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Does Industry-level Information Affect Auditors' Assessment of Client-level Risk?

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Does Industry-level Information Affect Auditors' Assessment of Client-level Risk?

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Abstract

This study investigates auditors' consideration of industry-level information in their assessment of client-level risk. Auditing standards suggest that industry-level information is likely to be important in the assessment of client-level risk, but the standards provide few specifics about how auditors should use industry-level information in the risk assessment process. I argue that industry norms serve as a benchmark for evaluating the risk of the client and that deviations from industry norms could indicate increased audit risk. I create measures that capture the extent to which clients deviate from industry norms using proxies for client-level risk factors. In my primary tests, I investigate whether auditors respond to these measures of deviation from industry norms and whether these measures are associated with adverse audit outcomes. I find consistent evidence of a positive relation between these measures and audit fees, suggesting that auditors identify and respond to deviations from industry norms. I find limited evidence of a relation between these measures and the likelihood of misstatement, suggesting that auditors' response to deviations from industry norms is generally appropriate. In subsequent tests, I consider whether auditors' response to deviations from industry norms varies by auditor type. I find that Big Four auditors and industry specialist auditors are more responsive to deviations from industry norms than non-Big Four and non-specialist auditors. Consistent with this, I also find some evidence that deviations from industry norms for certain risk factors are more strongly associated with adverse outcomes for non-Big Four or non-specialist auditors relative to Big Four or specialist auditors. My findings should be of interest to auditors, regulators, and market participants because they suggest that identifying and responding to industry-level information when assessing client-level risk is an important component of effective audit risk assessment.

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Table of Contents

I. Introduction

The purpose of this study is to investigate whether auditors respond to industry-level information in their assessment of client-level risk and how this response affects audit outcomes.[1] Auditing standards require auditors to consider risks of material misstatement from a variety of sources, including conditions in the company's industry, when assessing risk (PCAOB AS 2110). Moreover, the risk assessment process requires auditors to "obtain an understanding of the company and its environment… to understand the events, conditions, and company activities that might reasonably be expected to have a significant effect on the risks of material misstatement. Obtaining an understanding of the company includes understanding… relevant industry, regulatory, and other external factors" (PCAOB AS 2110, par 7). While this suggests that standard setters view industry-level information as important in the assessment of client-level risk, the standards provide auditors with little guidance about how industry-level information should affect the risk assessment process and what types of industry-level information are likely to be important.

I propose that one way that auditors may use industry-level information is as a benchmark, or norm, against which to compare their clients when evaluating audit risk. In particular, I expect industry-level information to be important when client-level risk factors deviate from industry norms.[2] Accordingly, I create measures that capture the extent to which clients deviate from industry norms using client characteristics that prior literature finds to be

[1] I use the terms risk, client-level risk, and audit risk to refer to the risk that the financial statements of an audit client are materially misstated.

[2] My argument is similar to Brazel, Jones and Zimbelman (2009), who find that auditors can use the difference between financial and nonfinancial measures to help identify fraud companies. I posit that the difference between client-level and industry-level information can help auditors assess the risk of material misstatement more appropriately.

associated with risk (i.e., risk factors).[3] I create three separate measures that allow the effect of these risk factors to vary according to the magnitude of the deviation from industry norms. First, I create a continuous measure of the magnitude of deviation from the industry median for each company and standardize the deviation by industry-year. Second, because I expect that the effect of deviation may be more evident for companies that are substantially riskier than industry norms, I create indicator variables set equal to one if the client is in the top tercile of my measure of deviation for each risk factor, and zero otherwise. Third, because I expect the effect of deviation to be more evident for companies that are riskier than industry norms across multiple risk factors, I create a count variable of the total number of top tercile indicators the client has.

In my primary tests, I investigate whether these measures of deviation from industry norms are associated with audit fees and with the likelihood of misstatement. If deviations from industry norms indicate increased risk and auditors respond appropriately, they should affect the nature, timing, and extent of substantive audit procedures performed (i.e., auditors should increase effort).[4] However, if auditors fail to respond appropriately, theory suggests that the likelihood of misstatement will be higher for companies that deviate from industry norms.

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[3] The specific risk factors that I use to create my measures of deviation are stock returns, return volatility, financial distress estimated using Altman's (1968) model as modified by Shumway (2001), and leverage. I multiply stock returns and Altman's Z-Score by negative one so that increases in each risk factor represent increases in risk. It is important to note that I do not suggest that these are the only risk factors that might be relevant to auditors. As discussed in Sections II and III, I choose these risk factors because they are widely available for sample companies, are commonly used in accounting research, and allow me to develop expectations about the direction of the effect that deviation from industry norms is likely to have on audit fees and on the likelihood of misstatement.

[4] Alternatively, auditors may respond to increased risk by charging a risk premium. However, because auditing standards require auditors to respond to increased risk by changing procedures, charging a risk premium alone would not be an appropriate response. My results are generally consistent with increased audit fees proxying for increased audit effort, although I cannot rule out this alternative explanation.

Accordingly, I follow prior auditing research and use audit fees to proxy for audit effort (e.g., Hogan and Wilkins 2008; Cao, Myers and Omer 2012) and I use the likelihood of misstatement to proxy for the appropriateness of auditors' risk assessments. My models include controls for a number of client, auditor, and industry characteristics that have been shown to be associated with audit fees and the likelihood of misstatement.

Results from my audit fee models indicate that audit fees are positively associated with deviations from industry norms, particularly for clients in the top terciles of my measures of deviation. I also find that audit fees are higher when clients deviate from industry norms across multiple risk factors. These findings suggest that auditors respond to risk reflected in deviations from industry norms by charging higher audit fees.

Results from my misstatement models are weaker. I find an increased likelihood of misstatement for companies that are riskier than industry norms across multiple risk factors but not for my other measures of deviation. However, the limited evidence that deviations from industry norms are associated with adverse audit outcomes may indicate that auditors' response to deviations from industry norms (as suggested by the audit fee results) mitigates the effect of these risk factors on the likelihood of misstatement.

One approach to investigating whether auditors' response mitigates the relation between the likelihood of misstatement and deviations from industry norms is to identify auditors that are more responsive to deviations from industry norms than other auditors and to examine whether this increased responsiveness is associated with a decreased likelihood of misstatement. Accordingly, I examine whether auditors' response to deviations from industry norms and the effects of these deviations on audit outcomes vary by auditor type. Prior research finds that Big Four auditors (i.e., Deloitte & Touche LLP, Ernst & Young LLP, KPMG LLP, and

PricewaterhouseCoopers LLP) provide higher quality audits than non-Big Four auditors (e.g., Francis, Maydew and Sparks 1999; Lennox and Pittman 2010; and Eshleman and Guo 2014). Prior research also finds that industry specialist auditors provide higher quality audits than non-specialist auditors (e.g., Craswell, Francis and Taylor 1995; Balsam, Krishnan and Yang 2003; and Reichelt and Wang 2010). Moreover, Big Four auditors and industry specialist auditors may have more exposure to companies in an industry and have access to more, or higher quality, industry information than other auditors. Accordingly, I posit that Big Four and industry specialist auditors may be more likely to identify and respond to deviations from industry norms. Because of this, I re-estimate my audit fee and misstatement models after including interactions between my measures of deviation from industry norms and indicators for auditor type.

My results for Big Four auditors indicate that the positive association between audit fees and deviations from industry norms is primarily driven by Big Four auditors. The incremental effect of Big Four auditors is also stronger for clients in the top terciles of my measures of deviation from industry norms and for clients that deviate from industry norms across multiple risk factors.

Consistent with my primary tests, the results from my misstatement models are weaker than the results from my audit fee models. However, I find some evidence of a positive relation between deviations from industry norms and adverse audit outcomes for companies with non-Big Four auditors but not for companies with Big Four auditors. Specifically, the continuous version of the leverage deviation measure is positively and significantly associated with the likelihood of misstatement for non-Big Four auditors while the interaction between Big Four and the leverage deviation measure is negative and significant. Moreover, the sum of the coefficients on the leverage deviation measure and the interaction term is not statistically different from zero. This provides evidence that Big Four auditors are effectively able to mitigate the negative effects of deviations from industry norms on audit outcomes for certain risk factors.

My results for industry specialist auditors are similar. They indicate that the positive association between audit fees and deviations from industry norms is primarily driven by industry specialist auditors and is stronger for clients in the top terciles of my measures of deviation and for clients that deviate from industry norms across multiple risk factors.

I also find evidence that industry specialist auditors are able to mitigate the negative effects of deviations from industry norms on audit outcomes. Specifically, the continuous version of the leverage deviation measure is positively and significantly associated with the likelihood of misstatement for non-specialist auditors while the interaction between industry specialist and the leverage deviation measure is negative and significant. As for Big Four auditors, the sum of the coefficients on my leverage deviation measure and the interaction term is not statistically different from zero, providing evidence that industry specialist auditors are also able to mitigate the negative effects of deviations from industry norms on audit outcomes for certain risk factors.

In additional analyses, I investigate whether the results from the primary analyses are sensitive to using alternative specifications of the variables of interest and alternative specifications of auditor types. First, I use measures of deviation from industry norms that allow for differences in the relative magnitude of the deviation between industries. The primary analyses use measures of deviation that are standardized so that the relative distance of a company from the industry median is comparable between industries. Second, I use measures of deviation from industry norms that use the mean instead of the median as the industry benchmark. Overall inferences are unchanged when using these alternative measures of deviation from industry norms. Third, I use a large auditor indicator that combines the largest mid-tier auditors with Big Four auditors. The results of these tests suggest that the increased responsiveness of large auditors is primarily driven by Big Four auditors. Fourth, I identify industry specialist auditors using the national industry market. The primary analyses identify industry specialist auditors using the Metropolitan Statistical Area (MSA) industry market. The results from these tests suggests that, similarly to MSA industry specialists, national industry specialists are more responsive to deviations from industry norms than other auditors but they provide little evidence that this response is associated with the likelihood of misstatement.

This study makes several contributions to the literature. First, to the best of my knowledge, this is the first study to directly investigate whether auditors consider industry-level information in their risk assessment. While prior literature generally includes industry indicators in audit fee models to control for time-invariant differences in audit fees across industries, I argue that client-specific deviations from industry norms are likely an important, though overlooked, input in auditors' risk assessment processes and pricing decisions. Second, to the best of my knowledge, this is the first broad archival study to investigate whether deviations from industry norms affect audit outcomes. Auditing standards have long required auditors to consider industry factors during risk assessment, suggesting that consideration of industry information is important for risk assessments to be appropriate. Further, prior case studies provide evidence that failure to obtain and use knowledge of an audit client's industry can contribute to audit failures (Erickson, Mayhew, and Felix 2000). However, prior literature does not provide large sample evidence about whether deviations from industry norms are typically indicative of increased audit risk. Third, this study contributes to the research that investigates the effects of auditor type on audit quality. The evidence presented here suggests that greater attention to deviations from industry norms may be a mechanism contributing to the higher audit quality documented by prior research for Big Four and industry specialist auditors.

My findings should be of interest to auditors, auditing standard setters, and regulators. The evidence presented here suggests that while auditors' response to deviations from industry norms is generally appropriate, smaller, non-specialist, auditors may be able to improve their risk assessment processes (and audit outcomes) by focusing more carefully on deviations from industry norms as an indicator of increased client risk. My findings also suggest that additional guidance about the types of industry information that are likely to be useful and how to incorporate this industry information in the risk assessment process may help auditors, particularly smaller and non-specialist auditors, reduce the likelihood of adverse audit outcomes.

The remainder of the paper proceeds as follows. Section II discusses relevant prior literature and develops the hypotheses, Section III describes variable construction, research design, and the sample, Section IV presents the primary analyses, Section V presents additional analyses, and Section VI concludes.

II. Prior Literature and Hypotheses

While auditors are required to consider industry-level information in their client-level risk assessments, the standards provide almost no guidance about the types of industry information that are likely to be important or how auditors should use industry information in their assessment of risk. I propose that one way auditors may use industry-level information is as a benchmark, or norm, against which to compare their clients. My argument is similar to Brazel et al. (2009), who investigate whether auditors can use the difference between financial and nonfinancial measures to help identify fraud companies. I posit that auditors can use differences between client-level and industry-level information to help assess audit risk. Prior case studies provide evidence consistent with this notion. Erickson et al. (2000) examine the audit procedures applied to specific transactions from the Lincoln Savings and Loan (LSL) audit failure and conclude that "applying knowledge of LSL's business, the real estate industry, and economic trends in that industry would have been the most effective audit procedures available to LSL's auditors" (p. 189).[5]

However, identifying appropriate company characteristics to use to measure differences between client-level and industry-level information is problematic because expectations about how these deviations are likely to affect audit risk are idiosyncratic (and consequently ambiguous) for many financial characteristics.[6] For example, revenue is a likely candidate as an important financial characteristic because the auditing standards require auditors to presume that there is a fraud risk involving improper revenue recognition (PCAOB AS 2110, par 68). Accordingly, revenue growth that exceeds the industry norm by a large degree might suggest improper revenue recognition (which increases audit risk). Alternatively, it might indicate that the company is a strong performer in its industry (e.g., Apple). Similarly, return on equity or assets, inventory turnover, and gross margin are important characteristics in many industries, but in all cases, it is difficult to empirically disentangle whether exceeding the industry norm suggests increased risk or strong performance.

Because of this, I choose company characteristics that prior research has found to be associated with general business risk and with risk related to the financial condition of a

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[5] The authors examined audit workpapers and deposition transcripts related to the 1987 audit of LSL. LSL's auditors were subsequently sued (and settled) for failing to prevent the release of materially misstated financial statements.

[6] The relation between the risk factors that I use and audit risk is likely also ambiguous in some cases. However, I expect that the signal provided by these risk factors about audit risk generally runs in one direction.

company. The risk assessment standards explicitly acknowledge that business risk can lead to risk of material misstatement and require auditors to identify and respond appropriately to relevant business risks (PCAOB AS 2110). Specifically, the risk factors that I use are stock returns (Kinney and McDaniel 1989; Tan and Young 2015), return volatility (Erickson, Hanlon, and Maydew 2006), financial distress, and leverage (Kinney and McDaniel 1989; DeFond and Jimbialvo 1991; and Burns and Kedia 2006). I expect that companies with stock returns that are lower than industry norms, companies with return volatility that is higher than industry norms, and companies that are more financially constrained than industry norms are associated with increased audit risk.

Following prior auditing research, I use audit fees to proxy for audit effort (e.g., Hogan and Wilkins 2008; Cao et al. 2012). While specific audit procedures are unobservable, prior studies with available audit hours, audit fees, and labor experience mix suggest that audit fees reflect audit effort and are associated with auditors' response to client risk. For example, Bell, Landsman, and Shackelford (2001) find that auditors respond to company-level risk by increasing audit hours. More recently, Knechel and Schelleman (2010) find that auditors respond to high levels of short-term accruals by increasing audit hours of the professional staff and by using more supervisor, assistant, and support time. Accordingly, I interpret increased audit fees for companies that are relatively more risky than their industry as evidence of increased effort, suggesting that auditors identified and responded to risks reflected in deviations from industry norms. This leads to my first hypothesis (stated in the alternative):

> **H_1:** Companies that deviate from industry norms pay higher audit fees than other companies.

I also expect that companies that are more risky than their industry are more likely to misstate their financial statements than other companies, unless the auditor appropriately identifies and responds to risks reflected in deviations from industry norms. I use the likelihood of misstatement to proxy for the appropriateness of auditors' response because a misstatement indicates that the auditor issued an unqualified opinion on financial statements that were materially misstated (DeFond and Zhang 2014), indicating that they either failed to identify or failed to respond appropriately to audit risk. This leads to my second hypothesis (stated in the alternative):

> **H_2:** Companies that deviate from industry norms are more likely to misstate their financial statements than other companies.

I also investigate whether auditors' response to deviations from industry norms varies by auditor type. Prior research finds that Big Four auditors provide higher quality audits than non-Big Four auditors. For example, prior literature indicates that, relative to companies audited by non-Big Four auditors, companies audited by Big Four auditors have lower levels of discretionary accruals (Francis et al. 1999), are less likely to engage in fraudulent financial reporting (Lennox and Pittman 2010), and are less likely to issue financial statements that are subsequently restated (Eshleman and Guo 2014). Big Four auditors also have more resources than non-Big Four auditors and may have access to more, or higher quality, industry-level information. Accordingly, I posit that Big Four auditors are more likely to be responsive to deviations from industry norms than non-Big Four auditors and that deviations from industry norms are likely to be less strongly associated with the likelihood of misstatement for Big Four auditors than for other auditors. This leads to my third and fourth hypotheses (stated in the alternative):

> **H_3:** Companies that deviate from industry norms pay higher audit fees when they have a Big Four auditor than when they have a non-Big Four auditor.

H_4: Companies that deviate from industry norms are less likely to misstate their financial statements when they have a Big Four auditor than when they have a non-Big Four auditor.

Prior research also finds that industry specialist auditors provide higher quality audits than non-specialist auditors. For example, prior literature finds that auditors develop reputations as industry experts (Craswell et al. 1995), that companies with industry specialist auditors have lower levels of discretionary accruals and higher earnings response coefficients than other companies (Balsam et al. 2003), and that companies with industry specialist auditors are less likely to just meet or beat analysts' earnings forecasts and are more likely to be issued a going concern audit opinion than other companies (Reichelt and Wang 2010). In addition, industry specialist auditors may be more responsive to industry-level information because industry specialist auditors necessarily have greater exposure to the client's industry than non-specialist auditors. Intuitively, auditors specializing in an industry are also likely to be more aware of, and more attentive to, industry-level information than other auditors. For these reasons, my predictions for industry specialist auditors are similar to those for Big Four auditors, leading to my fifth and sixth hypotheses (stated in the alternative):

H_5: Companies that deviate from industry norms pay higher audit fees when they have an industry specialist auditor than when they have a non-specialist auditor.

H_6: Companies that deviate from industry norms are less likely to misstate their financial statements when they have an industry specialist auditor than when they have a non-specialist auditor.

III. Variable Construction, Research Design, and Sample

Variable Construction

My variables of interest capture the extent to which certain client characteristics that prior literature finds to be associated with risk (i.e., risk factors) deviate from industry norms. These risk factors are the company's stock return, return volatility, financial distress, and leverage. I choose these risk factors because they are widely available from commonly used databases, they are used in prior accounting literature as proxies for different aspects of company risk, and, importantly, because they allow me to develop expectations about the direction of the effect that distance from industry norms is likely to have on audit fees and on the likelihood of misstatement. However, I do not suggest that these are the only client characteristics or risk factors likely to be relevant to auditors, only that they are reasonable proxies for client risks that are likely to affect audit risk.

For each risk factor, I create three separate measures that allow the effect of the risk factor to vary according to the magnitude of the deviation from industry norms. First, I create a continuous measure of the magnitude of the standardized deviation from the industry median by fiscal year, as follows:[7]

$$DevVar_{it} = \left[\frac{(Var_{it} - median(Var_{jt}))}{median\_std(Var_{it})_{jt}} \right].$$

Where: *i* indicates a company, *j* indicates a three-digit NAICS industry, and *t* indicates the fiscal year. I require each industry-year to have at least ten observations for calculating the industry median for each risk factor to help ensure that the median isn't unduly influenced by specific companies and is representative of the industry as a whole.[8,9] I use the three-digit level of

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[7] Subtracting the industry average (whether the median or mean) is mathematically similar to including industry fixed effects in a regression model. However, including industry fixed effects alone is problematic for several reasons: The coefficients cannot be interpreted as the effect of deviation from industry norms because the variables in the regression model are demeaned across multiple dimensions (all other indicator variables included in the models), industry fixed effects don't allow for variation over time because they use the mean for the entire sample period, and, most importantly, including the client-specific risk factors as separate control variables is necessary to ensure that my measures are capturing the effect of deviation from the industry rather than the effect of the risk factors themselves.
[8] Inferences are generally unchanged if I use the industry mean instead of the median. I present and discuss analyses using the industry mean in Section V, Additional Analyses.
[9] This is similar to the requirement imposed in prior literature for calculating abnormal accruals.

industry detail because this allows me to retain a large sample of companies while requiring ten observations for each industry-year.[10] I use the NAICS industry classification because anecdotal evidence suggests that auditors have access to, and presumably use, industry reports prepared for NAICS industry classifications.[11] I standardize the variables because the dispersion of the underlying risk factors varies across industries and I want the relative distance of a company from the industry median to be comparable between industries. I modify the typical calculation of standard deviation to use the median instead of the mean as follows:

$$median\_std(Var_{it})_{jt} = \left[\frac{\sum | Var_{it} - median(Var_{jt}) |^2}{n} \right].$$

I create a separate deviation measure for each risk factor by replacing *Var* in the equation with the appropriate risk factor. Specifically:

Dev Ret = *Var* is replaced with *Ret*, the company's raw return for the year, multiplied by negative one;

Dev Vol = *Var* is replaced with *Vol*, the standard deviation of the company's daily stock returns over the prior year;

Dev ZScore = *Var* is replaced with *ZScore*, the company's financial distress score, multiplied by negative one (estimated using Altman's [1968] model as modified by Shumway [2001]: *ZScore* = [1.2*WC/TA + 0.6*RE/TA + 10.0*EBIT/TA + 0.05*ME/TL - 0.47*S/TA]*[-1], where WC is current assets minus current liabilities, TA is total assets, RE is retained earnings, EBIT is earnings before interest and taxes, ME is the end-of-year share price times total common shares outstanding, and S is total revenue); and

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[10] As an alternative, I run my tests using a five-digit NAICS classification and requiring five observations per industry-year for calculating the industry median for each risk factor (sample attrition is significant if I require ten observations per industry-year). Inferences are unchanged using this alternative classification.

[11] IBISWorld, a large provider of industry reports, claims that 65 of the top 100 CPA firms subscribe to their industry reports, prepared using the NAICS industry classification. I also had the opportunity to interview an industry analyst for PricewaterhouseCoopers LLP, who indicated that they also use the NAICS classification for their in-house industry reports.

Dev Lev = *Var* is replaced with *Lev*, the company's total liabilities divided by average total assets.

Ret and *ZScore* are multiplied by negative one in order to facilitate the interpretation of the sign of coefficients so that larger values of *Ret* indicate lower returns and larger values of *ZScore* indicate greater financial distress.

Second, because I expect that the effect of deviation from industry norms may be more evident for companies that are substantially riskier than industry norms, I create indicator variables set equal to one if the company is in the top tercile of the measure of deviation by fiscal year for each risk factor, and zero otherwise. Specifically:

Trc Dev Ret = an indicator variable set equal to one if the company's *Dev Ret* is in the top tercile of the sample distribution by fiscal year, and zero otherwise;

Trc Dev Vol = an indicator variable set equal to one if the company's *Dev Vol* is in the top tercile of the sample distribution by fiscal year, and zero otherwise;

Trc Dev ZScore = an indicator variable set equal to one if the company's *Dev ZScore* is in the top tercile of the sample distribution by fiscal year, and zero otherwise; and

Trc Dev Lev = an indicator variable set equal to one if the company's *Dev Lev* is in the top tercile of the sample distribution by fiscal year, and zero otherwise.

Third, because I expect that the effect of deviation from industry norms may be more evident for companies that are riskier than industry norms across multiple risk factors, I create a count variable of the total number of top tercile indicators that the client has. Specifically:

Count Trc Dev = the count of the company's top tercile indicators (*Trc Dev Ret*, *Trc Dev Vol*, *Trc Dev ZScore*, and *Trc Dev Lev*).

Research Design

To begin my investigation of auditors' response to deviations from industry norms, I model audit fees as a function of my measures of deviation from industry norms and other determinants common to prior audit fee literature using OLS regression (e.g., Francis, Reichelt, and Wang 2005; Hay, Knechel, and Wong 2006; and Fung, Gul, and Krishnana 2012).[12]

$$\begin{aligned} \mathit{Ln\ Fees}_{it} = \; & \beta_0 + \beta_1 \mathit{Ret}_{it} + \beta_2 \mathit{Vol}_{it} + \beta_3 \mathit{ZScore}_{it} + \beta_4 \mathit{Lev}_{it} + \beta_5 \mathit{Dev\ Ret}_{it} + \\ & \beta_6 \mathit{Dev\ Vol}_{it} + \beta_7 \mathit{Dev\ ZScore}_{it} + \beta_8 \mathit{Dev\ Lev}_{it} + \beta_9 \mathit{Ln\ AT}_{it} + \\ & \beta_{10} \mathit{Ln\ Rev}_{it} + \beta_{11} \mathit{Curr}_{it} + \beta_{12} \mathit{FCF}_{it} + \beta_{13} \mathit{CF\ Vol}_{it} + \beta_{14} \mathit{Rev\ Vol}_{it} + \\ & \beta_{15} \mathit{Ln\ Seg}_{it} + \beta_{16} \mathit{Foreign}_{it} + \beta_{17} \mathit{Loss}_{it} + \beta_{18} \mathit{GCO}_{it} + \beta_{19} \mathit{Busy}_{it} + \\ & \beta_{20} \mathit{BigN}_{it} + \beta_{21} \mathit{Merge}_{it} + \beta_{22} \mathit{Mat\ Weak}_{it} + \beta_{23} \mathit{Ind\ Herf}_{it} + \\ & \beta_{24} \mathit{Au\ Herf}_{it} + \beta_{25} \mathit{CLead}_{it} + \beta_{26} \mathit{Short\ Ten}_{it} + \beta_j \mathit{YearFE} + \\ & \beta_j \mathit{IndustryFE} + \varepsilon_{it} \qquad (1) \end{aligned}$$

where, for company *i* and year *t*: *Dev Ret*, *Dev Vol*, *Dev ZScore*, and *Dev Lev* are as previously described. And where:

Ln Fees =	the natural log of the company's total audit fees;
Ret =	the company's raw return for the year, multiplied by negative one;
Vol =	the standard deviation of the company's daily stock returns over the prior year;
ZScore =	the company's financial distress score, multiplied by negative one (estimated using Altman's [1968] model as modified by Shumway [2001]: *ZScore* = [1.2*WC/TA + 0.6*RE/TA + 10.0*EBIT/TA + 0.05*ME/TL - 0.47*S/TA]*[-1], where WC is current assets minus current liabilities, TA is total assets, RE is retained earnings, EBIT is earnings before interest and taxes, ME is the end-of-year share price times total common shares outstanding, and S is total revenue);
Lev =	the company's leverage (total liabilities divided by average total assets);
Ln AT =	the natural log of the company's total assets ($ millions);
Ln Rev =	the natural log of the company's total revenue ($ millions);

[12] Standard errors are robust and are adjusted for clustering by company in all models (Peterson 2009).

Curr =	the company's current ratio (current assets divided by current liabilities);
FCF =	the company's free cash flows (cash flows from operations less capital expenditures divided by current assets);
CF Vol =	the standard deviation of the company's net operating cash flow over the prior three years;
Rev Vol =	the standard deviation of the company's total revenue over the prior three years;
Ln Seg =	the natural log of the count of the company's business and geographic segments;
Foreign =	an indicator variable set equal to one if the company reports foreign pretax income, and zero otherwise;
Loss =	an indicator variable set equal to one if the company reports a net loss, and zero otherwise;
GCO =	an indicator variable set equal to one if the company receives a going-concern audit opinion, and zero otherwise;
Busy =	an indicator variable set equal to one if the company has a December fiscal year-end, and zero otherwise;
BigN =	an indicator variable set equal to one if the company is audited by Deloitte & Touche LLP, Ernst & Young LLP, KPMG LLP, or PricewaterhouseCoopers LLP, and zero otherwise;
Merge =	an indicator variable set equal to one if the company reports sales from acquisitions, and zero otherwise;
Mat Weak =	an indicator variable set equal to one if the company has one or more material weaknesses in internal control identified under SOX 302 or SOX 404, and zero otherwise;
Ind Herf =	company Herfindahl concentration in the industry, calculated as $\sum_{i=1}^{n} s_i^2$, where *i* is a company and *s* is market share calculated using revenue. An industry is defined as a three-digit NAICS industry;

Au Herf = auditor Herfindahl concentration in the industry, calculated as $\sum_{i=1}^{n} s_i^{2}$, where i is an audit firm and s is market share calculated using audit fees. An industry is defined as a three-digit NAICS industry;

CLead = an indicator variable set equal to one if the auditor has more than 33.3 percent of all audit fees in the company's three-digit NAICS industry and Metropolitan Statistical Area (MSA), and zero otherwise;

Short Ten = an indicator variable set equal to one if the company's audit is a first-, second-, or third-year engagement, and zero otherwise;

YearFE = an indicator variable for each fiscal year;

IndustryFE = an indicator variable for each three-digit NAICS industry; and

ε = error term.

β_5, β_6, β_7, and β_8, are the coefficients of interest and I expect them to be positive and significant, indicating that there is a positive association between deviations from industry norms and audit fees. I also present results for models replacing *Dev Ret, Dev Vol, Dev ZScore,* and *Dev Lev* in equation (1) with i) *Trc Dev Ret*, *Trc Dev Vol*, *Trc Dev ZScore*, and *Trc Dev Lev* and ii) *Count Trc Dev*, which are as previously described.

I obtain financial statement data from Compustat, auditor data from Audit Analytics, and stock-related data from CRSP. I include controls for company, audit engagement, auditor, and industry characteristics that have been shown to be associated with audit fees and that may also be associated with my measures of deviation from industry norms. I include *Ret*, *Vol*, *ZScore*, and *Lev* to control for the company-specific level of risk related to my variables of interest.[13] *Ln AT* and *Ln Rev* control for company size. I include *Curr*, *FCF*, *Loss*, and *GCO* as additional

[13] Including the company-specific level of each risk factor as a control variable is important to help ensure that my variables of interest are capturing risk related to deviation from industry norms that is incremental to the underlying riskiness of the company.

controls for the financial condition of the company. *CF Vol* and *Rev Vol* control for company volatility and *Ln Seg*, *Foreign*, and *Merge* control for company complexity. I include *Mat Weak* to control for risk related to the company's internal control over financial reporting. I include *Busy* and *Short Ten* to control for engagement characteristics associated with audit fees. I include *BigN* and *CLead* to control for auditor type. I include *Au Herf* and *Ind Herf* because the level of competition related to the industry is likely to be associated with audit fees and may be associated with deviations from industry norms. Lastly, I include year fixed effects (*YearFE*) and industry fixed effects (*IndustryFE*) based on three-digit NAICS codes to control for systematic variation across time and across industries.

Next, I model the likelihood of misstatement as a function of my measures of deviation from industry norms with the same set of control variables using Logistic regression.

$$\begin{aligned} Misstate_{it} = \; & \delta_0 + \delta_1 Ret_{it} + \delta_2 Vol_{it} + \delta_3 ZScore_{it} + \delta_4 Lev_{it} + \delta_5 Dev\ Ret_{it} + \\ & \delta_6 Dev\ Vol_{it} + \delta_7 Dev\ ZScore_{it} + \delta_8 Dev\ Lev_{it} + \delta_9 Ln\ AT_{it} + \\ & \delta_{10} Ln\ Rev_{it} + \delta_{11} Curr_{it} + \delta_{12} FCF_{it} + \delta_{13} CF\ Vol_{it} + \delta_{14} Rev\ Vol_{it} + \\ & \delta_{15} Ln\ Seg_{it} + \delta_{16} Foreign_{it} + \delta_{17} Loss_{it} + \delta_{18} GCO_{it} + \delta_{19} Busy_{it} + \\ & \delta_{20} BigN_{it} + \delta_{21} Merge_{it} + \delta_{22} Mat\ Weak_{it} + \delta_{23} Ind\ Herf_{it} + \\ & \delta_{24} Au\ Herf_{it} + \delta_{25} CLead_{it} + \delta_{26} Short\ Ten_{it} + \delta_j YearFE + \\ & \delta_j IndustryFE + \varepsilon_{it} \qquad (2) \end{aligned}$$

where:

Misstate = an indicator variable set equal to one if the company subsequently restates current year financial statements, and zero otherwise. Restatements are limited to those reported in a form 8-K ("Big R" restatements), following Aobdia (2017) and Tan and Young (2015).

All other variables are as previously described. I obtain restatement data from the Audit Analytics Non-Reliance Restatements database. *Misstate* is set equal to one only for "Big R" restatements that require disclosure in a separate 8-K filing (Aobdia 2017; Tan and Young 2015) because "little r" restatements (those not disclosed on a separate 8-K filing) are less severe and are immaterial for each reporting period and because previous literature finds that "little r" restatements disproportionately affect Big Four auditors after 2008 (Rowe and Sivadasan 2016). δ_5, δ_6, δ_7, and δ_8, are the coefficients of interest and I expect them to be positive and significant, indicating that there is a positive association between deviations from industry norms and the likelihood of misstatement. As for equation (1), I also present results for models replacing *Dev Ret, Dev Vol, Dev ZScore,* and *Dev Lev* in equation (2) with i) *Trc Dev Ret*, *Trc Dev Vol*, *Trc Dev ZScore*, and *Trc Dev Lev* and ii) *Count Trc Dev*.

Sample

As reported in Table 1, I begin with the intersection of companies covered by Compustat and Audit Analytics from 2004 through 2013, 70,893 company-year observations. This is the sample that I use to construct median risk factors by industry-year for my measures of deviation. I begin in 2004 to avoid possible confounding effects related to the passage of the Sarbanes-Oxley Act in 2002 and its implementation. I end in 2013 to allow sufficient time for misstatements to be identified and revealed through restatements. I drop 1,861 observations that are missing NAICS industry identifiers. Similar to prior audit literature, I drop 21,400 observations for companies in financial industries and utilities industries because risks for these regulated industries are likely to depend to a greater degree on factors beyond the control of managers (e.g., interest-rate spreads and costs of inputs such as coal and crude oil) than for other industries (Hutton, Lee, and Shu 2012). As discussed previously, I require at least ten observations for each industry-year for calculating the risk factor medians used to construct my measures of deviation. Accordingly, I drop 1,426 observations that have fewer than ten observations in an industry-year. I drop an additional 21,212 observations because of missing variables. Lastly, I exclude 94 observations that cannot be included in the misstatement models because they are in three-digit NAICS industries that don't have any misstatements for sample companies during the sample period (i.e., the misstatement models cannot include these observations because of perfect collinearity). My final sample consists of 24,900 company-year observations.

Table 2 presents a listing of the three-digit NAICS industries included in my final sample. Column (1) reports the number of sample observations in each industry and the percentage of the total sample observations represented by each industry. Column (2) reports the number of Compustat observations in each industry and the percentage of Compustat observations represented by each industry during my sample period for comparison.[14] While there are small differences between the industry percentages for sample companies and for Compustat, Table 2 suggests that industries are generally represented in the sample in similar proportions to Compustat.

IV. Primary Analyses

Descriptive Statistics

I provide descriptive statistics for the sample in Table 3.[15] The mean raw stock return for sample observations is about 14.9 percent during the sample period (*Ret*).[16] Mean volatility is 0.0335 (*Vol*). Sample companies have a mean financial distress score of -0.3246 (*ZScore*). Sample companies have mean leverage of 0.4955 (*Lev*). As expected, *Dev Ret*, *Dev Vol*, *Dev*

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[14] This table only includes industries that are in my final sample. The complete Compustat download includes a total of 88,099 observations from fyear 2004 through 2013 with non-missing NAICS identifiers, representing 96 industries. My sample includes fewer industries than this primarily because I exclude financial and utilities industries and require at least ten observations per industry-year.

[15] All continuous variables presented in Table 3 and used in subsequent regressions are winsorized at the 1% and 99% levels.

[16] It is important to remember that *Ret* and *ZScore* are constructed by multiplying the company's raw return and financial distress score, respectively, by negative one, so that larger values of *Ret* indicate lower returns and larger values of *ZScore* indicate greater financial distress.

ZScore, and *Dev Lev* have medians close to zero (-0.0020, 0.0000, -0.0064, and -0.0015, respectively) because they are standardized using a standard deviation measure modified to use the median instead of the mean. Also, as expected for standardized variables, *Dev Ret* and *Dev Vol* have standard deviations close to one (0.9836 and 0.9358, respectively). However, *Dev ZScore* and *Dev Lev* have standard deviations of 0.3355 and 0.3715, respectively. This indicates that companies included in the final sample are relatively less financially distressed and leveraged than the companies included in the larger sample used to calculate the industry-year median *ZScore* and *Lev*.[17] The median of *Count Trc Dev* is 1 and the mean is 1.3333, indicating that slightly more than half of sample companies are in the top tercile of the distribution of at least one measure of deviation from industry norms. Descriptives for the remaining control variables are similar to those from prior literature (e.g., Cassell, Drake, and Rasmussen 2011; Numan and Willekens 2012; and Cairney and Stewart 2015).

Table 4 presents Pearson's correlation coefficients. Coefficients in bold are significant at the ten percent level. Deviations from the industry for returns, volatility, and financial distress are generally negatively and significantly correlated with *Ln Fees* while deviations for leverage are positively and significantly correlated with *Ln Fees*. All deviation measures are generally positively and significantly correlated with *Misstate*. This provides univariate evidence

[17] The industry-year medians that I use to create my measures of deviation include all possible observations while my sample only includes observations that have all variables needed for the regressions. Accordingly, I create *Dev ZScore* and *Dev Lev* using all possible Compustat observations while *Dev Ret* and *Dev Vol* require CRSP data, which is only available for a smaller subset of observations. When I eliminate observations from the sample because of missing variables, I disproportionately eliminate observations that have *Dev ZScore* and *Dev Lev* but are missing *Dev Ret* and *Dev Vol*. Immediately before eliminating observations because of missing variables, descriptive statistics indicate that *Dev ZScore* has a median of 0.0000 and standard deviation of 0.9653 and that *Dev Lev* has a mean of -0.0000 and standard deviation of 0.9853, as expected for standardized variables. Inferences remain unchanged if I calculate my measures of deviation using the final sample instead of the largest possible sample.

suggesting that deviations from industry norms increase audit risk but that auditors do not identify and respond to this risk appropriately. However, Table 4 also indicates that there are a number of significant correlations affecting the variables of interest, potentially confounding inferences based on univariate evidence. The correlations also suggest that multicollinearity may be a concern. Accordingly, I examine variance inflation factors (vifs) and find that vifs are below nine for the variables of interest in all of the primary analyses. This suggests that multicollinearity is unlikely to substantially affect the results.

Main Tests

Table 5 presents the results of my tests of H_1. The dependent variable is *Ln Fees*. Column (1) presents results using the continuous measures of deviation from industry norms (*Dev Ret*, *Dev Vol*, *Dev ZScore*, and *Dev Lev*). The coefficient on *Dev ZScore* is positive and significant (coefficient 0.047, t-statistic 2.616). This indicates that companies that deviate from the industry median to a greater degree for this risk factor pay higher audit fees than other companies. However, the remaining coefficients of interest are insignificant, suggesting that deviations from industry norms for returns, return volatility, and leverage are not associated with audit fees. Column (2) presents results using the top tercile indicator measures of deviation from industry norms (*Trc Dev Ret*, *Trc Dev Vol*, *Trc Dev ZScore*, and *Trc Dev Lev*). The coefficients on *Trc Dev Vol* (coefficient 0.026, t-statistic 2.267) and *Trc Dev ZScore* (coefficient 0.108, t-statistic 7.721) are positive and significant. This indicates that companies in the top tercile of these measures of deviation pay higher audit fees than companies in the first and second terciles. The coefficients on *Trc Dev Ret* and *Trc Dev Lev* are insignificant, suggesting that deviations from industry norms for returns and leverage are not associated with audit fees, even for companies that are substantially different from industry norms. Column (3) presents results using the count of top tercile indicators measure of deviation from industry norms (*Count Trc Dev*). The coefficient is positive and significant (coefficient 0.035, t-statistic 6.130), indicating that companies that deviate from industry norms across multiple risk factors pay higher audit fees than other companies.

Taken together, results from Table 5 provide evidence that audit fees are associated with deviations from industry norms for multiple risk factors, suggesting that auditors identify and respond to risks reflected in deviations from industry norms. The results also suggest that the relation between deviations from industry norms and audit fees is nonlinear, at least for certain risk factors. Specifically, the *Dev Vol* coefficient is insignificant in Column (1) but the *Trc Dev Vol* coefficient is positive and significant in Column (2). This suggests that, for risks related to return volatility, it is primarily companies that are substantially riskier than industry norms that pay higher audit fees. Results from Column (3) are also consistent with this interpretation, suggesting that companies that are riskier than industry norms across multiple risk factors pay higher audit fees than other companies.

The relation between the control variables and audit fees are generally consistent with prior literature. Financially distressed companies (*ZScore*, *Curr*, *Loss*, and *GCO*), large companies (*Ln AT* and *Ln Rev*), and more complex companies (*Ln Seg*, *Foreign*, and *Merge*) pay higher audit fees than other companies. December fiscal-year end (*Busy*) engagements, Big Four auditor (*BigN*) engagements, industry specialist auditor (*CLead*) engagements, and internal control material weaknesses (*Mat Weak*) are associated with higher audit fees. Lastly, cash flow volatility (*CF Vol*), industry concentration (*Ind Herf*), and short auditor tenure (*Short Ten*) are negatively associated with audit fees.

Table 6 presents the results of my tests of H_2. The dependent variable is *Misstate*. Column (1) presents results using the continuous measures of deviation from industry norms (*Dev Ret*, *Dev Vol*, *Dev ZScore*, and *Dev Lev*). Column (2) presents results using the top tercile indicator measures of deviation from industry norms (*Trc Dev Ret*, *Trc Dev Vol*, *Trc Dev ZScore*, and *Trc Dev Lev*). None of the coefficients of interest are statistically significant in Columns (1) or (2), suggesting that deviations from industry norms are not associated with the likelihood of misstatement, on average. Column (3) presents results using the count of top tercile indicators measure of deviation from industry norms (*Count Trc Dev*). The coefficient is positive and significant (coefficient 0.080, z-statistic 1.734), indicating that companies that deviate from industry norms across multiple risk factors have a higher likelihood of misstatement than other companies.

Results from Table 6 provide limited evidence that deviations from industry norms are associated with an increased likelihood of misstatement. However, the findings presented in Table 5 indicate that auditors respond to deviations from industry norms. Insofar as audit fees proxy for audit effort, this suggests that auditors respond to deviations from industry norms by changing the nature, timing, and extent of substantive audit procedures. If auditors respond appropriately to risk reflected in deviations from industry norms, then their response should mitigate any association between these deviations and the likelihood of misstatement. Consistent with this interpretation, results from Table 6 may indicate that auditors generally respond appropriately to deviations from industry norms, mitigating the negative effects of deviations on audit outcomes.

The relation between the control variables and the likelihood of misstatement are generally consistent with prior literature. Return volatility (*Vol*), leverage (*Lev*), company size

(*Ln AT*), the number business and geographic segments (*Ln Seg*), and internal control material weaknesses (*Mat Weak*) are positively associated with the likelihood of misstatement while *FCF*, *Foreign*, *GCO*, and *Busy* are negatively associated with the likelihood of misstatement.

Big Four Auditors

Table 7 presents the results of my tests of H_3. Panel A is identical to Table 5 except that I add interaction terms between *BigN* and my variables of interest to equation (1). The dependent variable is *Ln Fees*. Column (1) presents results using the continuous measures of deviation from industry norms (*Dev Ret*, *Dev Vol*, *Dev ZScore*, and *Dev Lev*). The coefficients on *Dev Vol* and *Dev Lev* are negative and significant (coefficients -0.042 and -0.065, respectively, t-statistics -3.335 and -1.810, respectively), indicating that companies with non-Big Four auditors that deviate from the industry median to a greater degree for these risk factors pay lower audit fees than other companies.[18] Interestingly, the interaction terms suggest that Big Four auditors are more responsive to deviations from industry norms for return volatility and leverage than non-Big Four auditors. Specifically, the coefficient on *BigN*Dev Vol* is 0.072 (t-statistic 5.878), and the coefficient on *BigN*Dev Lev* is 0.112 (t-statistic 3.006). The remaining interaction terms are insignificant, suggesting that Big Four auditors price deviations from industry norms for returns and for financial distress similarly to non-Big Four auditors.

Column (2) presents results using the top tercile indicator measures of deviation from industry norms (*Trc Dev Ret*, *Trc Dev Vol*, *Trc Dev ZScore*, and *Trc Dev Lev*). Consistent with Table 5, the *Trc Dev ZScore* coefficient is positive and significant (coefficient 0.116, t-statistic

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[18] The negative relation between these factors and audit fees is inconsistent with my expectations and with theory. While I don't have an intuitive explanation for the negative relation, I interpret these results as evidence that non-Big Four auditors misprice these risk factors. Results from my misstatement regressions are consistent with a mispricing interpretation for the negative relation between *Dev Lev* and *Ln Fees*.

4.665) while the coefficients on *Trc Dev Vol* and *Trc Dev Lev* are negative and significant (coefficients -0.050 and -0.098, respectively, t-statistics -2.343 and -3.590, respectively). As in Column (1), the interaction terms suggest that Big Four auditors are more responsive to deviations from industry norms than non-Big Four auditors. Specifically, the coefficient on *BigN*Trc Dev Vol* is 0.106 (t-statistic 4.539) and the coefficient on *BigN*Dev Lev* is 0.128 (t-statistic 4.572). The coefficients on *BigN*Trc Dev Ret* and *BigN*Trc Dev ZScore* are insignificant, suggesting that Big Four auditors price substantial deviations from industry norms for returns and financial distress similarly to non-Big Four auditors. Column (3) presents results using the count of top tercile indicators measure of deviation from industry norms (*Count Trc Dev*). The *Count Trc Dev* coefficient is insignificant. However, the *BigN*Count Trc Dev* coefficient is positive and significant (coefficient 0.053, t-statistic 5.038), providing further evidence that Big Four auditors are more responsive to deviations from industry norms than non-Big Four auditors.

Table 7 Panel B presents the results of F-tests used to test whether the total effects of my measures of deviation from industry norms on audit fees are statistically significant for Big Four auditors. Specifically, I test whether the sum of the coefficients on the variables of interest and the Big Four interaction terms is equal to zero. The results indicate that the sum of the coefficients related to my continuous measures of deviation from industry norms are positive and significant for return volatility (*Dev Vol* + *BigN*Dev Vol*, F-statistic 7.023), financial distress (*Dev ZScore* + *BigN*Dev Zscore*, F-statistic 5.784), and leverage (*Dev Lev* + *BigN*Dev Lev*, F-statistic 7.435), though not for returns (*Dev Ret* + *BigN*Dev Ret*, F-statistic 0.041). Similarly, the results indicate that the sum of the coefficients related to my top tercile indicator measures are positive and significant for return volatility (*Trc Dev Vol* + *BigN*Trc Dev Vol*, F-statistic

19.954), financial distress (*Trc Dev ZScore* + *BigN*Trc Dev Zscore*, F-statistic 47.061), and leverage (*Trc Dev Lev* + *BigN*Trc Dev Lev*, F-statistic 4.884), though not for returns (*Trc Dev Ret* + *BigN*Trc Dev Ret*, F-statistic 0.019). Lastly, the results also indicate that the total effect of deviations from industry norms across multiple risk factors is positive and significant for Big Four auditors. Specifically, the F-statistic for the sum of *Count Trc Dev* and *BigN*Count Trc Dev* is 60.708.

Taken together, results from Table 7 provide strong evidence that audit fees are positively associated with my measures of deviation from industry norms for clients of Big Four auditors, suggesting that these auditors respond to risks reflected in deviations from industry norms. Results for non-Big Four auditors suggest that these auditors are less responsive to deviations from industry norms than Big Four auditors. Specifically, Table 7 provides some evidence that non-Big Four auditors charge higher audit fees related to deviations from industry norms for financial distress but not related to deviations for the other risk factors.

Table 8 presents the results of my tests of H_4. Panel A is identical to Table 6 except that I add interaction terms between *BigN* and my variables of interest to equation (2). The dependent variable is *Misstate*. Column (1) presents results using the continuous measures of deviation from industry norms (*Dev Ret*, *Dev Vol*, *Dev ZScore*, and *Dev Lev*). The coefficient on *Dev Lev* is positive and significant (coefficient 0.425, z-statistic 2.176), indicating that companies with non-Big Four auditors that deviate from the industry median to a greater degree for this risk factor have a higher likelihood of misstatement than other companies. The remaining coefficients on my measures of deviation are insignificant. The *BigN*Dev Lev* coefficient is negative and significant (coefficient -0.504, z-statistic -2.327), indicating that the likelihood of misstatement related to deviations from industry norms for leverage is lower for companies with Big Four auditors than for companies with non-Big Four auditors. None of the variables of interest are statistically significant in Column (2) or Column (3).

Table 8 Panel B presents results of chi-squared tests used to investigate the total effects of my measures of deviation from industry norms on the likelihood of misstatement for Big Four auditors. Specifically, I test whether the sum of the coefficients on the variables of interest and the Big Four interaction terms is equal to zero. The results of the chi-squared tests indicate that the sums of the coefficients are never statistically different from zero. Specifically, the chi-squared statistics are 0.180 for *Dev Ret* plus *BigN*Dev Ret*, 0.556 for *Dev Vol* plus *BigN*Dev Vol*, 0.135 for *Dev ZScore* plus *BigN*Dev Zscore*, and 0.284 for *Dev Lev* plus *BigN*Dev Lev*, 0.951 for *Trc Dev Ret* plus *BigN*Trc Dev Ret*, 2.208 for *Trc Dev Vol* plus *BigN*Trc Dev Vol*, 0.055 for *Trc Dev ZScore* plus *BigN*Trc Dev Zscore*, 0.103 for *Trc Dev Lev* plus *BigN*Trc Dev Lev*, and 1.803 for *Count Trc Dev* plus *BigN*Count Trc Dev*.

Taken together, results from Table 8 provides very limited evidence that deviations from industry norms for leverage are associated with adverse audit outcomes for companies with non-Big Four auditors but that Big Four auditors mitigate this relation. Specifically, the total effect of *Dev Lev* on the likelihood of misstatement is positive and significant for companies audited by non-Big Four auditors but not significantly different from zero for companies audited by Big Four auditors. Results from Table 7 and Table 8 provide evidence that Big Four auditors are more responsive to deviations from industry norms than non-Big Four auditors and that Big Four auditors mitigate the adverse effect of deviations from industry norms on audit outcomes, at least for certain risk factors.

Industry Specialist Auditors

Table 9 presents the results of my tests of H_5. Panel A is identical to Table 5 except that I add interaction terms between *CLead* and my variables of interest to equation (1). The dependent variable is *Ln Fees*. Results for industry specialist auditors are generally similar to those presented in Table 7 for Big Four auditors, though somewhat weaker. Column (1) presents results using the continuous measures of deviation from industry norms (*Dev Ret*, *Dev Vol*, *Dev ZScore*, and *Dev Lev*). None of the coefficients on the variables of interest are statistically significant, indicating that audit fees are not associated with my measures of deviation from industry norms for companies with non-specialist auditors. The interaction terms suggest, however, that industry specialist auditors are more responsive to deviations from industry norms for return volatility than non-specialist auditors. Specifically, the coefficient on *CLead*Dev Vol* is 0.025 (t-statistic 2.291). The remaining interaction terms are insignificant, suggesting that industry specialist auditors price deviations from industry norms for returns, financial distress, and leverage similarly to non-specialist auditors.

Column (2) presents results using the top tercile indicator measures of deviation from industry norms (*Trc Dev Ret*, *Trc Dev Vol*, *Trc Dev ZScore*, and *Trc Dev Lev*). The *Trc Dev ZScore* coefficient is positive and significant (coefficient 0.106, t-statistic 5.688) and the *Trc Dev Lev* coefficient is negative and significant (coefficient -0.037, t-statistic -1.963). The coefficients on the remaining measures of deviation are insignificant. As in Column (1), the interaction terms suggest that industry specialist auditors are more responsive to deviations from industry norms than non-specialist auditors. Specifically, the coefficient on *CLead*Trc Dev Vol* is 0.036 (t-statistic 1.820) and the coefficient on *CLead*Dev Lev* is 0.069 (t-statistic 3.199). The coefficients on *CLead*Trc Dev Ret* and *CLead*Trc Dev ZScore* are insignificant, suggesting that industry specialist auditors price substantial deviations from industry norms for returns and financial distress similarly to non-specialist auditors. Column (3) presents results using the count of top tercile indicators measure of deviations from industry norms (*Count Trc Dev*). The *Count Trc Dev* coefficient is positive and significant (coefficient 0.021, t-statistic 2.867), indicating that non-specialist auditors respond to deviations from industry norms across multiple risk factors. The *CLead*Count Trc Dev* coefficient is also positive and significant (coefficient 0.024, t-statistic 2.907), however, providing further evidence that industry specialist auditors are more responsive to deviations from industry norms than non-specialist auditors.

Table 9 Panel B presents the results of F-tests used to test whether the total effects of my measures of deviation from industry norms on audit fees are statistically significant for industry specialist auditors. Specifically, I test whether the sum of the coefficients on the variables of interest and the *CLead* interaction terms is equal to zero. The results indicate that the sum of the coefficients related to my continuous measures of deviation from the industry are positive and significant for financial distress (*Dev ZScore* + *CLead*Dev Zscore*, F-statistic 8.818), though not for returns (*Dev Ret* + *CLead*Dev Ret*, F-statistic 0.068), return volatility (*Dev Vol* + *CLead*Dev Vol*, F-statistic 0.596), or leverage (*Dev Lev* + *CLead*Dev Lev*, F-statistic 0.541). The results indicate that the sum of the coefficients related to my top tercile indicator measures are positive and significant for all measures of deviation except for returns. Specifically, the F-statistic for the sum of the coefficients is 8.953 related to return volatility (*Trc Dev Vol* + *CLead*Trc Dev Vol*), 42.421 related to financial distress (*Trc Dev ZScore* + *CLead*Trc Dev Zscore*), and 4.113 related to leverage (*Trc Dev Lev* + *CLead*Trc Dev Lev*). Lastly, the results indicate that the total effect of deviations from industry norms across multiple risk factors is positive and significant for industry specialist auditors. Specifically, the F-statistic for the sum of *Count Trc Dev* and *CLead*Count Trc Dev* is 45.093.

Taken together, results from Table 9 provide evidence that audit fees are associated with deviations from industry norms for industry specialist auditors, suggesting that these auditors identify and respond to risks reflected in deviations from industry norms. Results for non-specialist auditors are much weaker, suggesting that these auditors are less responsive to deviations from industry norms than industry specialist auditors.

Table 10 presents the results of my tests of H_6. Panel A is identical to Table 6 except that I add interaction terms between *CLead* and my variables of interest to equation (2). The dependent variable is *Misstate*. Results related to industry specialist auditors are similar to those related to Big Four auditors in the misstatement regressions presented in Table 8. Column (1) presents results using the continuous measures of deviation from industry norms (*Dev Ret*, *Dev Vol*, *Dev ZScore*, and *Dev Lev*). The coefficient on *Dev Lev* is positive and significant (coefficient 0.430, z-statistic 2.017), indicating that companies with non-specialist auditors that deviate from the industry median to a greater degree for this risk factor have a higher likelihood of misstatement than other companies. The remaining coefficients on my measures of deviation are insignificant. The *CLead*Dev Lev* coefficient is negative and significant (coefficient -0.504, z-statistic -2.327), indicating that the likelihood of misstatement related to deviations from industry norms for leverage is lower for companies with industry specialist auditors than for companies with non-specialist auditors. However, none of the coefficients on my measures of deviation from industry norms or the interaction terms are significant in Column (2) or Column (3).

Consistent with my findings related to Big Four auditors, the results of chi-squared tests presented in Table 10 Panel B indicate that the sums of the coefficients for industry specialist auditors are never statistically different from zero. Specifically, the chi-squared statistics are 0.044 for *Dev Ret* plus *CLead*Dev Ret*, 0.171 for *Dev Vol* plus *CLead*Dev Vol*, 0.045 for *Dev ZScore* plus *CLead*Dev Zscore*, 0.037 for *Dev Lev* plus *CLead*Dev Lev*, 0.554 for *Trc Dev Ret* plus *CLead*Trc Dev Ret*, 1.030 for *Trc Dev Vol* plus *CLead*Trc Dev Vol*, 0.912 for *Trc Dev ZScore* plus *CLead*Trc Dev Zscore*, 0.408 for *Trc Dev Lev* plus *CLead*Trc Dev Lev*, and 1.911 for *Count Trc Dev* plus *CLead*Count Trc Dev*.

Taken together, results from Table 10 provide very limited evidence that deviations from industry norms for leverage are associated with adverse audit outcomes for companies with non-specialist auditors but that industry specialist auditors mitigate this relation. Specifically, the total effect of *Dev Lev* on the likelihood of misstatement is positive and significant for companies audited by non-specialist auditors but not significantly different from zero for companies audited by industry specialist auditors. Results from Table 9 and Table 10 provide some evidence that industry specialist auditors are more responsive to deviations from industry norms than non-specialist auditors and that industry specialist auditors mitigate the association between deviations from industry norms and adverse audit outcomes for certain risk factors.

Overall, the results presented in Tables 7 through 10 indicate that certain auditor types that prior literature finds to be associated with higher audit quality are more responsive to deviations from industry norms than other auditors. These results also indicate that, at least for certain risk factors, this greater attention mitigates the relation between deviations from industry norms and adverse audit outcomes.

V. Additional Analyses

Magnitude of the Deviations

The variables of interest in the primary analyses use measures of deviation from industry norms that are standardized so that the relative distance of a company from the industry median is comparable between industries. A potential limitation of these measures is that they do not allow for differences in the magnitude of the deviation relative to other industries.[19] In this section, I re-estimate the main tests using alternative measures of deviation from industry norms that allow for differences in the magnitude of the deviation. Specifically, I create a continuous measure of the deviation from the industry median by fiscal year, as follows:

$$PctVar_{it} = \left[\frac{(Var_{it} - median(Var_{jt}))}{|\,median(Var_{jt})\,|} \right].$$

Where: *i* indicates a company, *j* indicates a three-digit NAICS industry, and *t* indicates the fiscal year. I create a separate deviation measure for each risk factor by replacing *Var* in the equation with the appropriate risk factor. Specifically:

Pct Ret =	*Var* is replaced with *Ret*, the company's raw return for the year, multiplied by negative one.
Pct Vol =	*Var* is replaced with *Vol*, the standard deviation of the company's daily stock returns over the prior year.
Pct ZScore =	*Var* is replaced with *ZScore*, the company's financial distress score, multiplied by negative one. Estimated using Altman's (1968) model as modified by Shumway (2001): *ZScore* = [1.2*WC/TA + 0.6*RE/TA + 10.0*EBIT/TA + 0.05*ME/TL - 0.47*S/TA]*[-1], where: WC is current assets minus current liabilities, TA is total assets, RE is retained earnings, EBIT is earnings before interest and taxes, ME is the end-of-year share price times total common shares outstanding, and S is total revenue.

[19] For example, companies in industries with low (high) dispersion for a particular risk factor may be in (out of) the top tercile of the distribution for that risk factor even though the magnitude of their deviation from the industry median is relatively small (large).

Pct Lev = *Var* is replaced with *Lev*, the company's total liabilities divided by average total assets.

Following the same methodology used to create the variables of interest for the primary analyses, I also create top tercile indicator variables (*Trc Pct Ret*, *Trc Pct Vol*, *Trc Pct ZScore*, and *Trc Pct Lev*) and a count of top tercile indicators variable (*Count Trc Pct*).

Tables 11 and 12 present the results of equations (1) and (2) using the *Pct Var* measures of deviation from industry norms. The dependent variable in Table 11 is *Ln Fees*. Column (1) presents results using the continuous measures of deviation from industry norms (*Pct Ret*, *Pct Vol*, *Pct ZScore*, and *Pct Lev*). The coefficient on *Pct ZScore* is positive and significant (coefficient 0.001, t-statistic 3.471). Column (2) presents results using the top tercile indicator measures of deviation from industry norms (*Trc Pct Ret*, *Trc Pct Vol*, *Trc Pct ZScore*, and *Trc Pct Lev*). The coefficients on *Trc Pct Vol* (coefficient 0.023, t-statistic 1.989) and *Trc Pct ZScore* (coefficient 0.095, t-statistic 6.541) are positive and significant. Column (3) presents results using the count of top tercile indicators measure of deviation from industry norms (*Count Trc Pct*). The coefficient is positive and significant (coefficient 0.032, t-statistic 5.44). The remaining coefficients of interest in Table 11 are insignificant.

The dependent variable in Table 12 is *Misstate*. Column (1) presents results using the continuous measures of deviation from industry norms (*Pct Ret*, *Pct Vol*, *Pct ZScore*, and *Pct Lev*), Column (2) presents results using the top tercile indicator measures of deviation from industry norms (*Trc Pct Ret*, *Trc Pct Vol*, *Trc Pct ZScore*, and *Trc Pct Lev*), and Column (3) presents results using the count of top tercile indicators measure of deviation from industry norms (*Count Trc Pct*). The coefficient on *Count Trc Pct* is positive and significant (coefficient 0.099, z-statistic 2.067) while the remaining coefficients on the variables of interest are not statistically significant. The results in Tables 11 and 12 are very similar to the results from the main tests presented in Tables 5 and 6. Inferences are unchanged when using the *Pct Var* measures of deviation from industry norms.

Deviations Measured Using Industry Means

The primary analyses use the industry median as the benchmark for estimating deviations from the industry norm. In this section, I re-estimate the main tests using measures of deviation from the industry mean in order to investigate the sensitivity of my results to using the median as the benchmark. Specifically, I create a continuous measure of the deviation from the industry mean by fiscal year, as follows:

$$DevVar(Mean)_{it} = \left[\frac{(Var_{it} - \overline{Var}_{jt})}{std(Var_{it})_{jt}} \right].$$

Where: *i* indicates a company, *j* indicates a three-digit NAICS industry, and *t* indicates the fiscal year. I require each industry-year to have at least ten observations for calculating the industry mean for each risk factor. Following the same methodology used to create the variables of interest for the primary analyses, I create four continuous measures of deviation (*Dev Ret (Mean)*, *Dev Vol (Mean)*, *Dev ZScore (Mean)*, and *Dev Lev (Mean)*), top tercile indicator variables (*Trc Dev Ret (Mean)*, *Trc Dev Vol (Mean)*, *Trc Dev ZScore (Mean)*, and *Trc Dev Lev (Mean)*), and a count of top tercile indicators variable (*Count Trc Dev (Mean)*).

Tables 13 and 14 present the results of equations (1) and (2) using the *Dev Var (Mean)* measures of deviation from industry norms. The coefficient on *Dev ZScore (Mean)* is 0.044 (t-statistic 2.417), the coefficient on *Trc Dev Vol (Mean)* is 0.027 (t-statistic 2.433), the coefficient on *Trc Dev ZScore (Mean)* is 0.064 (t-statistic 5.548), and the coefficient on *Count Trc Dev (Mean)* is 0.026 (t-statistic 4.628). The remaining coefficients on the variables of interest are not statistically significant. The signs and significance of the coefficients in Table 13 are similar to those in Table 5, suggesting that the equation (1) results are not sensitive to using the mean instead of the median as the benchmark for the industry norm.

The results in Table 14 differ somewhat from the results in Table 6, however. Specifically, the coefficient on *Count Trc Dev (Mean)* is not statistically significant (coefficient 0.059, z-statistic 1.287) while the coefficient on *Trc Dev Ret (Mean)* is positive and significant (coefficient 0.157, z-static 1.823). The remaining coefficients on the variables of interest are not statistically significant.

In order to investigate the extent of the sensitivity of the misstatement results to using the mean as the industry benchmark, I re-estimate the Big Four auditor and industry specialist auditor specifications presented in Tables 8 and 10 using the *Dev Var (Mean)* measures of deviation from industry norms. The results (untabulated) indicate that inferences are unchanged. Specifically, the results suggest that Big Four auditors and industry specialist auditors are more responsive to deviations from industry norms and that these auditors mitigate the positive association between deviations from industry norms for leverage and the likelihood of misstatement. Taken together, the results from the tests discussed in this section suggest that overall inferences are not sensitive to using the mean instead of the median as the industry benchmark.

Mid-tier Auditors

The primary analyses investigate whether Big Four auditors are more responsive to deviations from industry norms than smaller auditors. However, mid-tier auditors, particularly the largest mid-tier auditors (Grant Thornton LLP and BDO USA, LLP), are also likely to have substantial resources and may have access to a similar quantity and quality of industry-level information relative to Big Four auditors. Moreover, prior literature indicates that mid-tier auditors have similar audit quality and similar financial reporting credibility post SOX relative to Big Four auditors (Boone, Khurana, and Raman 2010; Cassell, Giroux, Myers, and Omer 2013). I investigate whether mid-tier auditors respond similarly to deviations from industry norms relative to Big Four auditors in Table 15 and Table 16. These tables present the results of equations (1) and (2) after replacing *BigN* with *BigN-MidN*. *BigN-MidN* is an indicator variable set equal to one if the company is audited by Deloitte & Touche LLP, Ernst & Young LLP, KPMG LLP, PricewaterhouseCoopers LLP, Grant Thornton LLP, or BDO USA, LLP, and zero otherwise.

Table 15 Panel A presents the results of equation (1). The dependent variable is *Ln Fees*. Column (1) presents results using the continuous measures of deviation from industry norms (*Dev Ret*, *Dev Vol*, *Dev ZScore*, and *Dev Lev*). None of the coefficients on the variables of interest are statistically significant with the exception of the *BigN-MidN*Dev Vol* interaction term (coefficient 0.029, t-statistic 2.240). Column (2) presents results using the top tercile indicator measures of deviation from industry norms (*Trc Dev Ret*, *Trc Dev Vol*, *Trc Dev ZScore*, and *Trc Dev Lev*). Consistent with the results using the *BigN* indicator presented in Table 7, the *Trc Dev ZScore* coefficient is positive and significant (coefficient 0.163, t-statistic 5.741) and the coefficient on *Trc Dev Lev* is negative and significant (coefficient -0.096, t-statistic -3.147). However, the coefficient on *Trc Dev Vol* is not statistically significant. Also consistent with Table 7, the coefficients on *BigN-MidN*Trc Dev Vol* and *BigN*Dev Lev* are positive and significant (coefficients 0.048 and 0.120, respectively, t-statistics 1.823 and 3.924, respectively). The coefficient on *BigN-MidN*Trc Dev ZScore*, however, is negative and significant (coefficient -0.073, t-statistic -2.484). Column (3) presents results using the count of top tercile indicators measure of deviation from industry norms (*Count Trc Dev*). Both the *Count Trc Dev* and *BigN-MidN*Count Trc Dev* coefficients are positive and significant (coefficients 0.021 and 0.019, respectively, t-statistics 1.783 and 1.645, respectively).

Table 15 Panel B presents the results of F-tests used to test whether the total effects of my measures of deviation from industry norms on audit fees are statistically significant for *BigN-MidN* auditors. The results are similar to the results for *BigN* auditors presented in Table 7 Panel B, though the joint tests generally have smaller F-statistics (i.e., the results are weaker). Specifically, the results indicate that the sum of the coefficients related to my continuous measures of deviation from industry norms are positive and significant for financial distress (*Dev ZScore* + *BigN-MidN*Dev Zscore*, F-statistic 5.402) and leverage (*Dev Lev* + *BigN-MidN*Dev Lev*, F-statistic 4.050), but not for returns (*Dev Ret* + *BigN-MidN*Dev Ret*, F-statistic 0.160) or return volatility (*Dev Vol* + *BigN-MidN*Dev Vol*, F-statistic 1.768). The results indicate that the sum of the coefficients related to my top tercile indicator measures are positive and significant for return volatility (*Trc Dev Vol* + *BigN-MidN*Trc Dev Vol*, F-statistic 11.617), financial distress (*Trc Dev ZScore* + *BigN-MidN*Trc Dev Zscore*, F-statistic 39.126), and leverage (*Trc Dev Lev* + *BigN-MidN*Trc Dev Lev*, F-statistic 3.155), though not for returns (*Trc Dev Ret* + *BigN-MidN*Trc Dev Ret*, F-statistic 0.275). Lastly, the the sum of *Count Trc Dev* and *BigN-MidN*Count Trc Dev* is positive and significant (F-statistic 45.598).

Table 16 presents the results of equation (2). The dependent variable is *Misstate*. The results are similar to the results for *BigN* auditors presented in Table 8 and all inferences are unchanged. In Panel A, *Dev Lev* is positive and significant (coefficient 0.412, z-statistic 1.914) and *BigN-MidN*Dev Lev* is negative and significant (coefficient -0.457, z-statistic -1.995). In Panel B, the results of chi-squared tests indicate that the sums of the coefficients are never statistically different from zero. Consistent with the primary analyses, the results in Table 16 suggest that the total effect of *Dev Lev* on the likelihood of misstatement is positive and significant for companies audited by smaller auditors but not significantly different from zero for companies audited by *BigN-MidN* auditors. Taken together, results from Tables 15 and 16 provide evidence that *BigN-MidN* auditors are more responsive to deviations from industry norms than smaller auditors. However, the weaker results in Table 15 compared with Table 7 suggest that this effect is primarily driven by Big Four auditors.[20]

National Industry Specialist Auditors

The primary analyses investigate whether industry specialist auditors identified as specialists using the MSA industry market (*CLead*) are more responsive to industry norms than other auditors. Some *CLead* auditors are relatively small audit firms that may not have access to the quantity or quality of industry information that larger audit firms can access. As a result, national industry expertise may be more relevant in my setting than MSA-level industry expertise. I investigate this possibility in Tables 17 and 18. These tables present the results of equations (1) and (2) after replacing *CLead* with *NLead*. *NLead* is an indicator variable set equal to one if the auditor has the highest percent of audit fees in the company's three-digit NAICS industry, and zero otherwise.[21]

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[20] Results (untabulated) run separately on three samples (*BigN* auditors only, *MidN* auditors only, and smaller auditors only), provide additional support for this interpretation. The signs of the significant coefficients on the variables of interest in the *MidN*-only regressions are more similar to those in the small auditor-only regressions than those in the *BigN*-only regressions for audit fees and misstatements. This suggests that *MidN* auditors identify and respond to deviations from industry norms similarly to smaller auditors.

[21] Prior literature also identifies auditors as national industry specialists if they have more than 33.3 percent of all audit fees in the three-digit NAICS industry at the national level. However, this results in substantial overlap between Big Four auditors and those identified as specialists. Results (untabulated) using this alternative national specialist classification are similar (though somewhat weaker) than the results for *BigN* auditors presented in Tables 7 and 8.

Table 17 Panel A presents the results of equation (1). The dependent variable is *Ln Fees*. Column (1) presents results using the continuous measures of deviation from industry norms (*Dev Ret*, *Dev Vol*, *Dev ZScore*, and *Dev Lev*). The results in Column (1) are somewhat stronger than the results for *CLead* auditors presented in Table 9, suggesting that *NLead* auditors are more responsive to deviations from industry norms than other auditors for three of the four risk factors. Specifically, the coefficients on *NLead*Dev Vol*, *NLead*Dev ZScore*, and *NLead*Dev Lev* are positive and significant (coefficients 0.029, 0.089, and 0.050, respectively, t-statistics 1.931, 2.508, and 1.723, respectively).

Column (2) presents results using the top tercile indicator measures of deviation from industry norms (*Trc Dev Ret*, *Trc Dev Vol*, *Trc Dev ZScore*, and *Trc Dev Lev*) and Column (3) presents results using the count of top tercile indicators measure of deviations from industry norms (*Count Trc Dev*). The results in columns Columns (2) and (3) are similar to the results for *CLead* auditors presented in Table 9 and inferences are unchanged.

Table 17 Panel B presents the results of F-tests used to test whether the total effects of my measures of deviation from industry norms on audit fees are statistically significant for *NLead* auditors and results are similar to the results for *CLead* auditors presented in Table 9 Panel B. Specifically, the sum of the coefficients related to my continuous measures of deviation from the industry are positive and significant for financial distress (*Dev ZScore* + *NLead*Dev Zscore*, F-statistic 15.438) and leverage (*Dev Lev* + *NLead*Dev Lev*, F-statistic 4.160), but not for returns (*Dev Ret* + *NLead*Dev Ret*, F-statistic 2.189) or return volatility (*Dev Vol* + *NLead*Dev Vol*, F-statistic 0.898). The sum of the coefficients related to my top tercile indicator measures are positive and significant for all measures of deviation except for returns. Specifically, the F-statistic for the sum of the coefficients is 12.077 related to return volatility

(*Trc Dev Vol* + *NLead**Trc Dev Vol*), 16.222 related to financial distress (*Trc Dev ZScore* + *NLead**Trc Dev Zscore*), and 9.005 related to leverage (*Trc Dev Lev* + *NLead**Trc Dev Lev*). Lastly, the F-statistic for the sum of *Count Trc Dev* and *NLead*Count Trc Dev* is 34.360, indicating that the total effect of deviations from industry norms across multiple risk factors is positive and significant for *NLead* auditors.

Table 18 Panel A presents the results of equation (2). The dependent variable is *Misstate*. The only significant coefficient is the coefficient on the *NLead*Trc Dev ZScore* interaction in Column (2) (coefficient -0.373, z-statistic -1.768). Table 18 Panel B presents the results of the chi-squared tests estimating the total effect of deviation from industry norms for companies with *NLead* auditors. While the majority of the results are consistent with those for *CLead* auditors presented in Table 10 Panel B, the sum of *Trc Dev Ret* and *NLead*Trc Dev Ret* is positive and significant (chi-squared statistic 3.062). This provides limited evidence that the total effect of substantial deviation from industry norms for returns is associated with an increased likelihood of misstatement for *NLead* auditors. Overall, the results in Tables 17 and 18 suggest that, similarly to *CLead* auditors, *NLead* auditors are more responsive to deviations from industry norms than other auditors but they provide little evidence that this response is associated with the likelihood of misstatement.

VI. Conclusion

The purpose of this study is to investigate whether auditors respond to industry-level information and how their response affects audit outcomes. Auditing standards indicate that industry-level information is important in the assessment of client-level risk but provide auditors with little guidance about how they should use industry-level information and the types of information that are likely to be important. I propose that one way that auditors may use industry-level information is as a benchmark or norm against which to compare their clients when evaluating audit risk. I create measures that capture the extent to which clients deviate from industry norms using risk factors identified by prior literature and examine whether deviations from industry norms are associated with audit fees and with the likelihood of misstatement.

In my main tests, I find strong evidence that audit fees are positively associated with deviations from industry norms, suggesting that auditors identify and respond to risks reflected in these deviations. I find limited evidence that deviations from industry norms are associated with an increased likelihood of misstatement. These findings suggest that auditors generally appropriately incorporate industry-level information in their assessment of client-level risk.

I also examine whether the effects of deviations from industry norms on audit fees and on the likelihood of misstatement vary by auditor type. I find consistent evidence that both Big Four and industry specialist auditors are more responsive to deviations from industry norms than other auditors. I also find limited evidence that these auditors mitigate the increased likelihood of misstatement associated with deviations from industry norms for certain risk factors relative to smaller or non-specialist auditors.

My findings should be of interest to auditors, auditing standard setters, and regulators because, while they suggest that auditors generally appropriately identify and respond to industry-level information in their assessment of client-level risk, smaller, non-specialist, auditors may be able to improve audit outcomes by focusing more carefully on deviations from industry norms as an indicator of audit risk. My findings also suggest that additional guidance about the types of industry information that are likely to be useful and how to incorporate this industry information in the risk assessment process may help auditors, particularly smaller and non-specialist auditors, reduce the likelihood of adverse audit outcomes.

References

Altman, E. 1968. Financial ratios, discriminant analysis, and the prediction of corporate bankruptcy. *Journal of Finance* 23 (4): 589-609.

Aobdia, D. 2017. The validity of publicly available measures of audit quality. Evidence from the PCAOB inspection data. Working Paper, Northwestern University.

Balsam, S., J. Krishnan, and J. Yang. 2003. Auditor industry specialization and earnings quality. *Auditing: A Journal of Practice and Theory* 22 (2): 71-97.

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

Boone, J., I. Khurana, and K. Raman. 2010. Do the Big 4 and second-tier firms provide audits of similar quality? *Journal of Accounting and Public Policy* 29 (4): 330-352.

Brazel, J., K. Jones, and M. Zimbelman. 2009. Using nonfinancial measures to assess fraud risk. *Journal of Accounting Research* 47 (5): 1135-1166.

Burns, N., and S. Kedia. 2006. The impact of performance-based compensation on misreporting. *Journal of Financial Economics* 79: 35-67.

Cairney, T., and E. Stewart. 2015. Audit fees and client industry homogeneity. *Auditing: A Journal of Practice and Theory* 34 (4): 33-57.

Cao, Y., L. Myers, and T. Omer. 2012. Does company reputation matter for financial reporting quality? Evidence from restatements. *Contemporary Accounting Research* 29 (3): 956-990.

Cassell, C., M. Drake, and S. Rasmussen. 2011. Short interest as a signal of audit risk. *Contemporary Accounting Research* 28 (4): 1278-1297.

Cassell, C., G. Giroux, L. Myers, and T. Omer. 2013. The emergence of second-tier auditors in the US: Evidence from investor perceptions of financial reporting credibility. *Journal of Business Finance and Accounting* 40 (3): 350-372.

Craswell, A., J. Francis, and S. Taylor. 1995. Auditor brand name reputations and industry specializations. *Journal of Accounting and Economics* 20: 297-322.

DeFond, M., and J. Jiambalvo. 1991. Incidence and circumstances of accounting errors. *The Accounting Review* 66 (3): 643-655.

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

Erickson, M., M. Hanlon, and E. Maydew. 2006. Is there a link between executive incentives and accounting fraud? *Journal of Accounting Research* 44 (1): 113-143.

Erickson, M., B. Mayhew, and W. Felix. 2000. Why do audits fail? Evidence from Lincoln Savings and Loan. *Journal of Accounting Research* 38 (1): 165-194.

Eshleman, J., and P. Guo. 2014. Do Big 4 auditors provide higher audit quality after controlling for the endogenous choice of auditor? *Auditing: A Journal of Practice and Theory* 33 (4): 197-219.

Francis, J., E. Maydew, and H. Sparks. 1999. The role of Big 6 auditors in the credible reporting of accruals. *Auditing: A Journal of Practice and Theory* 18 (2): 17-34.

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

Fung, S., F. Gul, and J. Krishnan. 2012. City-level auditor industry specialization, economies of scale, and audit pricing. *The Accounting Review* 87 (4): 1281-1307.

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

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

Hutton, A., L. Lee, and S. Shu. 2012. Do managers always know better? The relative accuracy of management of analyst forecasts. *Journal of Accounting Research* 50 (5): 1217-1244.

Kinney, W., and L. McDaniel. 1989. Characteristics of firms correcting previously reported quarterly earnings. *Journal of Accounting and Economics* 11: 71-93.

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

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

Numan, W., and M. Willekens. 2012. An empirical test of spatial competition in the audit market. *Journal of Accounting and Economics* 53: 450-465.

Peterson, M. 2009. Estimating standard errors in finance panel data sets: Comparing approaches. *Review of Financial Studies* 22: 435-480.

Reichelt, K., and D. Wang. 2010. National and office-specific measures of auditor industry expertise and effects on audit quality. *Journal of Accounting Research* 48 (3): 647-686.

Rowe, S., and P. Sivadasan. 2016. Audit quality and restatement rates. Working Paper, University of Arkansas, Tulane University.

Shumway, T. 2001. Forecasting bankruptcy more accurately: A simple hazard model. *The Journal of Business* 74 (1): 101-124.

Tan, C., and S. Young. 2015. An analysis of "Little r" restatements. *Accounting Horizons* 29 (3): 667-693.

Appendix A
Variable Definitions

Variables of Interest	**Definition**

For the primary analyses, deviation from the industry is estimated by fiscal year as the company-specific risk factor minus the median of the risk factor for the industry, standardized by industry-year. Expressed mathematically:

$$DevVar_{it} = \left[\frac{(Var_{it} - median(Var_{jt}))}{median\_std(Var_{it})_{jt}} \right].$$

Where: *i* indicates a company, *j* indicates a three-digit NAICS industry, and *t* indicates the fiscal year. And where:

$$median\_std(Var_{it})_{jt} = \left[\frac{\sum | Var_{it} - median(Var_{jt}) |^2}{n} \right].$$

Var is replaced with the particular risk factor as detailed below.

Dev Ret =	*Var* is replaced with *Ret*, the company's raw return for the year, multiplied by negative one.
Dev Vol =	*Var* is replaced with *Vol*, the standard deviation of the company's daily stock returns over the prior year.
Dev ZScore =	*Var* is replaced with *ZScore*, the company's financial distress score, multiplied by negative one. Estimated using Altman's (1968) model as modified by Shumway (2001): *ZScore* = [1.2*WC/TA + 0.6*RE/TA + 10.0*EBIT/TA + 0.05*ME/TL - 0.47*S/TA]*[-1], where: WC is current assets minus current liabilities, TA is total assets, RE is retained earnings, EBIT is earnings before interest and taxes, ME is the end-of-year share price times total common shares outstanding, and S is total revenue.
Dev Lev =	*Var* is replaced with *Lev*, the company's total liabilities divided by average total assets.
Trc Dev Ret =	an indicator variable set equal to one if the company's *Dev Ret* is in the top tercile of the sample distribution by fiscal year, and zero otherwise.
Trc Dev Vol =	an indicator variable set equal to one if the company's *Dev Vol* is in the top tercile of the sample distribution by fiscal year, and zero otherwise.

Trc Dev ZScore = an indicator variable set equal to one if the company's *Dev ZScore* is in the top tercile of the sample distribution by fiscal year, and zero otherwise.

Trc Dev Lev = an indicator variable set equal to one if the company's *Dev Lev* is in the top tercile of the sample distribution by fiscal year, and zero otherwise.

Count Trc Dev = the count of the company's top tercile indicators (*Trc Dev Ret*, *Trc Dev Vol*, *Trc Dev ZScore*, and *Trc Dev Lev*).

In additional analyses, deviation from the industry is estimated by fiscal year as the company-specific risk factor minus the median of the risk factor for the industry, divided by the absolute value of the median of the risk factor for the industry. Expressed mathematically:

$$PctVar_{it} = \left[\frac{(Var_{it} - median(Var_{jt}))}{| median(Var_{jt}) |} \right].$$

Where: *i* indicates a company, *j* indicates a three-digit NAICS industry, and *t* indicates the fiscal year. *Var* is replaced with the particular risk factor as detailed below.

Pct Ret = *Var* is replaced with *Ret*, the company's raw return for the year, multiplied by negative one.

Pct Vol = *Var* is replaced with *Vol*, the standard deviation of the company's daily stock returns over the prior year.

Pct ZScore = *Var* is replaced with *ZScore*, the company's financial distress score, multiplied by negative one. Estimated using Altman's (1968) model as modified by Shumway (2001): *ZScore* = [1.2*WC/TA + 0.6*RE/TA + 10.0*EBIT/TA + 0.05*ME/TL - 0.47*S/TA]*[-1], where: WC is current assets minus current liabilities, TA is total assets, RE is retained earnings, EBIT is earnings before interest and taxes, ME is the end-of-year share price times total common shares outstanding, and S is total revenue.

Pct Lev = *Var* is replaced with *Lev*, the company's total liabilities divided by average total assets.

Trc Pct Ret = an indicator variable set equal to one if the company's *Pct Ret* is in the top tercile of the sample distribution by fiscal year, and zero otherwise.

Trc Pct Vol = an indicator variable set equal to one if the company's *Pct Vol* is in the top tercile of the sample distribution by fiscal year, and zero otherwise.

Trc Pct ZScore =	an indicator variable set equal to one if the company's *Pct ZScore* is in the top tercile of the sample distribution by fiscal year, and zero otherwise.
Trc Pct Lev =	an indicator variable set equal to one if the company's *Pct Lev* is in the top tercile of the sample distribution by fiscal year, and zero otherwise.
Count Trc Pct =	the count of the company's top tercile indicators (*Trc Pct Ret*, *Trc Pct Vol*, *Trc Pct ZScore*, and *Trc Pct Lev*).

Other Variables	**Definition**
Ret =	the company's raw return for the year, multiplied by negative one.
Vol =	the standard deviation of the company's daily stock returns over the prior year.
ZScore =	the company's financial distress score, multiplied by negative one. Estimated using Altman's (1968) model as modified by Shumway (2001): *ZScore* = [1.2*WC/TA + 0.6*RE/TA + 10.0*EBIT/TA + 0.05*ME/TL - 0.47*S/TA]*[-1], where: WC is current assets minus current liabilities, TA is total assets, RE is retained earnings, EBIT is earnings before interest and taxes, ME is the end-of-year share price times total common shares outstanding, and S is total revenue.
Lev =	the company's leverage (total liabilities divided by average total assets).
Fees =	the company's total audit fees.
Ln Fees =	the natural log of the company's total audit fees.
Misstate =	an indicator variable set equal to one if the company subsequently restates current year financial statements, and zero otherwise. Restatements are limited to those reported in a form 8-K ("Big R" restatements), following Aobdia (2017) and Tan and Young (2015).
AT =	the company's total assets ($ millions).
Ln AT =	the natural log of the company's total assets ($ millions).
Rev =	the company's total revenue ($ millions).
Ln Rev =	the natural log of the company's total revenue ($ millions).

Curr = the company's current ratio (current assets divided by current liabilities).

FCF = the company's free cash flows (cash flow from operations less capital expenditures divided by current assets).

CF Vol = the standard deviation of the company's net operating cash flow over the prior three years.

Rev Vol = the standard deviation of the company's total revenue over the prior three years.

Seg = the count of the company's business and geographic segments.

Ln Seg = the natural log of the count of the company's business and geographic segments.

Foreign = an indicator variable set equal to one if the company reports foreign pretax income, and zero otherwise.

Loss = an indicator variable set equal to one if the company reports a net loss, and zero otherwise.

GCO = an indicator variable set equal to one if the company receives a going-concern audit opinion, and zero otherwise.

Busy = an indicator variable set equal to one if the company has a December fiscal year-end, and zero otherwise.

BigN = an indicator variable set equal to one if the company is audited by Deloitte & Touche LLP, Ernst & Young LLP, KPMG LLP, or PricewaterhouseCoopers LLP, and zero otherwise.

BigN-MidN = an indicator variable set equal to one if the company is audited by Deloitte & Touche LLP, Ernst & Young LLP, KPMG LLP, PricewaterhouseCoopers LLP, Grant Thornton LLP, or BDO USA, LLP, and zero otherwise.

Merge = an indicator variable set equal to one if the company reports sales from acquisitions, and zero otherwise.

Mat Weak = an indicator variable set equal to one if the company has one or more material weaknesses in internal control identified under SOX 302 or SOX 404, and zero otherwise.

Ind Herf = company Herfindahl concentration in the industry, calculated as $\sum_{i=1}^{n} s_i^2$,
where *i* is a company and *s* is market share calculated using revenue. An industry is defined as a three-digit NAICS industry.

Au Herf = auditor Herfindahl concentration in the industry, calculated as $\sum_{i=1}^{n} s_i^2$,
where i is an audit firm and s is market share calculated using audit fees. An industry is defined as a three-digit NAICS industry.

CLead = an indicator variable set equal to one if the auditor has more than 33.3 percent of all audit fees in the company's three-digit NAICS industry and Metropolitan Statistical Area (MSA), and zero otherwise.

NLead = an indicator variable set equal to one if the auditor has the highest percent of audit fees in the company's three-digit NAICS industry, and zero otherwise.

Short Ten = an indicator variable set equal to one if the company's audit is a first-, second-, or third-year engagement, and zero otherwise.

Table 1: Sample Selection

Observations in Compustat and Audit Analytics from 2004 through 2013	70,893
Observations missing NAICS industry identifier	-1,861
Financial and utilities companies	-21,400
Observations in industries with fewer than 10 observations in a year for calculating industry medians	-1,426
Observations missing required variables	-21,212
Observations dropped because of perfect collinearity	-94
Sample	**24,900**

Table 2: Industry Detail

	Three-digit NAICS	(1) Sample		(2) Compustat	
		N	%	N	%
Crop Production	111	25	0.10	182	0.32
Oil and Gas Extraction	211	805	3.23	2,474	4.30
Mining (except Oil and Gas)	212	251	1.01	1,845	3.20
Support Activities for Mining	213	284	1.14	517	0.90
Heavy and Civil Engineering Construction	237	147	0.59	434	0.75
Specialty Trade Contractors	238	66	0.27	187	0.32
Food Manufacturing	311	492	1.98	1,037	1.80
Beverage and Tobacco Product Manufacturing	312	209	0.84	528	0.92
Apparel Manufacturing	315	274	1.10	527	0.92
Leather and Allied Product Manufacturing	316	167	0.67	224	0.39
Wood Product Manufacturing	321	99	0.40	193	0.34
Paper Manufacturing	322	240	0.96	507	0.88
Printing and Related Support Activities	323	141	0.57	198	0.34
Petroleum and Coal Products Manufacturing	324	173	0.69	548	0.95
Chemical Manufacturing	325	3,037	12.20	7,725	13.41
Plastics and Rubber Products Manufacturing	326	226	0.91	519	0.90
Nonmetallic Mineral Product Manufacturing	327	159	0.64	346	0.60
Primary Metal Manufacturing	331	327	1.31	791	1.37
Fabricated Metal Product Manufacturing	332	467	1.88	736	1.28
Machinery Manufacturing	333	1,210	4.86	2,196	3.81
Computer and Electronic Product Manufacturing	334	4,068	16.34	7,971	13.84
Electrical Equipment, Appliance, and Component Manufacturing	335	582	2.34	1,092	1.90
Transportation Equipment Manufacturing	336	713	2.86	1,544	2.68
Furniture and Related Product Manufacturing	337	184	0.74	259	0.45
Miscellaneous Manufacturing	339	925	3.71	1,843	3.20

Table 2: Industry Detail (Cont.)

	Three-digit NAICS	(1) Sample N	(1) Sample %	(2) Compustat N	(2) Compustat %
Merchant Wholesalers, Durable Goods	423	628	2.52	1,230	2.14
Merchant Wholesalers, Nondurable Goods	424	320	1.29	846	1.47
Motor Vehicle and Parts Dealers	441	149	0.60	205	0.36
Electronics and Appliance Stores	443	8	0.03	119	0.21
Food and Beverage Stores	445	114	0.46	257	0.45
Health and Personal Care Stores	446	106	0.43	241	0.42
Clothing and Clothing Accessories Stores	448	423	1.70	603	1.05
Sporting Goods, Hobby, Musical Instrument, and Book Stores	451	91	0.37	195	0.34
General Merchandise Stores	452	190	0.76	261	0.45
Miscellaneous Store Retailers	453	61	0.24	138	0.24
Nonstore Retailers	454	187	0.75	515	0.89
Air Transportation	481	157	0.63	399	0.69
Rail Transportation	482	7	0.03	108	0.19
Water Transportation	483	100	0.40	649	1.13
Truck Transportation	484	198	0.80	258	0.45
Publishing Industries (except Internet)	511	1,379	5.54	3,457	6.00
Motion Picture and Sound Recording Industries	512	85	0.34	391	0.68
Broadcasting (except Internet)	515	311	1.25	641	1.11
Telecommunications	517	554	2.22	2,038	3.54
Data Processing, Hosting, and Related Services	518	357	1.43	881	1.53
Other Information Services	519	332	1.33	1,369	2.38
Rental and Leasing Services	532	83	0.33	426	0.74
Professional, Scientific, and Technical Services	541	1,513	6.08	3,392	5.89
Administrative and Support Services	561	593	2.38	1,132	1.97
Educational Services	611	152	0.61	363	0.63

Table 2: Industry Detail (Cont.)

	Three-digit NAICS	(1) Sample N	(1) Sample %	(2) Compustat N	(2) Compustat %
Ambulatory Health Care Services	621	438	1.76	810	1.41
Hospitals	622	98	0.39	206	0.36
Nursing and Residential Care Facilities	623	113	0.45	164	0.28
Amusement, Gambling, and Recreation Industries	713	158	0.63	415	0.72
Accommodation	721	151	0.61	379	0.66
Food Services and Drinking Places	722	476	1.91	901	1.56
Personal and Laundry Services	812	97	0.39	177	0.31
	Total	**24,900**	**100.00**	**57,589**	**100.00**

This table presents the distribution of sample observations across three-digit NAICS industries and the distribution of all Compustat observations with non-missing NAICS industry identifiers for comparison.

Table 3: Descriptive Statistics

Variables (N = 24,900)	Mean	Std	0.25	Mdn	0.75
Ret	-0.1492	0.6123	-0.3757	-0.0683	0.2165
Vol	0.0335	0.0196	0.0207	0.0285	0.0404
Zscore	0.3246	4.9627	-1.3936	-0.6161	0.4509
Lev	0.4955	0.2891	0.2883	0.4686	0.6442
Dev Ret	-0.1515	0.9836	-0.5836	-0.0020	0.4596
Dev Vol	0.2024	0.9358	-0.4035	0.0000	0.5569
Dev ZScore	0.0014	0.3355	-0.0329	-0.0064	0.0218
Dev Lev	-0.0079	0.3715	-0.0301	-0.0015	0.0121
Trc Dev Ret	0.3333	0.4714	0	0	1
Trc Dev Vol	0.3333	0.4714	0	0	1
Trc Dev ZScore	0.3333	0.4714	0	0	1
Trc Dev Lev	0.3333	0.4714	0	0	1
Count Trc Dev	1.3333	1.1617	0	1	2
Fees	1,800,000	2,500,000	400,000	900,000	2,000,000
Ln Fees	13.6971	1.2037	12.8783	13.7086	14.4876
Misstate	0.0449	0.2072	0	0	0
AT	3,300	13,000	101	405	1,700
Ln AT	6.0850	1.9853	4.6278	6.0075	7.4317
Rev	2,700	7,700	82	390	1,600
Ln Rev	5.8630	2.2145	4.4204	5.9676	7.3784
Curr	3.0406	3.1340	1.4394	2.1519	3.4679
FCF	-0.0326	0.7232	-0.0702	0.0807	0.2031
CF Vol	89.2344	393.0833	4.9345	15.1388	50.8670
Rev Vol	283.4327	907.3932	10.5615	44.2697	172.5905
Seg	4.8752	2.8242	2	4	6
Ln Seg	1.4255	0.5638	0.6931	1.3863	1.7918
Foreign	0.4985	0.5000	0	0	1
Loss	0.3320	0.4709	0	0	1
GCO	0.0281	0.1653	0	0	0
Busy	0.6697	0.4703	0	1	1
BigN	0.7398	0.4388	0	1	1
Merge	0.1111	0.3142	0	0	0
Mat Weak	0.0727	0.2596	0	0	0
Ind Herf	0.0712	0.0572	0.0291	0.0570	0.0872
Au Herf	0.2588	0.0497	0.2288	0.2481	0.2669
CLead	0.5578	0.4967	0	1	1
Short Ten	0.1936	0.3951	0	0	0

Table 3: Descriptive Statistics (Cont.)

All variables are as defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels.

Table 4: Correlations

Variables	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**	**12.**
1. Ret	1											
2. Vol	**0.21**	1										
3. Zscore	**0.12**	**0.38**	1									
4. Lev	**-0.05**	**0.05**	**0.14**	1								
5. Dev Ret	**0.82**	**0.15**	**0.15**	**-0.03**	1							
6. Dev Vol	**0.09**	**0.80**	**0.38**	**0.06**	**0.15**	1						
7. Dev ZScore	**0.07**	**0.23**	**0.38**	**0.11**	**0.12**	**0.29**	1					
8. Dev Lev	**-0.02**	**0.05**	**0.06**	**0.48**	-0.01	**0.05**	**0.19**	1				
9. Trc Dev Ret	**0.54**	**0.26**	**0.20**	**-0.02**	**0.66**	**0.28**	**0.15**	**0.01**	1			
10. Trc Dev Vol	**0.04**	**0.62**	**0.31**	**0.04**	**0.10**	**0.76**	**0.23**	**0.04**	**0.23**	1		
11. Trc Dev ZScore	**0.12**	**0.40**	**0.46**	**0.13**	**0.18**	**0.46**	**0.40**	**0.11**	**0.25**	**0.42**	1	
12. Trc Dev Lev	**-0.02**	**0.03**	**0.06**	**0.67**	**-0.03**	**0.03**	**0.10**	**0.42**	**-0.01**	**0.03**	**0.12**	1
13. Count Trc Dev	**0.27**	**0.54**	**0.42**	**0.33**	**0.37**	**0.62**	**0.35**	**0.24**	**0.60**	**0.68**	**0.73**	**0.46**
14. Ln Fees	-0.01	**-0.36**	**-0.22**	**0.27**	**-0.02**	**-0.42**	**-0.09**	**0.13**	**-0.14**	**-0.36**	**-0.23**	**0.23**
15. Misstate	0.00	0.01	0.01	**0.04**	0.00	**0.03**	**0.01**	**0.02**	**0.01**	**0.03**	**0.02**	**0.02**
16. Ln AT	**-0.04**	**-0.45**	**-0.35**	**0.28**	**-0.05**	**-0.50**	**-0.17**	**0.11**	**-0.18**	**-0.43**	**-0.34**	**0.23**
17. Ln Rev	**-0.05**	**-0.45**	**-0.41**	**0.28**	**-0.06**	**-0.47**	**-0.16**	**0.10**	**-0.19**	**-0.41**	**-0.33**	**0.23**
18. Curr	0.00	**0.03**	**-0.06**	**-0.44**	-0.01	0.01	**-0.07**	**-0.13**	**0.02**	**0.02**	**-0.07**	**-0.26**
19. FCF	**-0.11**	**-0.31**	**-0.52**	**-0.06**	**-0.13**	**-0.29**	**-0.22**	**-0.02**	**-0.16**	**-0.22**	**-0.27**	**-0.04**
20. CF Vol	-0.01	**-0.12**	**-0.06**	**0.07**	-0.01	**-0.14**	**-0.02**	**0.03**	**-0.05**	**-0.11**	**-0.07**	**0.04**
21. Rev Vol	-0.01	**-0.16**	**-0.07**	**0.12**	**-0.02**	**-0.17**	**-0.02**	**0.07**	**-0.08**	**-0.14**	**-0.06**	**0.11**
22. Ln Seg	**-0.02**	**-0.20**	**-0.18**	0.00	**-0.03**	**-0.22**	**-0.05**	**0.03**	**-0.09**	**-0.19**	**-0.19**	**0.04**

Table 4: Correlations (Cont.)

Variables	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**	**12.**
23. Foreign	**-0.02**	**-0.21**	**-0.17**	0.01	**-0.03**	**-0.24**	**-0.06**	**0.06**	**-0.09**	**-0.21**	**-0.20**	**0.04**
24. Loss	**0.16**	**0.43**	**0.43**	**0.04**	**0.21**	**0.44**	**0.29**	**0.06**	**0.28**	**0.40**	**0.57**	**0.04**
25. GCO	**0.10**	**0.33**	**0.43**	**0.13**	**0.12**	**0.34**	**0.19**	**0.07**	**0.14**	**0.22**	**0.22**	**0.07**
26. Busy	**-0.02**	**0.03**	**0.06**	**0.10**	**0.01**	**0.01**	**0.01**	**0.04**	-0.01	**0.01**	**0.02**	**0.06**
27. BigN	**-0.02**	**-0.27**	**-0.12**	**0.15**	**-0.03**	**-0.31**	**-0.09**	**0.07**	**-0.10**	**-0.26**	**-0.16**	**0.12**
28. Merge	0.00	**-0.06**	**-0.05**	**0.08**	**-0.01**	**-0.06**	**-0.01**	**0.07**	**-0.02**	**-0.06**	**-0.07**	**0.07**
29. Mat Weak	**0.05**	**0.10**	**0.06**	**0.02**	**0.06**	**0.14**	**0.05**	0.01	**0.09**	**0.11**	**0.09**	0.01
30. Ind Herf	**-0.01**	**-0.06**	**-0.09**	**0.08**	**0.01**	0.00	**-0.02**	**-0.01**	0.00	-0.01	**0.03**	**0.03**
31. Au Herf	**-0.05**	**-0.12**	**-0.06**	**0.12**	0.01	0.00	**-0.02**	**-0.02**	**-0.01**	-0.01	**0.01**	**0.04**
32. CLead	**-0.01**	**-0.17**	**-0.10**	**0.14**	0.00	**-0.17**	**-0.04**	**0.05**	**-0.05**	**-0.15**	**-0.08**	**0.12**
33. Short Ten	0.00	**0.14**	**0.06**	**-0.03**	**0.01**	**0.17**	**0.05**	-0.01	**0.05**	**0.14**	**0.09**	**-0.03**

Table 4: Correlations (Cont.)

Variables	**13.**	**14.**	**15.**	**16.**	**17.**	**18.**	**19.**	**20.**	**21.**	**22.**	**23.**	**24.**
13. Count Trc Dev	1											
14. Ln Fees	**-0.20**	1										
15. Misstate	**0.04**	-0.01	1									
16. Ln AT	**-0.29**	**0.87**	**-0.02**	1								
17. Ln Rev	**-0.28**	**0.81**	**-0.02**	**0.91**	1							
18. Curr	**-0.11**	**-0.27**	**-0.02**	**-0.26**	**-0.38**	1						
19. FCF	**-0.28**	**0.20**	**-0.01**	**0.23**	**0.34**	0.01	1					
20. CF Vol	**-0.08**	**0.32**	**-0.02**	**0.39**	**0.33**	**-0.08**	**0.06**	1				
21. Rev Vol	**-0.07**	**0.42**	**-0.02**	**0.49**	**0.47**	**-0.12**	**0.07**	**0.50**	1			
22. Ln Seg	**-0.17**	**0.44**	0.00	**0.35**	**0.37**	**-0.10**	**0.17**	**0.13**	**0.16**	1		
23. Foreign	**-0.19**	**0.49**	**-0.03**	**0.37**	**0.37**	**-0.09**	**0.16**	**0.12**	**0.14**	**0.52**	1	
24. Loss	**0.52**	**-0.24**	**0.02**	**-0.36**	**-0.45**	**0.10**	**-0.29**	**-0.09**	**-0.13**	**-0.19**	**-0.16**	1
25. GCO	**0.26**	**-0.13**	**-0.01**	**-0.20**	**-0.22**	**-0.06**	**-0.30**	**-0.03**	**-0.04**	**-0.08**	**-0.10**	**0.22**
26. Busy	**0.04**	**0.07**	**-0.02**	**0.06**	**-0.02**	-0.01	**-0.06**	**0.03**	**0.03**	**-0.04**	**-0.02**	**0.07**
27. BigN	**-0.16**	**0.57**	0.01	**0.52**	**0.46**	**-0.10**	**0.13**	**0.12**	**0.17**	**0.17**	**0.23**	**-0.16**
28. Merge	**-0.03**	**0.09**	**0.01**	**0.08**	**0.07**	**-0.07**	**0.06**	0.00	**0.03**	**0.07**	**0.05**	**-0.05**
29. Mat Weak	**0.12**	**-0.01**	**0.10**	**-0.11**	**-0.09**	**-0.02**	**-0.04**	**-0.04**	**-0.05**	0.00	**-0.02**	**0.10**
30. Ind Herf	**0.02**	**0.05**	-0.01	**0.11**	**0.20**	**-0.14**	**0.09**	0.01	**0.07**	**-0.08**	**-0.09**	**-0.11**
31. Au Herf	**0.01**	**0.07**	0.00	**0.14**	**0.18**	**-0.08**	**0.09**	**0.07**	**0.09**	0.00	**-0.07**	**-0.08**
32. CLead	**-0.07**	**0.33**	0.00	**0.35**	**0.35**	**-0.12**	**0.11**	**0.11**	**0.15**	**0.09**	**0.07**	**-0.13**
33. Short Ten	**0.10**	**-0.24**	**0.03**	**-0.23**	**-0.21**	**0.03**	**-0.07**	**-0.06**	**-0.07**	**-0.07**	**-0.10**	**0.09**

Table 4: Correlations (Cont.)

Variables	25.	26.	27.	28.	29.	30.	31.	32.	33.
25. GCO	1								
26. Busy	**0.02**	1							
27. BigN	**-0.11**	**0.07**	1						
28. Merge	**-0.04**	**0.02**	**0.04**	1					
29. Mat Weak	**0.07**	**-0.02**	**-0.09**	0.01	1				
30. Ind Herf	**-0.04**	**-0.04**	**0.01**	0.01	-0.01	1			
31. Au Herf	**-0.02**	**0.04**	**0.09**	**-0.01**	**-0.01**	**0.38**	1		
32. CLead	**-0.06**	**0.03**	**0.37**	**0.01**	**-0.03**	**0.19**	**0.20**	1	
33. Short Ten	**0.07**	0.00	**-0.32**	0.00	**0.11**	**-0.01**	-0.01	**-0.15**	1

All variables are as defined in Appendix A. This table presents Pearson's pairwise correlation coefficients. Bold indicates significance at the 0.10 level or below. All continuous variables are winsorized at the 1% and 99% levels.

Table 5: *Ln Fees*

Variables	(1) Continuous	t	(2) Top Tercile Ind	t	(3) Top Tercile Count	t
Ret	-0.004	(-0.324)	-0.002	(-0.242)	-0.018***	(-3.030)
Vol	-0.160	(-0.320)	-0.986***	(-2.726)	-1.101***	(-3.259)
Zscore	0.020***	(9.038)	0.019***	(9.308)	0.020***	(9.505)
Lev	0.044	(1.553)	0.037	(1.232)	0.014	(0.528)
Dev Ret	0.001	(0.093)				
Dev Vol	-0.003	(-0.310)				
Dev ZScore	0.047***	(2.616)				
Dev Lev	0.020	(1.138)				
Trc Dev Ret			-0.003	(-0.396)		
Trc Dev Vol			0.026**	(2.267)		
Trc Dev ZScore			0.108***	(7.721)		
Trc Dev Lev			0.006	(0.466)		
Count Trc Dev					0.035***	(6.130)
Ln AT	0.368***	(35.572)	0.372***	(35.998)	0.370***	(35.775)
Ln Rev	0.119***	(11.903)	0.121***	(12.263)	0.120***	(12.095)
Curr	-0.004*	(-1.808)	-0.003	(-1.185)	-0.004	(-1.626)
FCF	-0.000	(-0.036)	-0.001	(-0.097)	-0.001	(-0.089)
CF Vol	-0.000***	(-4.168)	-0.000***	(-4.064)	-0.000***	(-4.083)
Rev Vol	0.000	(1.291)	0.000	(0.666)	0.000	(1.084)
Ln Seg	0.154***	(10.395)	0.155***	(10.491)	0.155***	(10.440)
Foreign	0.253***	(15.079)	0.255***	(15.223)	0.255***	(15.202)
Loss	0.167***	(14.003)	0.124***	(10.638)	0.149***	(12.820)

Table 5: *Ln Fees* (Cont.)

Variables	(1) Continuous	t	(2) Top Tercile Ind	t	(3) Top Tercile Count	t
GCO	0.077***	(2.671)	0.095***	(3.319)	0.089***	(3.083)
Busy	0.075***	(4.690)	0.075***	(4.664)	0.075***	(4.689)
BigN	0.388***	(20.122)	0.385***	(20.070)	0.387***	(20.121)
Merge	0.029**	(2.371)	0.035***	(2.891)	0.032***	(2.582)
Mat Weak	0.332***	(17.615)	0.331***	(17.588)	0.330***	(17.516)
Ind Herf	-0.569***	(-2.790)	-0.583***	(-2.874)	-0.564***	(-2.774)
Au Herf	-0.043	(-0.319)	-0.048	(-0.354)	-0.047	(-0.349)
CLead	0.041***	(3.057)	0.041***	(3.097)	0.041***	(3.095)
Short Ten	-0.030**	(-2.542)	-0.031***	(-2.608)	-0.031***	(-2.625)
Constant	9.865***	(63.737)	9.811***	(64.031)	9.833***	(64.245)
Observations	24,900		24,900		24,900	
Adjusted R-squared	0.847		0.848		0.847	
Industry FE/Year FE	Yes/Yes		Yes/Yes		Yes/Yes	

*The dependent variable is Ln Fees. All variables are as defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. Industry fixed effects are at the three-digit NAICS level. Year fixed effects are included for the fiscal year of the company. The models are estimated using OLS regression with robust standard errors clustered by company. ***,**, and * indicate two tailed significance at the 0.01, 0.05, and 0.10 levels, respectively.*

Table 6: ***Misstate***

Variables	**(1)** **Continuous**	**z**	**(2)** **Top Tercile Ind**	**z**	**(3)** **Top Tercile Count**	**z**
Ret	-0.022	(-0.145)	-0.116*	(-1.661)	-0.112*	(-1.891)
Vol	9.911**	(1.969)	8.733***	(2.874)	9.119***	(3.165)
Zscore	-0.004	(-0.341)	-0.005	(-0.448)	-0.005	(-0.393)
Lev	0.546***	(2.980)	0.554***	(3.243)	0.496***	(3.077)
Dev Ret	-0.032	(-0.377)				
Dev Vol	0.023	(0.259)				
Dev ZScore	0.041	(0.215)				
Dev Lev	0.057	(0.449)				
Trc Dev Ret			0.089	(1.004)		
Trc Dev Vol			0.104	(1.021)		
Trc Dev ZScore			0.103	(0.883)		
Trc Dev Lev			0.018	(0.173)		
Count Trc Dev					0.080*	(1.734)
Ln AT	0.152**	(1.998)	0.159**	(2.084)	0.155**	(2.047)
Ln Rev	-0.056	(-0.795)	-0.054	(-0.784)	-0.055	(-0.799)
Curr	0.000	(0.009)	0.002	(0.134)	0.002	(0.124)
FCF	-0.082*	(-1.804)	-0.083*	(-1.837)	-0.083*	(-1.831)
CF Vol	-0.000	(-0.848)	-0.000	(-0.850)	-0.000	(-0.840)
Rev Vol	-0.000	(-0.883)	-0.000	(-0.905)	-0.000	(-0.904)
Ln Seg	0.235**	(2.100)	0.236**	(2.103)	0.236**	(2.097)
Foreign	-0.221**	(-1.973)	-0.218*	(-1.947)	-0.217*	(-1.937)
Loss	0.097	(0.980)	0.034	(0.321)	0.044	(0.454)

Table 6: *Misstate* (Cont.)

Variables	**(1) Continuous**	**z**	**(2) Top Tercile Ind**	**z**	**(3) Top Tercile Count**	**z**
GCO	-1.114***	(-4.287)	-1.069***	(-4.156)	-1.072***	(-4.191)
Busy	-0.199*	(-1.818)	-0.202*	(-1.845)	-0.202*	(-1.848)
BigN	-0.083	(-0.637)	-0.085	(-0.650)	-0.083	(-0.633)
Merge	0.031	(0.300)	0.039	(0.374)	0.036	(0.343)
Mat Weak	0.791***	(8.166)	0.783***	(8.077)	0.784***	(8.099)
Ind Herf	0.138	(0.065)	0.222	(0.104)	0.212	(0.100)
Au Herf	-1.456	(-1.013)	-1.502	(-1.037)	-1.486	(-1.023)
CLead	0.031	(0.301)	0.031	(0.307)	0.031	(0.303)
Short Ten	-0.131	(-1.361)	-0.132	(-1.364)	-0.131	(-1.358)
Constant	-2.808**	(-2.127)	-2.937**	(-2.226)	-2.908**	(-2.215)
Observations	24,900		24,900		24,900	
Pseudo R-squared	0.107		0.108		0.108	
Area under ROC	0.756		0.755		0.755	
Industry FE/Year FE	Yes/Yes		Yes/Yes		Yes/Yes	

*The dependent variable is Misstate. All variables are as defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. Industry fixed effects are at the three-digit NAICS level. Year fixed effects are included for the fiscal year of the company. The models are estimated using Logistic regression with robust standard errors clustered by company. ***,**, and * indicate two tailed significance at the 0.01, 0.05, and 0.10 levels, respectively.*

Table 7: *Ln Fees* with *BigN* Interactions

Panel A: Regression Output	**(1)**		**(2)**		**(3)**	
Variables	**Continuous**	**t**	**Top Tercile Ind**	**t**	**Top Tercile Count**	**t**
Ret	-0.001	(-0.080)	0.000	(0.029)	-0.015**	(-2.531)
Vol	-0.185	(-0.368)	-0.720**	(-2.014)	-0.884***	(-2.644)
Zscore	0.020***	(8.994)	0.019***	(9.273)	0.020***	(9.501)
Lev	0.043	(1.514)	0.045	(1.499)	0.015	(0.559)
Dev Ret	0.002	(0.207)				
Dev Vol	-0.042***	(-3.335)				
Dev ZScore	0.047	(1.452)				
Dev Lev	-0.065*	(-1.810)				
Trc Dev Ret			-0.022	(-1.509)		
Trc Dev Vol			-0.050**	(-2.343)		
Trc Dev ZScore			0.116***	(4.665)		
Trc Dev Lev			-0.098***	(-3.590)		
Count Trc Dev					-0.005	(-0.512)
*BigN*Dev Ret*	-0.003	(-0.482)				
*BigN*Dev Vol*	0.072***	(5.878)				
*BigN*Dev ZScore*	0.002	(0.057)				
*BigN*Dev Lev*	0.112***	(3.006)				
*BigN*Trc Dev Ret*			0.024	(1.541)		
*BigN*Trc Dev Vol*			0.106***	(4.539)		
*BigN*Trc Dev ZScore*			-0.012	(-0.464)		
*BigN*Trc Dev Lev*			0.128***	(4.572)		
*BigN*Count Trc Dev*					0.053***	(5.038)

Table 7: *Ln Fees* with *BigN* Interactions (Cont.)

Panel A: Regression Output

	(1)		(2)		(3)	
Variables	**Continuous**	**t**	**Top Tercile Ind**	**t**	**Top Tercile Count**	**t**
Ln AT	0.371***	(36.039)	0.373***	(36.106)	0.371***	(35.872)
Ln Rev	0.120***	(12.009)	0.121***	(12.253)	0.120***	(12.061)
Curr	-0.005**	(-2.006)	-0.003	(-1.439)	-0.004*	(-1.867)
FCF	-0.002	(-0.207)	-0.001	(-0.159)	-0.001	(-0.127)
CF Vol	-0.000***	(-3.963)	-0.000***	(-3.903)	-0.000***	(-3.992)
Rev Vol	0.000	(1.405)	0.000	(0.701)	0.000	(1.120)
Ln Seg	0.156***	(10.566)	0.156***	(10.594)	0.156***	(10.562)
Foreign	0.252***	(15.087)	0.255***	(15.277)	0.256***	(15.250)
Loss	0.163***	(13.707)	0.124***	(10.583)	0.151***	(12.959)
GCO	0.095***	(3.289)	0.106***	(3.676)	0.098***	(3.417)
Busy	0.074***	(4.625)	0.074***	(4.627)	0.074***	(4.665)
BigN	0.357***	(17.070)	0.301***	(11.340)	0.306***	(11.525)
Merge	0.027**	(2.256)	0.036***	(2.961)	0.031**	(2.563)
Mat Weak	0.336***	(18.063)	0.334***	(17.868)	0.331***	(17.666)
Ind Herf	-0.557***	(-2.733)	-0.572***	(-2.821)	-0.556***	(-2.726)
Au Herf	-0.052	(-0.389)	-0.056	(-0.417)	-0.057	(-0.424)
CLead	0.039***	(2.939)	0.041***	(3.085)	0.041***	(3.059)
Short Ten	-0.030**	(-2.508)	-0.030**	(-2.550)	-0.029**	(-2.470)
Constant	9.870***	(62.660)	9.875***	(65.282)	9.884***	(64.251)
Observations	24,900		24,900		24,900	
Adjusted R-squared	0.848		0.849		0.848	
Industry FE/Year FE	Yes/Yes		Yes/Yes		Yes/Yes	

Table 7: *Ln Fees* with *BigN* Interactions (Cont.)
Panel B: Joint Tests

Variables	**F**	**p**
*Dev Ret + BigN*Dev Ret*	0.041	0.840
*Dev Vol + BigN*Dev Vol*	7.023***	0.008
*Dev Zscore + BigN*Dev Zscore*	5.784**	0.016
*Dev Lev + BigN*Dev Lev*	7.435***	0.006
*Trc Dev Ret + BigN*Trc Dev Ret*	0.019	0.890
*Trc Dev Vol + BigN*Trc Dev Vol*	19.954***	0.000
*Trc Dev Zscore + BigN*Trc Dev Zscore*	47.061***	0.000
*Trc Dev Lev + BigN*Trc Dev Lev*	4.884**	0.027
*Count Trc Dev + BigN*Count Trc Dev*	60.708***	0.000

*The dependent variable is Ln Fees. All variables are as defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. Industry fixed effects are at the three-digit NAICS level. Year fixed effects are included for the fiscal year of the company. The models are estimated using OLS regression with robust standard errors clustered by company. ***,**, and * indicate two tailed significance at the 0.01, 0.05, and 0.10 levels, respectively.*

Table 8: *Misstate* with *BigN* Interactions

Panel A: Regression Output

Variables	**(1) Continuous**	**z**	**(2) Top Tercile Ind**	**z**	**(3) Top Tercile Count**	**z**
Ret	-0.023	(-0.150)	-0.119*	(-1.691)	-0.116*	(-1.955)
Vol	9.963**	(1.976)	8.690***	(2.817)	8.832***	(3.009)
Zscore	-0.004	(-0.343)	-0.006	(-0.485)	-0.005	(-0.429)
Lev	0.550***	(2.988)	0.536***	(3.141)	0.492***	(3.052)
Dev Ret	-0.018	(-0.185)				
Dev Vol	-0.041	(-0.389)				
Dev ZScore	0.231	(1.486)				
Dev Lev	0.425**	(2.176)				
Trc Dev Ret			0.076	(0.539)		
Trc Dev Vol			-0.073	(-0.409)		
Trc Dev ZScore			0.308	(1.584)		
Trc Dev Lev			0.239	(1.291)		
Count Trc Dev					0.135	(1.637)
*BigN*Dev Ret*	-0.018	(-0.286)				
*BigN*Dev Vol*	0.111	(1.344)				
*BigN*Dev ZScore*	-0.322	(-1.134)				
*BigN*Dev Lev*	-0.504**	(-2.327)				
*BigN*Trc Dev Ret*			0.019	(0.128)		
*BigN*Trc Dev Vol*			0.244	(1.220)		
*BigN*Trc Dev ZScore*			-0.277	(-1.279)		
*BigN*Trc Dev Lev*			-0.277	(-1.342)		
*BigN*Count Trc Dev*					-0.069	(-0.814)

Table 8: *Misstate* with *BigN* Interactions (Cont.)

Panel A: Regression Output	**(1)**		**(2)**		**(3)**	
Variables	**Continuous**	**z**	**Top Tercile Ind**	**z**	**Top Tercile Count**	**z**
Ln AT	0.157**	(2.057)	0.158**	(2.076)	0.153**	(2.022)
Ln Rev	-0.055	(-0.774)	-0.053	(-0.753)	-0.055	(-0.790)
Curr	0.000	(0.016)	0.004	(0.218)	0.003	(0.167)
FCF	-0.079*	(-1.701)	-0.083*	(-1.834)	-0.082*	(-1.816)
CF Vol	-0.000	(-0.846)	-0.000	(-0.857)	-0.000	(-0.845)
Rev Vol	-0.000	(-0.845)	-0.000	(-0.875)	-0.000	(-0.908)
Ln Seg	0.234**	(2.093)	0.231**	(2.060)	0.234**	(2.080)
Foreign	-0.222**	(-1.983)	-0.219**	(-1.960)	-0.218*	(-1.940)
Loss	0.095	(0.960)	0.030	(0.285)	0.044	(0.451)
GCO	-1.189***	(-4.259)	-1.092***	(-4.194)	-1.085***	(-4.218)
Busy	-0.201*	(-1.836)	-0.199*	(-1.813)	-0.201*	(-1.839)
BigN	-0.144	(-0.984)	-0.003	(-0.014)	0.040	(0.193)
Merge	0.029	(0.279)	0.036	(0.349)	0.036	(0.342)
Mat Weak	0.790***	(8.144)	0.785***	(8.096)	0.784***	(8.101)
Ind Herf	0.051	(0.024)	0.179	(0.084)	0.196	(0.092)
Au Herf	-1.434	(-0.994)	-1.499	(-1.036)	-1.480	(-1.020)
CLead	0.033	(0.329)	0.036	(0.352)	0.032	(0.317)
Short Ten	-0.128	(-1.333)	-0.133	(-1.376)	-0.133	(-1.375)
Constant	-2.771**	(-2.095)	-2.970**	(-2.242)	-2.978**	(-2.267)
Observations	24,900		24,900		24,900	
Pseudo R-squared	0.109		0.109		0.108	
Area under ROC	0.756		0.756		0.755	
Industry FE/Year FE	Yes/Yes		Yes/Yes		Yes/Yes	

Table 8: *Misstate* with *BigN* Interactions (Cont.)
Panel B: Joint Tests

Variables	**χ^2**	**p**
*Dev Ret + BigN*Dev Ret*	0.180	0.671
*Dev Vol + BigN*Dev Vol*	0.556	0.456
*Dev Zscore + BigN*Dev Zscore*	0.135	0.713
*Dev Lev + BigN*Dev Lev*	0.284	0.594
*Trc Dev Ret + BigN*Trc Dev Ret*	0.951	0.330
*Trc Dev Vol + BigN*Trc Dev Vol*	2.208	0.137
*Trc Dev Zscore + BigN*Trc Dev Zscore*	0.055	0.815
*Trc Dev Lev + BigN*Trc Dev Lev*	0.103	0.748
*Count Trc Dev + BigN*Count Trc Dev*	1.803	0.179

*The dependent variable is Misstate. All variables are as defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. Industry fixed effects are at the three-digit NAICS level. Year fixed effects are included for the fiscal year of the company. The models are estimated using Logistic regression with robust standard errors clustered by company. ***,**, and * indicate two tailed significance at the 0.01, 0.05, and 0.10 levels, respectively.*

Table 9: *Ln Fees* with *CLead* Interactions

Panel A: Regression Output

Variables	**(1)** Continuous	t	**(2)** Top Tercile Ind	t	**(3)** Top Tercile Count	t
Ret	-0.004	(-0.327)	-0.002	(-0.227)	-0.017***	(-2.881)
Vol	-0.084	(-0.168)	-0.934***	(-2.584)	-1.042***	(-3.084)
Zscore	0.020***	(9.296)	0.019***	(9.389)	0.020***	(9.580)
Lev	0.044	(1.562)	0.041	(1.361)	0.014	(0.519)
Dev Ret	0.003	(0.427)				
Dev Vol	-0.016	(-1.433)				
Dev ZScore	0.016	(0.476)				
Dev Lev	0.035	(1.022)				
Trc Dev Ret			-0.005	(-0.456)		
Trc Dev Vol			0.007	(0.417)		
Trc Dev ZScore			0.106***	(5.688)		
Trc Dev Lev			-0.037**	(-1.963)		
Count Trc Dev					0.021***	(2.867)
*CLead*Dev Ret*	-0.005	(-0.849)				
*CLead*Dev Vol*	0.025**	(2.291)				
*CLead*Dev ZScore*	0.043	(1.135)				
*CLead*Dev Lev*	-0.022	(-0.598)				
*CLead*Trc Dev Ret*			0.002	(0.178)		
*CLead*Trc Dev Vol*			0.036*	(1.820)		
*CLead*Trc Dev ZScore*			0.004	(0.184)		
*CLead*Trc Dev Lev*			0.069***	(3.199)		
*CLead*Count Trc Dev*					0.024***	(2.907)

Table 9: *Ln Fees* with *CLead* Interactions (Cont.)

Panel A: Regression Output	**(1)**		**(2)**		**(3)**	
Variables	**Continuous**	**t**	**Top Tercile Ind**	**t**	**Top Tercile Count**	**t**
Ln AT	0.370***	(35.743)	0.373***	(35.994)	0.371***	(35.849)
Ln Rev	0.119***	(11.870)	0.121***	(12.178)	0.120***	(11.998)
Curr	-0.004*	(-1.849)	-0.003	(-1.347)	-0.004*	(-1.767)
FCF	-0.001	(-0.064)	-0.001	(-0.166)	-0.001	(-0.107)
CF Vol	-0.000***	(-4.072)	-0.000***	(-3.967)	-0.000***	(-4.018)
Rev Vol	0.000	(1.421)	0.000	(0.607)	0.000	(1.126)
Ln Seg	0.155***	(10.436)	0.156***	(10.556)	0.155***	(10.474)
Foreign	0.253***	(15.072)	0.254***	(15.196)	0.255***	(15.193)
Loss	0.166***	(13.995)	0.124***	(10.594)	0.149***	(12.830)
GCO	0.079***	(2.721)	0.096***	(3.339)	0.090***	(3.114)
Busy	0.075***	(4.711)	0.075***	(4.671)	0.075***	(4.709)
BigN	0.383***	(19.726)	0.385***	(19.901)	0.385***	(19.971)
Merge	0.028**	(2.333)	0.035***	(2.844)	0.031**	(2.529)
Mat Weak	0.332***	(17.620)	0.331***	(17.643)	0.330***	(17.532)
Ind Herf	-0.560***	(-2.737)	-0.598***	(-2.941)	-0.568***	(-2.789)
Au Herf	-0.049	(-0.366)	-0.041	(-0.302)	-0.048	(-0.357)
CLead	0.034**	(2.514)	0.006	(0.344)	0.010	(0.589)
Short Ten	-0.031***	(-2.578)	-0.031**	(-2.576)	-0.031***	(-2.581)
Constant	9.862***	(63.170)	9.828***	(63.760)	9.849***	(64.078)
Observations	24,900		24,900		24,900	
Adjusted R-squared	0.847		0.848		0.847	
Industry FE/Year FE	Yes/Yes		Yes/Yes		Yes/Yes	

Table 9: *Ln Fees* with *CLead* Interactions (Cont.)
Panel B: Joint Tests

Variables	**F**	**p**
*Dev Ret + CLead*Dev Ret*	0.068	0.794
*Dev Vol + CLead*Dev Vol*	0.596	0.440
*Dev Zscore + CLead*Dev Zscore*	8.818***	0.003
*Dev Lev + CLead*Dev Lev*	0.541	0.462
*Trc Dev Ret + CLead*Trc Dev Ret*	0.079	0.779
*Trc Dev Vol + CLead*Trc Dev Vol*	8.953***	0.003
*Trc Dev Zscore + CLead*Trc Dev Zscore*	42.421***	0.000
*Trc Dev Lev + CLead*Trc Dev Lev*	4.113**	0.043
*Count Trc Dev + CLead*Count Trc Dev*	45.093***	0.000

*The dependent variable is Ln Fees. All variables are as defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. Industry fixed effects are at the three-digit NAICS level. Year fixed effects are included for the fiscal year of the company. The models are estimated using OLS regression with robust standard errors clustered by company. ***,**, and * indicate two tailed significance at the 0.01, 0.05, and 0.10 levels, respectively.*

Table 10: *Misstate* with *CLead* Interactions

Panel A: Regression Output

Variables	**(1) Continuous**	**z**	**(2) Top Tercile Ind**	**z**	**(3) Top Tercile Count**	**z**
Ret	-0.019	(-0.122)	-0.116*	(-1.648)	-0.116*	(-1.955)
Vol	10.168**	(2.026)	8.711***	(2.852)	8.832***	(3.009)
Zscore	-0.002	(-0.167)	-0.005	(-0.426)	-0.005	(-0.429)
Lev	0.525***	(2.860)	0.542***	(3.162)	0.492***	(3.052)
Dev Ret	-0.047	(-0.520)				
Dev Vol	-0.000	(-0.002)				
Dev ZScore	-0.047	(-0.169)				
Dev Lev	0.430**	(2.017)				
Trc Dev Ret			0.096	(0.803)		
Trc Dev Vol			0.078	(0.549)		
Trc Dev ZScore			0.060	(0.378)		
Trc Dev Lev			0.176	(1.239)		
Count Trc Dev					0.092	(1.462)
*CLead*Dev Ret*	-0.018	(-0.286)				
*CLead*Dev Vol*	0.111	(1.344)				
*CLead*Dev ZScore*	-0.322	(-1.134)				
*CLead*Dev Lev*	-0.504**	(-2.327)				
*CLead*Trc Dev Ret*			0.019	(0.128)		
*CLead*Trc Dev Vol*			0.244	(1.220)		
*CLead*Trc Dev ZScore*			-0.277	(-1.279)		
*CLead*Trc Dev Lev*			-0.277	(-1.342)		
*CLead*Count Trc Dev*					-0.020	(-0.305)

Table 10: *Misstate* with *CLead* Interactions (Cont.)

Panel A: Regression Output	**(1)**		**(2)**		**(3)**	
Variables	**Continuous**	**z**	**Top Tercile Ind**	**z**	**Top Tercile Count**	**z**
Ln AT	0.151**	(1.977)	0.160**	(2.092)	0.154**	(2.028)
Ln Rev	-0.055	(-0.783)	-0.055	(-0.792)	-0.055	(-0.783)
Curr	0.001	(0.044)	0.003	(0.172)	0.002	(0.144)
FCF	-0.082*	(-1.791)	-0.081*	(-1.792)	-0.083*	(-1.827)
CF Vol	-0.000	(-0.838)	-0.000	(-0.847)	-0.000	(-0.841)
Rev Vol	-0.000	(-0.853)	-0.000	(-0.875)	-0.000	(-0.909)
Ln Seg	0.235**	(2.101)	0.235**	(2.088)	0.235**	(2.088)
Foreign	-0.217*	(-1.946)	-0.217*	(-1.936)	-0.217*	(-1.935)
Loss	0.093	(0.935)	0.037	(0.353)	0.044	(0.456)
GCO	-1.112***	(-4.262)	-1.071***	(-4.156)	-1.073***	(-4.195)
Busy	-0.201*	(-1.835)	-0.200*	(-1.824)	-0.202*	(-1.849)
BigN	-0.088	(-0.672)	-0.095	(-0.724)	-0.080	(-0.613)
Merge	0.028	(0.268)	0.041	(0.390)	0.036	(0.346)
Mat Weak	0.789***	(8.136)	0.783***	(8.068)	0.785***	(8.104)
Ind Herf	0.183	(0.086)	0.256	(0.120)	0.214	(0.101)
Au Herf	-1.512	(-1.052)	-1.521	(-1.051)	-1.487	(-1.024)
CLead	0.025	(0.236)	0.086	(0.590)	0.061	(0.417)
Short Ten	-0.130	(-1.350)	-0.131	(-1.353)	-0.132	(-1.362)
Constant	-2.797**	(-2.150)	-2.964**	(-2.253)	-2.925**	(-2.231)
Observations	24,900		24,900		24,900	
Pseudo R-squared	0.108		0.108		0.108	
Area under ROC	0.756		0.756		0.755	
Industry FE/Year FE	Yes/Yes		Yes/Yes		Yes/Yes	

Table 10: *Misstate* with *CLead* Interactions (Cont.)
Panel B: Joint Tests

Variables	χ^2	p
*Dev Ret + CLead*Dev Ret*	0.044	0.833
*Dev Vol + CLead*Dev Vol*	0.171	0.680
*Dev Zscore + CLead*Dev Zscore*	0.045	0.832
*Dev Lev + CLead*Dev Lev*	0.037	0.848
*Trc Dev Ret + CLead*Trc Dev Ret*	0.554	0.457
*Trc Dev Vol + CLead*Trc Dev Vol*	1.030	0.310
*Trc Dev Zscore + CLead*Trc Dev Zscore*	0.912	0.340
*Trc Dev Lev + CLead*Trc Dev Lev*	0.408	0.523
*Count Trc Dev + CLead*Count Trc Dev*	1.911	0.167

*The dependent variable is Misstate. All variables are as defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. Industry fixed effects are at the three-digit NAICS level. Year fixed effects are included for the fiscal year of the company. The models are estimated using Logistic regression with robust standard errors clustered by company. ***,**, and * indicate two tailed significance at the 0.01, 0.05, and 0.10 levels, respectively.*

Table 11: *Ln Fees* (Using *Pct Var*)

	(1)		(2)		(3)	
Variables	**Continuous**	**t**	**Top Tercile Ind**	**t**	**Top Tercile Count**	**t**
Ret	-0.002	(-0.417)	-0.000	(-0.053)	-0.016***	(-2.813)
Vol	0.499	(0.868)	-0.910**	(-2.499)	-0.981***	(-2.928)
Zscore	0.019***	(8.677)	0.019***	(9.362)	0.020***	(9.524)
Lev	0.004	(0.057)	0.025	(0.795)	0.015	(0.571)
Pct Ret	-0.000	(-0.253)				
Pct Vol	-0.030	(-1.429)				
Pct ZScore	0.001***	(3.471)				
Pct Lev	0.032	(0.942)				
Trc Pct Ret			-0.006	(-0.653)		
Trc Pct Vol			0.023**	(1.989)		
Trc Pct ZScore			0.095***	(6.541)		
Trc Pct Lev			0.017	(1.152)		
Count Trc Pct					0.032***	(5.444)
Ln AT	0.368***	(35.478)	0.373***	(36.011)	0.370***	(35.818)
Ln Rev	0.120***	(11.985)	0.120***	(12.092)	0.120***	(12.030)
Curr	-0.003	(-1.458)	-0.003	(-1.242)	-0.004	(-1.605)
FCF	-0.001	(-0.160)	-0.000	(-0.022)	-0.001	(-0.080)
CF Vol	-0.000***	(-4.239)	-0.000***	(-4.135)	-0.000***	(-4.106)
Rev Vol	0.000	(1.314)	0.000	(0.773)	0.000	(1.156)
Ln Seg	0.154***	(10.376)	0.155***	(10.439)	0.155***	(10.442)
Foreign	0.254***	(15.154)	0.254***	(15.206)	0.255***	(15.201)
Loss	0.166***	(14.444)	0.126***	(10.386)	0.150***	(12.731)

Table 11: *Ln Fees* (Using *Pct Var*) (Cont.)

	(1)		(2)		(3)	
Variables	**Continuous**	**t**	**Top Tercile Ind**	**t**	**Top Tercile Count**	**t**
GCO	0.078***	(2.704)	0.094***	(3.280)	0.088***	(3.067)
Busy	0.075***	(4.685)	0.075***	(4.676)	0.075***	(4.712)
BigN	0.387***	(20.066)	0.387***	(20.101)	0.388***	(20.111)
Merge	0.030**	(2.443)	0.034***	(2.767)	0.031**	(2.561)
Mat Weak	0.333***	(17.678)	0.331***	(17.610)	0.330***	(17.509)
Ind Herf	-0.567***	(-2.774)	-0.570***	(-2.816)	-0.566***	(-2.782)
Au Herf	-0.040	(-0.297)	-0.049	(-0.367)	-0.050	(-0.373)
CLead	0.042***	(3.128)	0.041***	(3.078)	0.041***	(3.079)
Short Ten	-0.031**	(-2.564)	-0.031***	(-2.613)	-0.031***	(-2.605)
Constant	9.857***	(64.402)	9.822***	(64.149)	9.838***	(64.546)
Observations	24,900		24,900		24,900	
Adjusted R-squared	0.847		0.848		0.847	
Industry FE/Year FE	Yes/Yes		Yes/Yes		Yes/Yes	

*The dependent variable is Ln Fees. All variables are as defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. Industry fixed effects are at the three-digit NAICS level. Year fixed effects are included for the fiscal year of the company. The models are estimated using OLS regression with robust standard errors clustered by company. ***,**, and * indicate two tailed significance at the 0.01, 0.05, and 0.10 levels, respectively.*

Table 12: *Misstate* (Using *Pct Var*)

Variables	**(1) Continuous**	**z**	**(2) Top Tercile Ind**	**z**	**(3) Top Tercile Count**	**z**
Ret	-0.074	(-1.143)	-0.125*	(-1.839)	-0.122**	(-2.070)
Vol	11.209*	(1.957)	9.179***	(3.030)	8.829***	(3.066)
Zscore	0.001	(0.054)	-0.004	(-0.300)	-0.005	(-0.389)
Lev	0.421	(1.076)	0.402**	(2.158)	0.465***	(2.818)
Pct Ret	-0.000	(-0.042)				
Pct Vol	-0.006	(-0.035)				
Pct ZScore	-0.002	(-0.729)				
Pct Lev	0.103	(0.447)				
Trc Pct Ret			0.107	(1.253)		
Trc Pct Vol			0.078	(0.760)		
Trc Pct ZScore			0.057	(0.489)		
Trc Pct Lev			0.163	(1.449)		
Count Trc Pct					0.099**	(2.067)
Ln AT	0.143*	(1.869)	0.154**	(2.025)	0.159**	(2.090)
Ln Rev	-0.053	(-0.754)	-0.058	(-0.841)	-0.057	(-0.828)
Curr	0.002	(0.137)	0.002	(0.120)	0.002	(0.146)
FCF	-0.080*	(-1.762)	-0.082*	(-1.812)	-0.082*	(-1.815)
CF Vol	-0.000	(-0.843)	-0.000	(-0.838)	-0.000	(-0.848)
Rev Vol	-0.000	(-0.859)	-0.000	(-0.884)	-0.000	(-0.900)
Ln Seg	0.236**	(2.096)	0.236**	(2.104)	0.236**	(2.102)
Foreign	-0.218*	(-1.949)	-0.216*	(-1.928)	-0.217*	(-1.940)
Loss	0.111	(1.128)	0.046	(0.428)	0.027	(0.272)

Table 12: *Misstate* (Using *Pct Var*) (Cont.)

Variables	(1) Continuous	z	(2) Top Tercile Ind	z	(3) Top Tercile Count	z
GCO	-1.105***	(-4.281)	-1.068***	(-4.162)	-1.061***	(-4.149)
Busy	-0.199*	(-1.823)	-0.202*	(-1.845)	-0.202*	(-1.846)
BigN	-0.084	(-0.643)	-0.079	(-0.606)	-0.082	(-0.626)
Merge	0.030	(0.289)	0.031	(0.302)	0.036	(0.350)
Mat Weak	0.792***	(8.187)	0.784***	(8.095)	0.784***	(8.086)
Ind Herf	0.256	(0.120)	0.204	(0.096)	0.194	(0.091)
Au Herf	-1.450	(-0.999)	-1.468	(-1.012)	-1.477	(-1.019)
CLead	0.031	(0.303)	0.029	(0.284)	0.030	(0.291)
Short Ten	-0.130	(-1.350)	-0.131	(-1.357)	-0.132	(-1.365)
Constant	-2.802**	(-2.103)	-2.872**	(-2.174)	-2.910**	(-2.214)
Observations	24,900		24,900		24,900	
Pseudo R-squared	0.107		0.108		0.108	
Area under ROC	0.755		0.755		0.755	
Industry FE/Year FE	Yes/Yes		Yes/Yes		Yes/Yes	

*The dependent variable is Misstate. All variables are as defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. Industry fixed effects are at the three-digit NAICS level. Year fixed effects are included for the fiscal year of the company. The models are estimated using Logistic regression with robust standard errors clustered by company. ***,**, and * indicate two tailed significance at the 0.01, 0.05, and 0.10 levels, respectively.*

Table 13: *Ln Fees* (Using Means)

	(1)		(2)		(3)	
Variables	**Continuous**	**t**	**Top Tercile Ind**	**t**	**Top Tercile Count**	**t**
Ret	-0.006	(-0.485)	-0.004	(-0.606)	-0.014**	(-2.361)
Vol	-0.405	(-0.786)	-0.866**	(-2.386)	-0.854**	(-2.537)
Zscore	0.020***	(8.978)	0.019***	(9.169)	0.020***	(9.423)
Lev	0.047	(1.458)	0.055*	(1.830)	0.028	(1.047)
Dev Ret (Mean)	0.002	(0.295)				
Dev Vol (Mean)	0.002	(0.199)				
Dev ZScore (Mean)	0.044**	(2.417)				
Dev Lev (Mean)	0.012	(0.626)				
Trc Dev Ret (Mean)			0.004	(0.464)		
Trc Dev Vol (Mean)			0.027**	(2.433)		
Trc Dev ZScore (Mean)			0.064***	(5.548)		
Trc Dev Lev (Mean)			-0.001	(-0.104)		
Count Trc Dev (Mean)					0.026***	(4.628)
Ln AT	0.369***	(35.569)	0.370***	(35.778)	0.368***	(35.709)
Ln Rev	0.119***	(11.901)	0.121***	(12.168)	0.121***	(12.096)
Curr	-0.004*	(-1.763)	-0.003	(-1.435)	-0.004*	(-1.696)
FCF	-0.000	(-0.030)	-0.001	(-0.164)	-0.001	(-0.130)
CF Vol	-0.000***	(-4.163)	-0.000***	(-4.277)	-0.000***	(-4.152)
Rev Vol	0.000	(1.298)	0.000	(1.033)	0.000	(1.183)
Ln Seg	0.154***	(10.399)	0.154***	(10.417)	0.155***	(10.430)
Foreign	0.253***	(15.079)	0.254***	(15.174)	0.254***	(15.167)
Loss	0.167***	(14.028)	0.154***	(13.367)	0.160***	(13.767)

Table 13: *Ln Fees* (Using Means) (Cont.)

Variables	**(1)** Continuous	**t**	**(2)** Top Tercile Ind	**t**	**(3)** Top Tercile Count	**t**
GCO	0.077***	(2.673)	0.082***	(2.870)	0.083***	(2.870)
Busy	0.075***	(4.687)	0.075***	(4.686)	0.075***	(4.678)
BigN	0.388***	(20.128)	0.387***	(20.133)	0.387***	(20.113)
Merge	0.029**	(2.405)	0.032***	(2.603)	0.031**	(2.502)
Mat Weak	0.332***	(17.603)	0.332***	(17.630)	0.331***	(17.560)
Ind Herf	-0.561***	(-2.750)	-0.529***	(-2.590)	-0.555***	(-2.722)
Au Herf	-0.047	(-0.347)	-0.063	(-0.468)	-0.060	(-0.445)
CLead	0.041***	(3.070)	0.042***	(3.110)	0.041***	(3.103)
Short Ten	-0.031**	(-2.551)	-0.031***	(-2.621)	-0.031***	(-2.622)
Constant	9.875***	(63.458)	9.828***	(63.979)	9.851***	(64.426)
Observations	24,900		24,900		24,900	
Adjusted R-squared	0.847		0.847		0.847	
Industry FE/Year FE	Yes/Yes		Yes/Yes		Yes/Yes	

*The dependent variable is Ln Fees. Control variables are as defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. Industry fixed effects are at the three-digit NAICS level. Year fixed effects are included for the fiscal year of the company. The models are estimated using OLS regression with robust standard errors clustered by company. ***,**, and * indicate two tailed significance at the 0.01, 0.05, and 0.10 levels, respectively.*

Table 14: *Misstate* (Using Means)

	(1)		(2)		(3)	
Variables	**Continuous**	**z**	**Top Tercile Ind**	**z**	**Top Tercile Count**	**z**
Ret	-0.017	(-0.104)	-0.145**	(-2.140)	-0.103*	(-1.758)
Vol	9.822*	(1.901)	8.669***	(2.847)	9.604***	(3.353)
Zscore	-0.005	(-0.421)	-0.003	(-0.228)	-0.005	(-0.388)
Lev	0.513**	(2.407)	0.586***	(3.337)	0.521***	(3.195)
Dev Ret (Mean)	-0.035	(-0.405)				
Dev Vol (Mean)	0.024	(0.261)				
Dev ZScore (Mean)	0.078	(0.448)				
Dev Lev (Mean)	0.075	(0.517)				
Trc Dev Ret (Mean)			0.157*	(1.823)		
Trc Dev Vol (Mean)			0.115	(1.150)		
Trc Dev ZScore (Mean)			-0.030	(-0.291)		
Trc Dev Lev (Mean)			-0.001	(-0.010)		
Count Trc Dev (Mean)					0.059	(1.287)
Ln AT	0.153**	(2.016)	0.154**	(2.032)	0.152**	(2.001)
Ln Rev	-0.056	(-0.805)	-0.055	(-0.786)	-0.055	(-0.788)
Curr	0.000	(0.003)	0.000	(0.028)	0.002	(0.092)
FCF	-0.081*	(-1.782)	-0.083*	(-1.837)	-0.083*	(-1.845)
CF Vol	-0.000	(-0.849)	-0.000	(-0.848)	-0.000	(-0.841)
Rev Vol	-0.000	(-0.887)	-0.000	(-0.871)	-0.000	(-0.897)
Ln Seg	0.235**	(2.094)	0.238**	(2.120)	0.236**	(2.100)
Foreign	-0.222**	(-1.981)	-0.219*	(-1.957)	-0.218*	(-1.948)
Loss	0.094	(0.953)	0.076	(0.777)	0.070	(0.726)

Table 14: *Misstate* (Using Means) (Cont.)

	(1)		(2)		(3)	
Variables	**Continuous**	**z**	**Top Tercile Ind**	**z**	**Top Tercile Count**	**z**
GCO	-1.116***	(-4.287)	-1.091***	(-4.199)	-1.089***	(-4.223)
Busy	-0.199*	(-1.816)	-0.202*	(-1.852)	-0.202*	(-1.848)
BigN	-0.082	(-0.629)	-0.083	(-0.639)	-0.082	(-0.630)
Merge	0.031	(0.297)	0.035	(0.331)	0.035	(0.333)
Mat Weak	0.791***	(8.165)	0.783***	(8.064)	0.788***	(8.135)
Ind Herf	0.130	(0.061)	0.208	(0.098)	0.232	(0.109)
Au Herf	-1.459	(-1.013)	-1.495	(-1.029)	-1.498	(-1.028)
CLead	0.030	(0.299)	0.030	(0.299)	0.031	(0.301)
Short Ten	-0.131	(-1.356)	-0.133	(-1.377)	-0.133	(-1.378)
Constant	-2.766**	(-2.070)	-2.877**	(-2.175)	-2.880**	(-2.194)
Observations	24,900		24,900		24,900	
Pseudo R-squared	0.107		0.108		0.108	
Area under ROC	0.756		0.756		0.756	
Industry FE/Year FE	Yes/Yes		Yes/Yes		Yes/Yes	

*The dependent variable is Misstate. Control variables are as defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. Industry fixed effects are at the three-digit NAICS level. Year fixed effects are included for the fiscal year of the company. The models are estimated using Logistic regression with robust standard errors clustered by company. ***,**, and * indicate two tailed significance at the 0.01, 0.05, and 0.10 levels, respectively.*

Table 15: *Ln Fees* with *BigN-MidN* Interactions

Panel A: Regression Output	**(1)**		**(2)**		**(3)**	
Variables	**Continuous**	**t**	**Top Tercile Ind**	**t**	**Top Tercile Count**	**t**
Ret	-0.007	(-0.593)	-0.003	(-0.449)	-0.018***	(-3.158)
Vol	-0.227	(-0.463)	-0.659*	(-1.890)	-0.759**	(-2.321)
Zscore	0.020***	(9.177)	0.019***	(9.436)	0.021***	(9.635)
Lev	0.054*	(1.903)	0.055*	(1.827)	0.027	(1.002)
Dev Ret	0.002	(0.196)				
Dev Vol	-0.014	(-1.064)				
Dev ZScore	0.046	(1.279)				
Dev Lev	-0.026	(-0.680)				
Trc Dev Ret			-0.023	(-1.312)		
Trc Dev Vol			-0.008	(-0.319)		
Trc Dev ZScore			0.163***	(5.741)		
Trc Dev Lev			-0.096***	(-3.147)		
Count Trc Dev					0.021*	(1.783)
*BigN-MidN*Dev Ret*	0.001	(0.123)				
*BigN-MidN*Dev Vol*	0.029**	(2.240)				
*BigN-MidN*Dev ZScore*	-0.001	(-0.016)				
*BigN-MidN*Dev Lev*	0.061	(1.538)				
*BigN-MidN*Trc Dev Ret*			0.027	(1.563)		
*BigN-MidN*Trc Dev Vol*			0.048*	(1.823)		
*BigN-MidN*Trc Dev ZScore*			-0.073**	(-2.484)		
*BigN-MidN*Trc Dev Lev*			0.120***	(3.924)		
*BigN-MidN*Count Trc Dev*					0.019*	(1.645)

Table 15: *Ln Fees* with *BigN-MidN* Interactions (Cont.)

Panel A: Regression Output	**(1)**		**(2)**		**(3)**	
Variables	**Continuous**	**t**	**Top Tercile Ind**	**t**	**Top Tercile Count**	**t**
Ln AT	0.379***	(37.604)	0.380***	(37.763)	0.379***	(37.631)
Ln Rev	0.113***	(11.501)	0.115***	(11.869)	0.113***	(11.657)
Curr	-0.003	(-1.478)	-0.002	(-0.827)	-0.003	(-1.261)
FCF	-0.003	(-0.408)	-0.003	(-0.374)	-0.003	(-0.381)
CF Vol	-0.000***	(-4.231)	-0.000***	(-4.130)	-0.000***	(-4.187)
Rev Vol	0.000*	(1.667)	0.000	(1.107)	0.000	(1.495)
Ln Seg	0.155***	(10.658)	0.155***	(10.739)	0.155***	(10.688)
Foreign	0.252***	(15.227)	0.254***	(15.385)	0.255***	(15.391)
Loss	0.153***	(12.975)	0.112***	(9.759)	0.136***	(11.834)
GCO	0.104***	(3.657)	0.119***	(4.226)	0.111***	(3.947)
Busy	0.079***	(4.961)	0.078***	(4.953)	0.079***	(4.983)
BigN-MidN	0.453***	(20.032)	0.434***	(14.721)	0.438***	(14.934)
Merge	0.024**	(2.015)	0.031***	(2.596)	0.027**	(2.245)
Mat Weak	0.326***	(17.553)	0.325***	(17.475)	0.323***	(17.339)
Ind Herf	-0.590***	(-2.827)	-0.597***	(-2.886)	-0.582***	(-2.800)
Au Herf	-0.033	(-0.248)	-0.031	(-0.231)	-0.034	(-0.256)
CLead	0.057***	(4.387)	0.057***	(4.429)	0.057***	(4.419)
Short Ten	-0.052***	(-4.439)	-0.053***	(-4.550)	-0.052***	(-4.475)
Constant	9.773***	(65.569)	9.740***	(67.312)	9.748***	(66.381)
Observations	24,900		24,900		24,900	
Adjusted R-squared	0.850		0.851		0.850	
Industry FE/Year FE	Yes/Yes		Yes/Yes		Yes/Yes	

Table 15: *Ln Fees* with *BigN-MidN* Interactions (Cont.)
Panel B: Joint Tests

Variables	**F**	**p**
*Dev Ret + BigN-MidN*Dev Ret*	0.160	0.689
*Dev Vol + BigN-MidN*Dev Vol*	1.768	0.184
*Dev Zscore + BigN-MidN*Dev Zscore*	5.402**	0.020
*Dev Lev + BigN-MidN*Dev Lev*	4.050**	0.044
*Trc Dev Ret + BigN-MidN*Trc Dev Ret*	0.275	0.600
*Trc Dev Vol + BigN-MidN*Trc Dev Vol*	11.617***	0.001
*Trc Dev Zscore + BigN-MidN*Trc Dev Zscore*	39.126***	0.000
*Trc Dev Lev + BigN-MidN*Trc Dev Lev*	3.155*	0.076
*Count Trc Dev + BigN-MidN*Count Trc Dev*	45.598***	0.000

*The dependent variable is Ln Fees. All variables are as defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. Industry fixed effects are at the three-digit NAICS level. Year fixed effects are included for the fiscal year of the company. The models are estimated using OLS regression with robust standard errors clustered by company. ***,**, and * indicate two tailed significance at the 0.01, 0.05, and 0.10 levels, respectively.*

Table 16: *Misstate* with *BigN-MidN* Interactions

Panel A: Regression Output

Variables	**(1) Continuous**	**z**	**(2) Top Tercile Ind**	**z**	**(3) Top Tercile Count**	**z**
Ret	-0.024	(-0.154)	-0.111	(-1.570)	-0.112*	(-1.883)
Vol	9.803*	(1.942)	8.781***	(2.862)	8.951***	(3.078)
Zscore	-0.003	(-0.274)	-0.005	(-0.442)	-0.005	(-0.386)
Lev	0.543***	(2.951)	0.537***	(3.147)	0.493***	(3.063)
Dev Ret	-0.012	(-0.122)				
Dev Vol	-0.053	(-0.479)				
Dev ZScore	0.124	(0.644)				
Dev Lev	0.412*	(1.914)				
Trc Dev Ret			-0.045	(-0.277)		
Trc Dev Vol			-0.103	(-0.465)		
Trc Dev ZScore			0.287	(1.158)		
Trc Dev Lev			0.233	(1.022)		
Count Trc Dev					0.095	(0.974)
*BigN-MidN*Dev Ret*	-0.022	(-0.330)				
*BigN-MidN*Dev Vol*	0.110	(1.240)				
*BigN-MidN*Dev ZScore*	-0.141	(-0.478)				
*BigN-MidN*Dev Lev*	-0.457**	(-1.995)				
*BigN-MidN*Trc Dev Ret*			0.153	(0.943)		
*BigN-MidN*Trc Dev Vol*			0.242	(1.017)		
*BigN-MidN*Trc Dev ZScore*			-0.218	(-0.837)		
*BigN-MidN*Trc Dev Lev*			-0.245	(-1.010)		
*BigN-MidN*Count Trc Dev*					-0.017	(-0.174)

Table 16: *Misstate* with *BigN-MidN* Interactions (Cont.)

Panel A: Regression Output	**(1)**		**(2)**		**(3)**	
Variables	**Continuous**	**z**	**Top Tercile Ind**	**z**	**Top Tercile Count**	**z**
Ln AT	0.158**	(2.072)	0.160**	(2.096)	0.155**	(2.043)
Ln Rev	-0.052	(-0.734)	-0.050	(-0.715)	-0.053	(-0.759)
Curr	0.000	(0.006)	0.003	(0.198)	0.002	(0.127)
FCF	-0.081*	(-1.728)	-0.081*	(-1.791)	-0.081*	(-1.792)
CF Vol	-0.000	(-0.856)	-0.000	(-0.860)	-0.000	(-0.845)
Rev Vol	-0.000	(-0.869)	-0.000	(-0.901)	-0.000	(-0.915)
Ln Seg	0.232**	(2.077)	0.233**	(2.076)	0.235**	(2.095)
Foreign	-0.217*	(-1.939)	-0.216*	(-1.926)	-0.215*	(-1.920)
Loss	0.099	(0.994)	0.035	(0.338)	0.049	(0.500)
GCO	-1.173***	(-4.232)	-1.087***	(-4.192)	-1.083***	(-4.214)
Busy	-0.201*	(-1.839)	-0.202*	(-1.853)	-0.203*	(-1.855)
BigN-MidN	-0.231	(-1.285)	-0.167	(-0.637)	-0.108	(-0.416)
Merge	0.034	(0.327)	0.041	(0.395)	0.037	(0.352)
Mat Weak	0.790***	(8.183)	0.786***	(8.126)	0.786***	(8.149)
Ind Herf	0.067	(0.031)	0.196	(0.092)	0.228	(0.107)
Au Herf	-1.407	(-0.976)	-1.478	(-1.019)	-1.483	(-1.022)
CLead	0.029	(0.286)	0.033	(0.324)	0.030	(0.297)
Short Ten	-0.128	(-1.368)	-0.129	(-1.376)	-0.130	(-1.380)
Constant	-2.724**	(-2.060)	-2.901**	(-2.180)	-2.900**	(-2.201)
Observations	24,900		24,900		24,900	
Pseudo R-squared	0.850		0.851		0.850	
Area under ROC	0.756		0.756		0.755	
Industry FE/Year FE	Yes/Yes		Yes/Yes		Yes/Yes	

Table 16: *Misstate* with *BigN-MidN* Interactions (Cont.)
Panel B: Joint Tests

Variables	**χ^2**	**p**
*Dev Ret + BigN-MidN*Dev Ret*	0.163	0.687
*Dev Vol + BigN-MidN*Dev Vol*	0.380	0.538
*Dev Zscore + BigN-MidN*Dev Zscore*	0.006	0.941
*Dev Lev + BigN-MidN*Dev Lev*	0.102	0.750
*Trc Dev Ret + BigN-MidN*Trc Dev Ret*	1.366	0.243
*Trc Dev Vol + BigN-MidN*Trc Dev Vol*	1.614	0.204
*Trc Dev Zscore + BigN-MidN*Trc Dev Zscore*	0.315	0.575
*Trc Dev Lev + BigN-MidN*Trc Dev Lev*	0.011	0.915
*Count Trc Dev + BigN-MidN*Count Trc Dev*	2.608	0.106

*The dependent variable is Misstate. All variables are as defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. Industry fixed effects are at the three-digit NAICS level. Year fixed effects are included for the fiscal year of the company. The models are estimated using Logistic regression with robust standard errors clustered by company. ***,**, and * indicate two tailed significance at the 0.01, 0.05, and 0.10 levels, respectively.*

Table 17: *Ln Fees* with *NLead* Interactions

Panel A: Regression Output

Variables	**(1) Continuous**	**t**	**(2) Top Tercile Ind**	**t**	**(3) Top Tercile Count**	**t**
Ret	0.013	(1.120)	0.004	(0.578)	-0.011*	(-1.837)
Vol	-0.053	(-0.106)	-0.999***	(-2.821)	-1.083***	(-3.243)
Zscore	0.023***	(10.197)	0.021***	(10.391)	0.023***	(10.596)
Lev	0.054*	(1.854)	0.054*	(1.792)	0.026	(0.977)
Dev Ret	-0.007	(-0.966)				
Dev Vol	-0.014	(-1.273)				
Dev ZScore	0.037*	(1.929)				
Dev Lev	0.001	(0.060)				
Trc Dev Ret			-0.009	(-0.936)		
Trc Dev Vol			0.008	(0.654)		
Trc Dev ZScore			0.104***	(6.588)		
Trc Dev Lev			-0.026*	(-1.751)		
Count Trc Dev					0.021***	(3.428)
*NLead*Dev Ret*	-0.006	(-0.862)				
*NLead*Dev Vol*	0.029*	(1.931)				
*NLead*Dev ZScore*	0.089**	(2.508)				
*NLead*Dev Lev*	0.050*	(1.723)				
*NLead*Trc Dev Ret*			0.001	(0.080)		
*NLead*Trc Dev Vol*			0.069***	(2.888)		
*NLead*Trc Dev ZScore*			-0.006	(-0.215)		
*NLead*Trc Dev Lev*			0.094***	(3.895)		
*NLead*Count Trc Dev*					0.036***	(3.449)

Table 17: *Ln Fees* with *NLead* Interactions (Cont.)

Panel A: Regression Output	**(1)**		**(2)**		**(3)**	
Variables	**Continuous**	**t**	**Top Tercile Ind**	**t**	**Top Tercile Count**	**t**
Ln AT	0.368***	(34.634)	0.372***	(35.078)	0.370***	(34.824)
Ln Rev	0.142***	(13.912)	0.143***	(14.221)	0.142***	(14.036)
Curr	-0.001	(-0.336)	0.001	(0.245)	-0.000	(-0.219)
FCF	0.003	(0.420)	0.002	(0.301)	0.003	(0.391)
CF Vol	-0.000***	(-3.603)	-0.000***	(-3.586)	-0.000***	(-3.552)
Rev Vol	0.000	(0.432)	-0.000	(-0.332)	0.000	(0.188)
Ln Seg	0.102***	(6.847)	0.103***	(6.966)	0.102***	(6.879)
Foreign	0.238***	(14.371)	0.239***	(14.434)	0.240***	(14.490)
Loss	0.161***	(13.540)	0.123***	(10.585)	0.148***	(12.756)
GCO	0.096***	(3.265)	0.109***	(3.730)	0.104***	(3.544)
Busy	0.039**	(2.384)	0.036**	(2.195)	0.037**	(2.288)
BigN	0.329***	(16.407)	0.330***	(16.553)	0.329***	(16.526)
Merge	0.048***	(3.849)	0.054***	(4.365)	0.050***	(4.049)
Mat Weak	0.332***	(17.507)	0.330***	(17.471)	0.329***	(17.314)
Ind Herf	-0.692***	(-3.384)	-0.702***	(-3.445)	-0.676***	(-3.316)
Au Herf	-0.062	(-0.466)	-0.080	(-0.603)	-0.079	(-0.599)
NLead	0.064***	(4.295)	0.014	(0.703)	0.022	(1.123)
Short Ten	-0.045***	(-3.852)	-0.046***	(-3.944)	-0.046***	(-3.926)
Constant	9.974***	(67.736)	9.948***	(69.600)	9.969***	(69.323)
Observations	24,900		24,900		24,900	
Adjusted R-squared	0.834		0.835		0.834	
Industry FE/Year FE	Yes/Yes		Yes/Yes		Yes/Yes	

Table 17: *Ln Fees* with *NLead* Interactions (Cont.)
Panel B: Joint Tests

Variables	F	p
*Dev Ret + NLead*Dev Ret*	2.189	0.139
*Dev Vol + NLead*Dev Vol*	0.898	0.343
*Dev Zscore + NLead*Dev Zscore*	15.438***	0.000
*Dev Lev + NLead*Dev Lev*	4.160**	0.041
*Trc Dev Ret + NLead*Trc Dev Ret*	0.283	0.595
*Trc Dev Vol + NLead*Trc Dev Vol*	12.077***	0.001
*Trc Dev Zscore + NLead*Trc Dev Zscore*	16.222***	0.000
*Trc Dev Lev + NLead*Trc Dev Lev*	9.005***	0.003
*Count Trc Dev + NLead*Count Trc Dev*	34.360***	0.000

*The dependent variable is Ln Fees. All variables are as defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. Industry fixed effects are at the three-digit NAICS level. Year fixed effects are included for the fiscal year of the company. The models are estimated using OLS regression with robust standard errors clustered by company. ***,**, and * indicate two tailed significance at the 0.01, 0.05, and 0.10 levels, respectively.*

Table 18: *Misstate* with *NLead* Interactions

Panel A: Regression Output

	(1)		(2)		(3)	
Variables	**Continuous**	**z**	**Top Tercile Ind**	**z**	**Top Tercile Count**	**z**
Ret	0.045	(0.300)	-0.110*	(-1.667)	-0.108*	(-1.898)
Vol	9.009*	(1.841)	8.952***	(3.067)	9.176***	(3.296)
Zscore	-0.003	(-0.239)	-0.004	(-0.356)	-0.003	(-0.303)
Lev	0.554***	(3.067)	0.551***	(3.260)	0.525***	(3.326)
Dev Ret	-0.086	(-1.042)				
Dev Vol	0.016	(0.180)				
Dev ZScore	0.080	(0.522)				
Dev Lev	0.091	(0.736)				
Trc Dev Ret			0.009	(0.097)		
Trc Dev Vol			0.026	(0.235)		
Trc Dev ZScore			0.167	(1.348)		
Trc Dev Lev			0.010	(0.093)		
Count Trc Dev					0.059	(1.158)
*NLead*Dev Ret*	0.064	(0.890)				
*NLead*Dev Vol*	0.132	(1.241)				
*NLead*Dev ZScore*	-0.212	(-0.520)				
*NLead*Dev Lev*	-0.115	(-0.468)				
*NLead*Trc Dev Ret*			0.253	(1.548)		
*NLead*Trc Dev Vol*			0.253	(1.230)		
*NLead*Trc Dev ZScore*			-0.373*	(-1.768)		
*NLead*Trc Dev Lev*			0.130	(0.682)		
*NLead*Count Trc Dev*					0.048	(0.628)

Table 18: *Misstate* with *NLead* Interactions (Cont.)

Panel A: Regression Output

Variables	**(1) Continuous**	**z**	**(2) Top Tercile Ind**	**z**	**(3) Top Tercile Count**	**z**
Ln AT	0.154**	(2.086)	0.154**	(2.094)	0.154**	(2.085)
Ln Rev	-0.035	(-0.515)	-0.034	(-0.505)	-0.035	(-0.525)
Curr	0.004	(0.229)	0.006	(0.359)	0.006	(0.351)
FCF	-0.072	(-1.582)	-0.076*	(-1.706)	-0.073	(-1.632)
CF Vol	-0.000	(-1.056)	-0.000	(-1.048)	-0.000	(-1.055)
Rev Vol	-0.000	(-1.092)	-0.000	(-1.121)	-0.000	(-1.132)
Ln Seg	0.136	(1.273)	0.133	(1.244)	0.136	(1.265)
Foreign	-0.139	(-1.318)	-0.141	(-1.336)	-0.136	(-1.288)
Loss	0.084	(0.871)	0.033	(0.324)	0.039	(0.408)
GCO	-0.976***	(-3.928)	-0.948***	(-3.862)	-0.946***	(-3.867)
Busy	-0.208*	(-1.938)	-0.217**	(-2.017)	-0.214**	(-1.993)
BigN	-0.301**	(-2.362)	-0.282**	(-2.210)	-0.284**	(-2.246)
Merge	0.066	(0.654)	0.074	(0.726)	0.072	(0.702)
Mat Weak	0.798***	(8.480)	0.795***	(8.448)	0.794***	(8.442)
Ind Herf	-0.296	(-0.140)	-0.248	(-0.118)	-0.149	(-0.071)
Au Herf	-1.327	(-0.937)	-1.361	(-0.957)	-1.369	(-0.957)
NLead	0.272**	(2.347)	0.178	(1.081)	0.212	(1.294)
Short Ten	-0.199**	(-2.138)	-0.198**	(-2.112)	-0.199**	(-2.130)
Constant	-2.612**	(-1.990)	-2.715**	(-2.080)	-2.741**	(-2.104)
Observations	24,900		24,900		24,900	
Pseudo R-squared	0.106		0.106		0.106	
Area under ROC	0.755		0.756		0.754	
Industry FE/Year FE	Yes/Yes		Yes/Yes		Yes/Yes	

Table 18: *Misstate* with *NLead* Interactions (Cont.)
Panel B: Joint Tests

Variables	χ^2	**p**
*Dev Ret + NLead*Dev Ret*	0.057	0.811
*Dev Vol + NLead*Dev Vol*	1.432	0.231
*Dev Zscore + NLead*Dev Zscore*	0.100	0.752
*Dev Lev + NLead*Dev Lev*	0.010	0.922
*Trc Dev Ret + NLead*Trc Dev Ret*	3.062*	0.080
*Trc Dev Vol + NLead*Trc Dev Vol*	2.224	0.136
*Trc Dev Zscore + NLead*Trc Dev Zscore*	1.071	0.301
*Trc Dev Lev + NLead*Trc Dev Lev*	0.621	0.431
*Count Trc Dev + NLead*Count Trc Dev*	2.260	0.133

*The dependent variable is Misstate. All variables are as defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels. Industry fixed effects are at the three-digit NAICS level. Year fixed effects are included for the fiscal year of the company. The models are estimated using Logistic regression with robust standard errors clustered by company. ***,**, and * indicate two tailed significance at the 0.01, 0.05, and 0.10 levels, respectively.*