Annual Report Readability and Corporate Audit Outcomes

ABSTRACT

This study examines the effect of annual report readability on audit outcomes. We find that firms with less readable financial statements (i.e., Form 10-K filings) pay higher audit fees, have longer audit report lag, are more likely to receive a modified going concern opinion, and have higher auditor turnover, suggesting that these firms impose greater engagement risk on their auditors. Our results are robust to several measures of readability used in the accounting and finance literature, suggesting that annual report readability provides incremental information about audit engagement risk that affects auditor-client contracting decisions. These findings should be of interest to auditors and to standard setters who are exploring ways to improve the readability of financial disclosures.

Keywords: *Audit fees; audit report lag; going concern opinion; auditor turnover; engagement risk; readability*

Data Availability: *Data are obtained from public sources identified in the paper.*

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I. INTRODUCTION

Recent changes in financial and reporting regulations have significantly increased the amount of required disclosures in annual reports (Form 10-K).[1] Consequently, the SEC has expressed concerns about the ability of financial statement users to understand firms' financial reports and has taken steps to make financial disclosures more readable (SEC 1998; Francis 2014). This concern has spawned a stream of research investigating how the readability of the annual report affects the usefulness of financial reports for financial statement users (Bloomfield 2002, Li 2008; You and Zhang 2009; Miller 2010; Lehavy et al. 2011). However, there is limited evidence on whether the readability of the annual report affects auditor-client contracting. We attempt to fill this gap by investigating whether, and how, annual report readability affects audit fees, audit report lag, audit opinion formation, and auditor turnover. This is important because while there is a robust stream of literature examining the relation between quantitative information and auditor-client contracting, there is little research on how the qualitative components of financial reports affect the audit engagement.[2]

[1] We use the terms annual report and Form 10-K interchangeably. The SEC also uses these terms interchangeably, but differentiates annual report from the annual report to shareholders.

[2] Recent studies investigating the association between annual readability and financial outcomes have used the Gunning-Fog Index (Fog Index) to measure readability (Li 2008; Biddle et al. 2009; Callen et al. 2013; Miller 2010; Lawrence 2013; and Lehavy et al. 2011). In a more recent study, Loughran and McDonald (2014) provide evidence that 10-K file size is a simple proxy for document readability and is highly correlated with other measures of readability. The purpose of this study is to examine the relation between readability and audit contracting, not to distinguish the proxies for readability. Therefore, we use both the 10-K file size and Fog Index to proxy for readability in our main tests. In further tests, we find our results are robust to the inclusion of several other proxies for readability used in prior literature.

In this study, we investigate whether the readability of annual reports provides incremental information about the auditor's engagement risk. The management obfuscation hypothesis suggests that managers have incentives to obfuscate information or strategically hide adverse information through less transparent disclosures (Bloomfield 2002; Li 2008). For example, Bloomfield (2002) argues that managers make decisions that are motivated (at least partly) by intentions to make it more difficult for investors to uncover information that the managers do not want uncovered. In addition, Li (2008) argues that managers hide the transitory nature of good news or the permanent nature of bad news through more complicated annual reports.

Under SEC rules (i.e., Rule 10b-5), investors can initiate legal action after being affected by a company's misrepresentations in its disclosures. For example, Rogers et al. (2011) provides evidence suggesting that managers' use of unusually optimistic language increases litigation risk. In our setting, auditors engaging with corporate managers that produce less readable annual reports may perceive elevated client litigation risks. These aforementioned factors would suggest that less readable annual reports would increase the auditor's engagement risk.

On the other hand, it is not clear, ex ante that the readability of the annual report will provide information about the auditor's engagement risk beyond known firm and audit characteristics that impact engagement risk (e.g. firm size, firm complexity, etc.). In addition, the firm is responsible for the production of the annual report (SEC 2014), while the auditor is only responsible for reading any other information that is included with audited financial

statements (AU 550). Thus, the effect of annual report readability on audit risk is an empirical question. In this study, we empirically examine the relation between annual report readability and engagement risk by investigating various strategies that auditors use to mitigate engagement risk (DeFond, Lim, Zang 2014).

The production view of the audit process suggests that auditors respond to audit risk by increasing effort or charging a risk premium (Simunic 1980). Audit report lag proxies for audit effort (Knechel and Payne 2001), while both audit effort and risk premia affect audit fees (Johnstone and Bedard 2004). Auditors can also limit their exposure to litigation risk by lowering the threshold for issuing a modified going concern opinion (GCO). Finally, auditors can reduce litigation risk by resigning from risky clients. Thus, if less readable annual reports increase engagement risk, we expect that auditors will respond by taking longer to issue audit reports, charging higher audit fees, issuing more modified GCOs, and/or resigning from client engagements more frequently.

Using a sample of firms from 1999 to 2010, we find that annual report readability is significantly associated with audit outcomes in the subsequent year. Specifically, less readable annual reports are associated with longer audit report lag and higher audit fees in the following year. Our results are also economically meaningful, as we find that a firm with annual report readability (measured by 10-K file size) in the 75th percentile pays about 19 percent higher audit fees compared to a firm with readability in the 25th percentile, ceteris paribus. Further, we find that firms with less readable annual reports are more likely to

receive a modified GCO and experience higher auditor turnover. Collectively, our results suggest that financial statement readability has a significant effect on audit outcomes.

We consider, and take a number of steps to address, alternative explanations for our results. First, we demonstrate our results are robust to many control variables that prior research has shown to affect audit outcomes. Our results are also robust to alternative measures of readability. The results suggest that annual report readability provides incremental information about auditors' assessment of their clients' engagement risk. Finally, we demonstrate that our results hold predictably across a number of audit outcomes (fees, audit report lag, going concern opinions, and auditor turnover).

In further tests, we examine the relation between linguistic characteristics of the annual report and audit outcomes. Specifically, negative sentiment and a higher percentage of litigious words in the annual report are associated with higher audit fees. Further, negative sentiment, a higher percentage of litigious words, and a higher percentage of constraining words in the annual report are associated with longer audit report lag and higher auditor turnover. Finally, negative sentiment and a higher percentage of constraining words in the annual report are associated with a higher likelihood of receiving a modified GCO. These results, combined with our primary results, provide insight into the mechanisms likely affecting our results by showing that the linguistic characteristics of a firm's annual report provide incremental information related to the auditor's assessment of engagement risk.

Our results directly contribute to the audit and the financial disclosure literatures. First, we contribute to the audit literature by finding that the readability of the annual report

provides incremental information about the auditor's perceived engagement risk. Second, we contribute to the financial disclosure literature by providing evidence that auditors respond to the readability of information contained in the annual report. The annual report has been shown to be an input in the decisions of investors (Previts et al. 1994; Rogers and Grant 1997), however the SEC has criticized firms for the complexity of their language in these filings (Cox 2007). Prior research finds evidence that this complexity is costly to investors (You and Zhang 2009). We provide evidence that auditors respond to this complexity by taking steps to mitigate engagement risk. Finally, our paper should be of interest to investors, analysts, policy-makers and regulators, as well as academic researchers seeking a better understanding of the relationship between the qualitative aspects of financial information and audit outcomes.

The rest of the paper is organized as follows: Section II provides background and develops the hypotheses; Section III describes our sample selection process and develops the empirical models; Section IV provides the results from our testing; and Section V concludes.

II. BACKGROUND AND HYPOTHESIS DEVELOPMENT

Textual Analysis and Financial Reporting Readability

Prior research has shown that annual financial reports provide important information to capital market participants (e. g. Ball and Brown 1968; Beaver 1969). Much of this research focuses on how investors use the accounting numbers, such as earnings, sales, cost of goods sold, among others, contained within the financial reports. However, research also shows that investors use the textual information shown in the financial statement, such as the President's

letter, Management Discussion and Analysis (MDA), and footnotes (Courtis 1995, Jones and Shoemaker 1994). For example, early research into the use of annual reports showed that the president's letter is the most widely read part of the annual report (Lee and Tweedie 1975).

Increases in the required disclosures of firms to external users has led to concerns about the effectiveness of textual communication with external users (Lehavy et al. 2010). For decades, the SEC has pushed to make financial disclosures more understandable for ordinary investors (Firtel 1999). Toward that end, in 1998 the SEC formally addressed *understandability* and *readability* of disclosures by implementing Rule 421(d), which requires firms to use "plain English" in their prospectus filings, and encourages them to use this in all disclosure documents. This heightened concern over the readability of financial statements coupled with improved technology allowing researchers to investigate large collections of text through machine readable textual data from annual reports, has spawned a surge in research investigating the readability of financial statements.

For example, Li (2008) finds less readable financial reports are associated with lower earnings persistence, suggesting mangers obfuscate bad news in less readable financial reports. Further, research shows that readability of textual information affects whether stakeholders can use textual information efficiently and effectively. Specifically, You and Zhang (2009) find that investors underreact to the information from longer 10-K filings but show little under-reaction when 10-K filings are shorter. Further, Miller (2010) finds that when 10-K filings and annual reports increase in length, small investors reduce their trading activities and trading consensus. Callen et al. (2013) use the readability of 10-K filings as a

proxy for accounting quality and show that less readable 10-K filings are associated with a greater stock price delay. Similarly, Lee (2013) show that the post-earnings announcement drift is more profound when 10-Q filings are more difficult to read,and Lehavy et al. (2011) find that investors respond to less readable 10-Ks by demanding greater analyst following. Despite the demand for improved information environment, they also find that less readable 10-Ks are associated with higher analyst earnings forecast dispersion, lower forecast accuracy and higher uncertainty.

Taken together, these studies suggest that managers strategically manipulate the readability of textual information and that stakeholders are affected by this manipulation.[3] We empirically examine whether auditors respond to annual report readability in their assessment of engagement risk. While the auditor is not responsible for disclosures in the annual report, auditing standard AU Section 550 requires that:

"…the auditor has no obligation to perform any procedures to corroborate other information contained in a document. However, he should read the other information and consider whether such information, or the manner of its presentation, is materially inconsistent with information, or the manner of its presentation, appearing in the financial statements. If the auditor concludes that there is a material inconsistency, he should determine whether the financial statements, his report, or both require revision. If he concludes that they do not require revision, he should request the client to revise the other information. If the other information is not revised to eliminate the material inconsistency, he should communicate the material inconsistency to the audit committee and consider other actions, such as revising his report to include an explanatory paragraph describing the material inconsistency, withholding the use of his report in the document, and withdrawing from the engagement. The action he takes will depend on the particular circumstances and the significance of the inconsistency in the other information."

[3] Anecdotally, Loughran and McDonald (2014) ask a sample of accounting firm partners how they would obscure information whose disclosure was required. The partners suggested that burying the disclosure in a large amount of text and data could achieve such an objective.

We predict that annual report readability will affect the auditor's engagement risk. DeFond, Lim, and Zang (2015) note that engagement risk consists of three components: (i) client business risk, which is the risk associated with the client's survival and profitability; (ii) audit risk, which is the risk that the auditor fails to modify his opinion about financial statements that are materially misstated; and (iii) auditor business risk, the risk of potential litigation and loss of reputation for the auditor.

In identifying and assessing the client's risk of material misstatement, the auditor should obtain an understanding of the policies and actions of management, including assessing management's philosophy, operating style, integrity and ethical values. Further, discussions among the key audit engagement team members about the potential for material misstatement should occur with an attitude that includes a questioning mind about management's intentions (Auditing Standard No. 12). As discussed above, managers are known to obfuscate unfavorable information and conceal adverse information through more obscure and less readable disclosures (Bloomfield 2002; Li 2008). Auditors engaging with corporate managers displaying such tendencies are likely to elevate their assessment of risk.

Furthermore, annual report readability could represent greater explanation, disclosure, or obfuscation of negative information about the firm and its future operations, which could increase client business risk. The preceding risks should increase auditor business risk because Hennes et al. (2014) document that auditors are more likely to be dismissed when they fail to detect misstatements (reputation risk). Furthermore, Bloomfield (2008) suggests that firms may write longer annual reports to shield themselves from litigation. Thus, we

predict that less readable financial statements will be associated with higher engagement risk. Because DeFond and Zhang (2014) note that auditors will respond to higher engagement risk by employing several different strategies to mitigate engagement risk, we outline our specific hypotheses below.

Audit Report Lag and Annual Report Readability

The first strategy that auditors may employ to mitigate engagement risk is to increase audit effort. Auditors may increase audit effort in order to reduce the likelihood of undetected errors (Hillegeist 1999; Lobo and Zhao 2013), which will, in turn, reduce audit risk. We use audit report lag as a proxy for audit effort because prior research suggests that audit report lags are related to the amount of work performed in the audit engagement (Knechel and Payne 2001; Knechel, Rouse, and Schelleman 2009). If annual report readability is indicative of higher engagement risk, we expect a positive relation between audit report lag and annual report readability. However, if there is no incremental information in the annual report readability beyond client and engagement factors, we expect no relation. This leads to our first hypothesis (in alternative form):

> ***H1:*** *There is a negative association between audit report lag and the readability of a firm's annual report.*

Audit Fees and Annual Report Readability

The seminal work by Simunic (1980) models audit fees as a function of effort and risk. If higher audit effort does not reduce engagement risk to acceptable levels, the auditor may charge a risk premium in order to pass some of the risk on to the client (Pratt and Stice 1994;

Morgan and Stocken 1998; Bell, Landsman, and Shackleford 2001; Johnstone and Bedard 2004) Thus, if clients with less readable annual reports impose more risk, we expect higher fees. In our setting, we posit that a hard-to-read financial statement might serve as a signal of complexity (e.g. Hoitash and Hoitash 2015). Less readable financial statements could also signal management obfuscation or lower earnings quality (e.g. Li 2008; Biddle et al. 2009; Loughran and McDonald 2014). Any of these explanations could lead to the auditor charging a risk premium in order to transfer some of the risk to the client. This leads to our second hypothesis (stated in alternative form):

> ***H2:*** *There is a negative association between audit fees paid to external auditors and the readability of a firm's annual report.*

Going Concern Opinions and Annual Report Readability

Auditors may also increase the likelihood of issuing a modified GCO in order to reduce engagement risk. Blay, Geiger, and North (2011) contend that issuing a modified GCO is the means by which the auditor indicates her perceived risk about the continued viability of a client. Kaplan and Williams (2013, pg. 2) contend that issuing a GCO is a "preemptive action that auditors may take when they assess the risk of investor litigation to be high." Research supports this contention. Specifically, Carcello and Palmrose (1994) document univariate evidence of a negative relation between modified GCOs and auditor litigation, while Krishnan and Krishnan (1996) document that the probability of litigation is positively associated with the issuance of a modified GCO. Furthermore, Kaplan and Williams (2013)

find that auditors are more likely to issue a modified GCO to clients with higher litigation risk.[4] This leads to our third hypothesis (stated in alternative form):

> ***H3:*** *There is a negative association between the issuance of a going concern opinion and the readability of a firm's annual report.*

Auditor Turnover and Annual Report Readability

If the above strategies do not reduce the engagement risk to acceptable levels, auditors may choose to eliminate the risk by resigning from the audit engagement. Krishnan and Krishnan (1997) show a positive association between litigation risk and auditor resignations. Furthermore, prior research documents that resignations are more frequent when clients pose higher litigation risk (Shu 2000), and when clients have higher levels of real activities management (Kim and Park 2014).

There are several facets of annual report readability that may affect auditor turnover. AU 550 requires that the auditor discuss any inconsistencies in the annual report with the client, which could lead the client to revise the annual report. This, coupled with potentially higher fees and more frequent modified GCOs, could cause a serious breakdown in the relationship between management and the auditor. This may increase the probability that the auditor resigns or is dismissed from the engagement. Therefore, if clients with less readable annual reports impose more risk, we expect greater auditor turnover. Our final hypothesis is stated as follows (in alternative form):

[4] Relatedly, Francis and Krishnan (1999) show that auditors are more likely to issue a modified GCO to clients with larger accruals.

H4: *There is a negative association between auditor turnover and the readability of a firm's annual report.*

III. METHODOLOGY

Sample Selection

Our sample selection begins by obtaining all firms in the intersection of the Audit Analytics and Compustat databases for fiscal years 1999 through 2010. We omit firm-years with missing observations for our variables used in our multivariate analyses and, due to inherent institutional and regulatory differences, we drop firms operating in the financial industry (SIC 6000 through 6999). Our primary sample consists of 49,649 firm-year observations. Panel A of Table 1 reports the time distribution of our sample and Panel B of Table 1 reports the industry distribution. Our sample is widely distributed across time. Food, tobacco, textiles, paper and chemicals, manufacturing, machinery and electronics and services industries represent over 60% of our sample.[5]

=====TABLE 1 HERE=====

Financial Statement Readability

We use three measures of financial statement readability. Our primary measure of financial statement readability is natural log of 10-K document net file size (Loughran and McDonald 2014). Loughran and McDonald (2014) show that the Fog Index is poorly specified when used to evaluate financial documents, as the complex words contained in business text are well-understood by investors and analysts. Further, they show that 10-K

[5] For ease of exposition, we present the industry distribution by one-digit SIC. However, we include industry fixed effects using two-digit SIC in all multivariate specifications

document file size provides a straightforward readability proxy, which is substantially less prone to measurement error, is easily replicated, and is highly correlated with extant readability measures. We also use the natural log of the number of 10-K words as an alternative measure of financial statement readability. Both Loughran and McDonald (2014) and Li (2008) use the length of 10-K filings as an alternative measure of financial statement readability. Finally, even though the Fog index may suffer from certain misspecifications, it has been used extensively in accounting and finance literature to measure financial statement readability (Li 2008; Biddle et al. 2009; Miller 2010; Lehavy et al. 2011, Merkley 2011, Dougal et al. 2012, Lawrence 2013, Callen et al. 2013, Franco et al. 2013). Hence, we use the Fog Index as our final measure of financial statement readability.[6]

Audit Outcomes

We consider four sets of audit outcomes, audit report lag, audit fees, auditor's propensity to issue modified going concern opinions, and audit turnover. Since we measure all readability proxies and linguistic cues at year *t*, we consider all audit outcome variables at year *t+1*. We test our first two hypotheses by estimating the following OLS regression that controls for financial characteristics and audit engagement factors likely to affect audit report lag (*ARL*) and fees (*AFEE*), both at year *t+1*. Prior research suggests that ARL is associated with client size, complexity, performance, and audit characteristics (Knechel and Payne 2001). Similarly, in the audit fee model developed by Simunic (1980) and Simunic and Stein

[6]In robustness checks, we show that our results are insensitive to the use of alternative measures of financial report readability.

(1996), audit fees reflect the economic costs of auditors, which are known to be related to client size, complexity, performance, risk, financial reporting quality, and other client-specific characteristics (Hay et al. 2006). Hence, we include a large set of controls in order to isolate the effect of our variable of interest (*READABILITY*) on audit outcomes (*ARL* and *AFEE*). Given the common set of variables associated with both audit report lag and audit fees, we use the following model to test our first two hypotheses:

$$ARL_{it+1}/\ AFEE_{it+1} = \beta_0 + \beta_1\, READABILITY_t + \beta_2 SIZE_{it} + \beta_3\, LEVERAGE_{it} + \beta_4\, RECINV_{it} + \beta_5 ROA_{it} + \beta_6 LOSS_{it} + \beta_7 FOREIGN_{it} + \beta_8 MERGER_{it} + \beta_9 RESTRUCTURE_{it} + \beta_{10} DISCOPS_{it} + \beta_{11} EXTRA_{it} + \beta_{12} SPECIAL_{it} + \beta_{13} BIGN_{it} + \beta_{14}\, BUSY_{it} + \beta_{15} MATWEAK_{it} + \beta_{16} FILE404_{it} + \beta_{17} RESTATE_{it} + \beta_{18} MISTATE_{it} + \beta_{19} AUDITORCHANGE_{it} + YEAR/INDUSTRY\ DUMMIES + \varepsilon_{it} \quad (1)$$

Where:

ARL is the natural log of the number of days between fiscal year and signature date of the audit report at firscal year *t+1*;

AFEE is the natural logarithm of audit fees at fiscal year *t+1*;

READABILITY is one of our three measures financial statement readability: the natural log of net file size, the natural log of number of words in 10-K, and the FOG Index. All three proxies for readability are measured at year *t*;

SIZE is the natural logarithm of a firm's total assets at the end of the fiscal year *t*;

LEVERAGE is a firm's total liabilities scaled by total assets at the end of the fiscal year *t*;

RECINV is the sum of receivables and inventory, scaled by total assets, at the end of the fiscal year *t*;

ROA is a firm's net income for the fiscal year divided by total assets at end of the fiscal year *t*;

LOSS is an indicator variable that takes the value one if a firm's net income for the fiscal year *t* is negative and zero otherwise;

FOREIGN is an indicator variable that takes the value one if a firm has foreign operations during the fiscal year *t* and zero otherwise;

MERGER is an indicator variable that takes the value one if firm has merger and acquisition activities during the year *t* and zero otherwise;

RESTRUCTURE is an indicator variable taking the value one if a firm has restructuring activities during the year *t* and zero otherwise;

DISCOPS is an indicator variable taking the value one if the firm reported discontinued operations for the fiscal year *t* and zero otherwise;

EXTRA is an indicator variable taking the value one if the firm reported an extraordinary item for the fiscal year *t* and zero otherwise;

SPECIAL is an indicator variable taking the value one if a firm's reported special item for the fiscal year *t* is at least 2 percent of total assets and zero otherwise;

BIGN is an indicator variable taking the value one if a firm is audited by one of the "Big 4" audit firms for the fiscal year *t* and zero otherwise;

BUSY is an indicator variable taking the value one if a firm's fiscal year-end month is December and zero otherwise;

MATWEAK is an indicator variable that takes the value one if the firm receives a SOX 404 internal control weakness opinion from the auditor and zero otherwise;

FILE404 is an indicator variable that takes the value one if the firm filed a SOX report and zero otherwise;

RESTATE is an indicator variable that takes the value one if the firm announces a financial statement restatement during fiscal year t and zero otherwise;

MISSTATE is an indicator variable that takes the value one if the firm's current financial statement is restated in later period and zero otherwise.

AUDITORCHANGE is an indicator variable taking the value one if a firm changed auditor and zero otherwise;

We also include industry and year fixed effects to control for cross-sectional differences in audit lags and fees across industry and time, and we cluster standard errors by firm and year (Petersen 2009; Gow, Ormazabal, and Taylor, 2010; Thompson, 2011).[7] Our coefficient of interest is β_1, which measures the association between financial statement readability and *ARL* (*AFEE*). We expect a positive association between the proxies for readability and audit outcomes ($\beta_1 > 0$).

Next we investigate the association between readability and the auditor's propensity to issue a modified going concern opinion. Following DeFond and Zhang (2014), we use the following model to test our hypothesis:

$$FIRSTGCO_{it} = \beta_0 + \beta_1 READABILITY_{t-1} + \beta_2 SIZE_{it} + \beta_3 AGE_{it} + \beta_4 BIGN_{it} + \beta_5 LEVERAGE_{it} + \beta_6 \Delta LEVERAGE_{it} + \beta_7 ZSCORE_{it} + \beta_8 OCF_{it} + \beta_9 ARL_{it} + \beta_{10} LIQUIDITY_{it} + \beta_{11} LOSS_{it} + \beta_{12} STOCK\ RETURN_{it} + \beta_{13} GROWTH_{it} + \beta_{14} INVESTMENT_{it} + \beta_{15} NEW\ FINANCE_{it} + YEAR/INDUSTRY\ DUMMIES + \varepsilon_{it} \quad (2)$$

Where:

$FIRSTGCO_{it}$ is an indicator variable taking the value one if the auditor issues the first time Going Concern Opinion to its clients;

AGE_{it} is the number of years a firm has been covered in COMPUSTAT;

$\Delta LEVERAGE_{it}$ is the change of leverage from year *t-1* to year *t*;

$ZSCORE_{it}$ is the bankruptcy score based on Altman (1968);

OCF_{it} is a firm's operating cash flow divided by its total assets;

$LIQUIDITY_{it}$ is a firm's currents asset divided by its current liabilities;

[7] Appendix A provides definitions of all variables used in our analysis.

STOCK RETURN$_{it}$ is a firm's stock return for fiscal year *t*;

GROWTH$_{it}$ is a firm's sales growth rate;

INVESTMENT$_{it}$ is short- and long-term investment securities (including cash and cash equivalents) (Compustat items CHE and IVPT), scaled by total assets;

NEW FINANCE$_{it}$ is an indicator variable equal to 1 if a client has a new issuance of equity or debt in the subsequent fiscal year;

All other variables are as defined in Eq. 1.

For our test of H3, we follow Carson et al. (2013) to identify controls that can affect auditor's propensity to issue a modified GCO. We follow standard conventions in this literature (e.g., Carson et al. 2013) and restrict our sample to financially distressed firms (firms with either negative net income or negative operating cash flow). This leaves us 14,445 observations for our main tests. Our coefficient of interest is β_1, which measures the association between financial statement readability and the propensity to issue a modified GCO. We expect a positive association between the proxies for readability and the issuance of a modified going concern opinion ($\beta_1 > 0$). We also include industry and year fixed effects and cluster standard errors by firm and year.

Finally, we investigate the association between readability and auditor turnover using a modified version of Eq. 1 as follows[8]:

$$TURNOVER_{it+1} = \beta_0 + \beta_1 READABILITY_t + \beta_2 SIZE_{it} + \beta_3 LEVERAGE_{it} + \beta_4 RECINV_{it} + \beta_5 ROA_{it} + \beta_6 LOSS_{it} + \beta_7 FOREIGN_{it} + \beta_8 MERGER_{it} + \beta_9 RESTRUCTURE_{it} + \beta_{10} DISCOPS_{it} + \beta_{11} EXTRA_{it} + \beta_{12} SPECIAL_{it} + \beta_{13} BIGN_{it} + \beta_{14} BUSY_{it} + \beta_{15} MATWEAK_{it} + \beta_{16} FILE404_{it} + \beta_{17} RESTATE_{it} + \beta_{18} MISTATE_{it} + YEAR/INDUSTRY\ DUMMIES + \varepsilon_{it} \quad (3)$$

[8] This model is similar to auditor turnover models used in prior literature (Landsman et al. 2009; Kim and Park 2014).

We replace the audit outcome variable in Equation (1) with an audit turnover indicator ($TURNOVER_{it+1}$). $TURNOVER_{it+1}$ is an indicator variable taking the value one if the firm reported an auditor change within 365 days after its fiscal year end. We exclude *AUDITORCHANGE* from the model. All other variables are as previously defined. We also include industry and year fixed effects to control for cross-sectional differences in audit turnover across industry and time, and we cluster standard errors by firm and year. Our coefficient of interest is β_1, which measures the association between financial statement readability and auditor turnover. We expect a positive association between the proxies for readability and auditor turnover ($\beta_1 > 0$).

IV. RESULTS

Descriptive Statistics

Table 2 presents the descriptive statistics for the variables used in the primary analyses. The mean (median) *ARL* is 68 (66 days), while the mean (median) audit fees (*AFEE*) for fiscal year *t+1* is $1,151,360 ($400,290). About ten percent of our sample firms change auditors (*TURNOVER*), and about two percent of our sample firms receive a modified going-concern opinion for the first time (*FIRSTGCO*). The mean (median) log of file size of 10-K (*FILESIZE*) at fiscal year *t+1* is 12.482 (12.474), corresponding to approximately 263,550 (261,450) characters. The mean (median) number of the log of number of words (*LENGTH*) at fiscal year *t+1* is 10.377 (10.376), corresponding to approximately 32,112 (32,080) words. Approximately 44.6% of firm-year observations reported a loss (*LOSS*) for the fiscal year *t*. A majority of observations in our sample (68.2%) engaged a Big N auditor

(*BIGN*). Only about two percent of the firm-year observations received a SOX 404 material weakness internal control opinion (*MATWEAK*) and approximately eight percent of firm-year observations announced a restatement. Collectively, these summary statistics are consistent with related audit research (e.g., Krishnan and Wang 2015).

Panel B presents the descriptive statistics for the variables used in to test H3. We restrict this sample to firms with either negative net income or negative operating cash flow, leaving a sample of 14,445 firms. Approximately 8.2% of our sample firms receive their first going concern opinion during our sample period (*FIRSTGCO*). The mean (median) log of file size of 10-K (*FILESIZE*) at fiscal year *t+1* is 12.464 (12.087), while the mean (median) number of the log of number of words (*LENGTH*) at fiscal year *t+1* is 10.362 (10.374) and the mean (median) fog score (*FOG*) is 19.657 (19.510). These values are similar to corresponding values for our full sample in Panel A.

=====TABLE 2 HERE=====

Correlations

Table 3 reports Pearson correlation coefficients for the main variables used in the empirical analyses. The positive correlations between all three readability measures (*FILESIZE*, *LENGTH*, *FOG*) and audit fees (*AFEE*) are significant in the hypothesized direction. However, *FILESIZE* and *LENGTH* are negatively associated with audit lag (*ARL*), first-time modified going-concern opinion (*FIRSTGCO*), and audit turnover (*TURNOVER*) at fiscal year *t+1*. However, these are merely pairwise correlations and do not consider the

effects of other factors that may impact readability and audit outcomes. Thus, it is necessary to test this relationship in a multivariate framework. We now turn to our regression results.

=====TABLE 3 HERE=====

Multivariate Analysis

Audit Lag (H1)

Table 4 reports results from estimating Equation (1) using *ARL* as the dependent variable. Coefficient estimates of different readability measures *FILESIZE* (Column 1, Estimate = 0.0482, *p*-value < 0.01) and *LENGTH* (Column 2, Estimate = 0.0439, *p*-value = 0.0439) are consistent with our hypothesis that financial report readability is positively associated with audit report lag. This result suggests that auditors spend more time auditing clients that have less readable financial statements. Economically speaking, a one standard deviation increase in *FILESIZE* is associated with a 3% increase in audit lag. Most control variables are consistent with prior literature. The adjusted R^2 for our models range from twenty-nine to thirty-two percent, which is also consistent with prior literature (Krishnan and Yang 2009). The relation between *ARL* and *FOG* (Column 3, Estimate = 0.0014, *p*-value > 0.10) is positive, but is not significant at conventional levels, which corroborates Loughran and McDonald's (2014) contention that *FOG* is not well specified as a measure of financial report complexity.

=====TABLE 4 HERE=====

Audit Fees (H2)

Table 5 presents the results from our tests investigating the association between financial report readability and audit fees. Coefficient estimates of different readability measures in Columns (1), (2) and (3) confirm our hypothesis that auditors charge higher fees to firms with less readable financial reports. Specifically, we find that *FILESIZE* (Column 1, Estimate = 0.215, *p*-value < 0.01), *LENGTH* (Column 2, Estimate = 0.202, *p*-value < 0.01), and *FOG* (Column 3, Estimate = 0.009, *p*-value < 0.01) are all positively and significantly associated with audit fees. In term of economic significance, a one-standard deviation increase in *FILESIZE* is associated with a 13.5% increase in *AFEE*.

Consistent with prior work examining audit fees, find that the coefficients for our control variables are significant in the predicted directions. The adjusted R^2 for our models range from eighty-three to eighty-six percent, indicating our models have high explanatory power. Moreover, the coefficient estimates on our control variables and adjusted R^2 are consistent with related audit research (DeFond, Lim, and Zang 2015).

=====TABLE 5 HERE=====

First time GC (H3)

Table 6 provides the results for our tests regarding the association between financial statement readability and auditors' propensity to issue first time going concern reports. Following Carson et al. (2013), we restrict our sample to financially distressed firms with negative net income or operating cash flow. Table 6 reports results from estimating Equation (2). Coefficient estimates of different readability measures in Columns (1), (2) and (3) confirm our hypothesis that financial report readability is positively associated with auditor

propensity to issue a GCO. Specifically, we find that *FILESIZE* (Column 1, Estimate = 0.127, *p*-value < 0.01), *LENGTH* (Column 2, Estimate = 0.118, *p*-value < 0.01), and *FOG* (Column 3, Estimate = 0.021, *p*-value < 0.01) are all positively and significantly associated with auditors' propensity to issue a first-time modified going concern opinion. Consistent with prior studies, we find that auditor's propensity to issue a modified GCO is lower for firms with larger assets, older ages, lower leverage, higher Altman's Z score, shorter audit lag, higher liquidity ratio, and better performance (Blay, Geiger, and North 2011).The area under ROC is around 0.83, which suggests our model performs well in predicting auditor's propensity to issue a going concern opinion.

=====TABLE 6 HERE=====

Auditor Turnover (H4)

Table 7 provides results from our tests examining the association between financial statement readability and auditor turnover in the subsequent year.[9] If the auditor is unable to resolve the risk of maintaining a client with less readable financial statements through effort, risk premium, or issuing a modified going concern opinion, auditors may resign the engagement, and thus increase the turnover rate. Coefficient estimates of different readability measures in Columns (1) and (2) confirm our hypothesis that financial report readability is positively associated with audit turnover. Specifically, we find that *FILESIZE* (Column 1, Estimate = 0.0656, *p*-value < 0.01) and *LENGTH* (Column 2, Estimate = 0.0629, *p*-value <

[9]Lee et al. (2004) argue that there is often no difference between an auditor resignation and a dismissal, because an audit firm can preemptively resign from an engagement rather than be dismissed at a later date by the audit committee.

0.01) are positively and significantly associated with auditor turnover. We do not, however, find *FOG* to be related to auditor turnover (Column 3, Estimate = 0.0029, *p*-value > 0.10). The sign and magnitude of the control variables are consistent with prior studies (Kim and Park 2014)[10].

=====TABLE 7 HERE=====

V. ADDITIONAL ANALYSIS

Linguistic Cues and Disclosure Tone

As an additional analysis, we examine the lexical properties of annual reports and their implications for audit engagement. Specifically, we examine the disclosure tone of the annual report. We employ three measures of disclosure tone following Loughran and McDonald (2011). The first measure of disclosure tone we consider is negative tone (*NEGATIVE*). The second disclosure tone we consider is litigious tone (*LITIGIOUS*). The third disclosure tone is financial constraint tone (*CONSTRAINT*).

NEGATIVE is percentage of words within the 10-K that are classified as negative minus the percentage of words within 10-K that are classified as positive using the Loughran and McDonald (2011) word list.[11] *LITIGIOUS* is the percentage of words within the 10-K

[10] In diagnostic tests, we confirm our variance inflation factors ("VIFs") for our main variables across all models are less than 5, which indicates that multicollinearity is not an issue.

[11] Mayew et al. (2014) show that level of negative words provide significant predictive ability of MD&A disclosure in addition to financial ratios, market-based models, and even auditor's going concern opinion. Thus, the use of negative words in previous year 10-K disclosure indicates a high audit risk in this fiscal year.

classified as legal using the Loughran and McDonald (2011) word list.[12] *CONSTRAINING* is the percentage of words within the 10-K classified as constraint using the Loughran and McDonald (2011) word list.[13] Our results from this analysis are presented in Table 8.

=====TABLE 8 HERE=====

Panel A of Table 8 presents the results for our tests examining the association between different linguistic cues and audit report lag in year *t+1*. All three measures of linguistic cues (*NEGATIVE*, *LITIGIOUS*, *CONSTRAINING*) are positively associated with audit lags in year *t+1* (*p*-value < 0.01). These results are consistent with our primary analysis and confirm that auditors respond to the negative information in the prior year 10-K.

Panel B presents the results from our tests examining the association between different linguistic cues and audit fees at year *t+1*. Column (1) shows that the coefficient on *NEGATIVE* is positively and significantly (Estimate = 0.113, *p*-value < 0.01) associated with audit fees at year *t+1*. Column (2) show that the coefficient on *LITIGIOUS* is also positively and significantly (Estimate = 0.0392, *p*-value < 0.01) associated with audit fees in year *t+1*. The coefficient on *CONSTRAINING* is positive, but is not significant at conventional levels (Estimate = 0.0195, *p*-value > 0.10).

[12] The usage of litigious tone is intuitive in our setting. High levels of litigious text indicate a high litigation risk to the firm. We identify 731 instances of litigious terms: claimant, deposition, testimony, and tort.

[13] Loughran and McDonald (2011) show that the constraining tone of 10-K documents outperformed current measures of financial constraint, like SA and WW index. The frequency of constraining words predicts subsequent liquidity events. We use the Loughran and McDonald (2011) sentiment word lists. The Loughran and McDonald word lists, created specifically for financial document, have been widely used in the literature to gauge disclosure tone in newspaper articles, financial statement, and conference calls (Gurun and Butler, 2012; Dougal et al. 2012; Feldman, Govindaraj, Livnat, and Segal, 2010; Mayew and Venkatachalam, 2012). In our setting, we gauge the disclosure tone across the whole 10-K disclosure (Loughran and McDonald 2014).

Panel C examines the association between different linguistic cues and audit's propensity to issue a first-time modified GCO. We find a positive association between *NEGATIVE* (Column 1, Estimate = 0.092, *p*-value < 0.10), *LITIGIOUS* (Column 2, Estimate = 0.0254, *p*-value < 0.10), and *CONSTRAINING* (Column 3, Estimate = 0.226, *p*-value < 0.01) and auditors' propensity to issue an initial modified GCO. Economically speaking, a one percent increase in constraining words is associated with 2.8% increase in probability to issue a GCO. This suggest that the constraining tone of the 10-K provides the auditor incremental information in assessing the firm's ability to continue as a going concern. These results are consistent with Mayew et al. (2015) who show that the tone of the MD&A disclosure is informative of business risk in the near future.

Panel D presents results from our examination of the association between different linguistic cues and audit turnover in year *t+1*. We find a positive association between *NEGATIVE* (Column 1, Estimate = 0.0511, *p*-value < 0.01), *LITIGIOUS* (Column 2, Estimate = 0.0254, *p*-value < 0.05), and *CONSTRAINING* (Column 3, Estimate = 0.126, *p*-value < 0.05) and auditor turnover in year *t+1*. This result suggests that the annual report readability is informative about the engagment risk of the client, and that auditors respond to this risk when determining their audit portfolio. Overall, our results suggest that linguistic cues in the annual report are informative about auditors' engagement risk. More specifically, our results suggest that auditors consider the linguistics cues contained in prior year's financial statement when planning the audit engagement.

Sensitivity Analyses

Firm Fixed Effects

Our primary analyses use cross-sectional panel data. In order to mitigate the possibility of correlated omitted variables, we re-estimate Eq. 1 using firm fixed effects. Amir et al. (2015) suggest that the use of firm fixed effects is effective at yielding unbiased coefficient estimates, and is superior to a changes model (differencing of both the dependent variable and independent variables), which yields unbiased coefficients, but is subject to loss of data.

Table 9 presents the results from the estimation of Eq. 1 using firm fixed effects. Panel A presents results when *ARL* is the dependent variable. The coefficients on all three readability measures are positive and statistically significant. Panel B presents results when *AFEE* is the dependent variable. The coefficients on all three readability measures are positive and significant at the 1% level. These results are consistent with our primary analysis and provide some assurance that our results are not driven by unobserved time-invariant firm characteristics.

=====TABLE 9 HERE=====

Alternative Measures of Financial Statement Readability

We also examine the effect of financial statement readability on audit outcomes by using other readability proxies. Specifically, we use the Flesch Reading Ease index (*FLESCH*), and Kincaid index (*KINCAID*) as proxies for readability.[14] The results using alternative measures of financial reporting readability are qualitatively similar as the results

[14] The Flesch Reading Ease Index is calculated as 206.835 - (1.015 * words per sentence) - (84.6 * syllables per word). The Kincaid Index is calculated as (11.8 * syllables per word) + (0.39 * words per sentence) - 15.59.

using *FOG* as measure of financial statement readability. Certain measures yield weaker results. This suggests that Fog index outperform other readability proxies.

VI. CONCLUSION

Prior research has overwhelmingly demonstrated that financial reports are an important source of information for capital markets, but regulators, academics, and the popular press have all expressed concern that the readability of financial information can dampen the effectiveness of financial disclosures. In our study, we find evidence consistent with the notion that auditors respond to less readable annual reports. Specifically, we find that audit report lag, audit fees, the issuance of a modified going concern opinion, and auditor turnover are increasing in annual report complexity. The results are robust to many control variables that prior research has shown to affect audit outcomes and to alternative measures of readability. Collectively, our results suggest that annual report readability provides incremental information about auditors' assessment of their clients' engagement risk

We also find that the lexical properties of annual reports are associated with auditor-client contracting. Specifically, negative sentiment and a higher percentage of litigious words in the annual report are associated with higher audit fees. Further, negative sentiment, a higher percentage of litigious words, and a higher percentage of constraining words in the annual report are associated with longer audit report lag and higher auditor turnover. Finally, more negative sentiment and a higher percentage of constraining words in the annual report are associated with a higher likelihood of receiving a modified going concern opinion. These results, taken with our primary results, provide insight into the mechanisms likely affecting

our results by showing that the linguistic characteristics of a firm's annual report provide incremental information about the auditor's assessment of engagement risk.

APPENDIX A Variable Definitions

Variable Name	Variable Measurement
Dependent Variables	
AFEE	The natural log of total audit fees for firm *i* in year *t+1*.
ARL	The natural log of audit lag for firm *i* in year *t+1*
TURNOVER	1 if auditor turnover happens for firm *i* in year *t+1*, and 0 otherwise
FIRSTGCO	1 if auditor issues first time GC opinion in *t+1*, and 0 otherwise
Readability and Linguistic Cues	
FILESIZE	The natural log of net file size of 10-K filings
LENGTH	The natural log of number of words in 10-K filings
FOG	The Fog Index (Li 2008).
NEGATIVE	(Number of negative words in 10-K filings minus number of positive words in 10-K filings divided by the total number of words in 10-K filings) * 100. The word lists for positive words and negative words are obtained from Loughran and McDonald Financial Sentiment Dictionaries.
LITIGIOUS	(Number of litigious words in 10-K filings divided by the total number of words in 10-K filings) * 100. The word lists for uncertain words is obtained from Loughran and McDonald Financial Sentiment Dictionaries.
CONSTRAINING	(Number of constraining words in 10-K filings divided by the total number of words in 10-K filings) * 100. The word lists for uncertain words is obtained from Loughran and McDonald Financial Sentiment Dictionaries.
Control Variables	
SIZE	The natural log of total assets for firm *i* in year *t*.
LEVERAGE	Total liabilities divided by total assets for firm *i* in year *t*.
$\Delta LEVERAGE_{it}$	*LEVERAGE* in year *t* minus *LEVERAGE* in year *t-1*
RECINV	The sum of receivables and inventory, scaled by total assets, at the end of the fiscal year t.
ROA	Net earnings divided by total assets.
LOSS	1 if firm *i*'s net income is a loss in year *t*, and 0 otherwise.
FOREIGN	1 if firm *i* has foreign operations in year *t*, and 0 otherwise.
MERGER	1 if firm *i* (did not) engage in merger and acquisition activity in the fiscal year, and 0 otherwise.
RESTRUCTURE	1 if firm *i* has restructuring activities during the year, and 0 otherwise.
DISCOPS	1 if firm *i* has discontinued operations in year *t*, and 0 otherwise.
EXTRA	1 if firm *i* (does not) reports an extraordinary item in year *t*.
SPECIAL	1 if firm *i* reported special item for the fiscal year is at least 2 percent of total asset, and 0 otherwise.
ICW	1 if firm *i* reported an internal control weakness in year *t*, and 0 otherwise.
MATWEAK	1 if firm *i* reported any internal control weakness in during fiscal year *t*, and 0 otherwise.
FILE404	1 if firm filed a SOX report in year *t*, and 0 otherwise.
BIG4	1 if firm i is audited by a Big 4 auditor in year *t*, and 0 otherwise.
BUSY	1 if firm *i* has a fiscal year-end of December or January in year *t*, and 0 otherwise.
RESTATE	1 if the firm i announces a financial statement restatement during fiscal year t, and 0 otherwise.

Misstate	1 if this fiscal year's financial statement is restated later, and 0 otherwise.
AUDITORCHANGE	1 if firm *i* experienced a change in auditor in year *t*, and 0 otherwise.
ZSCORE	Altman (1968) bankruptcy score, *calculated as: ZSCORE*= 3.3 *(NI/AT) + 1.0 * (SALE/AT) + 1.4 * (RE/AT) + 1.2 * (WCAP/AT) + 0.6 * (CSHO * PRCC_F /LT).
OCF	Operating Cash Flow divided by Total Assets
STOCK RETURN	Stock return over the fiscal year
LIQUIDITY	Current assets divided by current liabilities
GROWTH	Sales over lag sales
INVESTMENT	Short- and long-term investment securities (including cash and cash equivalents) (Compustat items CHE and IVPT), scaled by total assets;
NEW FINANCE	1 if a firm has a new issuance of equity or debt in the subsequent fiscal year (SSTK exceeding 5 percent of the firm's market value of equity or positive DLTIS);

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Table 1
Sample Composition

Panel A. Time distribution

Year	Frequency	%	Cumulative Freq.	Cumulative %
1999	2,230	4.49	2,230	4.49
2000	4,212	8.48	6,442	12.98
2001	4,763	9.59	11,205	22.57
2002	4,851	9.77	16,056	32.34
2003	4,781	9.63	20,837	41.97
2004	4,615	9.3	25,452	51.26
2005	4,438	8.94	29,890	60.2
2006	4,217	8.49	34,107	68.7
2007	4,119	8.3	38,226	76.99
2008	3,952	7.96	42,178	84.95
2009	3,769	7.59	45,947	92.54
2010	3,702	7.46	49,649	100

Panel B: Industry distribution

Industry (1-Digit SIC)	Frequency	%	Cumulative Freq.	Cumulative %
0-1 (Agriculture, mining, oil and construction)	3,541	7.13	3,541	7.13
2 (Food, tobacco, textiles, paper and chemicals)	9,127	18.38	12,668	25.51
3 (Manufacturing, machinery and electronics)	14,792	29.79	27,460	55.30
4 (Transportation and communications)	5,466	11.01	32,926	66.31
5 (Wholesale and retail)	5,269	10.61	38,195	76.92
7 (Services)	8,299	16.72	46,494	93.64
8-9 (Health, legal, educational services and other)	3,155	6.36	49,649	100

Table 2
Summary Statistics of Variables used in Analysis

Panel A: Descriptive Statistics for Primary Analyses: This table reports the summary statistics for variables used in our audit fee, audit lag and audit turnover tests. All continuous firm characteristics are winsorized at 1 and 99 percentiles. See Appendix A for variable definitions.

Variables	N	mean	sd	p25	p50	p75
Readability and Linguistic Cues						
FILESIZE	49,649	12.482	0.626	12.073	12.474	12.871
LENGTH	49,649	10.377	0.643	9.959	10.376	10.783
FOG	33,512	19.423	2.692	18.622	19.469	20.436
NEGATIVE	49,649	0.917	0.452	0.624	0.903	1.198
LITIGIOUS	49,649	1.553	0.898	0.841	1.293	2.094
CONSTRAINING	49,649	0.787	0.176	0.666	0.779	0.899
Dependent Variables						
AFEE (raw $ amount)	49,649	1151360	2102599	135500	400291	1175000
AFEE (t+1)	49,649	12.908	1.496	11.817	12.900	13.977
ARL (in days)	49,561	68	28	53	66	80
ARL (t+1)	49,549	4.137	0.394	3.970	4.190	4.382
TURNOVER (t+1)	49649	0.105	0.307	0.000	0.000	0.000
Control Variables						
SIZE	49,649	18.821	2.686	17.176	18.988	20.672
LEVERAGE	49,649	0.899	2.306	0.289	0.507	0.719
RECINV	49,649	0.251	0.205	0.079	0.210	0.376
ROA	49,649	-0.446	1.987	-0.165	0.014	0.063
LOSS	49,649	0.446	0.497	0.000	0.000	1.000
FOREIGN	49,649	0.194	0.395	0.000	0.000	0.000
MERGER	49,649	0.323	0.468	0.000	0.000	1.000
RESTRUCTURE	49,649	0.211	0.408	0.000	0.000	0.000
DISCOPS	49,649	0.144	0.351	0.000	0.000	0.000
EXTRA	49,649	0.068	0.251	0.000	0.000	0.000
SPECIAL	49,649	0.050	0.218	0.000	0.000	0.000
BIGN	49,649	0.682	0.466	0.000	1.000	1.000
BUSY	49,649	0.679	0.467	0.000	1.000	1.000
MATWEAK	49,649	0.024	0.154	0.000	0.000	0.000
FILE404	49,649	0.341	0.474	0.000	0.000	0.000
RESTATE	49,649	0.080	0.271	0.000	0.000	0.000
MISSTATE	49,649	0.175	0.380	0.000	0.000	0.000
AUDITORCHANGE	49,649	0.103	0.303	0.000	0.000	0.000

Panel B: Descriptive Statistics for GC sample: This table reports the summary statistics for variables used in our modified GCO tests. All continuous firm characteristics are winsorized at 1 and 99 percentiles. See Appendix A for variable definitions.

Variables	N	mean	sd	p25	p50	p75
Readability and Linguistic Cues						
FILESIZE	14,445	12.464	0.593	12.087	12.465	12.836
LENGTH	14,445	10.362	0.616	9.973	10.374	10.754
FOG	10,595	19.657	1.540	18.681	19.510	20.451
NEGATIVE	14,445	0.967	0.460	0.660	0.961	1.271
LITIGIOUS	14,445	1.603	0.929	0.861	1.332	2.187
CONSTRAINING	14,445	0.787	0.175	0.668	0.784	0.900
Dependent Variables						
FIRSTGCO (t+1)	14,445	0.082	0.274	0.000	0.000	0.000
Control Variables						
SIZE	14,445	18.580	1.960	17.222	18.470	19.837
FIRM AGE	14,445	2.470	0.702	1.946	2.398	2.944
BIGN	14,445	0.712	0.453	0.000	1.000	1.000
LEVERAGE	14,445	0.480	0.311	0.240	0.438	0.653
ΔLEVERAGE	14,445	0.023	0.165	-0.035	0.013	0.078
ZSCORE	14,445	1.051	0.831	0.459	0.861	1.413
OCF	14,445	-0.059	0.237	-0.115	0.009	0.074
ARL	14,445	4.102	0.422	3.892	4.205	4.369
LIQUIDITY	14,445	3.543	3.928	1.390	2.249	4.013
LOSS	14,445	0.672	0.470	0.000	1.000	1.000
STOCK RETURN	14,445	0.154	1.242	-0.486	-0.148	0.292
GROWTH	14,445	0.257	1.066	-0.120	0.041	0.265
INVESTMENT	14,445	0.277	0.271	0.045	0.179	0.455
NEW FINANCE	14,445	0.540	0.498	0.000	1.000	1.000

Table 3
Correlation Matrix of Main Variables

This table reports the Pearson correlation tables for variables used in our main tests. All continuous firm characteristics are winsorized at 1 and 99 percentiles. See Appendix A for variable definitions.

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
AFEE (t+1)	(1)	1									
ARL (t+1)	(2)	**-0.155**	1								
TURNOVER (t+1)	(3)	**-0.157**	**0.095**	1							
FIRSTGCO (t+1)	(4)	**-0.065**	**0.109**	**0.023**	1						
FILESIZE	(5)	**0.593**	**-0.038**	**-0.083**	**-0.017**	1					
LENGTH	(6)	**0.579**	**-0.032**	**-0.081**	**-0.015**	**0.995**	1				
FOG	(7)	**0.095**	0.009	-0.000	0.007	**0.251**	**0.253**	1			
NEGATIVE	(8)	**0.151**	**0.083**	0.005	**0.016**	**0.367**	**0.381**	**0.105**	1		
LITIGIOUS	(9)	**0.163**	**-0.121**	**-0.011**	**0.015**	**0.580**	**0.582**	**0.248**	**0.401**	1	
CONSTRAINING	(10)	**0.219**	**0.059**	**-0.026**	0.006	**0.477**	**0.488**	**0.150**	**0.379**	**0.362**	1

Table 4
Readability of Annual Financial Reports and Audit Lag at year *t+1*

This table contains OLS regression results for the relation between audit lags at year t+1 and different readability measures. The dependent variable is log of audit lag at year t+1 and the variables of interest are log of net filesize of 10-K disclosure at year t, log of number of words used in 10-K disclosure at year t and fog index of 10-K disclosure at year t. See Appendix A for variable definitions. All continuous firm characteristics are winsorized at 1 and 99 percentiles. Industry and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
FILESIZE	0.0482***		
	[7.065]		
LENGTH		0.0439***	
		[7.232]	
FOG			0.00141
			[1.232]
SIZE	-0.0528***	-0.0522***	-0.0505***
	[-9.865]	[-9.945]	[-9.882]
LEVERAGE	0.00185	0.00194	0.0114**
	[0.935]	[0.978]	[1.969]
RECINV	0.106***	0.105***	0.145***
	[3.020]	[3.021]	[3.060]
ROA	0.00507***	0.00501***	0.0106**
	[2.669]	[2.640]	[2.320]
LOSS	0.0689***	0.0695***	0.0790***
	[5.924]	[5.914]	[5.537]
FOREIGN	0.0226***	0.0228***	0.0267***
	[3.287]	[3.301]	[3.964]
MERGER	0.0252***	0.0255***	0.0289***
	[4.244]	[4.269]	[3.712]
RESTRUCTURE	-0.00589	-0.00563	-0.000791
	[-0.646]	[-0.618]	[-0.101]
DISCOPS	0.0322***	0.0327***	0.0290***
	[3.200]	[3.233]	[2.631]
EXTRA	0.0561***	0.0563***	0.0622***
	[3.962]	[3.975]	[4.062]
SPECIAL	0.0119**	0.0124**	0.0166
	[2.470]	[2.573]	[1.641]
BIGN	-0.0177	-0.0179	0.00464
	[-0.974]	[-0.987]	[0.291]
BUSY	0.0199*	0.0200*	0.0259*
	[1.710]	[1.723]	[1.680]
MATWEAK	0.107***	0.108***	0.0856***

	[6.753]	[6.818]	[6.347]
FILE404	-0.0863***	-0.0864***	-0.0869***
	[-2.712]	[-2.715]	[-2.711]
RESTATE	0.0214**	0.0215**	0.0321***
	[2.470]	[2.479]	[2.746]
MISTATE	0.101***	0.101***	0.114***
	[7.490]	[7.489]	[7.412]
AUDITORCHANGE	0.00801*	0.00822*	0.00238
	[1.778]	[1.821]	[0.286]
INTERCEPT	4.359***	4.492***	4.811***
	[50.20]	[49.47]	[44.78]
Observations	49,549	49,549	33,480
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Ind FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adj R2	0.317	0.317	0.288

t-statistics in brackets *** p<0.01, ** p<0.05, * p<0.1

Table 5
Readability of Annual Financial Reports and Audit Fees at year *t+1*

This table contains OLS regression results for the relation between audit fees at year t+1 and different readability measures. The dependent variable is log of audit fees at year t+1 and the variables of interest are log of net filesize of 10-K disclosure at year t, log of number of words used in 10-K disclosure at year t and fog index of 10-K disclosure at year t. See Appendix A for variable definitions. All continuous firm characteristics are winsorized at 1 and 99 percentiles. Industry and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
FILESIZE	0.215***		
	[11.97]		
LENGTH		0.202***	
		[11.26]	
FOG			0.00910***
			[3.930]
SIZE	0.425***	0.427***	0.479***
	[67.38]	[68.54]	[70.71]
LEVERAGE	0.0243***	0.0247***	0.0426***
	[9.707]	[9.843]	[6.341]
RECINV	0.419***	0.419***	0.519***
	[9.240]	[9.267]	[8.946]
ROA	-0.0565***	-0.0567***	-0.0785***
	[-11.48]	[-11.53]	[-8.431]
LOSS	0.0542***	0.0554***	0.0907***
	[5.058]	[5.112]	[6.905]
FOREIGN	0.205***	0.206***	0.198***
	[12.76]	[12.75]	[11.80]
MERGER	0.119***	0.120***	0.114***
	[12.74]	[12.80]	[10.61]
RESTRUCTURE	0.185***	0.185***	0.179***
	[17.97]	[18.08]	[14.80]
DISCOPS	0.130***	0.132***	0.135***
	[10.96]	[11.11]	[10.37]
EXTRA	0.0471***	0.0478***	0.0627***
	[2.973]	[3.000]	[3.984]
SPECIAL	0.0396***	0.0411***	0.0717***
	[3.707]	[3.862]	[5.577]
BIGN	0.269***	0.267***	0.221***
	[6.627]	[6.614]	[7.092]

BUSY	0.0547**	0.0546**	0.0727*
	[1.963]	[1.961]	[1.883]
MATWEAK	0.297***	0.297***	0.327***
	[10.88]	[10.87]	[12.46]
FILE404	0.217***	0.217***	0.194***
	[5.063]	[5.058]	[4.270]
RESTATE	0.0572***	0.0574***	0.0926***
	[6.005]	[5.984]	[6.397]
MISTATE	0.0675***	0.0674***	0.0968***
	[3.785]	[3.776]	[5.766]
AUDITORCHANGE	-0.0399***	-0.0394***	-0.0299
	[-3.308]	[-3.241]	[-1.469]
INTERCEPT	0.849***	1.392***	2.997***
	[2.866]	[5.106]	[12.44]
Observations	49,649	49,649	33,512
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Ind FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adj R2	0.860	0.860	0.830

t-statistics in brackets

*** p<0.01, ** p<0.05, * p<0.1

Table 6

Readability of Annual Financial Reports and Going Concern Opinions at year *t+1*

This table contains probit regression results for the relation between auditor propensity to issue going concern opinion at year t+1 and different readability measures. The dependent variable is auditor's going concern opinion at year t+1 and the variables of interest are log of net file size of 10-K disclosure at year t, log of number of words used in 10-K disclosure at year t and fog index of 10-K disclosure at year t. See Appendix A for variable definitions. All continuous firm variables are winsorized at 1 and 99 percentiles. Industry and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
FILESIZE	0.127***		
	[4.713]		
LENGTH		0.118***	
		[4.242]	
FOG			0.0211**
			[2.328]
SIZE	-0.148***	-0.146***	-0.136***
	[-11.04]	[-10.48]	[-8.567]
AGE	-0.0791**	-0.0784**	-0.0843**
	[-2.357]	[-2.342]	[-2.179]
BIGN	0.00637	0.00557	0.0874
	[0.136]	[0.119]	[1.445]
LEVERAGE	0.540***	0.542***	0.582***
	[9.175]	[9.222]	[7.439]
ΔLEVERAGE	-0.237**	-0.239**	-0.254
	[-2.113]	[-2.130]	[-1.629]
ZSCORE	-0.124***	-0.124***	-0.120***
	[-3.738]	[-3.738]	[-2.666]
OCF	-0.654***	-0.656***	-0.740***
	[-6.402]	[-6.408]	[-4.523]
ARL	0.286***	0.287***	0.312***
	[5.808]	[5.826]	[4.407]
LIQUIDITY	-0.0129**	-0.0129**	-0.0243**
	[-1.983]	[-1.982]	[-2.479]
LOSS	0.330***	0.330***	0.406***
	[9.666]	[9.580]	[8.338]
STOCK RETURN	-0.0230	-0.0230	-0.0407*
	[-1.407]	[-1.409]	[-1.647]
GROWTH	0.0345***	0.0346***	0.0462**
	[2.598]	[2.602]	[2.080]
INVESTMENT	-0.610***	-0.609***	-0.612***

	[-5.704]	[-5.723]	[-5.686]
NEW FINANCE	0.109***	0.109***	0.113***
	[3.049]	[3.057]	[2.845]
INTERCEPT	-0.990	-0.667	-0.616
	[-1.433]	[-1.051]	[-0.710]
Observations	14,445	14,445	10,595
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Ind FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Pseudo R2	0.164	0.164	0.170
Area under ROC	0.804	0.804	0.813

z-statistics in brackets *** p<0.01, ** p<0.05, * p<0.1

Table 7
Readability of Annual Financial Reports and Auditor Turnover in Year *t+1*

This table contains probit regression results for the relation between audit turnover at year t+1 and different readability measures. The dependent variable is auditor turnover at year t+1 and the variables of interest are log of net filesize of 10-K disclosure at year t, log of number of words used in 10-K disclosure at year t and fog index of 10-K disclosure at year t. See Appendix A for variable definitions. All continuous variables are winsorized at 1 and 99 percentiles. Industry and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
FILESIZE	0.0656***		
	[2.611]		
LENGTH		0.0629***	
		[2.758]	
FOG			0.00291
			[0.814]
SIZE	-0.111***	-0.110***	-0.110***
	[-7.862]	[-7.826]	[-5.488]
LEVERAGE	-0.0128***	-0.0127***	-0.0208***
	[-4.967]	[-4.917]	[-2.976]
RECINV	0.209***	0.209***	0.292***
	[3.304]	[3.305]	[3.166]
ROA	-0.00317	-0.00318	-0.0205***
	[-0.848]	[-0.848]	[-4.347]
LOSS	0.0791***	0.0792***	0.116***
	[2.602]	[2.627]	[2.751]
FOREIGN	0.0251	0.0253	0.0424
	[0.993]	[1.004]	[1.401]
MERGER	0.0482***	0.0484***	0.0358*
	[3.721]	[3.733]	[1.851]
RESTRUCTURE	0.00595	0.00607	0.0392*
	[0.280]	[0.285]	[1.907]
DISCOPS	0.0576***	0.0580***	0.0752**
	[3.390]	[3.425]	[2.513]
EXTRA	0.0783*	0.0786*	0.105***
	[1.698]	[1.702]	[3.405]
SPECIAL	0.0197	0.0200	0.100**
	[0.997]	[1.015]	[2.561]
BIGN	0.00896	0.00857	0.0779

	[0.107]	[0.103]	[1.048]
BUSY	0.0302	0.0301	0.00643
	[1.058]	[1.053]	[0.172]
MATWEAK	0.475***	0.475***	0.406***
	[8.996]	[8.983]	[6.037]
FILE404	-0.292***	-0.292***	-0.241***
	[-3.262]	[-3.263]	[-3.207]
RESTATE	0.0741**	0.0741**	0.113**
	[2.404]	[2.406]	[2.252]
MISTATE	0.234***	0.234***	0.167***
	[9.745]	[9.768]	[6.180]
INTERCEPT	-0.219	-0.0607	0.0204
	[-0.514]	[-0.164]	[0.0905]
Observations	59,324	59,324	38,838
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Ind FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Pseudo R2	0.086	0.086	0.088
Area under ROC	0.722	0.722	0.726

z-statistics in brackets *** p<0.01, ** p<0.05, * p<0.1

Table 8
Additional Analyses: Linguistic Cues - NEGATIVE; LITIGIOUS; CONSTRAINING

Panel A. Audit Lag at year *t+1*

This table contains OLS regression results for the relation between audit lags at year t+1 and different linguistic cues. The dependent variable is log of audit lag at year t+1 and the variables of interest are percentage negative sentiment words in 10 K disclosure at year t, percentage litigious words in 10 K disclosure at year t, and percentage of constraining words in 10 K disclosure at year t. All continuous firm characteristics are winsorized at 1 and 99 percentiles. Industry and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
NEGATIVE	0.0328***		
	[3.755]		
LITIGIOUS		0.0123***	
		[3.048]	
CONSTRAINING			0.0998***
			[5.119]
Control Variables	Yes	Yes	Yes
Observations	49,549	49,549	49,549
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Ind FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adj R2	0.315	0.315	0.315

t-statistics in brackets. *** p<0.01, ** p<0.05, * p<0.1

Panel B. Audit Fees at year *t+1*

This table contains OLS regression results for the relation between audit fees at year t+1 and different readability measures. The dependent variable is log of audit fees at year t+1 and the variables of interest are percentage negative sentiment words in 10 K disclosure at year t, percentage litigious words in 10 K disclosure at year t, and percentage of constraining words in 10 K disclosure at year t. All continuous firm characteristics are winsorized at 1 and 99 percentiles. Industry and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
NEGATIVE	0.113***		
	[10.88]		
LITIGIOUS		0.0392***	
		[6.972]	
CONSTRAINING			0.0195
			[0.616]
Control Variables	Yes	Yes	Yes
Observations	49,649	49,649	49,649
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Ind FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adj R2	0.857	0.856	0.855

t-statistics in brackets *** p<0.01, ** p<0.05, * p<0.1

Panel C. Going Concern Opinion at year *t+1*

This table contains probit regression results for the relation between auditor propensity to issue going concern opinion at year t+1 and different readability measures. The dependent variable is auditor's going concern opinion at year t+1 and the variables of interest are percentage negative sentiment words in 10 K disclosure at year t, percentage litigious words in 10 K disclosure at year t, and percentage of constraining words in 10 K disclosure at year t. See Appendix A for variable definitions. All continuous firm characteristics are winsorized at 1 and 99 percentiles. Industry and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
NEGATIVE	0.0920*		
	[1.708]		
LITIGIOUS		0.0254*	
		[1.839]	
CONSTRAINING			0.226***
			[3.640]
Control Variables	Yes	Yes	Yes
Observations	14,450	14,450	14,450
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Ind FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Pseudo R2	0.163	0.163	0.163
Area under ROC	0.803	0.803	0.803

z-statistics in brackets

*** p<0.01, ** p<0.05, * p<0.1

Panel D. Audit Turnover in the Following Year

This table contains probit regression results for the relation between audit turnover at year t+1 and different readability measures. The dependent variable is auditor turnover at year t+1 and the variables of interest are percentage negative sentiment words in 10 K disclosure at year t, percentage litigious words in 10 K disclosure at year t, and percentage of constraining words in 10 K disclosure at year t. See Appendix A for variable definitions. All continuous firm characteristics are winsorized at 1 and 99 percentiles. Industry and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
NEGATIVE	0.0511***		
	[2.961]		
LITIGIOUS		0.0244**	
		[2.359]	
CONSTRAINING			0.126**
			[2.303]
Control Variables	Yes	Yes	Yes
Observations	59,324	59,324	59,324
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Ind FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Pseudo R2	0.086	0.086	0.086
Area under ROC	0.722	0.722	0.722

z-statistics in brackets

*** p<0.01, ** p<0.05, * p<0.1

Table 9
Additional Analyses: Fixed Effect Estimator

Panel A: Readability of Annual Financial Reports and Audit Lag at year *t+1* after controlling for firm fixed effects

This table contains OLS regression results for the relation between audit lags at year t+1 and different readability measures. The dependent variable is log of audit lag at year t+1 and the variables of interest are log of net filesize of 10-K disclosure at year t, log of number of words used in 10-K disclosure at year t and fog index of 10-K disclosure at year t. See Appendix A for variable definitions. All continuous firm characteristics are winsorized at 1 and 99 percentiles. Firm and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
FILESIZE	0.0179**		
	[2.574]		
LENGTH		0.0160**	
		[2.461]	
FOG			0.00217*
			[1.888]
SIZE	-0.0165**	-0.0162**	-0.0145
	[-2.182]	[-2.170]	[-1.600]
LEVERAGE	-0.00333*	-0.00331*	-0.000726
	[-1.767]	[-1.758]	[-0.232]
RECINV	0.00261	0.00271	0.0276
	[0.102]	[0.107]	[0.796]
ROA	-0.000288	-0.000299	-0.00179
	[-0.168]	[-0.174]	[-0.439]
LOSS	0.0279***	0.0280***	0.0303***
	[2.727]	[2.735]	[2.773]
FOREIGN	0.00922	0.00929	0.00694
	[0.916]	[0.922]	[0.711]
MERGER	0.0190***	0.0191***	0.0189***
	[3.334]	[3.353]	[2.806]
RESTRUCTURE	0.0197*	0.0198*	0.0237**
	[1.662]	[1.671]	[2.124]
DISCOPS	-0.0108	-0.0108	-0.0186*
	[-1.231]	[-1.225]	[-1.794]
EXTRA	0.0272**	0.0273**	0.0285*
	[2.082]	[2.085]	[1.956]
SPECIAL	-0.00647	-0.00643	-0.00680
	[-0.871]	[-0.865]	[-0.731]

BIGN	0.0568***	0.0568***	0.0598***
	[2.809]	[2.809]	[2.996]
BUSY	-0.0418*	-0.0418*	-0.0586
	[-1.704]	[-1.705]	[-1.583]
MATWEAK	0.0419**	0.0420**	0.0151
	[2.182]	[2.192]	[0.877]
FILE404	-0.0355	-0.0355	-0.0397
	[-0.770]	[-0.771]	[-0.899]
RESTATE	-0.0104*	-0.0104*	-0.00143
	[-1.650]	[-1.649]	[-0.162]
MISTATE	0.0729***	0.0729***	0.0850***
	[14.53]	[14.53]	[9.953]
AUDITORCHANGE	-0.0115	-0.0114	-0.0101
	[-1.348]	[-1.337]	[-0.726]
INTERCEPT	4.316***	4.370***	4.417***
	[47.27]	[45.51]	[25.46]
Observations	49,549	49,549	33,480
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adj R2	0.500	0.500	0.485

t-statistics in brackets *** p<0.01, ** p<0.05, * p<0.1

Panel B: Readability of Annual Financial Reports and Audit Fees at year *t+1* after controlling for firm fixed effects

This table contains OLS regression results for the relation between audit fees at year t+1 and different readability measures. The dependent variable is log of audit fees at year t+1 and the variables of interest are log of net filesize of 10-K disclosure at year t, log of number of words used in 10-K disclosure at year t and fog index of 10-K disclosure at year t. See Appendix A for variable definitions. All continuous firm characteristics are winsorized at 1 and 99 percentiles. Firm and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
FILESIZE	0.0722***		
	[9.107]		
LENGTH		0.0687***	
		[9.136]	
FOG			0.00411***
			[3.030]
SIZE	0.270***	0.271***	0.341***
	[17.49]	[17.57]	[20.11]
LEVERAGE	0.00699**	0.00706**	0.0161**
	[2.220]	[2.242]	[2.221]
RECINV	0.218***	0.218***	0.415***
	[4.290]	[4.298]	[7.963]
ROA	-0.0303***	-0.0303***	-0.0339***
	[-7.696]	[-7.714]	[-4.683]
LOSS	0.0106	0.0107	0.0194*
	[1.163]	[1.170]	[1.906]
FOREIGN	0.0547***	0.0550***	0.0467***
	[3.824]	[3.839]	[3.434]
MERGER	0.0287***	0.0288***	0.0191***
	[4.730]	[4.766]	[2.705]
RESTRUCTURE	0.0276***	0.0278***	0.0277***
	[2.934]	[2.948]	[3.112]
DISCOPS	-0.00982	-0.00969	-0.0114
	[-1.088]	[-1.073]	[-0.941]
EXTRA	0.0163	0.0163	0.0262
	[1.004]	[0.999]	[1.412]
SPECIAL	-0.0124	-0.0124	0.00592
	[-1.383]	[-1.373]	[0.499]
BIGN	0.256***	0.256***	0.246***
	[11.34]	[11.36]	[10.42]

BUSY	0.0282	0.0281	0.0273
	[0.748]	[0.743]	[0.484]
MATWEAK	0.200***	0.200***	0.196***
	[7.379]	[7.369]	[5.130]
FILE404	0.155*	0.155*	0.130
	[1.806]	[1.807]	[1.368]
RESTATE	0.0415***	0.0414***	0.0518***
	[5.352]	[5.350]	[4.950]
MISTATE	0.0481***	0.0481***	0.0446***
	[4.218]	[4.213]	[3.481]
AUDITORCHANGE	-0.0223**	-0.0222*	-0.0204*
	[-1.962]	[-1.939]	[-1.672]
INTERCEPT	6.779***	6.961***	6.337***
	[20.37]	[21.40]	[20.01]
Observations	49,649	49,649	33,512
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adj R2	0.942	0.942	0.934

t-statistics in brackets

*** p<0.01, ** p<0.05, * p<0.1

Annual Report Readability and Corporate Audit Outcomes

I. INTRODUCTION

Recent changes in financial and reporting regulations have significantly increased the amount of required disclosures in annual reports (Form 10-K).[1] Consequently, the SEC has expressed concerns about the ability of financial statement users to understand firms' financial reports and has taken steps to make financial disclosures more readable (SEC 1998; Francis 2014). This concern has spawned a stream of research investigating how the readability of the annual report affects the usefulness of financial reports for financial statement users (Bloomfield 2002, Li 2008; You and Zhang 2009; Miller 2010; Lehavy et al. 2011). However, there is limited evidence on whether the readability of the annual report affects auditor-client contracting. We attempt to fill this gap by investigating whether, and how, annual report readability affects audit fees, audit report lag, audit opinion formation, and auditor turnover. This is important because while there is a robust stream of literature examining the relation between quantitative information and auditor-client contracting, there is little research on how the qualitative components of financial reports affect the audit engagement.[2]

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[1] We use the terms annual report and Form 10-K interchangeably. The SEC also uses these terms interchangeably, but differentiates annual report from the annual report to shareholders.

[2] Recent studies investigating the association between annual readability and financial outcomes have used the Gunning-Fog Index (Fog Index) to measure readability (Li 2008; Biddle et al. 2009; Callen et al. 2013; Miller 2010; Lawrence 2013; and Lehavy et al. 2011). In a more recent study, Loughran and McDonald (2014) provide evidence that 10-K file size is a simple proxy for document readability and is highly correlated with other measures of readability. The purpose of this study is to examine the relation between readability and audit contracting, not to distinguish the proxies for readability. Therefore, we use both the 10-K file size and Fog Index to proxy for readability in our main tests. In further tests, we find our results are robust to the inclusion of several other proxies for readability used in prior literature.

In this study, we investigate whether the readability of annual reports provides incremental information about the auditor's engagement risk. The management obfuscation hypothesis suggests that managers have incentives to obfuscate information or strategically hide adverse information through less transparent disclosures (Bloomfield 2002; Li 2008). For example, Bloomfield (2002) argues that managers make decisions that are motivated (at least partly) by intentions to make it more difficult for investors to uncover information that the managers do not want uncovered. In addition, Li (2008) argues that managers hide the transitory nature of good news or the permanent nature of bad news through more complicated annual reports.

Under SEC rules (i.e., Rule 10b-5), investors can initiate legal action after being affected by a company's misrepresentations in its disclosures. For example, Rogers et al. (2011) provides evidence suggesting that managers' use of unusually optimistic language increases litigation risk. In our setting, auditors engaging with corporate managers that produce less readable annual reports may perceive elevated client litigation risks. These aforementioned factors would suggest that less readable annual reports would increase the auditor's engagement risk.

On the other hand, it is not clear, ex ante that the readability of the annual report will provide information about the auditor's engagement risk beyond known firm and audit characteristics that impact engagement risk (e.g. firm size, firm complexity, etc.). In addition, the firm is responsible for the production of the annual report (SEC 2014), while the auditor is only responsible for reading any other information that is included with audited financial

statements (AU 550). Thus, the effect of annual report readability on audit risk is an empirical question. In this study, we empirically examine the relation between annual report readability and engagement risk by investigating various strategies that auditors use to mitigate engagement risk (DeFond, Lim, Zang 2014).

The production view of the audit process suggests that auditors respond to audit risk by increasing effort or charging a risk premium (Simunic 1980). Audit report lag proxies for audit effort (Knechel and Payne 2001), while both audit effort and risk premia affect audit fees (Johnstone and Bedard 2004). Auditors can also limit their exposure to litigation risk by lowering the threshold for issuing a modified going concern opinion (GCO). Finally, auditors can reduce litigation risk by resigning from risky clients. Thus, if less readable annual reports increase engagement risk, we expect that auditors will respond by taking longer to issue audit reports, charging higher audit fees, issuing more modified GCOs, and/or resigning from client engagements more frequently.

Using a sample of firms from 1999 to 2010, we find that annual report readability is significantly associated with audit outcomes in the subsequent year. Specifically, less readable annual reports are associated with longer audit report lag and higher audit fees in the following year. Our results are also economically meaningful, as we find that a firm with annual report readability (measured by 10-K file size) in the 75th percentile pays about 19 percent higher audit fees compared to a firm with readability in the 25th percentile, ceteris paribus. Further, we find that firms with less readable annual reports are more likely to

receive a modified GCO and experience higher auditor turnover. Collectively, our results suggest that financial statement readability has a significant effect on audit outcomes.

We consider, and take a number of steps to address, alternative explanations for our results. First, we demonstrate our results are robust to many control variables that prior research has shown to affect audit outcomes. Our results are also robust to alternative measures of readability. The results suggest that annual report readability provides incremental information about auditors' assessment of their clients' engagement risk. Finally, we demonstrate that our results hold predictably across a number of audit outcomes (fees, audit report lag, going concern opinions, and auditor turnover).

In further tests, we examine the relation between linguistic characteristics of the annual report and audit outcomes. Specifically, negative sentiment and a higher percentage of litigious words in the annual report are associated with higher audit fees. Further, negative sentiment, a higher percentage of litigious words, and a higher percentage of constraining words in the annual report are associated with longer audit report lag and higher auditor turnover. Finally, negative sentiment and a higher percentage of constraining words in the annual report are associated with a higher likelihood of receiving a modified GCO. These results, combined with our primary results, provide insight into the mechanisms likely affecting our results by showing that the linguistic characteristics of a firm's annual report provide incremental information related to the auditor's assessment of engagement risk.

Our results directly contribute to the audit and the financial disclosure literatures. First, we contribute to the audit literature by finding that the readability of the annual report

provides incremental information about the auditor's perceived engagement risk. Second, we contribute to the financial disclosure literature by providing evidence that auditors respond to the readability of information contained in the annual report. The annual report has been shown to be an input in the decisions of investors (Previts et al. 1994; Rogers and Grant 1997), however the SEC has criticized firms for the complexity of their language in these filings (Cox 2007). Prior research finds evidence that this complexity is costly to investors (You and Zhang 2009). We provide evidence that auditors respond to this complexity by taking steps to mitigate engagement risk. Finally, our paper should be of interest to investors, analysts, policy-makers and regulators, as well as academic researchers seeking a better understanding of the relationship between the qualitative aspects of financial information and audit outcomes.

The rest of the paper is organized as follows: Section II provides background and develops the hypotheses; Section III describes our sample selection process and develops the empirical models; Section IV provides the results from our testing; and Section V concludes.

II. BACKGROUND AND HYPOTHESIS DEVELOPMENT

Textual Analysis and Financial Reporting Readability

Prior research has shown that annual financial reports provide important information to capital market participants (e. g. Ball and Brown 1968; Beaver 1969). Much of this research focuses on how investors use the accounting numbers, such as earnings, sales, cost of goods sold, among others, contained within the financial reports. However, research also shows that investors use the textual information shown in the financial statement, such as the President's

letter, Management Discussion and Analysis (MDA), and footnotes (Courtis 1995, Jones and Shoemaker 1994). For example, early research into the use of annual reports showed that the president's letter is the most widely read part of the annual report (Lee and Tweedie 1975).

Increases in the required disclosures of firms to external users has led to concerns about the effectiveness of textual communication with external users (Lehavy et al. 2010). For decades, the SEC has pushed to make financial disclosures more understandable for ordinary investors (Firtel 1999). Toward that end, in 1998 the SEC formally addressed *understandability* and *readability* of disclosures by implementing Rule 421(d), which requires firms to use "plain English" in their prospectus filings, and encourages them to use this in all disclosure documents. This heightened concern over the readability of financial statements coupled with improved technology allowing researchers to investigate large collections of text through machine readable textual data from annual reports, has spawned a surge in research investigating the readability of financial statements.

For example, Li (2008) finds less readable financial reports are associated with lower earnings persistence, suggesting mangers obfuscate bad news in less readable financial reports. Further, research shows that readability of textual information affects whether stakeholders can use textual information efficiently and effectively. Specifically, You and Zhang (2009) find that investors underreact to the information from longer 10-K filings but show little under-reaction when 10-K filings are shorter. Further, Miller (2010) finds that when 10-K filings and annual reports increase in length, small investors reduce their trading activities and trading consensus. Callen et al. (2013) use the readability of 10-K filings as a

proxy for accounting quality and show that less readable 10-K filings are associated with a greater stock price delay. Similarly, Lee (2013) show that the post-earnings announcement drift is more profound when 10-Q filings are more difficult to read,and Lehavy et al. (2011) find that investors respond to less readable 10-Ks by demanding greater analyst following. Despite the demand for improved information environment, they also find that less readable 10-Ks are associated with higher analyst earnings forecast dispersion, lower forecast accuracy and higher uncertainty.

Taken together, these studies suggest that managers strategically manipulate the readability of textual information and that stakeholders are affected by this manipulation.[3] We empirically examine whether auditors respond to annual report readability in their assessment of engagement risk. While the auditor is not responsible for disclosures in the annual report, auditing standard AU Section 550 requires that:

"…the auditor has no obligation to perform any procedures to corroborate other information contained in a document. However, he should read the other information and consider whether such information, or the manner of its presentation, is materially inconsistent with information, or the manner of its presentation, appearing in the financial statements. If the auditor concludes that there is a material inconsistency, he should determine whether the financial statements, his report, or both require revision. If he concludes that they do not require revision, he should request the client to revise the other information. If the other information is not revised to eliminate the material inconsistency, he should communicate the material inconsistency to the audit committee and consider other actions, such as revising his report to include an explanatory paragraph describing the material inconsistency, withholding the use of his report in the document, and withdrawing from the engagement. The action he takes will depend on the particular circumstances and the significance of the inconsistency in the other information."

[3] Anecdotally, Loughran and McDonald (2014) ask a sample of accounting firm partners how they would obscure information whose disclosure was required. The partners suggested that burying the disclosure in a large amount of text and data could achieve such an objective.

We predict that annual report readability will affect the auditor's engagement risk. DeFond, Lim, and Zang (2015) note that engagement risk consists of three components: (i) client business risk, which is the risk associated with the client's survival and profitability; (ii) audit risk, which is the risk that the auditor fails to modify his opinion about financial statements that are materially misstated; and (iii) auditor business risk, the risk of potential litigation and loss of reputation for the auditor.

In identifying and assessing the client's risk of material misstatement, the auditor should obtain an understanding of the policies and actions of management, including assessing management's philosophy, operating style, integrity and ethical values. Further, discussions among the key audit engagement team members about the potential for material misstatement should occur with an attitude that includes a questioning mind about management's intentions (Auditing Standard No. 12). As discussed above, managers are known to obfuscate unfavorable information and conceal adverse information through more obscure and less readable disclosures (Bloomfield 2002; Li 2008). Auditors engaging with corporate managers displaying such tendencies are likely to elevate their assessment of risk.

Furthermore, annual report readability could represent greater explanation, disclosure, or obfuscation of negative information about the firm and its future operations, which could increase client business risk. The preceding risks should increase auditor business risk because Hennes et al. (2014) document that auditors are more likely to be dismissed when they fail to detect misstatements (reputation risk). Furthermore, Bloomfield (2008) suggests that firms may write longer annual reports to shield themselves from litigation. Thus, we

predict that less readable financial statements will be associated with higher engagement risk. Because DeFond and Zhang (2014) note that auditors will respond to higher engagement risk by employing several different strategies to mitigate engagement risk, we outline our specific hypotheses below.

Audit Report Lag and Annual Report Readability

The first strategy that auditors may employ to mitigate engagement risk is to increase audit effort. Auditors may increase audit effort in order to reduce the likelihood of undetected errors (Hillegeist 1999; Lobo and Zhao 2013), which will, in turn, reduce audit risk. We use audit report lag as a proxy for audit effort because prior research suggests that audit report lags are related to the amount of work performed in the audit engagement (Knechel and Payne 2001; Knechel, Rouse, and Schelleman 2009). If annual report readability is indicative of higher engagement risk, we expect a negative relation between audit report lag and annual report readability. However, if there is no incremental information in the annual report readability beyond client and engagement factors, we expect no relation. This leads to our first hypothesis (in alternative form):

> ***H1:*** *There is a negative association between audit report lag and the readability of a firm's annual report.*

Audit Fees and Annual Report Readability

The seminal work by Simunic (1980) models audit fees as a function of effort and risk. If higher audit effort does not reduce engagement risk to acceptable levels, the auditor may charge a risk premium in order to pass some of the risk on to the client (Pratt and Stice 1994;

Morgan and Stocken 1998; Bell, Landsman, and Shackleford 2001; Johnstone and Bedard 2004) Thus, if clients with less readable annual reports impose more risk, we expect higher fees. In our setting, we posit that a hard-to-read financial statement might serve as a signal of complexity (e.g. Hoitash and Hoitash 2015). Less readable financial statements could also signal management obfuscation or lower earnings quality (e.g. Li 2008; Biddle et al. 2009; Loughran and McDonald 2014). Any of these explanations could lead to the auditor charging a risk premium in order to transfer some of the risk to the client. This leads to our second hypothesis (stated in alternative form):

> ***H2:*** *There is a negative association between audit fees paid to external auditors and the readability of a firm's annual report.*

Going Concern Opinions and Annual Report Readability

Auditors may also increase the likelihood of issuing a modified GCO in order to reduce engagement risk. Blay, Geiger, and North (2011) contend that issuing a modified GCO is the means by which the auditor indicates her perceived risk about the continued viability of a client. Kaplan and Williams (2013, pg. 2) contend that issuing a GCO is a "preemptive action that auditors may take when they assess the risk of investor litigation to be high." Research supports this contention. Specifically, Carcello and Palmrose (1994) document univariate evidence of a negative relation between modified GCOs and auditor litigation, while Krishnan and Krishnan (1996) document that the probability of litigation is positively associated with the issuance of a modified GCO. Furthermore, Kaplan and Williams (2013) find that auditors are more likely to issue a modified GCO to clients with higher litigation

risk.[4] If less readable annual reports proxy for higher litigation risk, then we expect that auditors are more likely to issue a modified going concern opinion. This leads to our third hypothesis (stated in alternative form):

> ***H3:*** *There is a negative association between the issuance of a going concern opinion and the readability of a firm's annual report.*

Auditor Turnover and Annual Report Readability

If the above strategies do not reduce the engagement risk to acceptable levels, auditors may choose to eliminate the risk by resigning from the audit engagement. Krishnan and Krishnan (1997) show a positive association between litigation risk and auditor resignations. Furthermore, prior research documents that resignations are more frequent when clients pose higher litigation risk (Shu 2000), and when clients have higher levels of real activities management (Kim and Park 2014).

There are several facets of annual report readability that may affect auditor turnover. AU 550 requires that the auditor discuss any inconsistencies in the annual report with the client, which could lead the client to revise the annual report. This, coupled with potentially higher fees and more frequent modified GCOs, could cause a serious breakdown in the relationship between management and the auditor. This may increase the probability that the auditor resigns or is dismissed from the engagement. Therefore, if clients with less readable annual

[4] Relatedly, Francis and Krishnan (1999) show that auditors are more likely to issue a modified GCO to clients with larger accruals.

reports impose more risk, we expect greater auditor turnover. Our final hypothesis is stated as follows (in alternative form):

> ***H4:*** *There is a negative association between auditor turnover and the readability of a firm's annual report.*

III. METHODOLOGY

Sample Selection

Our sample selection begins by obtaining all firms in the intersection of the Audit Analytics and Compustat databases for fiscal years 1999 through 2010. We omit firm-years with missing observations for our variables used in our multivariate analyses and, due to inherent institutional and regulatory differences, we drop firms operating in the financial industry (SIC 6000 through 6999). Our primary sample consists of 49,649 firm-year observations. Panel A of Table 1 reports the time distribution of our sample and Panel B of Table 1 reports the industry distribution. Our sample is widely distributed across time. Food, tobacco, textiles, paper and chemicals, manufacturing, machinery and electronics and services industries represent over 60% of our sample.[5]

=====TABLE 1 HERE=====

Financial Statement Readability

We use three measures of financial statement readability. Our primary measure of financial statement readability is natural log of 10-K document net file size (Loughran and

[5] For ease of exposition, we present the industry distribution by one-digit SIC. However, we include industry fixed effects using two-digit SIC in all multivariate specifications

McDonald 2014). Loughran and McDonald (2014) show that the Fog Index is poorly specified when used to evaluate financial documents, as the complex words contained in business text are well-understood by investors and analysts. Further, they show that 10-K document file size provides a straightforward readability proxy, which is substantially less prone to measurement error, is easily replicated, and is highly correlated with extant readability measures. We also use the natural log of the number of 10-K words as an alternative measure of financial statement readability. Both Loughran and McDonald (2014) and Li (2008) use the length of 10-K filings as an alternative measure of financial statement readability. Finally, even though the Fog index may suffer from certain misspecifications, it has been used extensively in accounting and finance literature to measure financial statement readability (Li 2008; Biddle et al. 2009; Miller 2010; Lehavy et al. 2011, Merkley 2011, Dougal et al. 2012, Lawrence 2013, Callen et al. 2013, Franco et al. 2013). Hence, we use the Fog Index as our final measure of financial statement readability.[6]

Audit Outcomes

We consider four sets of audit outcomes, audit report lag, audit fees, auditor's propensity to issue modified going concern opinions, and audit turnover. Since we measure all readability proxies and linguistic cues at year *t*, we consider all audit outcome variables at year *t+1*. We test our first two hypotheses by estimating the following OLS regression that controls for financial characteristics and audit engagement factors likely to affect audit report

[6]In robustness checks, we show that our results are insensitive to the use of alternative measures of financial report readability.

lag (*ARL*) and fees (*AFEE*), both at year *t+1*. Prior research suggests that ARL is associated with client size, complexity, performance, and audit characteristics (Knechel and Payne 2001). Similarly, in the audit fee model developed by Simunic (1980) and Simunic and Stein (1996), audit fees reflect the economic costs of auditors, which are known to be related to client size, complexity, performance, risk, financial reporting quality, and other client-specific characteristics (Hay et al. 2006). Hence, we include a large set of controls in order to isolate the effect of our variable of interest (*READABILITY*) on audit outcomes (*ARL* and *AFEE*). Given the common set of variables associated with both audit report lag and audit fees, we use the following model to test our first two hypotheses:

$$ARL_{it+1}/\ AFEE_{it+1} = \beta_0 + \beta_1\, READABILITY_t + \beta_2 SIZE_{it} + \beta_3\, LEVERAGE_{it} + \beta_4\, RECINV_{it} + \beta_5 ROA_{it} + \beta_6 LOSS_{it} + \beta_7 FOREIGN_{it} + \beta_8 MERGER_{it} + \beta_9 RESTRUCTURE_{it} + \beta_{10} DISCOPS_{it} + \beta_{11} EXTRA_{it} + \beta_{12} SPECIAL_{it} + \beta_{13} BIGN_{it} + \beta_{14}\, BUSY_{it} + \beta_{15} MATWEAK_{it} + \beta_{16} FILE404_{it} + \beta_{17} RESTATE_{it} + \beta_{18} MISTATE_{it} + \beta_{19} AUDITORCHANGE_{it} + YEAR/INDUSTRY\ DUMMIES + \varepsilon_{it} \quad (1)$$

Where:

ARL is the natural log of the number of days between fiscal year and signature date of the audit report at firscal year *t+1*;

AFEE is the natural logarithm of audit fees at fiscal year *t+1*;

READABILITY is one of our three measures financial statement readability: the natural log of net file size, the natural log of number of words in 10-K, and the FOG Index. All three proxies for readability are measured at year *t*;

SIZE is the natural logarithm of a firm's total assets at the end of the fiscal year *t*;

LEVERAGE is a firm's total liabilities scaled by total assets at the end of the fiscal year *t*;

RECINV is the sum of receivables and inventory, scaled by total assets, at the end of the fiscal year *t*;

ROA is a firm's net income for the fiscal year divided by total assets at end of the fiscal year *t*;

LOSS is an indicator variable that takes the value one if a firm's net income for the fiscal year *t* is negative and zero otherwise;

FOREIGN is an indicator variable that takes the value one if a firm has foreign operations during the fiscal year *t* and zero otherwise;

MERGER is an indicator variable that takes the value one if firm has merger and acquisition activities during the year *t* and zero otherwise;

RESTRUCTURE is an indicator variable taking the value one if a firm has restructuring activities during the year *t* and zero otherwise;

DISCOPS is an indicator variable taking the value one if the firm reported discontinued operations for the fiscal year *t* and zero otherwise;

EXTRA is an indicator variable taking the value one if the firm reported an extraordinary item for the fiscal year *t* and zero otherwise;

SPECIAL is an indicator variable taking the value one if a firm's reported special item for the fiscal year *t* is at least 2 percent of total assets and zero otherwise;

BIGN is an indicator variable taking the value one if a firm is audited by one of the "Big 4" audit firms for the fiscal year *t* and zero otherwise;

BUSY is an indicator variable taking the value one if a firm's fiscal year-end month is December and zero otherwise;

MATWEAK is an indicator variable that takes the value one if the firm receives a SOX 404 internal control weakness opinion from the auditor and zero otherwise;

FILE404 is an indicator variable that takes the value one if the firm filed a SOX report and zero otherwise;

RESTATE is an indicator variable that takes the value one if the firm announces a financial statement restatement during fiscal year t and zero otherwise;

MISSTATE is an indicator variable that takes the value one if the firm's current financial statement is restated in later period and zero otherwise.

AUDITORCHANGE is an indicator variable taking the value one if a firm changed auditor and zero otherwise;

We also include industry and year fixed effects to control for cross-sectional differences in audit lags and fees across industry and time, and we cluster standard errors by firm and year (Petersen 2009; Gow, Ormazabal, and Taylor, 2010; Thompson, 2011).[7] Our coefficient of interest is β_1, which measures the association between financial statement readability and *ARL* (*AFEE*). We expect a positive association between the proxies for readability and audit outcomes ($\beta_1 > 0$).

Next we investigate the association between readability and the auditor's propensity to issue a modified going concern opinion. Following DeFond and Zhang (2014), we use the following model to test our hypothesis:

$$FIRSTGCO_{it+1} = \beta_0 + \beta_1 READABILITY_t + \beta_2 SIZE_{it} + \beta_3 AGE_{it} + \beta_4 BIGN_{it} + \beta_5 LEVERAGE_{it} + \beta_6 \Delta LEVERAGE_{it} + \beta_7 ZSCORE_{it} + \beta_8 OCF_{it} + \beta_9 ARL_{it} + \beta_{10} LIQUIDITY_{it} + \beta_{11} LOSS_{it} + \beta_{12} STOCK\ RETURN_{it} + \beta_{13} GROWTH_{it} + \beta_{14} INVESTMENT_{it} + \beta_{15} NEW\ FINANCE_{it} + YEAR/INDUSTRY\ DUMMIES + \varepsilon_{it} \quad (2)$$

Where:

$FIRSTGCO_{it}$ is an indicator variable taking the value one if the auditor issues the first time Going Concern Opinion to its clients;

AGE_{it} is the number of years a firm has been covered in COMPUSTAT;

$\Delta LEVERAGE_{it}$ is the change of leverage from year *t-1* to year *t*;

[7] Appendix A provides definitions of all variables used in our analysis.

$ZSCORE_{it}$ is the bankruptcy score based on Altman (1968);

OCF_{it} *is* a firm's operating cash flow divided by its total assets;

$LIQUIDITY_{it}$ is a firm's currents asset divided by its current liabilities;

STOCK RETURN$_{it}$ is a firm's stock return for fiscal year *t*;

$GROWTH_{it}$ is a firm's sales growth rate;

$INVESTMENT_{it}$ is short- and long-term investment securities (including cash and cash equivalents) (Compustat items CHE and IVPT), scaled by total assets;

NEW FINANCE$_{it}$ is an indicator variable equal to 1 if a client has a new issuance of equity or debt in the subsequent fiscal year;

All other variables are as defined in Eq. 1.

For our test of H3, we follow Carson et al. (2013) to identify controls that can affect auditor's propensity to issue a modified GCO. We follow standard conventions in this literature (e.g., Carson et al. 2013) and restrict our sample to financially distressed firms (firms with either negative net income or negative operating cash flow). This leaves us 14,445 observations for our main tests. Our coefficient of interest is β_1, which measures the association between financial statement readability and the propensity to issue a modified GCO. We expect a positive association between the proxies for readability and the issuance of a modified going concern opinion ($\beta_1 > 0$). We also include industry and year fixed effects and cluster standard errors by firm and year.

Finally, we investigate the association between readability and auditor turnover using a modified version of Eq. 1 as follows[8]:

[8] This model is similar to auditor turnover models used in prior literature (Landsman et al. 2009; Kim and Park 2014).

$$TURNOVER_{it+1} = \beta_0 + \beta_1 READABILITY_t + \beta_2 SIZE_{it} + \beta_3 LEVERAGE_{it} + \beta_4 RECINV_{it} + \beta_5 ROA_{it} + \beta_6 LOSS_{it} + \beta_7 FOREIGN_{it} + \beta_8 MERGER_{it} + \beta_9 RESTRUCTURE_{it} + \beta_{10} DISCOPS_{it} + \beta_{11} EXTRA_{it} + \beta_{12} SPECIAL_{it} + \beta_{13} BIGN_{it} + \beta_{14} BUSY_{it} + \beta_{15} MATWEAK_{it} + \beta_{16} FILE404_{it} + \beta_{17} RESTATE_{it} + \beta_{18} MISTATE_{it} + YEAR/INDUSTRY\ DUMMIES + \varepsilon_{it} \quad (3)$$

We replace the audit outcome variable in Equation (1) with an audit turnover indicator ($TURNOVER_{it+1}$). $TURNOVER_{it+1}$ is an indicator variable taking the value one if the firm reported an auditor change within 365 days after its fiscal year end. We exclude *AUDITORCHANGE* from the model. All other variables are as previously defined. We also include industry and year fixed effects to control for cross-sectional differences in audit turnover across industry and time, and we cluster standard errors by firm and year. Our coefficient of interest is β_1, which measures the association between financial statement readability and auditor turnover. We expect a positive association between the proxies for readability and auditor turnover ($\beta_1 > 0$).

IV. RESULTS

Descriptive Statistics

Table 2 presents the descriptive statistics for the variables used in the primary analyses. The mean (median) *ARL* is 68 (66 days), while the mean (median) audit fees (*AFEE*) for fiscal year *t+1* is $1,151,360 ($400,290). About ten percent of our sample firms change auditors (*TURNOVER*), and about two percent of our sample firms receive a modified going-concern opinion for the first time (*FIRSTGCO*). The mean (median) log of file size of 10-K (*FILESIZE*) at fiscal year *t+1* is 12.482 (12.474), corresponding to approximately 263,550 (261,450) characters. The mean (median) number of the log of number of words

(*LENGTH*) at fiscal year *t+1* is 10.377 (10.376), corresponding to approximately 32,112 (32,080) words. Approximately 44.6% of firm-year observations reported a loss (*LOSS*) for the fiscal year *t*. A majority of observations in our sample (68.2%) engaged a Big N auditor (*BIGN*). Only about two percent of the firm-year observations received a SOX 404 material weakness internal control opinion (*MATWEAK*) and approximately eight percent of firm-year observations announced a restatement. Collectively, these summary statistics are consistent with related audit research (e.g., Krishnan and Wang 2015).

Panel B presents the descriptive statistics for the variables used in to test H3. We restrict this sample to firms with either negative net income or negative operating cash flow, leaving a sample of 14,445 firms. Approximately 8.2% of our sample firms receive their first going concern opinion during our sample period (*FIRSTGCO*). The mean (median) log of file size of 10-K (*FILESIZE*) at fiscal year *t+1* is 12.464 (12.087), while the mean (median) number of the log of number of words (*LENGTH*) at fiscal year *t+1* is 10.362 (10.374) and the mean (median) fog score (*FOG*) is 19.657 (19.510). These values are similar to corresponding values for our full sample in Panel A.

=====TABLE 2 HERE=====

Correlations

Table 3 reports Pearson correlation coefficients for the main variables used in the empirical analyses. The positive correlations between all three readability measures (*FILESIZE*, *LENGTH*, *FOG*) and audit fees (*AFEE*) are significant in the hypothesized direction. However, *FILESIZE* and *LENGTH* are negatively associated with audit lag (*ARL*),

first-time modified going-concern opinion (*FIRSTGCO*), and audit turnover (*TURNOVER*) at fiscal year *t+1*. However, these are merely pairwise correlations and do not consider the effects of other factors that may impact readability and audit outcomes. Thus, it is necessary to test this relationship in a multivariate framework. We now turn to our regression results.

=====TABLE 3 HERE=====

Multivariate Analysis

Audit Lag (H1)

Table 4 reports results from estimating Equation (1) using *ARL* as the dependent variable. Coefficient estimates of different readability measures *FILESIZE* (Column 1, Estimate = 0.0482, *p*-value < 0.01) and *LENGTH* (Column 2, Estimate = 0.0439, *p*-value = 0.0439) are consistent with our hypothesis that financial report readability is negatively associated with audit report lag. This result suggests that auditors spend more time auditing clients that have less readable financial statements. Economically speaking, a one standard deviation increase in *FILESIZE* is associated with a 3% increase in audit lag. Most control variables are consistent with prior literature. The adjusted R^2 for our models range from twenty-nine to thirty-two percent, which is also consistent with prior literature (Krishnan and Yang 2009). The relation between *ARL* and *FOG* (Column 3, Estimate = 0.0014, *p*-value > 0.10) is positive, but is not significant at conventional levels, which corroborates Loughran and McDonald's (2014) contention that *FOG* is not well specified as a measure of financial report complexity.

=====TABLE 4 HERE=====

Audit Fees (H2)

Table 5 presents the results from our tests investigating the association between financial report readability and audit fees. Coefficient estimates of different readability measures in Columns (1), (2) and (3) confirm our hypothesis that auditors charge higher fees to firms with less readable financial reports. Specifically, we find that *FILESIZE* (Column 1, Estimate = 0.215, *p*-value < 0.01), *LENGTH* (Column 2, Estimate = 0.202, *p*-value < 0.01), and *FOG* (Column 3, Estimate = 0.009, *p*-value < 0.01) are all positively and significantly associated with audit fees. In term of economic significance, a one-standard deviation increase in *FILESIZE* is associated with a 13.5% increase in *AFEE*.

Consistent with prior work examining audit fees, find that the coefficients for our control variables are significant in the predicted directions. The adjusted R^2 for our models range from eighty-three to eighty-six percent, indicating our models have high explanatory power. Moreover, the coefficient estimates on our control variables and adjusted R^2 are consistent with related audit research (DeFond, Lim, and Zang 2015).

=====TABLE 5 HERE=====

First time GC (H3)

Table 6 provides the results for our tests regarding the association between financial statement readability and auditors' propensity to issue first time going concern reports. Following Carson et al. (2013), we restrict our sample to financially distressed firms with negative net income or operating cash flow. Table 6 reports results from estimating Equation (2). Coefficient estimates of different readability measures in Columns (1), (2) and (3)

confirm our hypothesis that financial report readability is positively associated with auditor propensity to issue a GCO. Specifically, we find that *FILESIZE* (Column 1, Estimate = 0.127, *p*-value < 0.01), *LENGTH* (Column 2, Estimate = 0.118, *p*-value < 0.01), and *FOG* (Column 3, Estimate = 0.021, *p*-value < 0.01) are all positively and significantly associated with auditors' propensity to issue a first-time modified going concern opinion. Consistent with prior studies, we find that auditor's propensity to issue a modified GCO is lower for firms with larger assets, older ages, lower leverage, higher Altman's Z score, shorter audit lag, higher liquidity ratio, and better performance (Blay, Geiger, and North 2011).The area under ROC is around 0.83, which suggests our model performs well in predicting auditor's propensity to issue a going concern opinion.

=====TABLE 6 HERE=====

Auditor Turnover (H4)

Table 7 provides results from our tests examining the association between financial statement readability and auditor turnover in the subsequent year.[9] If the auditor is unable to resolve the risk of maintaining a client with less readable financial statements through effort, risk premium, or issuing a modified going concern opinion, auditors may resign the engagement, and thus increase the turnover rate. Coefficient estimates of different readability measures in Columns (1) and (2) confirm our hypothesis that financial report readability is positively associated with audit turnover. Specifically, we find that *FILESIZE* (Column 1,

[9]Lee et al. (2004) argue that there is often no difference between an auditor resignation and a dismissal, because an audit firm can preemptively resign from an engagement rather than be dismissed at a later date by the audit committee.

Estimate = 0.0656, *p*-value < 0.01) and *LENGTH* (Column 2, Estimate = 0.0629, *p*-value < 0.01) are positively and significantly associated with auditor turnover. We do not, however, find *FOG* to be related to auditor turnover (Column 3, Estimate = 0.0029, *p*-value > 0.10). The sign and magnitude of the control variables are consistent with prior studies (Kim and Park 2014)[10].

=====TABLE 7 HERE=====

V. ADDITIONAL ANALYSIS

Linguistic Cues and Disclosure Tone

As an additional analysis, we examine the lexical properties of annual reports and their implications for audit engagement. Specifically, we examine the disclosure tone of the annual report. We employ three measures of disclosure tone following Loughran and McDonald (2011). The first measure of disclosure tone we consider is negative tone (*NEGATIVE*). The second disclosure tone we consider is litigious tone (*LITIGIOUS*). The third disclosure tone is financial constraint tone (*CONSTRAINT*).

NEGATIVE is percentage of words within the 10-K that are classified as negative minus the percentage of words within 10-K that are classified as positive using the Loughran and McDonald (2011) word list.[11] *LITIGIOUS* is the percentage of words within the 10-K

[10] In diagnostic tests, we confirm our variance inflation factors ("VIFs") for our main variables across all models are less than 5, which indicates that multicollinearity is not an issue.

[11] Mayew et al. (2014) show that level of negative words provide significant predictive ability of MD&A disclosure in addition to financial ratios, market-based models, and even auditor's going concern opinion. Thus, the use of negative words in previous year 10-K disclosure indicates a high audit risk in this fiscal year.

classified as legal using the Loughran and McDonald (2011) word list.[12] *CONSTRAINING* is the percentage of words within the 10-K classified as constraint using the Loughran and McDonald (2011) word list.[13] Our results from this analysis are presented in Table 8.

=====TABLE 8 HERE=====

Panel A of Table 8 presents the results for our tests examining the association between different linguistic cues and audit report lag in year *t+1*. All three measures of linguistic cues (*NEGATIVE*, *LITIGIOUS*, *CONSTRAINING*) are positively associated with audit lags in year *t+1* (*p*-value < 0.01). These results are consistent with our primary analysis and confirm that auditors respond to the negative information in the prior year 10-K.

Panel B presents the results from our tests examining the association between different linguistic cues and audit fees at year *t+1*. Column (1) shows that the coefficient on *NEGATIVE* is positively and significantly (Estimate = 0.113, *p*-value < 0.01) associated with audit fees at year *t+1*. Column (2) show that the coefficient on *LITIGIOUS* is also positively and significantly (Estimate = 0.0392, *p*-value < 0.01) associated with audit fees in year *t+1*. The coefficient on *CONSTRAINING* is positive, but is not significant at conventional levels (Estimate = 0.0195, *p*-value > 0.10).

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[12] The usage of litigious tone is intuitive in our setting. High levels of litigious text indicate a high litigation risk to the firm. We identify 731 instances of litigious terms: claimant, deposition, testimony, and tort.

[13] Loughran and McDonald (2011) show that the constraining tone of 10-K documents outperformed current measures of financial constraint, like SA and WW index. The frequency of constraining words predicts subsequent liquidity events. We use the Loughran and McDonald (2011) sentiment word lists. The Loughran and McDonald word lists, created specifically for financial document, have been widely used in the literature to gauge disclosure tone in newspaper articles, financial statement, and conference calls (Gurun and Butler, 2012; Dougal et al. 2012; Feldman, Govindaraj, Livnat, and Segal, 2010; Mayew and Venkatachalam, 2012). In our setting, we gauge the disclosure tone across the whole 10-K disclosure (Loughran and McDonald 2014).

Panel C examines the association between different linguistic cues and audit's propensity to issue a first-time modified GCO. We find a positive association between *NEGATIVE* (Column 1, Estimate = 0.092, *p*-value < 0.10), *LITIGIOUS* (Column 2, Estimate = 0.0254, *p*-value < 0.10), and *CONSTRAINING* (Column 3, Estimate = 0.226, *p*-value < 0.01) and auditors' propensity to issue an initial modified GCO. Economically speaking, a one percent increase in constraining words is associated with 2.8% increase in probability to issue a GCO. This suggest that the constraining tone of the 10-K provides the auditor incremental information in assessing the firm's ability to continue as a going concern. These results are consistent with Mayew et al. (2015) who show that the tone of the MD&A disclosure is informative of business risk in the near future.

Panel D presents results from our examination of the association between different linguistic cues and audit turnover in year *t+1*. We find a positive association between *NEGATIVE* (Column 1, Estimate = 0.0511, *p*-value < 0.01), *LITIGIOUS* (Column 2, Estimate = 0.0254, *p*-value < 0.05), and *CONSTRAINING* (Column 3, Estimate = 0.126, *p*-value < 0.05) and auditor turnover in year *t+1*. This result suggests that the annual report readability is informative about the engagment risk of the client, and that auditors respond to this risk when determining their audit portfolio. Overall, our results suggest that linguistic cues in the annual report are informative about auditors' engagement risk. More specifically, our results suggest that auditors consider the linguistics cues contained in prior year's financial statement when planning the audit engagement.

Sensitivity Analyses

Firm Fixed Effects

Our primary analyses use cross-sectional panel data. In order to mitigate the possibility of correlated omitted variables, we re-estimate Eq. 1 using firm fixed effects. Amir et al. (2015) suggest that the use of firm fixed effects is effective at yielding unbiased coefficient estimates, and is superior to a changes model (differencing of both the dependent variable and independent variables), which yields unbiased coefficients, but is subject to loss of data.

Table 9 presents the results from the estimation of Eq. 1 using firm fixed effects. Panel A presents results when *ARL* is the dependent variable. The coefficients on all three readability measures are positive and statistically significant. Panel B presents results when *AFEE* is the dependent variable. The coefficients on all three readability measures are positive and significant at the 1% level. These results are consistent with our primary analysis and provide some assurance that our results are not driven by unobserved time-invariant firm characteristics.

=====TABLE 9 HERE=====

Alternative Measures of Financial Statement Readability

We also examine the effect of financial statement readability on audit outcomes by using other readability proxies. Specifically, we use the Flesch Reading Ease index (*FLESCH*), and Kincaid index (*KINCAID*) as proxies for readability.[14] The results using alternative measures of financial reporting readability are qualitatively similar as the results

[14] The Flesch Reading Ease Index is calculated as 206.835 - (1.015 * words per sentence) - (84.6 * syllables per word). The Kincaid Index is calculated as (11.8 * syllables per word) + (0.39 * words per sentence) - 15.59.

using *FOG* as measure of financial statement readability. Certain measures yield weaker results. This suggests that Fog index outperform other readability proxies.

VI. CONCLUSION

Prior research has overwhelmingly demonstrated that financial reports are an important source of information for capital markets, but regulators, academics, and the popular press have all expressed concern that the readability of financial information can dampen the effectiveness of financial disclosures. In our study, we find evidence consistent with the notion that auditors respond to less readable annual reports. Specifically, we find that audit report lag, audit fees, the issuance of a modified going concern opinion, and auditor turnover are increasing in annual report complexity. The results are robust to many control variables that prior research has shown to affect audit outcomes and to alternative measures of readability. Collectively, our results suggest that annual report readability provides incremental information about auditors' assessment of their clients' engagement risk

We also find that the lexical properties of annual reports are associated with auditor-client contracting. Specifically, negative sentiment and a higher percentage of litigious words in the annual report are associated with higher audit fees. Further, negative sentiment, a higher percentage of litigious words, and a higher percentage of constraining words in the annual report are associated with longer audit report lag and higher auditor turnover. Finally, more negative sentiment and a higher percentage of constraining words in the annual report are associated with a higher likelihood of receiving a modified going concern opinion. These results, taken with our primary results, provide insight into the mechanisms likely affecting

our results by showing that the linguistic characteristics of a firm's annual report provide incremental information about the auditor's assessment of engagement risk.

APPENDIX A Variable Definitions

Variable Name	Variable Measurement
Dependent Variables	
AFEE	The natural log of total audit fees for firm *i* in year *t+1*.
ARL	The natural log of audit lag for firm *i* in year *t+1*
TURNOVER	1 if auditor turnover happens for firm *i* in year *t+1*, and 0 otherwise
FIRSTGCO	1 if auditor issues first time GC opinion in *t+1*, and 0 otherwise
Readability and Linguistic Cues	
FILESIZE	The natural log of net file size of 10-K filings
LENGTH	The natural log of number of words in 10-K filings
FOG	The Fog Index (Li 2008).
NEGATIVE	(Number of negative words in 10-K filings minus number of positive words in 10-K filings divided by the total number of words in 10-K filings) * 100. The word lists for positive words and negative words are obtained from Loughran and McDonald Financial Sentiment Dictionaries.
LITIGIOUS	(Number of litigious words in 10-K filings divided by the total number of words in 10-K filings) * 100. The word lists for uncertain words is obtained from Loughran and McDonald Financial Sentiment Dictionaries.
CONSTRAINING	(Number of constraining words in 10-K filings divided by the total number of words in 10-K filings) * 100. The word lists for uncertain words is obtained from Loughran and McDonald Financial Sentiment Dictionaries.
Control Variables	
SIZE	The natural log of total assets for firm *i* in year *t*.
LEVERAGE	Total liabilities divided by total assets for firm *i* in year *t*.
$\Delta LEVERAGE_{it}$	*LEVERAGE* in year *t* minus *LEVERAGE* in year *t-1*
RECINV	The sum of receivables and inventory, scaled by total assets, at the end of the fiscal year t.
ROA	Net earnings divided by total assets.
LOSS	1 if firm *i*'s net income is a loss in year *t*, and 0 otherwise.
FOREIGN	1 if firm *i* has foreign operations in year *t*, and 0 otherwise.
MERGER	1 if firm *i* (did not) engage in merger and acquisition activity in the fiscal year, and 0 otherwise.
RESTRUCTURE	1 if firm *i* has restructuring activities during the year, and 0 otherwise.
DISCOPS	1 if firm *i* has discontinued operations in year *t*, and 0 otherwise.
EXTRA	1 if firm *i* (does not) reports an extraordinary item in year *t*.
SPECIAL	1 if firm *i* reported special item for the fiscal year is at least 2 percent of total asset, and 0 otherwise.
MATWEAK	1 if firm *i* reported any internal control weakness in during fiscal year *t*, and 0 otherwise.
FILE404	1 if firm filed a SOX report in year *t*, and 0 otherwise.
BIG4	1 if firm i is audited by a Big 4 auditor in year *t*, and 0 otherwise.
BUSY	1 if firm *i* has a fiscal year-end of December or January in year *t*, and 0 otherwise.
RESTATE	1 if the firm i announces a financial statement restatement during fiscal year t, and 0 otherwise.
Misstate	1 if this fiscal year's financial statement is restated later, and 0 otherwise.

AUDITORCHANGE	1 if firm *i* experienced a change in auditor in year *t*, and 0 otherwise.
ZSCORE	Altman (1968) bankruptcy score, *calculated as: ZSCORE*= 3.3 *(NI/AT) + 1.0 * (SALE/AT) + 1.4 * (RE/AT) + 1.2 * (WCAP/AT) + 0.6 * (CSHO * PRCC_F /LT).
OCF	Operating Cash Flow divided by Total Assets
STOCK RETURN	Stock return over the fiscal year
LIQUIDITY	Current assets divided by current liabilities
GROWTH	Sales over lag sales
INVESTMENT	Short- and long-term investment securities (including cash and cash equivalents) (Compustat items CHE and IVPT), scaled by total assets;
NEW FINANCE	1 if a firm has a new issuance of equity or debt in the subsequent fiscal year (SSTK exceeding 5 percent of the firm's market value of equity or positive DLTIS);

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Table 1
Sample Composition

Panel A. Time distribution

Year	Frequency	%	Cumulative Freq.	Cumulative %
1999	2,230	4.49	2,230	4.49
2000	4,212	8.48	6,442	12.98
2001	4,763	9.59	11,205	22.57
2002	4,851	9.77	16,056	32.34
2003	4,781	9.63	20,837	41.97
2004	4,615	9.3	25,452	51.26
2005	4,438	8.94	29,890	60.2
2006	4,217	8.49	34,107	68.7
2007	4,119	8.3	38,226	76.99
2008	3,952	7.96	42,178	84.95
2009	3,769	7.59	45,947	92.54
2010	3,702	7.46	49,649	100

Panel B: Industry distribution

Industry (1-Digit SIC)	Frequency	%	Cumulative Freq.	Cumulative %
0-1 (Agriculture, mining, oil and construction)	3,541	7.13	3,541	7.13
2 (Food, tobacco, textiles, paper and chemicals)	9,127	18.38	12,668	25.51
3 (Manufacturing, machinery and electronics)	14,792	29.79	27,460	55.30
4 (Transportation and communications)	5,466	11.01	32,926	66.31
5 (Wholesale and retail)	5,269	10.61	38,195	76.92
7 (Services)	8,299	16.72	46,494	93.64
8-9 (Health, legal, educational services and other)	3,155	6.36	49,649	100

Table 2
Summary Statistics of Variables used in Analysis

Panel A: Descriptive Statistics for Primary Analyses: This table reports the summary statistics for variables used in our audit fee, audit lag and audit turnover tests. All continuous firm characteristics are winsorized at 1 and 99 percentiles. See Appendix A for variable definitions.

Variables	N	mean	sd	p25	p50	p75
Readability and Linguistic Cues						
FILESIZE	49,649	12.482	0.626	12.073	12.474	12.871
LENGTH	49,649	10.377	0.643	9.959	10.376	10.783
FOG	33,512	19.423	2.692	18.622	19.469	20.436
NEGATIVE	49,649	0.917	0.452	0.624	0.903	1.198
LITIGIOUS	49,649	1.553	0.898	0.841	1.293	2.094
CONSTRAINING	49,649	0.787	0.176	0.666	0.779	0.899
Dependent Variables						
AFEE (raw $ amount)	49,649	1151360	2102599	135500	400291	1175000
AFEE (t+1)	49,649	12.908	1.496	11.817	12.900	13.977
ARL (in days)	49,561	68	28	53	66	80
ARL (t+1)	49,549	4.137	0.394	3.970	4.190	4.382
TURNOVER (t+1)	49649	0.105	0.307	0.000	0.000	0.000
Control Variables						
SIZE	49,649	18.821	2.686	17.176	18.988	20.672
LEVERAGE	49,649	0.899	2.306	0.289	0.507	0.719
RECINV	49,649	0.251	0.205	0.079	0.210	0.376
ROA	49,649	-0.446	1.987	-0.165	0.014	0.063
LOSS	49,649	0.446	0.497	0.000	0.000	1.000
FOREIGN	49,649	0.194	0.395	0.000	0.000	0.000
MERGER	49,649	0.323	0.468	0.000	0.000	1.000
RESTRUCTURE	49,649	0.211	0.408	0.000	0.000	0.000
DISCOPS	49,649	0.144	0.351	0.000	0.000	0.000
EXTRA	49,649	0.068	0.251	0.000	0.000	0.000
SPECIAL	49,649	0.050	0.218	0.000	0.000	0.000
BIGN	49,649	0.682	0.466	0.000	1.000	1.000
BUSY	49,649	0.679	0.467	0.000	1.000	1.000
MATWEAK	49,649	0.024	0.154	0.000	0.000	0.000
FILE404	49,649	0.341	0.474	0.000	0.000	0.000
RESTATE	49,649	0.080	0.271	0.000	0.000	0.000
MISSTATE	49,649	0.175	0.380	0.000	0.000	0.000
AUDITORCHANGE	49,649	0.103	0.303	0.000	0.000	0.000

Panel B: Descriptive Statistics for GC sample: This table reports the summary statistics for variables used in our modified GCO tests. All continuous firm characteristics are winsorized at 1 and 99 percentiles. See Appendix A for variable definitions.

Variables	N	mean	sd	p25	p50	p75
Readability and Linguistic Cues						
FILESIZE	14,445	12.464	0.593	12.087	12.465	12.836
LENGTH	14,445	10.362	0.616	9.973	10.374	10.754
FOG	10,595	19.657	1.540	18.681	19.510	20.451
NEGATIVE	14,445	0.967	0.460	0.660	0.961	1.271
LITIGIOUS	14,445	1.603	0.929	0.861	1.332	2.187
CONSTRAINING	14,445	0.787	0.175	0.668	0.784	0.900
Dependent Variables						
FIRSTGCO (t+1)	14,445	0.082	0.274	0.000	0.000	0.000
Control Variables						
SIZE	14,445	18.580	1.960	17.222	18.470	19.837
FIRM AGE	14,445	2.470	0.702	1.946	2.398	2.944
BIGN	14,445	0.712	0.453	0.000	1.000	1.000
LEVERAGE	14,445	0.480	0.311	0.240	0.438	0.653
ΔLEVERAGE	14,445	0.023	0.165	-0.035	0.013	0.078
ZSCORE	14,445	1.051	0.831	0.459	0.861	1.413
OCF	14,445	-0.059	0.237	-0.115	0.009	0.074
ARL	14,445	4.102	0.422	3.892	4.205	4.369
LIQUIDITY	14,445	3.543	3.928	1.390	2.249	4.013
LOSS	14,445	0.672	0.470	0.000	1.000	1.000
STOCK RETURN	14,445	0.154	1.242	-0.486	-0.148	0.292
GROWTH	14,445	0.257	1.066	-0.120	0.041	0.265
INVESTMENT	14,445	0.277	0.271	0.045	0.179	0.455
NEW FINANCE	14,445	0.540	0.498	0.000	1.000	1.000

Table 3
Correlation Matrix of Main Variables

This table reports the Pearson correlation tables for variables used in our main tests. All continuous firm characteristics are winsorized at 1 and 99 percentiles. See Appendix A for variable definitions.

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
AFEE (t+1)	(1)	1									
ARL (t+1)	(2)	**-0.155**	1								
TURNOVER (t+1)	(3)	**-0.157**	**0.095**	1							
FIRSTGCO (t+1)	(4)	**-0.065**	**0.109**	**0.023**	1						
FILESIZE	(5)	**0.593**	**-0.038**	**-0.083**	**-0.017**	1					
LENGTH	(6)	**0.579**	**-0.032**	**-0.081**	**-0.015**	**0.995**	1				
FOG	(7)	**0.095**	0.009	-0.000	0.007	**0.251**	**0.253**	1			
NEGATIVE	(8)	**0.151**	**0.083**	0.005	**0.016**	**0.367**	**0.381**	**0.105**	1		
LITIGIOUS	(9)	**0.163**	**-0.121**	**-0.011**	**0.015**	**0.580**	**0.582**	**0.248**	**0.401**	1	
CONSTRAINING	(10)	**0.219**	**0.059**	**-0.026**	0.006	**0.477**	**0.488**	**0.150**	**0.379**	**0.362**	1

Table 4
Readability of Annual Financial Reports and Audit Lag at year *t+1*

This table contains OLS regression results for the relation between audit lags at year t+1 and different readability measures. The dependent variable is log of audit lag at year t+1 and the variables of interest are log of net filesize of 10-K disclosure at year t, log of number of words used in 10-K disclosure at year t and fog index of 10-K disclosure at year t. See Appendix A for variable definitions. All continuous firm characteristics are winsorized at 1 and 99 percentiles. Industry and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
FILESIZE	0.0482***		
	[7.065]		
LENGTH		0.0439***	
		[7.232]	
FOG			0.00141
			[1.232]
SIZE	-0.0528***	-0.0522***	-0.0505***
	[-9.865]	[-9.945]	[-9.882]
LEVERAGE	0.00185	0.00194	0.0114**
	[0.935]	[0.978]	[1.969]
RECINV	0.106***	0.105***	0.145***
	[3.020]	[3.021]	[3.060]
ROA	0.00507***	0.00501***	0.0106**
	[2.669]	[2.640]	[2.320]
LOSS	0.0689***	0.0695***	0.0790***
	[5.924]	[5.914]	[5.537]
FOREIGN	0.0226***	0.0228***	0.0267***
	[3.287]	[3.301]	[3.964]
MERGER	0.0252***	0.0255***	0.0289***
	[4.244]	[4.269]	[3.712]
RESTRUCTURE	-0.00589	-0.00563	-0.000791
	[-0.646]	[-0.618]	[-0.101]
DISCOPS	0.0322***	0.0327***	0.0290***
	[3.200]	[3.233]	[2.631]
EXTRA	0.0561***	0.0563***	0.0622***
	[3.962]	[3.975]	[4.062]
SPECIAL	0.0119**	0.0124**	0.0166
	[2.470]	[2.573]	[1.641]
BIGN	-0.0177	-0.0179	0.00464
	[-0.974]	[-0.987]	[0.291]
BUSY	0.0199*	0.0200*	0.0259*
	[1.710]	[1.723]	[1.680]
MATWEAK	0.107***	0.108***	0.0856***

	[6.753]	[6.818]	[6.347]
FILE404	-0.0863***	-0.0864***	-0.0869***
	[-2.712]	[-2.715]	[-2.711]
RESTATE	0.0214**	0.0215**	0.0321***
	[2.470]	[2.479]	[2.746]
MISTATE	0.101***	0.101***	0.114***
	[7.490]	[7.489]	[7.412]
AUDITORCHANGE	0.00801*	0.00822*	0.00238
	[1.778]	[1.821]	[0.286]
INTERCEPT	4.359***	4.492***	4.811***
	[50.20]	[49.47]	[44.78]
Observations	49,549	49,549	33,480
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Ind FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adj R2	0.317	0.317	0.288

t-statistics in brackets *** p<0.01, ** p<0.05, * p<0.1

Table 5
Readability of Annual Financial Reports and Audit Fees at year *t+1*

This table contains OLS regression results for the relation between audit fees at year t+1 and different readability measures. The dependent variable is log of audit fees at year t+1 and the variables of interest are log of net filesize of 10-K disclosure at year t, log of number of words used in 10-K disclosure at year t and fog index of 10-K disclosure at year t. See Appendix A for variable definitions. All continuous firm characteristics are winsorized at 1 and 99 percentiles. Industry and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
FILESIZE	0.215***		
	[11.97]		
LENGTH		0.202***	
		[11.26]	
FOG			0.00910***
			[3.930]
SIZE	0.425***	0.427***	0.479***
	[67.38]	[68.54]	[70.71]
LEVERAGE	0.0243***	0.0247***	0.0426***
	[9.707]	[9.843]	[6.341]
RECINV	0.419***	0.419***	0.519***
	[9.240]	[9.267]	[8.946]
ROA	-0.0565***	-0.0567***	-0.0785***
	[-11.48]	[-11.53]	[-8.431]
LOSS	0.0542***	0.0554***	0.0907***
	[5.058]	[5.112]	[6.905]
FOREIGN	0.205***	0.206***	0.198***
	[12.76]	[12.75]	[11.80]
MERGER	0.119***	0.120***	0.114***
	[12.74]	[12.80]	[10.61]
RESTRUCTURE	0.185***	0.185***	0.179***
	[17.97]	[18.08]	[14.80]
DISCOPS	0.130***	0.132***	0.135***
	[10.96]	[11.11]	[10.37]
EXTRA	0.0471***	0.0478***	0.0627***
	[2.973]	[3.000]	[3.984]
SPECIAL	0.0396***	0.0411***	0.0717***
	[3.707]	[3.862]	[5.577]
BIGN	0.269***	0.267***	0.221***
	[6.627]	[6.614]	[7.092]

BUSY	0.0547**	0.0546**	0.0727*
	[1.963]	[1.961]	[1.883]
MATWEAK	0.297***	0.297***	0.327***
	[10.88]	[10.87]	[12.46]
FILE404	0.217***	0.217***	0.194***
	[5.063]	[5.058]	[4.270]
RESTATE	0.0572***	0.0574***	0.0926***
	[6.005]	[5.984]	[6.397]
MISTATE	0.0675***	0.0674***	0.0968***
	[3.785]	[3.776]	[5.766]
AUDITORCHANGE	-0.0399***	-0.0394***	-0.0299
	[-3.308]	[-3.241]	[-1.469]
INTERCEPT	0.849***	1.392***	2.997***
	[2.866]	[5.106]	[12.44]
Observations	49,649	49,649	33,512
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Ind FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adj R2	0.860	0.860	0.830

t-statistics in brackets

*** p<0.01, ** p<0.05, * p<0.1

Table 6

Readability of Annual Financial Reports and Going Concern Opinions at year *t+1*

This table contains probit regression results for the relation between auditor propensity to issue going concern opinion at year t+1 and different readability measures. The dependent variable is auditor's going concern opinion at year t+1 and the variables of interest are log of net file size of 10-K disclosure at year t, log of number of words used in 10-K disclosure at year t and fog index of 10-K disclosure at year t. See Appendix A for variable definitions. All continuous firm variables are winsorized at 1 and 99 percentiles. Industry and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
FILESIZE	0.127***		
	[4.713]		
LENGTH		0.118***	
		[4.242]	
FOG			0.0211**
			[2.328]
SIZE	-0.148***	-0.146***	-0.136***
	[-11.04]	[-10.48]	[-8.567]
AGE	-0.0791**	-0.0784**	-0.0843**
	[-2.357]	[-2.342]	[-2.179]
BIGN	0.00637	0.00557	0.0874
	[0.136]	[0.119]	[1.445]
LEVERAGE	0.540***	0.542***	0.582***
	[9.175]	[9.222]	[7.439]
ΔLEVERAGE	-0.237**	-0.239**	-0.254
	[-2.113]	[-2.130]	[-1.629]
ZSCORE	-0.124***	-0.124***	-0.120***
	[-3.738]	[-3.738]	[-2.666]
OCF	-0.654***	-0.656***	-0.740***
	[-6.402]	[-6.408]	[-4.523]
ARL	0.286***	0.287***	0.312***
	[5.808]	[5.826]	[4.407]
LIQUIDITY	-0.0129**	-0.0129**	-0.0243**
	[-1.983]	[-1.982]	[-2.479]
LOSS	0.330***	0.330***	0.406***
	[9.666]	[9.580]	[8.338]
STOCK RETURN	-0.0230	-0.0230	-0.0407*
	[-1.407]	[-1.409]	[-1.647]
GROWTH	0.0345***	0.0346***	0.0462**
	[2.598]	[2.602]	[2.080]
INVESTMENT	-0.610***	-0.609***	-0.612***

	[-5.704]	[-5.723]	[-5.686]
NEW FINANCE	0.109***	0.109***	0.113***
	[3.049]	[3.057]	[2.845]
INTERCEPT	-0.990	-0.667	-0.616
	[-1.433]	[-1.051]	[-0.710]
Observations	14,445	14,445	10,595
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Ind FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Pseudo R2	0.164	0.164	0.170
Area under ROC	0.804	0.804	0.813

z-statistics in brackets *** p<0.01, ** p<0.05, * p<0.1

Table 7
Readability of Annual Financial Reports and Auditor Turnover in Year *t+1*

This table contains probit regression results for the relation between audit turnover at year t+1 and different readability measures. The dependent variable is auditor turnover at year t+1 and the variables of interest are log of net filesize of 10-K disclosure at year t, log of number of words used in 10-K disclosure at year t and fog index of 10-K disclosure at year t. See Appendix A for variable definitions. All continuous variables are winsorized at 1 and 99 percentiles. Industry and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
FILESIZE	0.0656***		
	[2.611]		
LENGTH		0.0629***	
		[2.758]	
FOG			0.00291
			[0.814]
SIZE	-0.111***	-0.110***	-0.110***
	[-7.862]	[-7.826]	[-5.488]
LEVERAGE	-0.0128***	-0.0127***	-0.0208***
	[-4.967]	[-4.917]	[-2.976]
RECINV	0.209***	0.209***	0.292***
	[3.304]	[3.305]	[3.166]
ROA	-0.00317	-0.00318	-0.0205***
	[-0.848]	[-0.848]	[-4.347]
LOSS	0.0791***	0.0792***	0.116***
	[2.602]	[2.627]	[2.751]
FOREIGN	0.0251	0.0253	0.0424
	[0.993]	[1.004]	[1.401]
MERGER	0.0482***	0.0484***	0.0358*
	[3.721]	[3.733]	[1.851]
RESTRUCTURE	0.00595	0.00607	0.0392*
	[0.280]	[0.285]	[1.907]
DISCOPS	0.0576***	0.0580***	0.0752**
	[3.390]	[3.425]	[2.513]
EXTRA	0.0783*	0.0786*	0.105***
	[1.698]	[1.702]	[3.405]
SPECIAL	0.0197	0.0200	0.100**
	[0.997]	[1.015]	[2.561]
BIGN	0.00896	0.00857	0.0779

	[0.107]	[0.103]	[1.048]
BUSY	0.0302	0.0301	0.00643
	[1.058]	[1.053]	[0.172]
MATWEAK	0.475***	0.475***	0.406***
	[8.996]	[8.983]	[6.037]
FILE404	-0.292***	-0.292***	-0.241***
	[-3.262]	[-3.263]	[-3.207]
RESTATE	0.0741**	0.0741**	0.113**
	[2.404]	[2.406]	[2.252]
MISTATE	0.234***	0.234***	0.167***
	[9.745]	[9.768]	[6.180]
INTERCEPT	-0.219	-0.0607	0.0204
	[-0.514]	[-0.164]	[0.0905]
Observations	59,324	59,324	38,838
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Ind FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Pseudo R2	0.086	0.086	0.088
Area under ROC	0.722	0.722	0.726

z-statistics in brackets *** p<0.01, ** p<0.05, * p<0.1

Table 8
Additional Analyses: Linguistic Cues - NEGATIVE; LITIGIOUS; CONSTRAINING

Panel A. Audit Lag at year *t+1*

This table contains OLS regression results for the relation between audit lags at year t+1 and different linguistic cues. The dependent variable is log of audit lag at year t+1 and the variables of interest are percentage negative sentiment words in 10 K disclosure at year t, percentage litigious words in 10 K disclosure at year t, and percentage of constraining words in 10 K disclosure at year t. All continuous firm characteristics are winsorized at 1 and 99 percentiles. Industry and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
NEGATIVE	0.0328***		
	[3.755]		
LITIGIOUS		0.0123***	
		[3.048]	
CONSTRAINING			0.0998***
			[5.119]
Control Variables	Yes	Yes	Yes
Observations	49,549	49,549	49,549
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Ind FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adj R2	0.315	0.315	0.315

t-statistics in brackets. *** p<0.01, ** p<0.05, * p<0.1

Panel B. Audit Fees at year *t+1*

This table contains OLS regression results for the relation between audit fees at year t+1 and different readability measures. The dependent variable is log of audit fees at year t+1 and the variables of interest are percentage negative sentiment words in 10 K disclosure at year t, percentage litigious words in 10 K disclosure at year t, and percentage of constraining words in 10 K disclosure at year t. All continuous firm characteristics are winsorized at 1 and 99 percentiles. Industry and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
NEGATIVE	0.113***		
	[10.88]		
LITIGIOUS		0.0392***	
		[6.972]	
CONSTRAINING			0.0195
			[0.616]
Control Variables	Yes	Yes	Yes
Observations	49,649	49,649	49,649
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Ind FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adj R2	0.857	0.856	0.855

t-statistics in brackets *** p<0.01, ** p<0.05, * p<0.1

Panel C. Going Concern Opinion at year *t+1*

This table contains probit regression results for the relation between auditor propensity to issue going concern opinion at year t+1 and different readability measures. The dependent variable is auditor's going concern opinion at year t+1 and the variables of interest are percentage negative sentiment words in 10 K disclosure at year t, percentage litigious words in 10 K disclosure at year t, and percentage of constraining words in 10 K disclosure at year t. See Appendix A for variable definitions. All continuous firm characteristics are winsorized at 1 and 99 percentiles. Industry and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
NEGATIVE	0.0920*		
	[1.708]		
LITIGIOUS		0.0254*	
		[1.839]	
CONSTRAINING			0.226***
			[3.640]
Control Variables	Yes	Yes	Yes
Observations	14,450	14,450	14,450
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Ind FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Pseudo R2	0.163	0.163	0.163
Area under ROC	0.803	0.803	0.803

z-statistics in brackets

*** p<0.01, ** p<0.05, * p<0.1

Panel D. Audit Turnover in the Following Year

This table contains probit regression results for the relation between audit turnover at year t+1 and different readability measures. The dependent variable is auditor turnover at year t+1 and the variables of interest are percentage negative sentiment words in 10 K disclosure at year t, percentage litigious words in 10 K disclosure at year t, and percentage of constraining words in 10 K disclosure at year t. See Appendix A for variable definitions. All continuous firm characteristics are winsorized at 1 and 99 percentiles. Industry and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
NEGATIVE	0.0511***		
	[2.961]		
LITIGIOUS		0.0244**	
		[2.359]	
CONSTRAINING			0.126**
			[2.303]
Control Variables	Yes	Yes	Yes
Observations	59,324	59,324	59,324
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Ind FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Pseudo R2	0.086	0.086	0.086
Area under ROC	0.722	0.722	0.722

z-statistics in brackets

*** p<0.01, ** p<0.05, * p<0.1

Table 9
Additional Analyses: Fixed Effect Estimator

Panel A: Readability of Annual Financial Reports and Audit Lag at year *t+1* after controlling for firm fixed effects

This table contains OLS regression results for the relation between audit lags at year t+1 and different readability measures. The dependent variable is log of audit lag at year t+1 and the variables of interest are log of net filesize of 10-K disclosure at year t, log of number of words used in 10-K disclosure at year t and fog index of 10-K disclosure at year t. See Appendix A for variable definitions. All continuous firm characteristics are winsorized at 1 and 99 percentiles. Firm and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
FILESIZE	0.0179**		
	[2.574]		
LENGTH		0.0160**	
		[2.461]	
FOG			0.00217*
			[1.888]
SIZE	-0.0165**	-0.0162**	-0.0145
	[-2.182]	[-2.170]	[-1.600]
LEVERAGE	-0.00333*	-0.00331*	-0.000726
	[-1.767]	[-1.758]	[-0.232]
RECINV	0.00261	0.00271	0.0276
	[0.102]	[0.107]	[0.796]
ROA	-0.000288	-0.000299	-0.00179
	[-0.168]	[-0.174]	[-0.439]
LOSS	0.0279***	0.0280***	0.0303***
	[2.727]	[2.735]	[2.773]
FOREIGN	0.00922	0.00929	0.00694
	[0.916]	[0.922]	[0.711]
MERGER	0.0190***	0.0191***	0.0189***
	[3.334]	[3.353]	[2.806]
RESTRUCTURE	0.0197*	0.0198*	0.0237**
	[1.662]	[1.671]	[2.124]
DISCOPS	-0.0108	-0.0108	-0.0186*
	[-1.231]	[-1.225]	[-1.794]
EXTRA	0.0272**	0.0273**	0.0285*
	[2.082]	[2.085]	[1.956]
SPECIAL	-0.00647	-0.00643	-0.00680
	[-0.871]	[-0.865]	[-0.731]

BIGN	0.0568***	0.0568***	0.0598***
	[2.809]	[2.809]	[2.996]
BUSY	-0.0418*	-0.0418*	-0.0586
	[-1.704]	[-1.705]	[-1.583]
MATWEAK	0.0419**	0.0420**	0.0151
	[2.182]	[2.192]	[0.877]
FILE404	-0.0355	-0.0355	-0.0397
	[-0.770]	[-0.771]	[-0.899]
RESTATE	-0.0104*	-0.0104*	-0.00143
	[-1.650]	[-1.649]	[-0.162]
MISTATE	0.0729***	0.0729***	0.0850***
	[14.53]	[14.53]	[9.953]
AUDITORCHANGE	-0.0115	-0.0114	-0.0101
	[-1.348]	[-1.337]	[-0.726]
INTERCEPT	4.316***	4.370***	4.417***
	[47.27]	[45.51]	[25.46]
Observations	49,549	49,549	33,480
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adj R2	0.500	0.500	0.485

t-statistics in brackets *** p<0.01, ** p<0.05, * p<0.1

Panel B: Readability of Annual Financial Reports and Audit Fees at year *t+1* after controlling for firm fixed effects

This table contains OLS regression results for the relation between audit fees at year t+1 and different readability measures. The dependent variable is log of audit fees at year t+1 and the variables of interest are log of net filesize of 10-K disclosure at year t, log of number of words used in 10-K disclosure at year t and fog index of 10-K disclosure at year t. See Appendix A for variable definitions. All continuous firm characteristics are winsorized at 1 and 99 percentiles. Firm and year fixed effects are also included. Standard errors are clustered by firm and year.

	(1)	(2)	(3)
VARIABLES	**coef/stat**	**coef/stat**	**coef/stat**
FILESIZE	0.0722***		
	[9.107]		
LENGTH		0.0687***	
		[9.136]	
FOG			0.00411***
			[3.030]
SIZE	0.270***	0.271***	0.341***
	[17.49]	[17.57]	[20.11]
LEVERAGE	0.00699**	0.00706**	0.0161**
	[2.220]	[2.242]	[2.221]
RECINV	0.218***	0.218***	0.415***
	[4.290]	[4.298]	[7.963]
ROA	-0.0303***	-0.0303***	-0.0339***
	[-7.696]	[-7.714]	[-4.683]
LOSS	0.0106	0.0107	0.0194*
	[1.163]	[1.170]	[1.906]
FOREIGN	0.0547***	0.0550***	0.0467***
	[3.824]	[3.839]	[3.434]
MERGER	0.0287***	0.0288***	0.0191***
	[4.730]	[4.766]	[2.705]
RESTRUCTURE	0.0276***	0.0278***	0.0277***
	[2.934]	[2.948]	[3.112]
DISCOPS	-0.00982	-0.00969	-0.0114
	[-1.088]	[-1.073]	[-0.941]
EXTRA	0.0163	0.0163	0.0262
	[1.004]	[0.999]	[1.412]
SPECIAL	-0.0124	-0.0124	0.00592
	[-1.383]	[-1.373]	[0.499]
BIGN	0.256***	0.256***	0.246***
	[11.34]	[11.36]	[10.42]

BUSY	0.0282	0.0281	0.0273
	[0.748]	[0.743]	[0.484]
MATWEAK	0.200***	0.200***	0.196***
	[7.379]	[7.369]	[5.130]
FILE404	0.155*	0.155*	0.130
	[1.806]	[1.807]	[1.368]
RESTATE	0.0415***	0.0414***	0.0518***
	[5.352]	[5.350]	[4.950]
MISTATE	0.0481***	0.0481***	0.0446***
	[4.218]	[4.213]	[3.481]
AUDITORCHANGE	-0.0223**	-0.0222*	-0.0204*
	[-1.962]	[-1.939]	[-1.672]
INTERCEPT	6.779***	6.961***	6.337***
	[20.37]	[21.40]	[20.01]
Observations	49,649	49,649	33,512
Cluster	By Firm & By Year	By Firm & By Year	By Firm & By Year
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adj R2	0.942	0.942	0.934

t-statistics in brackets

*** p<0.01, ** p<0.05, * p<0.1