The Impact of Tightly Contested Governance Proposals on Firms' Narrative Disclosures: Evidence from a Regression-Discontinuity Design (RDD) [1]

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ABSTRACT

Corporate governance and firm disclosure are endogenously determined. We exploit locally exogenous variations in corporate governance created by "close-call" governance-related shareholder proposals, using a fuzzy RDD and text analytics to examine whether better corporate governance causally affects the narratives in corporate disclosures. We find that although better corporate governance in firms leads to more disclosure in their 10-K filings, the passage of "close-call" governance proposals also significantly increases the complexity and the boilerplate nature of such disclosures. These results are robust to several robustness tests, alternative RDD bandwidths, and different specifications, and amplified when the investors are undistracted.

Keywords: Corporate governance, Textual Disclosure, Endogeneity, Regression Discontinuity Design (RDD), Computational Linguistics, Investor Distraction

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> "Good corporate governance is a system in which those who manage a company — that is, officers and directors — are effectively held accountable for their decisions and performance. But accountability is impossible without transparency. By adopting these rules, we will improve the disclosure around risk, compensation, and corporate governance, thereby increasing accountability and directly benefiting investors."
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> *- 29th Chairwoman of the SEC, Mary L. Schapiro, Dec 16, 2009*

1. Introduction

This paper examines the impact of corporate governance on the quantity, complexity, and boilerplate nature of firms' narrative disclosures in their 10-K filings. Despite enormous growth in research on the influence of corporate governance on firm disclosures, the empirical evidence is, at best, mixed and non-causal. While the studies that find a positive association between good governance and firm disclosure conform nicely to the predictions from the monitoring role of corporate governance, researchers who document a negative relation between corporate governance and disclosure indicate that good corporate governance is merely a substitute for informative disclosures. Such conflicting results are puzzling, especially when most regulators tend to believe that better governance would automatically lead to a higher quality of firm disclosures. For example, in the 2018 U.S. Securities and Exchange Commission's (SEC) enforcement action and settlement with Tesla and its CEO, Elon Musk, two of the essential settlement demands by the SEC included changes pertaining to corporate governance. Specifically, (1) an independent chairperson must replace Musk as chairperson of the board and (2) Tesla must add two independent directors to its board.[1] The impetus behind these two required changes was the SEC's underlying presumption that better governance would effectively oversee Musk's communications and lead to improved disclosure practices by Tesla. Such similar views from regulators are also vividly depicted in a speech in 2009 by the 29th Chairwoman of the SEC, Mary

[1] https://www.sec.gov/news/press-release/2018-226

L. Schapiro, cited at the beginning of the paper. In the same vein, many academics also believe that the corporate governance structures in firms are put in place to ascertain that the minority shareholders also have access to the same credible and reliable value-relevant information that is available to the company's insiders (managers) and the large blockholders (Bushman and Smith, 2003). However, in a survey on the state of research exploring the relation between corporate governance and firm disclosure, Brown, Beekes, and Verhoeven (2011, p. 142) write:

> Despite the presumption from regulators that CG (Corporate Governance) leads to better disclosure practices, studies find opposing results, leaving the debate open as to whether CG is a substitute for, or complementary to, a firm's disclosure practices.

Because individually corporate governance structures (Demsetz and Lehn, 1985) and firm disclosures (Dye, 2001) and the relation between the two are endogenously determined (Leuz and Wysocki, 2016), identifying the causal impact of governance on disclosure is empirically challenging. Empiricists in this area not only face the identification challenge of simultaneity, as one can argue that both governance and disclosure are determined jointly in equilibrium, but also face a more severe issue of omitted variable bias. Hence, it is plausible that the extant literature has not controlled for an observable or unobservable variable that simultaneously determines corporate governance and disclosure practices. To the extent researchers have identified the relevant explanatory variables, they potentially face further endogeneity issues arising from the commonly used measures that proxy for corporate governance (Larcker, Richardson, and Tuna, 2007; Bebchuk, Cohen, and Ferrell, 2009). Furthermore, because of difficulties quantifying the textual information in firm disclosures, empirical research examining the association between corporate governance and firm disclosure is prone to measurement errors, which is yet another common culprit for endogeneity. Likely due to these empirical challenges, there is scant evidence of the impact of corporate governance on firms' narrative disclosures (i.e., the voluntary soft

information) in SEC filings, which often account for a significant portion of firms' disclosure documents (Liberti and Petersen, 2019).

To circumvent such issues of identification and to claim credible causal inference, we rely on the econometric technique of Fuzzy Regression Discontinuity Design (Fuzzy RDD). We use Fuzzy RDD to estimate the impact of the passing of governance-enhancing shareholder proposals not only on the quantity and complexity, but also on the boilerplate nature of firms' disclosures in the narratives of their 10-K filings. Although Thistlethwaite and Campell first introduced RDDs in the year 1960, they have not been widely used in the corporate finance and accounting literature until recently, most noticeably by Cuñat, Gine, and Guadalupe (2012).[2] We follow the methodology of Cuñat, Gine, and Guadalupe (2012), where the rationale of such an RDD approach is that the corporate governance-related shareholder proposals that pass or fail by a small margin of votes around the 50% threshold create a local exogenous variation in corporate governance. In other words, the firms on either side of the 50% cutoff are comparable with respect to having similar observable and unobservable characteristics, except for their treatment status. Therefore, comparing the impact on firms just above (i.e., treatment group) and below (i.e., control group) the 50% voting threshold provides an opportunity for causal inference.

A reasonable concern with the empirical set-up described above is that the corporate governance-related shareholder proposals are nonbinding and are only advisory in nature. However, the econometric reasoning of using such a setting is that because the passing of shareholder proposals exerts pressure on the management to enact the proposals in the future, the likelihood of their implementation increases, therefore, satisfying the critical identification

[2] Imbens and Lemeiux (2008), and Lee and Lemieux (2010) provide excellent reviews of Regression Discontinuity Designs (RDD). Some other recent papers in finance that have used this quasi-experimental technique of RDD are Black, Kim, Jang, and Park (2015), Malenko and Shen (2016), Almeida, Fos, and Kronlund (2016), and Chemmanur and Tian (2018).

assumption in the Fuzzy RDD methodology (Cuñat, Gine, and Guadalupe, 2012; Roberts and Whited, 2013).[3]

Our identification strategy using Fuzzy RDD suggests a positive effect of corporate governance on the quantity of textual disclosure. However, more interestingly, we also find a negative impact of governance as it significantly increases the complexity and the boilerplate nature of disclosures, plausibly reducing the informational content of such disclosures. We further document that our results are stronger when the firms' investors are not distracted, using two different investor distraction measures. The idea here is that distracted shareholders would weaken, if not nullify, the causal impact of the passing of governance proposals due to their weaker oversight. So, our conjecture here is that if the results shown in our paper are causal, such RDD results should be stronger cross-sectionally when the institutional investors are undistracted. Such findings are contrary to the Securities Exchange Commission (SEC)'s intended goal, as the SEC encourages and provides guidance to firms periodically to limit boilerplate and complex language in their disclosures. For example, in a speech given in 2005, the then SEC Commissioner Cynthia A. Glassman states:

> What is important is that management provides meaningful descriptions of the material weaknesses and their consequences, as well as the remedial actions that have, or will, occur to rectify the problem. Boilerplate disclosure that does not change from quarter to quarter or year to year is not sufficient.[4]

Our results also complement the findings of the prior and current literature in finance and accounting that document that the boilerplate language uses rote recitations, making the 10-K filings less informative (Brown and Tucker, 2011; Cohen, Malloy, and Nguyen, 2020). We rely

[3] Ertimur, Ferri, and Stubben (2010) use a sample of majority-vote shareholder proposals between 1997 and 2004 and find that the change in the probability of implementation at the majority threshold can be inferred to be around 20.7%. Moreover, the authors document that 31.1% of the shareholder proposals that pass are implemented, while only 3.2% of those that fail are implemented.

[4] https://www.sec.gov/news/speech/spch022205cag.htm

on different textual and corpus similarity measures widely used in computational linguistics, and recently applied in finance and accounting, to quantify the texts used in 10-K disclosures.[5] Our results are robust to several diagnostic and placebo tests, alternative bandwidths around the cutoff, and alternative regression discontinuity specifications. Finally, the results are also consistent with the investor distraction hypothesis using two different measures of investor distraction: (1) institutional investor distractions arising from events in other industries that are by construction exogenous to the firm under consideration (Kempf, Manconi, and Spalt, 2017), and (2) media coverage-based distractions.

We begin Section 2 with a discussion of the existing literature related to our study and the formulation of our primary research question. Section 3 describes the sample and the data used in this study, followed by Section 4, which discusses the identification strategy using the Fuzzy RDD, and presents the main results. Section 5 complements the discussion of the main results using the cross-sectional variation in the firms' shareholder distraction level, and Section 6 conducts several placebo and sub-sample robustness tests of the main results. Finally, Section 7 concludes with some cautionary policy implications of our findings.

2. Related Literature and the Main Research Question

Regulators and investors generally perceive good corporate governance and greater firm disclosure as desirable. However, both in the finance and the accounting literature, it is an open question - whether better corporate governance indubitably leads to more informative disclosures, which is

[5] For comprehensive surveys on the application of textual analysis in finance and accounting, see Das (2014), Kearney and Liu (2014), and Loughran and McDonald (2016). The different similarity measures used in this paper have been borrowed from computational linguistics and has been recently applied in finance research (e.g., Hoberg and Phillips, 2010; Hoberg, Phillips, and Prabhala, 2014; Hoberg and Phillips, 2016; Box, 2018; Cohen, Malloy, and Nguyen, 2020).

the primary research question of this study. While disclosure can be written as an increasing function of corporate governance, where the monitoring role of corporate governance could ensure more informative firm disclosures, disclosure can also be described as a decreasing function of corporate governance, as it might serve as a substitute for governance. One can envision that under the assumption of an ideal frictionless world of full disclosure and symmetric information, there is no need for corporate governance, as investors are fully informed and can monitor the management themselves. It is in the real world with the presence of frictional costs such as adverse selection (Akerlof, 1970) and moral hazard (Hölmstrom, 1979) that corporate governance begins to matter, and hence, can behave as a substitute to disclosure in the cross-section. Moreover, firms may also choose to disclose less information despite good corporate governance for competitive and proprietary reasons (Admati and Pfleiderer, 2000).

There is ample empirical evidence on both sides of this argument in the extant literature, not only in studies based in the U.S. but also in studies that look at firms in other geographical regions. For instance, both Eng and Mak (2003) and Abraham and Cox (2007) find evidence of a negative association between good governance and disclosure. While Abraham and Cox (2007) focus their study on the UK firms and find a negative association between long-term institutional ownership (a proxy for good corporate governance) and the levels of risk disclosure in their annual reports, Eng and Mak (2003) document a negative relation between managerial ownership (another proxy for good corporate governance) and disclosure for firms incorporated in Singapore. Other studies, such as Beekes and Brown (2006) and Bird and Karolyi (2016) document a positive association between corporate governance and disclosure. While Beekes and Brown (2006) find that better governed Australian firms release more informative disclosures, Bird and Karolyi (2016) find that improved governance through increased institutional ownership via index reconstitutions leads to

more voluntary disclosures in the U.S. Heterogeneity amongst the institutional investors could also differentially impact their demands for disclosure from their investee firms. Boone and White (2015) document that quasi-indexers demand more transparency in corporate disclosures. Although both Boone and White (2015) and Bird and Karolyi (2016) attempt to address the identification challenges using the Russell 1000/2000 index re-assignments, an exogenous source of variation in firms' ownership structures, and arguably for governance, there is little agreement in the literature on how Russell reconstitutions impact firm's ownership structures (see Appel, Gormley, and Keim, 2020; Wei and Young, 2020; and Glossner, 2020, for detailed discussions). Moreover, different from Boone and White (2015) and Bird and Karolyi (2016), this paper focuses on the changes in the narratives and the language used in 10-K disclosures. Narratives are an essential dimension of disclosures, not only for human readers but also for machine and AI readers (Cao, Jiang, Yang, and Zhang, 2020).

Firm disclosure practices also develop endogenously within the firm's information environment. In a meta-analysis of a sample of 27 empirical studies, García-Meca and Sánchez-Ballesta (2010) document that the positive relation between corporate board independence, a proxy for good corporate governance, and voluntary disclosure is only found in countries with better investor protection rights.

In this paper, we argue that the extant literature studying this relation between governance and disclosure is inconclusive in both its theoretical predictions and empirical findings, not only because of the different endogeneity issues such as simultaneity, omitted variable bias, and measurement error, but also because the literature has mostly ignored the soft voluntary disclosure in the narratives of SEC filings (Liberti and Petersen, 2019). Hence, our study focuses on firms' disclosures in narratives of SEC filings by coding text into numbers using well-established natural

language processing (NLP) techniques and controlling for hard information by using various accounting and finance variables.[6] We further distinguish between the quantity and information in disclosures' narratives using several accepted statistical measures of text summarization because greater disclosure does not necessarily mean that the disclosure is more informative.

In summary, we believe that determining the causal relation between corporate governance and disclosure is essential as it can have real implications for both firms and capital markets (e.g., Grossman and Stiglitz, 1980; Diamond and Verrecchia, 1991; Easley and O'Hara, 2004; Goldstein and Yang, 2017; Goldstein and Yang, 2019) and is ultimately an empirical question warped with numerous identification challenges. Therefore, in asking the question of what the impact of corporate governance on firms' disclosures is, our goal in this study is to identify a credible causal relation.

3. Data and Summary Statistics

We collect the governance data and the data on shareholder proposals' vote information from RiskMetrics and SharkRepellent from 1997 to 2015. We start in the year 1997 due to the availability of such data and stop in 2015 to examine several years of post-voting outcomes data. We focus only on the governance-related proposals that have the valid voting results data and the requirement of a 50% threshold for approval. The final sample comprises 4,453 governance-related shareholder proposals during the sample period. Table 1 provides the summary statistics on the shareholder proposals included in this study.

[Insert Table 1 Here]

[6] Other than the fixed effects, all the empirical specifications also control for more than a dozen different covariates that proxy for various hard (financial and accounting) information.

Panel A of Table 1 presents the distribution of shareholder proposals by year for all S&P 1500 firms and an additional 500 widely held firms. In Panel B, we further classify the governance-related proposals manually by proposal type following the broad classification used by Cuñat, Gine, and Guadalupe (2012), namely, auditor-related, board-related, executive compensation-related, G-Index-related, voting-related, and others. Table 1 also provides the distribution of the percentage of proposals that passed and the average vote in favor of governance-related proposals each year. The number of governance proposals and the percentage of proposals passed are relatively evenly distributed over the sample period. Two specific examples of governance-related proposals with valid voting data close to the 50% threshold, sourced from SharkRepellent, are provided in Table 2.

[Insert Table 2 Here]

In both these examples of governance-related proposals, the voting outcomes either failed (i.e., for Exxon Mobil Corporation) or passed (i.e., for Cisco Systems, Inc.) by a small margin. Our empirical methodology relies on the assumption that either the firm or the dissident cannot precisely manipulate the votes on such governance proposals (Lee, 2008). To test our assumption, in Figure 1 below, we have plotted the density of governance-related proposals in our sample in a histogram, with the X-axis of the figure depicting the percentage of votes cast for the proposal. This figure shows no systematic sorting of firms within the proximity of the 50% vote threshold, indicating (graphically) that there is no evidence of precise manipulation at the cutoff point of 50% by either voters or managers.[7]

[Insert Figure 1 Here]

[7] In untabulated results, we also conduct more formal tests as recommended by McCrary (2008) and more recently by Cattaneo, Jansson, and Ma (2020), and find no evidence of precise vote manipulation. For brevity, we choose not to report the results as such results have already been documented in several prior papers such as Cuñat, Gine, and Guadalupe (2012), Malenko and Shen (2016), Chemmanur and Tian (2018), and others.

(A) Control Variables

Firm-level accounting and return data are from Compustat and CRSP, respectively. Institutional ownership data is collected from the Thomson Financial 13F institutional holdings database, and analyst coverage data is from IBES. The data on E-Index or the Entrenchment Index is based on Bebchuk, Cohen, and Ferrell (2009) and are obtained from RiskMetrics. Table 3 below presents the summary statistics of the control variables used in this study. Definitions of these covariates are provided in Appendix A of the paper and are selected based on the extant literature in finance and accounting. Finally, we also collect media coverage data from RavenPack, Inc., a leading global news analytics provider for financial services, for conducting several cross-sectional tests.[8]

[Insert Table 3 Here]

(B) Dependent Variables

We use a web crawler to download the 10-K filings from the SEC's EDGAR (Electronic Data Gathering, Analysis, and Retrieval) system.[9] To clean the filings before creating the textual variables for quantity and similarity of narratives in the 10-K filings, we closely follow the standard methodologies used in finance and accounting research such as Li (2008), Miller (2010), Loughran and McDonald (2011), Hwang and Kim (2017), and Cohen, Malloy, and Nguyen (2020). We use the programming language Python to create the textual outcome variables from these cleaned 10-K text files and broadly classify them as the quantity and similarity of textual disclosure as described below.[10] We focus on 10-K filings since they are the most essential and detailed firm

[8] https://www.ravenpack.com/
[9] https://www.sec.gov/edgar.shtml
[10] Professor Bill McDonald from the University of Notre Dame has provided very useful programming advice for textual analysis on his website: https://www3.nd.edu/~mcdonald/

disclosure document, but also because 10-K filings, unlike other important firm disclosures (such as 8-Ks), follow a standard structure required by the SEC, enabling us to compare a firm's 10-K filings over time.

(i) The Quantity of Textual Disclosure

We measure the quantity of disclosure in the narratives of 10-K filings using variables such as word count, complex word count, sentence count, and paragraph count. While word count is simply the number of words in the filings, complex word count is the number of words containing three or more syllables. We define sentence count as the number of sentences in the filing, where the minimum number of words needed to be considered a sentence is five. We follow the methodology of Gillick (2009) to identify sentence boundaries. Finally, we also compute the filings' paragraph count, where a paragraph is required to have a minimum of ten words. These four measures proxy for the degree or quantity of disclosure in the narratives of 10-K filings and are widely used in both the finance and the accounting literature (Loughran and McDonald, 2016). Furthermore, the complex word count also picks up complexity in the narratives.[11]

(ii) The Similarity of Textual Disclosure

We also measure the amount of boilerplate language, i.e., the text that has been simply copied and recycled from the prior filing using four different well-established semantic similarity or distance measures that are used for text document clustering, namely, the cosine similarity, the Jaccard coefficient or similarity, the modified Jaccard coefficient or similarity, and the minimum edit distance. We describe these semantic similarity measures in more detail below:

[11] We do not use any word lists that proxy for sentiments or readability since the "bag of words" approach is likely to be prone to researchers' subjectivity (Cookson, Moon, and Noh, 2020). Also, there is some evidence in the concurrent literature that after the publication of such word lists, corporations adjust their filings (Cao, Jiang, Yang, and Zhang, 2020).

Cosine Similarity

The first proxy for measuring the boilerplate language in 10-K filings that we compute is the most widely used cosine similarity measure from computational linguistics. We begin by representing each 10-K filing in our sample released at time *t* and its previous 10-K filing filed at time *t-n* (where *n* = 1, 2, or 3) as term vectors. The similarity between these two 10-K filings (let us denote them as documents D_1 and D_2) from the same firm is equal to the cosine of the angle between these two vectors as shown below:

$$\textbf{Similarity}_{Cosine}(D_1,D_2) = \overrightarrow{D_1} \cdot \overrightarrow{D_2} / \left|\overrightarrow{D_1}\right| \times \left|\overrightarrow{D_2}\right| \qquad \text{------ (1)}$$

where, $\overrightarrow{D_1}$ *and* $\overrightarrow{D_2}$ *are m-dimensional vectors over the term set* $T = \{t_1, t_2, \ldots, t_m\}$.

The numerator in formula (1) is the dot product or the inner product, and the denominator is the product of their Euclidean norms. Therefore, the cosine similarity measure is non-negative and is bounded between [0,1] (or between 0% and 100%).

Although the text-based cosine similarity measure is widely used and is an accepted measure of semantic similarity in computational linguistics, it has only recently been applied in finance research (e.g., Hoberg and Phillips, 2010; Hoberg, Phillips, and Prabhala, 2014; Hoberg and Phillips, 2016; Box, 2018; Cohen, Malloy, and Nguyen, 2020). For example, Cohen, Malloy, and Nguyen (2020) use the cosine similarity method to analyze the text in 10-K filings of U.S. firms for the period 1995-2014, and document that changes to the 10-K filings have predictive power for future earnings and profitability. The relatively new text-based network industry classification (TNIC) data library developed by Professors Gerard Hoberg and Gordon Phillips also relies on a cosine similarity measure.[12]

[12] http://hobergphillips.tuck.dartmouth.edu/

Jaccard Similarity Coefficient

The second similarity measure between 10-K filings for firms in our sample that we compute is the Jaccard coefficient or the Tanimoto coefficient. The basic idea here is to compare the sum of the weights of shared terms to the sum of the weights of the unique terms that are present in either of the two 10-K filings. Mathematically, the Jaccard coefficient is the similarity between two 10-K filings (let us denote them as documents D_1 and D_2), defined as:

$$\boldsymbol{Similarity_{Jaccard}(D_1,D_2)} = |\boldsymbol{T_1} \cap \boldsymbol{T_2}\ |/|\boldsymbol{T_1} \cup \boldsymbol{T_2}| \qquad \text{------ (2)}$$

where T_1 and T_2 are the word sets used by D_1 and D_2, respectively. The value of the Jaccard similarity measure ranges between *0* and *1* (or, 0% and 100%). If the value is *0*, then it means that the two 10-K filings are entirely different, and if the value is *1*, then it indicates that the two 10-K filings are the same with respect to their texts. Cohen, Malloy, and Nguyen (2020) also use Jaccard similarity in their paper as this measure picks up copied and recycled language from prior 10-K filings.

Modified Jaccard Coefficient

One of the shortcomings of the Jaccard similarity measure is that it ignores the term frequency, i.e., how many times the term occurs in a document. Often information retrieval models indicate that rare terms in a collection of words are more informative than frequently used terms. As the name suggests, the modified Jaccard coefficient is an improvement over the Jaccard coefficient, as it takes into consideration the word frequency in the two word sets, T_1 and T_2. The formal definition is:

$$\boldsymbol{Similarity_{Modified\ Jaccard}(D_1,D_2)} = \sum_{i \in \boldsymbol{T_1} \cap \boldsymbol{T_2}} (\boldsymbol{t_{1i}} + \boldsymbol{t_{2i}}) / \sum_{\boldsymbol{i=1}}^{\boldsymbol{m}} (\boldsymbol{t_{1i}} + \boldsymbol{t_{2i}}) \qquad \text{------ (3)}$$

The modified Jaccard similarity measure also ranges between 0 and 1 (or 0% and 100%).

Minimum Edit Distance

Our final similarity measure used to capture boilerplate language in 10-K filings is the minimum edit distance measure that mathematically is:

$$\textbf{Similarity}_{\textbf{Minimum Edit Distance}}(D_1,D_2) = \sum_{i=1}^{m}|t_{1i} - t_{2i}| / max\{\sum_{i=1}^{m} t_{1i}, \sum_{1}^{m} t_{2i}\} \quad \text{------ (4)}$$

Intuitively, we can think of minimum edit distance between two documents as the minimum number of operations (i.e., the number of insertions, deletions, or substitutions) it takes to edit document D_1 into document D_2. Note that the scores for minimum edit distance can be greater than 1 or 100%, and the similarity reduces with higher scores, which is the opposite of the last three similarity measures. Cohen, Malloy, and Nguyen (2020) also use minimum edit distance in their paper to measure changes in the texts of 10-K filings.

To test whether the four different textual variables for measuring the quantity of disclosure (*i.e., the word count, the complex word count, the sentence count, and the paragraph count*) and the four different textual proxies for quantifying the similarity in narratives of 10-K filings (*i.e., the cosine similarity, the Jaccard coefficient, the modified Jaccard coefficient, and the minimum edit distance*), are good proxies for quantity and similarity, respectively, we evaluate the correlations between these textual measures for our sample. The results reported in Table 4a show that each of these measures of *quantity* and *similarity* of textual disclosure is highly correlated with each other, therefore, to a reasonable extent, validating our use and interpretation of these proxies and alleviating concerns of measurement error.

[Insert Table 4a Here]

Before we conduct rigorous RDD regressions, we also conduct univariate tests to see the difference in various textual variables, i.e., our main dependent variables, for the firms where the

governance-related proposals were passed vis-à-vis the firms where the proposals were not passed. The univariate results are presented in Table 4b.

[Insert Table 4b Here]

While these univariate results show that the firms where the governance proposals passed significantly reduced the quantity of their textual disclosure in terms of word count, complex word count, sentence count, and paragraph count as shown by the significant differences in both their mean and median in Table 4b, such significant differences do not exist consistently for the four document similarity measures. Moreover, the direction of the differences in similarity measures is not clear either.

However, such naïve univariate tests do not control for the confounders and merely show an association. Therefore, the next section discusses the results from the multivariate specifications, and finally, the Fuzzy RDD to establish causality.

4. Identification Strategy and Main Results

(A) Ordinary Least Squares (OLS) Panel Results

As discussed in the preceding sections, research in finance and accounting provide us with useful insights into the relation between corporate governance and disclosure. However, the extant literature also recognizes that such a relation is endogenously determined, and in the absence of a truly exogenous shock to corporate governance, it is difficult to provide a credible causal inference. Even if we believe that the OLS models used to determine the association between corporate governance and disclosure in the extant literature are correctly specified, it is plausible that these models are unable to fully account for all the sources of endogeneity, such as omitted variables, measurement error, and simultaneity. For example, governance and disclosure could be jointly

determined or be caused by some unobservable characteristics that are time-varying. Nevertheless, we estimate the following multivariate model using OLS regressions to test the association between governance and disclosure in narratives as our starting point:

$$(Disclosure)_{i,t+n} = \alpha_t + \beta_t Eindex_{i,t} + \gamma Z_t + Year_t + Firm_i + u_{i,t}, \qquad \text{(i)}$$

where the dependent variable (Disclosure) is either the four different textual measures of the quantity or degree of disclosure or the four different measures of document similarity, capturing the amount of boilerplate nature of the disclosure narratives. *Z* is a vector of observable firm characteristics that may influence disclosure and have been borrowed from the extant literature. These covariates include market value, ROA, earnings growth, sales growth, loss indicator, big eight auditor indicator, stock volatility, institutional ownership, stock return, Amihud illiquidity, analyst following, and negative earnings surprise. The main variable of interest on the right-hand side of equation (i) is the *E-Index* or the Entrenchment Index (Bebchuk, Cohen, and Ferrell, 2009). The E-Index is a popular measure of governance quality in empirical finance research and relies on six entrenchment provisions that matter most for firm value.[13] We also include fixed effects to capture year and firm-fixed effects, and we cluster standard errors at the firm level. The results of specification (i) are presented in Table 5.

[Insert Table 5 Here]

Panel A of Table 5 presents the results where the dependent variable is one of the proxies of the disclosure quantity. The results in models (2)-(4) show a significant and positive association between governance and disclosure quantity. The E-Index coefficient estimate in model (1) is not significant but is in the same direction. Note that this positive association between governance and

[13] The six entrenchment provisions considered in E-Index are poison pills, golden parachutes, staggered boards, supermajority requirements for mergers, supermajority requirements for bylaw amendments, and supermajority requirements for charter amendments. A high E-Index score is associated with weak shareholder rights, and hence, poor corporate governance.

the quantity of disclosure is opposite to the relation reported in naïve univariate tests in the previous section. Panel B of Table 5 reports the results where the dependent variable is one of the proxies of the boilerplate nature of disclosures' narratives. The coefficient estimates of the E-Index are not significant in models (5)-(8).

(B) Identification

Although our analyses in Table 5 accounts for a long list of controls, different proxies for measuring textual quantity and similarity, and firm and year-fixed effects, we are cognizant that in the absence of a shock to the governance quality of a firm we cannot claim causality because endogeneity concerns due to omitted variable bias remain.[14] To address such issues of endogeneity, we implement a fuzzy RDD, *a la* Cuñat, Gine, and Guadalupe (2012), as our identification strategy, where we use the passing of shareholder proposals as a shock to corporate governance. Using the "close-call" proposals enables us to create locally exogenous shocks to governance to establish a causal impact of governance on firms' narrative disclosures.[15] Therefore, we estimate the following baseline specification:

$$(Disclosure)_{i,t+n} = \alpha_t + \beta_t Pass_{i,t} + \gamma Z_t + Year_t + Industry_i + u_{i,t}, \qquad \text{(ii)}$$

where *Pass* is the key variable of interest, which takes the value of 1 if the shareholder proposal passes, and 0 otherwise, and β_t is the coefficient of interest, which captures the impact of passing governance proposals on the different attributes of narratives of firms' disclosures. The indices *i* and *t* denote firm and year, respectively, and n equals 1, 2, or 3. *Z* is a vector of observable firm characteristics that have been found to be associated with firm disclosure in the extant literature

[14] The results are qualitatively similar if we use G-Index (Gompers, Ishii, and Metrick, 2003) instead of E-Index (Bebchuk, Cohen, and Ferrell, 2009), and if we control for the audit quality using the Big 4, instead of the Big 8 auditors. For brevity, we have not reported such repeated results in the paper.

[15] Econometricians consider RD designs as one of the most credible and internally valid approaches to address endogeneity and to claim a causal inference in observational studies (Cattaneo and Escanciano, 2017).

and is used in specification (i). Note that the fuzzy RDD design employed here does not require the inclusion of controls other than the forcing variable to obtain consistent estimates (Imbens and Lemieux, 2008).

Nevertheless, our results are not subsumed by conditioning on these standard quantitative measures influencing disclosure. We also control for industry ($Industry_i$) and year ($Year_t$) fixed effects to mitigate the endogeneity concerns arising from time-invariant and time-varying unobservables. We cannot include firm-fixed effects in the fuzzy RDD regressions as we have very few firms in our sample where the same firm had both a pass and a fail "close-call" governance-related proposal. The prior literature in finance, using a similar empirical set-up, has also not used firm-fixed effects (Cuñat, Gine, and Guadalupe, 2012; Malenko and Shen, 2016; Chemmanur and Tian, 2018).[16] Our dependent variable (*Disclosure*) is either the textual measures of the quantity of disclosure or the measures capturing the different dimensions of document similarity. Table 6 presents the results of such fuzzy RDD analyses for the governance-related proposals that pass or fail within the 10% bandwidth.

[Insert Table 6 Here]

Panel A of Table 6 shows that the estimated coefficients on the PASS variable are positive and significant for all the four models indicating that passing of governance proposals leads to an increase in the quantity of textual disclosure in the firm's 10-K filings. More interestingly, the results from Panel B show that the boilerplate nature of the texts used in narratives also significantly increases after such a close call passing of governance proposals, as indicated by models (5)-(8). For example, in model (7), where the dependent variable is the Jaccard Similarity measure, the coefficient on the PASS variable is 0.026 (t=3.03), significant at the 1% level. In

[16] Later in the paper, we also test the robustness of the main results using all proposals and including firm-fixed effects (Table 8b).

other words, the passing of a governance-related proposal within the 10% bandwidth translates into a predicted increase in 10-K similarity of 0.026, which is an increase of approximately 0.3 standard deviations in Jaccard Similarity, implying a significant economic consequence of good governance on the narratives of 10-K filings. Following these tests, we repeat the same specification for a narrower bandwidth of 5% to reduce noise and bias. The results are presented in Table 7.

[Insert Table 7 Here]

Interestingly, the results are not significant for the quantity of disclosure as shown in Panel A of Table 7; however, the results in terms of document similarity are stronger both in terms of magnitude and significance (significant at 1% level in all four measures of document similarity), as indicated in Panel B of Table 7. For example, now in model (7), where the dependent variable is the Jaccard Similarity measure, the coefficient on the independent variable of interest, the PASS variable, is 0.043 (t=3.99), and is significant at the 1% level. Such results indicate that the passing of a governance-related proposal within the narrower 5% bandwidth translates into a predicted increase in 10-K similarity of 0.043. That is an increase of approximately 0.5 standard deviations in Jaccard Similarity, implying an even greater significant economic consequence of good governance on the narratives of 10-K filings. Cohen, Malloy, and Nguyen (2020) documents that even subtle changes in similarity measures of 10-K filings are correlated with real and fundamental changes in those firms. Moreover, such findings, which are within a narrower bandwidth that further reduce the bias, suggest that the causal impact of governance is more on the narratives' boilerplate nature. Therefore, the passing of a governance-related proposal within a small margin of 5% significantly increases the amount of boilerplate language (i.e., the text that has been simply copied and recycled from the prior filings), plausibly obscuring information in the aggregate. For

example, Appendix B depicts the text changes on the first page of Item 1A (Risk Factors section in Form 10-K) for the same two firms with close-call governance proposals, as discussed in Table 2. It is easy to see that Cisco Systems, Inc., where the close-call governance proposal passed just by a margin of 1%, recycled most of its language. Cisco Systems also added/deleted significantly fewer texts than Exxon Mobil Corp., where the close-call governance proposal failed by a small margin of 0.6%.

(C) Alternative RDD Specifications

Even though the coefficient estimates from narrow bandwidths (i.e., 10% or 5%) are unbiased and less prone to noise, there are limitations in only focusing on "close-call" proposals. Since "close-call" proposals (pass or fail within 5% or 10% bandwidth) only consist of approximately 25% of the overall proposals, focusing just on this subset of proposals reduces the power of our analyses and raises questions on the external validity of our results (i.e., do our results hold for "non-close-call" proposals?). To address these concerns, we also conduct our analyses using an alternative fuzzy RDD specification following Cuñat, Gine, and Guadalupe (2012), where we include all proposals regardless of whether the proposals passed or failed by a small margin. The specification we use is shown in equation (iii):

$$(Disclosure)_{i,t+n} = \alpha_t + \beta_t Pass_{i,t} + \gamma Z_t + Year_t + Industry_i + P_l(v,c) + P_r(v,c) + u_{i,t}, \quad \text{(iii)}$$

Here, *Pass* is still the key variable of interest, which takes the value of 1 if the shareholder proposal passes, and 0 otherwise, and β_t is the coefficient of interest, which captures the impact of the passing of governance proposals on firms' disclosures. The indices *i* and *t* denote firm and year, respectively, and n equals 1, 2, or 3. *Z* is the same vector of observable firm characteristics used in specifications (i) and (ii). We also control for industry ($Industry_i$) and year ($Year_t$) fixed effects. In addition, we also add two polynomial terms to control for the additional noise that comes

along with including all proposals in our analyses. $P_l(v,c)$ is a polynomial term for proposals on the left side of the threshold (50%), and $P_r(v,c)$ is a polynomial term for proposals on the right side of the threshold (50%). v is the actual vote share in favor of the proposal, and c is the threshold (50% in our study). The different polynomial terms for proposals on the left and right sides of the threshold allow for the different functional forms for those proposals. We use the polynomials of order 2, as suggested in Gelman and Imbens (2018); however, the results are qualitatively similar using higher orders for the polynomial terms. The results with this alternative RDD specification are provided in Table 8a and Table 8b.

[Insert Table 8a Here]

[Insert Table 8b Here]

Both panels A and B of Table 8a show consistent results in line with our baseline RDD regressions, as presented in Table 6. However, once we add firm fixed effect to this alternative RDD specification, the increases in the quantity of textual disclosure in the narratives of 10-K filings after the passing of governance-related shareholder proposals become insignificant. Such findings are consistent with the results when we restrict our sample to proposals passed or failed within 5% bandwidth around the 50% threshold, as shown in Table 7. Such results highlight that as we make the RD model more constrained, by either reducing the bandwidth or adding firm fixed effects that further reduces noise and bias, governance is making disclosure just more similar or boilerplate. Put differently, better governance more severely impacts the similarity of texts in corporate disclosures.

(D) Principal Components Analysis (PCA)

As shown in Table 4a, the textual measures of both quantity and similarity of disclosures are highly correlated and hence cannot be used in the same regression due to multicollinearity.

Therefore, in this section, we employ Principal Components Analysis (PCA), one of the most popular methods in factor analysis and dimensionality reduction, to extract the principal eigenvectors of these textual measures. This procedure is similar to constructing an index of textual quantity and similarity measures by withholding their uncorrelated and normalized components, using vector space transformation. Then, we re-run the different fuzzy RDD specifications used in this paper, and the results are presented in Table 9.

[Insert Table 9 Here]

We find that our main results are consistent even when we use principal components that allow us to focus on the common essence of the proxies of textual quantity and similarity, as shown in the six different models in Table 9.

5. Cross-Sectional Analyses

This section explores further evidence of the impact of governance on the narratives of 10-K disclosures in the cross-section using the cross-sectional variation in firms' shareholders' attention for the firm. We first examine how the short-term exogenous distraction of shareholders alters the effect of governance on disclosure. Second, we explore how public opinion, as channeled through media coverage, impacts the documented causal link between corporate governance and disclosure in the narratives of 10-K filings.

(A) Distracted Shareholders

Recent research in empirical corporate finance shows that shareholder distraction can impact different firm outcomes. For instance, Kempf, Manconi, and Spalt (2017) develop an exogenous institutional distraction measure and find that firms with "distracted" shareholders have weaker monitoring incentives, which results in value-destroying decisions by the management such as

making negative NPV acquisition decisions. A concurrent working paper, Liu, Low, Masulis, and Zhang (2019), uses the same measure of distraction and finds that "distracted" shareholders are less likely to have a disciplinary effect on the board of directors. Following the current literature on "distracted" shareholders and their impact on corporate governance, we conjecture that our RDD results, as presented in the earlier tables, would be stronger if the institutional investors are *not distracted*. The idea here is that "distracted" shareholders would weaken, if not nullify, the causal impact of the passing of governance proposals due to their weaker oversight. We test this conjecture by conducting cross-sectional analyses for two sub-samples: with- and without-distracted institutional investors.

The measure of distraction we use is from Kempf, Manconi, and Spalt (2017), where the rationale is to construct an exogenous measure of firm-level shareholder distraction using unrelated industry shocks to the firm's institutional investors' portfolios. Appendix C describes in detail how such a measure is created; however, the intuition is straightforward. A firm "*f*" can have many institutional shareholders. An institutional investor holds many different firms in their portfolios, and if there is an exogenous shock or an attention-grabbing event to an unrelated part of their portfolio (e.g., a different firm in another unrelated industry), that institutional investor will pay less attention to the firm "*f*." Such a distraction or inattention for firm "*f*" is exacerbated if the unrelated firm/industry (where the attention-capturing event occurred) is vital to the institutional investor's portfolio.

[Insert Table 10 Here]

In Table 10, we repeat the analyses of the previous table for two sub-samples of firms, with and without distracted institutional investors, using the exogenous firm-level shareholder distraction scores aggregated across all investors for a firm as described above, and by separating

them into above and below the median shareholder distraction level. As hypothesized, Panel A of Table 10 shows that the results are stronger, for both the 10% and 5% bandwidths, for both disclosure and similarity when investors are not distracted. However, the results are weaker or not significant in Panel B of Table 10, when we repeat the same Principal Components Analysis (PCA) analysis with distracted investors. Such results provide further evidence on the causal impact of governance on the narratives of disclosures. One plausible interpretation of such results could be that the management tends to appease the exogenous introduction of better governance and monitoring by providing more text in their SEC disclosures, but using boilerplate language by merely copying and recycling from the prior filings.

(B) Media Coverage

The extant literature also shows that public opinion, as channeled via media coverage, can also play a governance role for corporations by lessening shareholder monitoring costs. Dyck, Volchkova, and Zingales (2008) find that international media coverage of Russian firms during the period from 1999 to 2002 increases the likelihood of the reversals of corporate governance violations. Kuhnen and Niessen (2012) document a positive correlation between negative media coverage and reductions in stock option grants in the US during 1992-2008. Relying on the extant literature, we hypothesize that if the passing of the governance-related proposals indeed affects the narratives of disclosures in 10-K filings, then such an effect would be more pronounced when there is greater media coverage of the firm. The reasoning here is that the lack of media coverage could proxy for lack of public interest or investor distraction (Hirshleifer, Lim, and Teoh, 2009; Fang, Peress, and Zheng, 2014). In other words, firms with greater media coverage tend to have higher investor attention (lower investor distraction), and vice versa. To proxy for media coverage, we collect the number of news articles about a firm from a leading global news analytics provider,

RavenPack, Inc. We use their Dow Jones Edition package that includes news articles from the Dow Jones Newswires, regional editions of the Wall Street Journal, Barron's and MarketWatch. RavenPack's Dow Jones Edition excludes the firm-generated PR news that could potentially bias the results.[17]

RavenPack also provides a relevance score, ranging between 0-100, which indicates how strongly the news article is related to the firm. To ensure that the news articles that we count are related to the firm under consideration, we use the cut-off of the relevance score of at least 75, as RavenPack considers values above 75 significantly relevant. The median number of news articles per year for the firms in our sample with a relevance score of at least 75 is 507.

We separate our sample of firms into two sub-samples, (1) firms with high media coverage and (2) firms with low media coverage, based on whether the number of articles about the firm is above or below the median and repeat the fuzzy RDD analyses. The results are shown in Table 11 and are consistent with our conjecture that the documented results in this study will be more pronounced with greater media coverage.

[Insert Table 11 Here]

Overall, our findings are consistent with the predictions of the models that consider corporate governance and disclosure as substitutes rather than complements. We focus the next section on conducting several robustness tests for our main results.

6. Robustness Tests

(A) Placebo Tests

In this section, we conduct a couple of placebo tests by artificially assuming voting thresholds for approval as 25% and 70%, instead of the actual 50% needed for the approval of governance-related

[17] The results (untabulated) are qualitatively similar if we also include the firm-generated PR news in our analyses.

shareholder proposals in our sample. The idea here is to test whether the passage of governance-related proposals around such artificially created thresholds has any impact on a firm's narrative disclosures. The results are presented in Table 12a (assuming a 70% threshold) and in Table 12b (assuming a 25% threshold).

[Insert Table 12a Here]

[Insert Table 12b Here]

None of the coefficient estimates of PASS are significantly different from zero, as shown in Table 12a. Moreover, the signs on the coefficients are mixed. The results in Table 12b are also not significant, except in model 5, which is significant only at the 10% level. Such falsification tests around alternative pseudo-cutoffs confirm that the main RDD results documented in the previous sections in the paper are unlikely to be spurious and are not driven by a coincidental discontinuity in unobservables.

(B) Post - 2003 Period

One concern regarding the non-binding nature of the shareholder proposals is that before 2003, management rarely implemented shareholder proposals, which could potentially render the RDD threshold as a weak instrument, as recently pointed out by Bach and Metzger (2019). However, Bach and Metzger (2019) also point out that the implementation rate jumped to approximately 70% post-2003. The authors further recommend checking the treatment effect using only the post-2003 data as a robustness test. Therefore, in this subsection, we conduct our primary analyses, i.e., Tables 6, 7, 8 again using only the post-2003 data, and the results are reported in Tables 13, 14, and 15, respectively. The results are not only robust to the use of post-2003 data but also stronger in several models.

[Insert Table 13 Here]

[Insert Table 14 Here]

[Insert Table 15 Here]

(C) G - Index Related Shareholder Proposals Only

Cuñat, Gine, and Guadalupe (2012) document the causal impact of the passing of shareholder proposals on enhancing firm value. They find that adopting one governance proposal leads to an increase in value by 2.8% on average. They further find that such a positive impact on valuation is even greater for the set of G-index (Gompers, Ishii, and Metrick, 2003) related proposals. Based on their results and the prior literature, we conjecture that if G-Index related shareholder proposals are so critical for firm governance, our main results should be more pronounced for the subsample of G-Index related shareholder proposals. Hence, in this subsection, we repeat our primary analyses, i.e., Tables 6, 7, 8, using only the G-Index related shareholder proposals, and the results are reported in Tables 16, 17, and 18, respectively. As expected, the results in terms of similarity of textual disclosure are stronger, as shown by the larger magnitudes of their coefficients.

[Insert Table 16 Here]

[Insert Table 17 Here]

[Insert Table 18 Here]

7. Conclusion and Policy Implications

In this paper, we study the causal impact of corporate governance on firms' disclosures in the narratives of 10-K filings. Utilizing locally exogenous variations in corporate governance created by "close-call" governance-related shareholder proposal votes, that render a quasi-experimental fuzzy RDD, and techniques for analyzing textual data borrowed from computational linguistics, we find that better corporate governance results in more boilerplate and plausibly less informative

disclosures in the narratives of 10-K filings. Although we also document that the passing of "close-call" governance-related shareholder proposals increases the quantity and complexity of textual disclosure in the narratives of 10-K filings, such results become insignificant at the 5% bandwidth (around the 50% threshold). In further cross-sectional and sub-sample analyses, we find that our main results on the relation between corporate governance and disclosure are more pronounced when shareholders are not distracted and when we include only G-Index related shareholder proposals.

The paper makes two new contributions to improving our collective understanding of the link between corporate governance and disclosure. First, such results provide empirical support to the disclosure models that treat corporate governance and disclosure as substitutes rather than complements and calls into question the common perception amongst regulators that better corporate governance leads to more informative disclosures. Second, we quantify the impact of governance on firms' soft disclosure using different document similarity measures, which are distinct from sentiments and readability, commonly used in *textual analysis* – an emerging line of research in finance and accounting. Overall, this study adds to our understanding of the intertwined concepts of corporate governance and disclosure.

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Figure 1 Voting Outcome Density of Shareholder Proposals

The figure below presents the histogram plot of the percentage of votes in favor of the proposals in our sample. The x-axis is the actual percentage of votes in favor of the proposals.

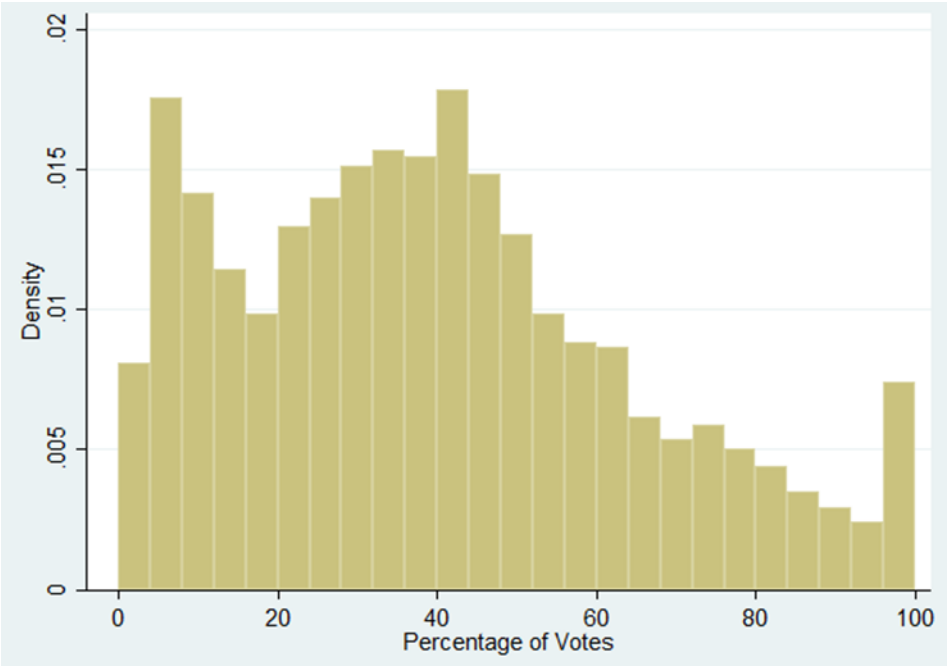

Table 1 Summary Statistics – Shareholder Proposals

The table below presents the summary statistics of shareholder proposals of publicly listed U.S. firms used in this paper from 1997 to 2015. Panel A displays the distribution of shareholder proposals by year. Panel B displays the distribution of shareholder proposals by proposal type. Only the proposals with a valid voting outcome and 50% threshold for approval are included.

Panel A: Summary Statistics of Shareholder Proposals					
Year	**# of Proposals**	**# of Proposals Passed**	**% of Proposals Passed**	**Avg. Vote in Favor**	**Std. Dev. Of Vote in Favor**
1997	101	9	8.91%	23.70%	17.50
1998	67	3	4.48%	21.04%	15.89
1999	32	3	9.38%	20.31%	16.70
2000	141	39	27.66%	32.05%	22.56
2001	166	43	25.90%	30.19%	22.95
2002	188	61	32.45%	35.81%	22.72
2003	326	114	34.97%	37.47%	22.69
2004	282	81	28.72%	33.68%	26.06
2005	255	77	30.20%	37.08%	23.97
2006	300	92	30.67%	39.47%	21.86
2007	290	67	23.10%	36.49%	21.78
2008	290	91	31.38%	43.21%	25.32
2009	381	159	41.73%	48.79%	26.29
2010	308	89	28.90%	41.51%	21.87
2011	238	97	40.76%	49.28%	26.18
2012	271	98	36.16%	46.88%	27.04
2013	289	74	25.61%	40.54%	25.64
2014	274	80	29.20%	43.46%	27.82
2015	254	69	27.17%	40.70%	23.73
Total	**4,453**	**1,346**	**30.23%**	**39.66%**	**24.96**

Panel B: Summary Statistics of Shareholder Proposals with Classification					
Classification	**# of Proposals**	**# of Proposals Passed**	**% of Proposals Passed**	**Average Vote in Favor**	**Std. Dev. Of Vote in Favor**
Auditor	43	3	6.98%	23.75%	17.49
Board	888	229	25.79%	39.46%	30.48
Compensation	1,192	104	8.72%	26.77%	16.71
G-Index					
G-Delay	738	448	60.70%	57.58%	19.43
G-Other	208	144	69.23%	58.82%	16.73
G-Protection	109	53	48.62%	47.73%	18.47
G-Voting	416	136	32.69%	44.73%	20.94
Other	428	39	9.11%	21.97%	19.23
Voting	431	190	44.08%	48.00%	20.81
Total	**4,453**	**1,346**	**30.23%**	**39.66%**	**24.96**

Table 2 Examples of Close-Call Governance Proposals

Example 1:

Company Name:	Exxon Mobil Corporation
Meeting Date:	May 27, 2015
Proposal:	"CalPERS and NYC Pension Funds filed a notice of exempt solicitation urging support for a non-binding proxy access proposal to create a holding requirement of 3% / 3 years to nominate 25% of Co.'s directors."
Voting Outcome:	Failed (49.4% vote in favor)

Example 2:

Company Name:	Cisco Systems, Inc.
Meeting Date:	Nov 12, 2009
Proposal:	"Dissident non-binding proposal for the 2009 annual meeting, which requested the board to adopt a policy to allow for a shareholder advisory vote on executive compensation each year."
Voting Outcome:	Passed (51% vote in favor)

Source: SharkRepellent

Table 3 Summary Statistics – Control Variables

The table provides the summary statistics of all the control variables used in this paper. Variable definitions are provided in Appendix A.

Variable	N	Mean	25th Percentile	Median	75th Percentile	Std. Dev.
Market Value (LN)	4,453	9.587	8.420	9.697	10.918	1.817
Market to Book	4,453	2.368	1.290	1.851	2.793	1.886
Return on Assets (ROA)	4,453	0.128	0.067	0.128	0.179	0.101
Earnings Growth	4,453	0.006	-0.006	0.004	0.019	0.075
Sales Growth	4,453	1.046	0.970	1.043	1.111	0.237
Loss Indicator	4,453	0.128	0	0	0	0.335
Big 8 Auditor Indicator	4,453	0.967	1	1	1	0.179
Stock Volatility	4,453	0.085	0.051	0.072	0.101	0.056
Institutional Ownership	4,453	0.728	0.621	0.744	0.841	0.169
Stock Return	4,453	1.124	0.931	1.108	1.278	0.410
Amihud Illiquidity	4,453	0.020	0.005	0.009	0.018	0.043
Analyst Following (LN)	4,453	3.038	2.773	3.178	3.401	0.548
Negative Earnings Surprise	4,453	0.403	0	0	1	0.491

Table 4a Correlation of Textual Disclosure Variables

The table provides the correlations between textual disclosure variables used in this study. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: Quantity of Disclosure			
	Word Count	**Complex Word Count**	**Sentence Count**	**Paragraph Count**
Word Count	1.0000			
Complex Word Count	0.9963***	1.0000		
Sentence Count	0.9827***	0.9844***	1.0000	
Paragraph Count	0.8299***	0.8325***	0.8514***	1.0000
	Panel B: Similarity of Disclosure			
	Cosine	**Modified Jaccard**	**Jaccard**	**Minimal Distance**
Cosine Similarity	1.0000			
Modified Jaccard Similarity	0.759***	1.0000		
Jaccard Similarity	0.7359***	0.865***	1.0000	
Minimal Distance	-0.7506***	-0.7153***	-0.8744***	1.0000

Table 4b Univariate Comparison of Disclosure Variables

The table reports the univariate comparison of various textual disclosure measures in 10-K filings between firms whose governance-related shareholder proposals are passed versus firms whose governance-related shareholder proposals are not passed. The last two columns report the p-value for differences in mean and median of these textual disclosure measures between these two groups of firms. The textual disclosure variables studied in this paper include word count; complex word count; sentence count; paragraph count; and similarity measures (cosine similarity; modified Jaccard similarity; Jaccard similarity; minimal distance).

	Proposal NOT Passed				Proposal Passed				Differences (p-value)	
	N	Mean	Median	Std. Dev.	N	Mean	Median	Std. Dev.	Mean	Median
Quantity of Disclosure										
Word Count (LN)	3,107	10.865	10.826	0.656	1,346	10.781	10.743	0.528	0.0000	0.0000
Complex word count (LN)	3,107	9.505	9.480	0.652	1,346	9.419	9.384	0.527	0.0000	0.0000
Sentence count (LN)	3,107	7.651	7.631	0.604	1,346	7.572	7.530	0.485	0.0000	0.0000
Paragraph Count (LN)	3,107	6.556	6.538	0.666	1,346	6.451	6.435	0.592	0.0000	0.0000
Similarity of Disclosure										
Cosine Similarity	3,107	0.974	0.987	0.040	1,346	0.972	0.987	0.043	0.0963	0.6280
Modified Jaccard Similarity	3,107	0.953	0.973	0.079	1,346	0.952	0.973	0.077	0.7737	0.4750
Jaccard Similarity	3,107	0.653	0.678	0.144	1,346	0.656	0.689	0.148	0.5553	0.0180
Minimal Distance	3,107	0.410	0.369	0.195	1,346	0.416	0.368	0.204	0.4053	0.9780

Table 5 Governance and Disclosure (OLS Panel Regressions)

This table presents the OLS estimation results between governance (proxied by Entrenchment Index) and various disclosure measures. The dependent variables are various textual disclosure measures of firms' 10-K filings. The control variables include market value, ROA, earnings growth, sales growth, loss indicator, big 8 auditor indicator, stock volatility, institutional ownership, stock return, Amihud illiquidity, analyst following, and negative earnings surprise. Standard errors are clustered at the firm level, and t-statistics are reported in the bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure			
	(1)	(2)	(3)	(4)
	LN (Word #)	LN (Complex Word #)	LN (Sentence #)	LN (Paragraph #)
E-Index	-0.010	-0.011*	-0.011**	-0.016**
	(-1.61)	(-1.69)	(-2.00)	(-2.50)
Market Value (LN)	0.006	0.006	0.005	0.019
	(0.40)	(0.39)	(0.41)	(1.37)
Market to Book	-0.011***	-0.011***	-0.011***	-0.017***
	(-2.81)	(-2.95)	(-2.67)	(-3.28)
Return on Assets (ROA)	-0.259***	-0.250***	-0.219***	-0.189***
	(-3.92)	(-3.94)	(-3.71)	(-3.02)
Earnings Growth	0.038	0.036	0.034	0.042
	(1.49)	(1.46)	(1.51)	(1.64)
Sales Growth	0.006	0.006	0.006	0.007*
	(1.35)	(1.31)	(1.35)	(1.72)
Loss Indicator	0.032***	0.031***	0.024**	0.030**
	(2.65)	(2.65)	(2.30)	(2.06)
Big 8 Auditor Indicator	0.052	0.053	0.050	0.099*
	(0.82)	(0.87)	(0.82)	(1.89)
Stock Volatility	0.357***	0.351***	0.368***	0.303***
	(4.46)	(4.59)	(5.24)	(3.77)
Institutional Ownership	0.022	0.023	0.036	0.052
	(0.42)	(0.46)	(0.76)	(1.01)
Stock Return	0.005	0.003	0.006	0.008
	(0.67)	(0.49)	(0.97)	(0.86)
Amihud Illiquidity	0.084	0.052	0.082	0.270*
	(0.55)	(0.37)	(0.64)	(1.79)
Analyst Following (LN)	0.027	0.027*	0.016	0.032**
	(1.64)	(1.70)	(1.14)	(2.03)
Negative Earnings Surprise	0.007	0.007	0.006	0.002
	(1.09)	(1.06)	(0.93)	(0.34)
Constant	9.720***	8.343***	6.563***	5.482***
	(68.97)	(61.91)	(52.96)	(44.49)
Firm Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
Clustering	Firm	Firm	Firm	Firm
N	17,151	17,151	17,151	17,151
adj. R-sq	0.700	0.728	0.735	0.620

	Panel B: DV = Similarity of Disclosure			
	(5)	(6)	(7)	(8)
	Cosine	Modified Jaccard	Jaccard	Minimal Distance
E-Index	0.000	0.000	0.001	-0.001
	(0.33)	(0.08)	(0.39)	(-0.50)
Market Value (LN)	0.000	-0.000	0.002	-0.004
	(0.05)	(-0.21)	(0.52)	(-0.70)
Market to Book	-0.000	0.000	0.001	-0.000
	(-0.37)	(0.21)	(0.78)	(-0.04)
Return on Assets (ROA)	0.013**	0.022**	0.064***	-0.075**
	(2.23)	(1.96)	(3.00)	(-2.49)
Earnings Growth	-0.001	-0.001	-0.003	-0.005
	(-0.19)	(-0.19)	(-0.21)	(-0.25)
Sales Growth	-0.000	-0.001	-0.000	-0.001
	(-0.23)	(-0.70)	(-0.06)	(-0.76)
Loss Indicator	0.002	0.003	-0.003	0.002
	(1.21)	(0.94)	(-0.64)	(0.26)
Big 8 Auditor Indicator	0.001	0.001	-0.001	0.002
	(0.25)	(0.08)	(-0.06)	(0.08)
Stock Volatility	-0.002	-0.027	-0.086***	0.095**
	(-0.18)	(-1.50)	(-2.63)	(2.16)
Institutional Ownership	-0.001	0.001	-0.006	0.000
	(-0.13)	(0.06)	(-0.37)	(0.00)
Stock Return	0.001	0.002	0.000	0.000
	(0.65)	(1.35)	(0.12)	(0.11)
Amihud Illiquidity	0.007	0.017	0.076	-0.076
	(0.46)	(0.50)	(1.33)	(-1.00)
Analyst Following (LN)	-0.001	-0.002	-0.002	0.003
	(-0.52)	(-0.59)	(-0.40)	(0.45)
Negative Earnings Surprise	-0.001	-0.003*	-0.005	0.005
	(-1.64)	(-1.74)	(-1.61)	(1.26)
Constant	0.959***	0.922***	0.551***	0.553***
	(83.44)	(39.81)	(13.56)	(10.10)
Firm Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
Clustering	Firm	Firm	Firm	Firm
N	17,151	17,151	17,151	17,151
adj. R-sq	0.092	0.062	0.223	0.238

Table 6 Governance and Disclosure (RDD Analysis – 10% Close Call Proposals)

This table presents the results on the relation between governance (proxied by the passing of governance-related proposals) and textual disclosure using Regression Discontinuity Design (RDD), as in equation (ii). The sample only includes proposals that pass or fail within a 10 percentage point margin around the 50% threshold. The dependent variables are various textual disclosure measures of firms' 10-K filings. The control variables include market value, ROA, earnings growth, sales growth, loss indicator, big 8 auditor indicator, stock volatility, institutional ownership, stock return, Amihud illiquidity, analyst following, and negative earnings surprise. t-statistics are reported in the bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure			
	(1)	**(2)**	**(3)**	**(4)**
	LN (Word #)	**LN (Complex Word #)**	**LN (Sentence #)**	**LN (Paragraph #)**
PASS	0.059**	0.056*	0.061**	0.065**
	(1.97)	(1.93)	(2.34)	(2.38)
Market Value (LN)	0.134***	0.133***	0.118***	0.120***
	(7.25)	(7.44)	(7.34)	(7.07)
Market to Book	-0.029***	-0.030***	-0.029***	-0.026***
	(-2.92)	(-3.19)	(-3.43)	(-2.85)
Return on Assets (ROA)	-1.066***	-1.089***	-0.993***	-1.190***
	(-5.03)	(-5.32)	(-5.37)	(-6.08)
Earnings Growth	-0.091	-0.093	-0.041	-0.068
	(-0.53)	(-0.56)	(-0.27)	(-0.43)
Sales Growth	0.046	0.060	0.010	-0.045
	(0.57)	(0.78)	(0.14)	(-0.61)
Loss Indicator	-0.045	-0.047	-0.025	-0.063
	(-0.77)	(-0.83)	(-0.48)	(-1.16)
Big 8 Auditor Indicator	0.200**	0.187**	0.177**	0.103
	(2.35)	(2.27)	(2.38)	(1.31)
Stock Volatility	2.288***	2.152***	1.865***	2.111***
	(5.64)	(5.49)	(5.27)	(5.64)
Institutional Ownership	-0.092	-0.072	-0.131	-0.092
	(-0.70)	(-0.56)	(-1.14)	(-0.75)
Stock Return	-0.028	-0.024	-0.017	-0.004
	(-0.55)	(-0.47)	(-0.38)	(-0.08)
Amihud Illiquidity	0.402	0.497	0.049	-0.490
	(0.62)	(0.80)	(0.09)	(-0.83)
Analyst Following (LN)	0.010	0.019	0.015	0.032
	(0.21)	(0.40)	(0.35)	(0.74)
Negative Earnings Surprise	0.021	0.017	0.020	0.001
	(0.71)	(0.58)	(0.77)	(0.02)
Constant	8.705***	7.323***	5.849***	4.847***
	(16.31)	(14.21)	(12.58)	(9.85)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	1,158	1,158	1,158	1,158
adj. R-sq	0.429	0.466	0.476	0.465

	Panel B: DV = Similarity of Disclosure			
	(5) Cosine	(6) Modified Jaccard	(7) Jaccard	(8) Minimal Distance
PASS	0.004*	0.015***	0.026***	-0.030**
	(1.66)	(2.81)	(3.03)	(-2.52)
Market Value (LN)	0.001	0.004	0.002	-0.007
	(0.81)	(1.33)	(0.42)	(-0.93)
Market to Book	-0.000	-0.001	0.003	-0.000
	(-0.13)	(-0.38)	(0.97)	(-0.07)
Return on Assets (ROA)	-0.009	-0.046	-0.013	0.023
	(-0.52)	(-1.24)	(-0.22)	(0.27)
Earnings Growth	-0.013	-0.025	-0.012	0.011
	(-0.90)	(-0.83)	(-0.25)	(0.16)
Sales Growth	0.005	0.003	-0.005	-0.011
	(0.81)	(0.19)	(-0.19)	(-0.33)
Loss Indicator	-0.008	-0.031***	-0.043**	0.022
	(-1.62)	(-3.07)	(-2.48)	(0.94)
Big 8 Auditor Indicator	-0.004	-0.001	-0.010	0.025
	(-0.60)	(-0.09)	(-0.39)	(0.74)
Stock Volatility	0.008	0.062	-0.008	0.046
	(0.25)	(0.88)	(-0.07)	(0.28)
Institutional Ownership	0.002	0.010	0.012	0.023
	(0.21)	(0.42)	(0.31)	(0.44)
Stock Return	0.003	0.001	0.011	-0.026
	(0.75)	(0.16)	(0.74)	(-1.26)
Amihud Illiquidity	0.014	0.048	-0.181	0.258
	(0.26)	(0.43)	(-0.97)	(1.00)
Analyst Following (LN)	0.000	0.000	-0.009	0.012
	(0.02)	(0.03)	(-0.68)	(0.62)
Negative Earnings Surprise	-0.007***	-0.008	-0.013	0.013
	(-3.03)	(-1.60)	(-1.45)	(1.09)
Constant	0.955***	0.884***	0.553***	0.465**
	(21.66)	(9.58)	(3.56)	(2.17)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	1,158	1,158	1,158	1,158
adj. R-sq	0.063	0.096	0.192	0.139

Table 7 Governance and Disclosure (RDD Analysis – 5% Close Call Proposals)

This table presents the results on the relation between governance (proxied by the passing of governance-related proposals) and textual disclosure using Regression Discontinuity Design (RDD), as in equation (ii). The sample only includes proposals that pass or fail within 5 percentage point margin around the 50% threshold. The dependent variables are various textual disclosure measures of firms' 10-K filings. The control variables include market value, ROA, earnings growth, sales growth, loss indicator, big 8 auditor indicator, stock volatility, institutional ownership, stock return, Amihud illiquidity, analyst following, and negative earnings surprise. t-statistics are reported in the bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure			
	(1)	(2)	(3)	(4)
	LN (Word #)	LN (Complex Word #)	LN (Sentence #)	LN (Paragraph #)
PASS	0.026	0.019	0.028	0.032
	(0.65)	(0.50)	(0.79)	(0.93)
Market Value (LN)	0.107***	0.109***	0.100***	0.118***
	(4.23)	(4.46)	(4.57)	(5.35)
Market to Book	-0.055***	-0.057***	-0.053***	-0.047***
	(-2.95)	(-3.19)	(-3.24)	(-2.92)
Return on Assets (ROA)	-0.957***	-0.973***	-0.968***	-1.276***
	(-3.19)	(-3.34)	(-3.70)	(-4.88)
Earnings Growth	-0.222	-0.234	-0.196	-0.347*
	(-1.08)	(-1.17)	(-1.09)	(-1.93)
Sales Growth	0.027	0.048	0.008	0.013
	(0.24)	(0.45)	(0.08)	(0.13)
Loss Indicator	-0.136*	-0.149*	-0.132*	-0.161**
	(-1.71)	(-1.93)	(-1.90)	(-2.32)
Big 8 Auditor Indicator	0.171	0.167	0.169*	0.130
	(1.49)	(1.50)	(1.69)	(1.30)
Stock Volatility	2.230***	2.158***	1.790***	1.754***
	(3.95)	(3.94)	(3.64)	(3.56)
Institutional Ownership	-0.242	-0.217	-0.222	-0.111
	(-1.27)	(-1.17)	(-1.33)	(-0.67)
Stock Return	0.038	0.036	0.036	0.053
	(0.51)	(0.50)	(0.55)	(0.82)
Amihud Illiquidity	0.560	0.669	0.323	0.696
	(0.62)	(0.76)	(0.41)	(0.88)
Analyst Following (LN)	0.082	0.084	0.063	0.053
	(1.29)	(1.37)	(1.15)	(0.97)
Negative Earnings Surprise	0.037	0.030	0.035	-0.010
	(0.87)	(0.74)	(0.94)	(-0.27)
Constant	9.122***	7.716***	6.183***	5.014***
	(15.91)	(13.87)	(12.36)	(10.03)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	575	575	575	575
adj. R-sq	0.419	0.454	0.469	0.483

	Panel B: DV = Similarity of Disclosure			
	(5) Cosine	(6) Modified Jaccard	(7) Jaccard	(8) Minimal Distance
PASS	0.008***	0.024***	0.043***	-0.050***
	(2.79)	(3.87)	(3.99)	(-3.25)
Market Value (LN)	0.000	-0.001	-0.006	0.004
	(0.20)	(-0.13)	(-0.94)	(0.43)
Market to Book	0.001	0.002	0.009*	-0.004
	(0.58)	(0.82)	(1.87)	(-0.56)
Return on Assets (ROA)	-0.001	-0.015	0.037	-0.043
	(-0.04)	(-0.33)	(0.46)	(-0.37)
Earnings Growth	-0.006	-0.023	0.028	-0.004
	(-0.40)	(-0.74)	(0.52)	(-0.05)
Sales Growth	0.003	-0.002	-0.012	-0.001
	(0.40)	(-0.13)	(-0.40)	(-0.02)
Loss Indicator	-0.007	-0.034***	-0.033	0.026
	(-1.17)	(-2.79)	(-1.56)	(0.83)
Big 8 Auditor Indicator	-0.001	-0.007	-0.018	0.017
	(-0.13)	(-0.40)	(-0.58)	(0.38)
Stock Volatility	0.067	0.157*	0.209	-0.328
	(1.57)	(1.80)	(1.38)	(-1.50)
Institutional Ownership	-0.007	-0.010	-0.047	0.077
	(-0.49)	(-0.34)	(-0.92)	(1.04)
Stock Return	-0.008	-0.022*	-0.034*	0.019
	(-1.34)	(-1.88)	(-1.71)	(0.65)
Amihud Illiquidity	-0.003	0.106	-0.215	0.212
	(-0.04)	(0.76)	(-0.89)	(0.60)
Analyst Following (LN)	-0.000	0.006	-0.008	-0.004
	(-0.01)	(0.63)	(-0.46)	(-0.16)
Negative Earnings Surprise	-0.010***	-0.015**	-0.025**	0.034**
	(-3.18)	(-2.25)	(-2.23)	(2.07)
Constant	0.967***	0.912***	0.605***	0.437*
	(22.13)	(10.33)	(3.95)	(1.96)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	575	575	575	575
adj. R-sq	0.145	0.260	0.331	0.229

Table 8a Governance & Disclosure (Alternative RDD – All Proposals with Polynomial Terms)
This table presents the results on the relation between governance (proxied by the passing of governance-related proposals) and textual disclosure using Regression Discontinuity Design (RDD), as in equation (iii). The sample includes all proposals. The dependent variables are various textual disclosure similarity measures of firms' 10-K filings. The control variables include market value, ROA, earnings growth, sales growth, loss indicator, big 8 auditor indicator, stock volatility, institutional ownership, stock return, Amihud illiquidity, analyst following, and negative earnings surprise. t-statistics are reported in the bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure			
	(1)	**(2)**	**(3)**	**(4)**
	LN (Word #)	**LN (Complex Word #)**	**LN (Sentence #)**	**LN (Paragraph #)**
PASS	0.068**	0.062**	0.066***	0.050*
	(2.49)	(2.36)	(2.70)	(1.70)
Polynomial of order 1	-0.001	-0.001	-0.001	-0.001
	(-1.45)	(-1.23)	(-1.50)	(-0.93)
Polynomial of order 2	0.000	0.000	0.000	0.000
	(0.86)	(0.79)	(1.33)	(1.62)
Market Value (LN)	0.123***	0.120***	0.113***	0.113***
	(14.13)	(14.41)	(14.65)	(12.14)
Market to Book	-0.038***	-0.039***	-0.038***	-0.036***
	(-8.10)	(-8.48)	(-8.94)	(-7.04)
Return on Assets (ROA)	-0.827***	-0.826***	-0.741***	-0.790***
	(-8.33)	(-8.64)	(-8.39)	(-7.41)
Earnings Growth	0.104	0.098	0.138	0.124
	(1.04)	(1.01)	(1.55)	(1.15)
Sales Growth	0.060*	0.066**	0.032	0.005
	(1.87)	(2.14)	(1.12)	(0.16)
Loss Indicator	0.061**	0.059**	0.073***	0.083***
	(2.23)	(2.22)	(2.95)	(2.80)
Big 8 Auditor Indicator	0.184***	0.179***	0.185***	0.191***
	(4.15)	(4.18)	(4.68)	(4.01)
Stock Volatility	1.628***	1.531***	1.371***	1.387***
	(8.81)	(8.60)	(8.33)	(6.98)
Institutional Ownership	-0.224***	-0.217***	-0.215***	-0.189***
	(-4.06)	(-4.08)	(-4.39)	(-3.19)
Stock Return	-0.042**	-0.039*	-0.024	-0.039*
	(-2.04)	(-1.93)	(-1.29)	(-1.73)
Amihud Illiquidity	-0.166	-0.154	-0.206	-0.294
	(-0.71)	(-0.69)	(-1.00)	(-1.18)
Analyst Following (LN)	-0.007	0.001	-0.004	0.037
	(-0.32)	(0.04)	(-0.22)	(1.54)
Negative Earnings Surprise	0.008	0.005	0.018	0.019
	(0.53)	(0.37)	(1.38)	(1.21)
Constant	9.042***	7.660***	5.996***	4.829***
	(43.38)	(38.14)	(32.32)	(21.57)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	4,453	4,453	4,453	4,453
adj. R-sq	0.456	0.490	0.491	0.420

	Panel B: DV = Similarity of Disclosure			
	(5) Cosine	(6) Modified Jaccard	(7) Jaccard	(8) Minimal Distance
PASS	0.002	0.011**	0.019**	-0.022**
	(0.84)	(2.42)	(2.37)	(-2.01)
Polynomial of order 1	-0.000*	-0.000**	-0.000***	0.001***
	(-1.83)	(-2.41)	(-2.94)	(2.82)
Polynomial of order 2	-0.000	-0.000	-0.000	0.000
	(-0.33)	(-0.90)	(-0.64)	(0.51)
Market Value (LN)	0.001	0.003*	0.003	-0.009***
	(1.43)	(1.95)	(1.41)	(-2.68)
Market to Book	-0.000	-0.001	0.003*	-0.001
	(-0.07)	(-0.88)	(1.91)	(-0.61)
Return on Assets (ROA)	-0.001	-0.026	-0.007	0.001
	(-0.17)	(-1.57)	(-0.26)	(0.03)
Earnings Growth	-0.006	-0.015	-0.008	-0.008
	(-0.66)	(-0.90)	(-0.29)	(-0.20)
Sales Growth	0.002	-0.000	-0.003	-0.010
	(0.58)	(-0.08)	(-0.37)	(-0.79)
Loss Indicator	-0.004*	-0.014***	-0.020***	0.016
	(-1.80)	(-3.17)	(-2.58)	(1.49)
Big 8 Auditor Indicator	-0.006	-0.013*	-0.036***	0.045**
	(-1.54)	(-1.76)	(-2.81)	(2.57)
Stock Volatility	0.002	0.035	-0.029	0.015
	(0.10)	(1.13)	(-0.54)	(0.20)
Institutional Ownership	-0.002	-0.000	0.006	0.014
	(-0.32)	(-0.00)	(0.35)	(0.65)
Stock Return	0.000	-0.001	0.004	-0.000
	(0.13)	(-0.16)	(0.61)	(-0.03)
Amihud Illiquidity	0.018	0.000	0.009	0.009
	(0.91)	(0.01)	(0.14)	(0.10)
Analyst Following (LN)	-0.002	-0.004	-0.018***	0.029***
	(-1.29)	(-1.12)	(-2.86)	(3.38)
Negative Earnings Surprise	-0.006***	-0.007***	-0.013***	0.012**
	(-4.49)	(-2.89)	(-3.06)	(2.13)
Constant	0.983***	0.956***	0.657***	0.360***
	(54.53)	(27.83)	(11.05)	(4.36)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	4,453	4,453	4,453	4,453
adj. R-sq	0.068	0.070	0.189	0.161

Table 8b Governance & Disclosure (Alternative RDD with Firm FE–All Proposals with Polynomials)
This table presents the results on the relation between governance (proxied by the passing of governance-related proposals) and textual disclosure using Regression Discontinuity Design (RDD), as in equation (iii). The sample includes all proposals. The dependent variables are various textual disclosure similarity measures of firms' 10-K filings. The control variables include market value, ROA, earnings growth, sales growth, loss indicator, big 8 auditor indicator, stock volatility, institutional ownership, stock return, Amihud illiquidity, analyst following, and negative earnings surprise. T-statistics are reported in the bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure			
	(1)	**(2)**	**(3)**	**(4)**
	LN (Word #)	**LN (Complex Word #)**	**LN (Sentence #)**	**LN (Paragraph #)**
PASS	0.027	0.024	0.029	0.025
	(1.22)	(1.16)	(1.52)	(1.04)
Polynomial of order 1	-0.000	-0.000	-0.000	-0.000
	(-0.32)	(-0.18)	(-0.42)	(-0.64)
Polynomial of order 2	0.000	0.000	0.000	0.000
	(0.78)	(0.79)	(1.37)	(0.68)
Market Value (LN)	-0.073***	-0.074***	-0.088***	-0.007
	(-3.55)	(-3.76)	(-4.93)	(-0.30)
Market to Book	-0.019***	-0.021***	-0.017***	-0.028***
	(-3.28)	(-3.79)	(-3.37)	(-4.38)
Return on Assets (ROA)	-0.327**	-0.305**	-0.255**	-0.525***
	(-2.38)	(-2.33)	(-2.13)	(-3.45)
Earnings Growth	0.097	0.088	0.094	0.057
	(1.04)	(0.99)	(1.16)	(0.55)
Sales Growth	0.048*	0.052**	0.036	0.031
	(1.82)	(2.03)	(1.53)	(1.06)
Loss Indicator	-0.011	-0.006	0.002	-0.026
	(-0.41)	(-0.23)	(0.08)	(-0.91)
Big 8 Auditor Indicator	0.254***	0.264***	0.276***	0.236***
	(4.40)	(4.79)	(5.49)	(3.69)
Stock Volatility	0.982***	0.879***	0.791***	1.083***
	(5.40)	(5.08)	(5.00)	(5.38)
Institutional Ownership	-0.138	-0.130	-0.110	-0.096
	(-1.47)	(-1.46)	(-1.35)	(-0.93)
Stock Return	-0.023	-0.018	-0.007	-0.030
	(-1.26)	(-1.03)	(-0.46)	(-1.47)
Amihud Illiquidity	-0.276	-0.350	-0.478	-0.556
	(-0.41)	(-0.54)	(-0.81)	(-0.74)
Analyst Following (LN)	-0.007	0.006	0.025	0.051
	(-0.22)	(0.17)	(0.85)	(1.39)
Negative Earnings Surprise	-0.018	-0.018	-0.009	-0.011
	(-1.43)	(-1.48)	(-0.83)	(-0.78)
Constant	10.464***	9.051***	7.248***	5.543***
	(47.09)	(42.73)	(37.43)	(22.52)
Firm Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	4,453	4,453	4,453	4,453
adj. R-sq	0.736	0.758	0.763	0.700

	Panel B: DV = Similarity of Disclosure			
	(5) Cosine	(6) Modified Jaccard	(7) Jaccard	(8) Minimal Distance
PASS	0.003	0.009**	0.020***	-0.023**
	(1.06)	(2.01)	(2.60)	(-2.14)
Polynomial of order 1	-0.000**	-0.000**	-0.000***	0.001***
	(-2.12)	(-2.08)	(-3.00)	(2.75)
Polynomial of order 2	-0.000	-0.000	-0.000	0.000
	(-0.94)	(-0.41)	(-0.46)	(1.11)
Market Value (LN)	0.002	-0.003	0.001	-0.008
	(0.86)	(-0.78)	(0.15)	(-0.82)
Market to Book	-0.000	-0.000	0.003	-0.003
	(-0.20)	(-0.00)	(1.44)	(-0.89)
Return on Assets (ROA)	0.026*	0.028	0.086*	-0.128*
	(1.66)	(0.98)	(1.78)	(-1.90)
Earnings Growth	0.001	-0.006	0.014	-0.016
	(0.07)	(-0.31)	(0.42)	(-0.34)
Sales Growth	-0.000	-0.001	-0.012	-0.005
	(-0.05)	(-0.26)	(-1.24)	(-0.35)
Loss Indicator	0.003	-0.004	0.003	-0.008
	(0.91)	(-0.84)	(0.31)	(-0.63)
Big 8 Auditor Indicator	-0.004	-0.028**	-0.057***	0.060**
	(-0.66)	(-2.35)	(-2.81)	(2.12)
Stock Volatility	0.004	0.037	-0.053	-0.015
	(0.18)	(0.98)	(-0.83)	(-0.17)
Institutional Ownership	0.027**	0.064***	0.136***	-0.251***
	(2.47)	(3.29)	(4.13)	(-5.48)
Stock Return	0.001	0.001	0.007	-0.008
	(0.60)	(0.14)	(1.05)	(-0.84)
Amihud Illiquidity	0.060	0.088	-0.011	0.302
	(0.76)	(0.63)	(-0.04)	(0.90)
Analyst Following (LN)	0.009**	0.019***	0.022*	-0.024
	(2.39)	(2.78)	(1.86)	(-1.44)
Negative Earnings Surprise	-0.005***	-0.005*	-0.014***	0.009
	(-3.20)	(-1.94)	(-3.08)	(1.45)
Constant	0.900***	0.890***	0.454***	0.793***
	(34.99)	(19.38)	(5.80)	(7.28)
Firm Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	4,453	4,453	4,453	4,453
adj. R-sq	0.187	0.289	0.398	0.373

Table 9 Principal Component Analysis (PCA) on Governance and Disclosure

This table presents the results on the relation between governance (proxied by the passing of governance-related proposals) and the principal components of textual disclosure using Regression Discontinuity Design (RDD). The dependent variables are the principal components of quantity of disclosure and similarity of disclosure in firms' 10-K filings. The control variables include market value, ROA, earnings growth, sales growth, loss indicator, big 8 auditor indicator, stock volatility, institutional ownership, stock return, Amihud illiquidity, analyst following, and negative earnings surprise. t-statistics are reported in the bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	10% Threshold Sample		5% Threshold Sample		Full Sample	
	(1)	(2)	(3)	(4)	(5)	(6)
	Disclosure	Similarity	Disclosure	Similarity	Disclosure	Similarity
PASS	0.196**	0.271***	0.085	0.465***	0.203**	0.184**
	(2.22)	(2.71)	(0.73)	(3.85)	(2.46)	(2.03)
Polynomial of order 1					-0.002	-0.005**
					(-1.36)	(-2.57)
Polynomial of order 2					0.000	-0.000
					(1.21)	(-0.68)
Market Value (LN)	0.412***	0.058	0.352***	-0.024	0.383***	0.050*
	(7.54)	(0.94)	(4.76)	(-0.32)	(14.65)	(1.73)
Market to Book	-0.093***	0.005	-0.173***	0.066	-0.123***	0.005
	(-3.22)	(0.15)	(-3.18)	(1.17)	(-8.62)	(0.31)
Return on Assets (ROA)	-3.522***	-0.520	-3.376***	0.022	-2.593***	-0.244
	(-5.61)	(-0.73)	(-3.83)	(0.02)	(-8.67)	(-0.74)
Earnings Growth	-0.238	-0.412	-0.801	-0.148	0.380	-0.223
	(-0.47)	(-0.71)	(-1.32)	(-0.24)	(1.26)	(-0.67)
Sales Growth	0.064	0.074	0.078	-0.018	0.135	0.005
	(0.27)	(0.28)	(0.24)	(-0.05)	(1.41)	(0.05)
Loss Indicator	-0.144	-0.514***	-0.469**	-0.487**	0.224***	-0.249***
	(-0.82)	(-2.61)	(-2.01)	(-2.02)	(2.69)	(-2.72)
Big 8 Auditor Indicator	0.552**	-0.106	0.523	-0.141	0.602***	-0.320**
	(2.19)	(-0.37)	(1.55)	(-0.40)	(4.50)	(-2.18)
Stock Volatility	6.845***	0.545	6.479***	2.935*	4.827***	0.167
	(5.70)	(0.40)	(3.91)	(1.71)	(8.67)	(0.27)
Institutional Ownership	-0.319	0.153	-0.656	-0.362	-0.692***	0.001
	(-0.81)	(0.34)	(-1.17)	(-0.63)	(-4.16)	(0.01)
Stock Return	-0.061	0.099	0.132	-0.404*	-0.116*	0.013
	(-0.40)	(0.57)	(0.60)	(-1.79)	(-1.85)	(0.20)
Amihud Illiquidity	0.430	-0.181	1.803	-0.101	-0.660	0.288
	(0.23)	(-0.08)	(0.68)	(-0.04)	(-0.94)	(0.38)
Analyst Following (LN)	0.060	-0.034	0.231	0.014	0.018	-0.137*
	(0.43)	(-0.22)	(1.25)	(0.07)	(0.26)	(-1.87)
Negative Earnings Surprise	0.049	-0.213**	0.079	-0.351***	0.041	-0.182***
	(0.56)	(-2.15)	(0.64)	(-2.73)	(0.92)	(-3.74)
Constant	-6.332***	-1.170	-5.246***	-0.587	-5.659***	0.163
	(-4.01)	(-0.65)	(-3.11)	(-0.34)	(-9.01)	(0.24)
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
N	1,158	1,158	575	575	4,453	4,453
adj. R-sq	0.474	0.119	0.467	0.267	0.491	0.106

Table 10 Cross-Sectional Analysis – Investor Distraction

This table presents the results on the relation between governance (proxied by the passing of governance-related proposals) and the principal components of textual disclosure using Regression Discontinuity Design (RDD) for two sub-samples based on investor distraction. The dependent variables are the principal components of quantity of disclosure and similarity of disclosure in firms' 10-K filings. The control variables include market value, ROA, earnings growth, sales growth, loss indicator, big 8 auditor indicator, stock volatility, institutional ownership, stock return, Amihud illiquidity, analyst following, and negative earnings surprise. Panel A provides results for firms with undistracted investors at the time of disclosure. Panel B provides results for firms with distracted investors at the time of disclosure. t-statistics are reported in the bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Investors Not Distracted						
	10% Threshold Sample		**5% Threshold Sample**		**Full Sample**	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
	Disclosure	**Similarity**	**Disclosure**	**Similarity**	**Disclosure**	**Similarity**
PASS	0.358***	0.336**	0.250	0.560***	0.309**	0.097
	(2.85)	(2.23)	(1.44)	(3.19)	(2.52)	(0.69)
Polynomial of order 1					-0.005*	0.001
					(-1.93)	(0.22)
Polynomial of order 2					-0.000	0.000
					(-0.15)	(0.42)
Market Value (LN)	0.452***	0.081	0.271**	-0.093	0.450***	0.122**
	(5.27)	(0.78)	(2.15)	(-0.74)	(9.39)	(2.20)
Market to Book	-0.279***	-0.026	-0.450***	0.091	-0.192***	-0.030
	(-4.01)	(-0.31)	(-4.40)	(0.88)	(-6.52)	(-0.88)
Return on Assets (ROA)	-1.527	1.367	-0.877	2.018	-2.673***	0.605
	(-1.30)	(0.97)	(-0.54)	(1.23)	(-4.52)	(0.89)
Earnings Growth	-0.472	-0.829	-1.351	-0.303	-0.033	0.077
	(-0.67)	(-0.98)	(-1.54)	(-0.34)	(-0.06)	(0.13)
Sales Growth	0.174	-0.033	0.435	-0.024	0.531***	-0.433*
	(0.54)	(-0.09)	(0.85)	(-0.05)	(2.62)	(-1.86)
Loss Indicator	0.095	-0.364	-0.364	0.030	0.271*	-0.210
	(0.32)	(-1.03)	(-0.94)	(0.08)	(1.88)	(-1.26)
Big 8 Auditor Indicator	0.780**	0.062	0.902*	0.332	0.778***	-0.451*
	(2.28)	(0.15)	(1.94)	(0.71)	(3.83)	(-1.92)
Stock Volatility	7.301***	1.629	5.081**	2.179	5.269***	1.862*
	(4.39)	(0.82)	(2.06)	(0.88)	(5.99)	(1.83)
Institutional Ownership	-1.233**	-0.286	-2.285**	-1.421	-0.865***	-0.067
	(-2.04)	(-0.40)	(-2.56)	(-1.58)	(-2.80)	(-0.19)
Stock Return	-0.161	0.329	0.192	0.241	-0.105	0.027
	(-0.67)	(1.15)	(0.56)	(0.71)	(-1.08)	(0.24)
Amihud Illiquidity	4.520	-8.175	5.595	-10.195	-3.495	0.177
	(0.61)	(-0.92)	(0.55)	(-0.99)	(-1.00)	(0.04)
Analyst Following (LN)	0.114	-0.320	0.366	-0.260	-0.137	-0.225*
	(0.54)	(-1.26)	(1.34)	(-0.94)	(-1.30)	(-1.85)
Negative Earnings Surprise	-0.048	-0.253*	-0.115	-0.011	-0.044	-0.190**
	(-0.38)	(-1.66)	(-0.62)	(-0.06)	(-0.65)	(-2.41)
Constant	-2.905*	-1.229	-1.874	0.678	-4.110**	0.106
	(-1.71)	(-0.60)	(-0.87)	(0.31)	(-2.55)	(0.06)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
N	539	539	271	271	2,000	2,000
adj. R-sq	0.484	0.132	0.437	0.224	0.500	0.144

Panel B: Investors Distracted						
	10% Threshold Sample		5% Threshold Sample		Full Sample	
	(1) Disclosure	(2) Similarity	(3) Disclosure	(4) Similarity	(5) Disclosure	(6) Similarity
PASS	0.178	0.077	0.014	0.425**	0.153	0.143
	(1.29)	(0.53)	(0.08)	(2.18)	(1.20)	(1.12)
Polynomial of order 1					0.000	-0.007***
					(0.10)	(-2.68)
Polynomial of order 2					0.000**	-0.000
					(2.04)	(-1.57)
Market Value (LN)	0.443***	0.028	0.593***	0.126	0.369***	0.014
	(4.08)	(0.25)	(4.04)	(0.80)	(7.96)	(0.30)
Market to Book	0.020	0.118*	0.073	0.084	-0.079***	0.041*
	(0.35)	(1.94)	(0.82)	(0.89)	(-3.43)	(1.75)
Return on Assets (ROA)	-5.887***	-4.070***	-8.622***	-2.295	-3.538***	-1.531***
	(-4.57)	(-2.99)	(-4.30)	(-1.07)	(-6.10)	(-2.61)
Earnings Growth	0.429	-0.452	-0.775	0.063	0.550	-0.496
	(0.40)	(-0.40)	(-0.60)	(0.05)	(0.95)	(-0.85)
Sales Growth	0.224	1.186**	0.230	0.611	-0.020	0.614***
	(0.44)	(2.23)	(0.32)	(0.79)	(-0.09)	(2.63)
Loss Indicator	-0.288	-1.082***	-0.884**	-0.870**	0.325***	-0.517***
	(-1.07)	(-3.79)	(-2.43)	(-2.24)	(2.59)	(-4.07)
Big 8 Auditor Indicator	0.422	-0.753	0.501	-1.392*	0.596**	-0.440*
	(0.83)	(-1.40)	(0.72)	(-1.86)	(2.43)	(-1.77)
Stock Volatility	11.047***	-1.135	13.600***	-0.131	7.494***	-2.134*
	(4.35)	(-0.42)	(3.98)	(-0.04)	(6.78)	(-1.91)
Institutional Ownership	-0.169	0.216	0.170	0.208	-0.379	0.256
	(-0.25)	(0.31)	(0.19)	(0.22)	(-1.35)	(0.90)
Stock Return	0.347	-0.167	0.433	-1.032***	0.160	-0.161
	(1.41)	(-0.64)	(1.18)	(-2.64)	(1.37)	(-1.36)
Amihud Illiquidity	10.078	22.433**	6.996	15.752	4.067	5.826*
	(0.97)	(2.05)	(0.48)	(1.00)	(1.38)	(1.95)
Analyst Following (LN)	0.483*	0.473	0.456	-0.340	0.183	0.027
	(1.76)	(1.63)	(1.20)	(-0.84)	(1.64)	(0.24)
Negative Earnings Surprise	0.122	-0.326**	0.061	-0.807***	0.152**	-0.139**
	(0.88)	(-2.24)	(0.31)	(-3.83)	(2.30)	(-2.08)
Constant	-9.788***	-2.283	-10.698***	1.683	-6.761***	-0.207
	(-4.94)	(-1.09)	(-3.93)	(0.58)	(-6.34)	(-0.19)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
N	512	512	261	261	2,000	2,000
adj. R-sq	0.518	0.207	0.536	0.350	0.482	0.145

Table 11 Cross-Sectional Analysis – Media Coverage

This table presents the results on the relation between governance (proxied by the passing of governance-related proposals) and the principal components of textual disclosure using Regression Discontinuity Design (RDD) for two sub-samples based on investor distraction. The dependent variables are the principal components of quantity of disclosure and similarity of disclosure in firms' 10-K filings. The control variables include market value, ROA, earnings growth, sales growth, loss indicator, big 8 auditor indicator, stock volatility, institutional ownership, stock return, Amihud illiquidity, analyst following, and negative earnings surprise. Panel A provides results for firms with high media coverage at the time of disclosure. Panel B provides results for firms with low media coverage at the time of disclosure. t-statistics are reported in the bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Panel A: High Media Coverage						
	10% Threshold Sample		**5% Threshold Sample**		**Full Sample**	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
	Disclosure	**Similarity**	**Disclosure**	**Similarity**	**Disclosure**	**Similarity**
PASS	0.247*	0.300**	0.136	0.482***	0.265*	0.282**
	(1.78)	(2.08)	(0.71)	(2.63)	(1.88)	(2.03)
Polynomial of order 1					-0.004	-0.008**
					(-1.12)	(-2.17)
Polynomial of order 2					0.000	-0.000
					(0.29)	(-1.34)
Market Value (LN)	0.536***	0.091	0.424*	-0.102	0.439***	0.111
	(3.67)	(0.60)	(1.96)	(-0.50)	(6.13)	(1.56)
Market to Book	-0.276***	0.036	-0.503***	0.024	-0.278***	-0.052*
	(-4.25)	(0.54)	(-4.28)	(0.21)	(-8.81)	(-1.65)
Return on Assets (ROA)	-3.472***	0.216	-1.906	0.573	-3.003***	0.889
	(-2.67)	(0.16)	(-1.04)	(0.33)	(-4.51)	(1.35)
Earnings Growth	-0.285	-1.349	-0.961	-2.235	0.525	-1.149
	(-0.25)	(-1.16)	(-0.53)	(-1.29)	(0.73)	(-1.62)
Sales Growth	-0.415	-0.407	0.079	-0.331	0.071	-0.260
	(-0.91)	(-0.86)	(0.12)	(-0.55)	(0.30)	(-1.11)
Loss Indicator	-0.488	-1.896***	-0.813*	-2.230***	-0.071	-0.912***
	(-1.59)	(-5.93)	(-1.76)	(-5.05)	(-0.47)	(-6.11)
Big 8 Auditor Indicator	1.367***	-0.670	1.395*	-0.833	0.727***	-0.608**
	(2.87)	(-1.36)	(1.92)	(-1.20)	(2.76)	(-2.33)
Stock Volatility	12.327***	2.768	10.712***	8.343**	9.855***	0.125
	(5.52)	(1.19)	(2.62)	(2.14)	(8.93)	(0.11)
Institutional Ownership	-0.093	-0.811	-1.342	-2.089*	-0.562	-0.249
	(-0.11)	(-0.94)	(-1.12)	(-1.82)	(-1.59)	(-0.71)
Stock Return	-0.247	-0.005	0.312	-0.028	-0.192	0.142
	(-0.95)	(-0.02)	(0.78)	(-0.07)	(-1.39)	(1.04)
Amihud Illiquidity	-41.864	47.802	-37.045	-11.274	-34.411**	41.186***
	(-1.26)	(1.38)	(-0.70)	(-0.22)	(-2.51)	(3.04)
Analyst Following (LN)	-0.372	0.653*	-0.189	0.351	-0.142	0.350**
	(-1.13)	(1.91)	(-0.38)	(0.75)	(-0.87)	(2.17)
Negative Earnings Surprise	0.071	-0.372**	0.133	-0.672***	-0.033	-0.201***
	(0.51)	(-2.54)	(0.62)	(-3.27)	(-0.47)	(-2.90)
Constant	-4.228	-2.224	-0.497	0.639	-4.738***	-1.247
	(-1.48)	(-0.75)	(-0.11)	(0.15)	(-3.42)	(-0.91)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
N	560	560	270	270	2,093	2,093
adj. R-sq	0.501	0.233	0.464	0.392	0.479	0.172

Panel B: Low Media Coverage						
	10% Threshold Sample		5% Threshold Sample		Full Sample	
	(1) Disclosure	(2) Similarity	(3) Disclosure	(4) Similarity	(5) Disclosure	(6) Similarity
PASS	0.194*	0.100	0.120	0.281	0.182*	0.059
	(1.67)	(0.66)	(0.78)	(1.62)	(1.72)	(0.44)
Polynomial of order 1					-0.001	-0.002
					(-0.72)	(-0.83)
Polynomial of order 2					-0.000	-0.000
					(-1.23)	(-0.33)
Market Value (LN)	-0.021	0.058	-0.028	-0.044	0.044	0.050
	(-0.24)	(0.50)	(-0.24)	(-0.33)	(1.12)	(1.01)
Market to Book	-0.095***	-0.028	-0.225***	0.126	-0.081***	0.002
	(-2.75)	(-0.62)	(-2.66)	(1.31)	(-4.97)	(0.12)
Return on Assets (ROA)	-0.883	-0.744	-0.421	-0.129	-1.127***	-0.242
	(-1.11)	(-0.71)	(-0.39)	(-0.10)	(-3.20)	(-0.54)
Earnings Growth	-0.236	-0.253	-0.796	0.171	0.331	-0.077
	(-0.41)	(-0.34)	(-1.22)	(0.23)	(1.03)	(-0.19)
Sales Growth	0.296	0.415	0.289	0.055	0.163	0.042
	(1.04)	(1.11)	(0.71)	(0.12)	(1.63)	(0.33)
Loss Indicator	0.129	0.192	-0.126	0.254	0.312***	0.096
	(0.61)	(0.69)	(-0.46)	(0.82)	(3.10)	(0.75)
Big 8 Auditor Indicator	0.074	0.252	-0.112	0.158	0.203	-0.040
	(0.27)	(0.69)	(-0.32)	(0.40)	(1.32)	(-0.20)
Stock Volatility	4.881***	-0.614	7.784***	0.455	2.751***	0.302
	(3.46)	(-0.33)	(4.31)	(0.22)	(3.98)	(0.34)
Institutional Ownership	-0.698	0.611	-0.760	0.330	-0.462**	0.144
	(-1.50)	(1.00)	(-1.12)	(0.43)	(-2.36)	(0.58)
Stock Return	-0.081	0.276	0.117	-0.077	0.007	0.028
	(-0.40)	(1.04)	(0.43)	(-0.25)	(0.10)	(0.31)
Amihud Illiquidity	-3.248*	-0.144	-1.976	-0.005	-1.864***	-0.489
	(-1.67)	(-0.06)	(-0.76)	(-0.00)	(-2.69)	(-0.56)
Analyst Following (LN)	0.500***	-0.303	0.626***	-0.130	0.274***	-0.280***
	(3.01)	(-1.39)	(3.03)	(-0.55)	(3.62)	(-2.92)
Negative Earnings Surprise	0.109	0.020	0.111	0.094	0.055	-0.152**
	(0.96)	(0.14)	(0.70)	(0.52)	(0.95)	(-2.07)
Constant	-5.384***	-0.019	-4.026**	0.473	-3.892***	0.217
	(-3.33)	(-0.01)	(-2.29)	(0.24)	(-2.99)	(0.13)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
N	532	532	266	266	2,096	2,096
adj. R-sq	0.519	0.096	0.540	0.343	0.509	0.095

Table 12a Placebo Test Assuming 70% Threshold for Passing (RDD – 10% Close Call Proposals)
This table presents the results on the relation between governance (proxied by the passing of governance-related proposals) and textual disclosure using Regression Discontinuity Design (RDD), as in equation (ii). However, here we are assuming the threshold for approval is 70% instead of 50%. The sample only includes proposals that pass or fail within the 10-percentage point margin around the 70% threshold. The dependent variables are various textual disclosure measures of firms' 10-K filings. The control variables include market value, ROA, earnings growth, sales growth, loss indicator, big 8 auditor indicator, stock volatility, institutional ownership, stock return, Amihud illiquidity, analyst following, and negative earnings surprise. t-statistics are reported in the bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure			
	(1)	(2)	(3)	(4)
	LN (Word #)	LN (Complex Word #)	LN (Sentence #)	LN (Paragraph #)
PASS	0.007	0.007	-0.002	-0.019
	(0.18)	(0.19)	(-0.05)	(-0.35)
Market Value (LN)	0.064**	0.062**	0.051**	0.031
	(2.43)	(2.42)	(2.13)	(0.86)
Market to Book	-0.017*	-0.018*	-0.018*	-0.010
	(-1.66)	(-1.78)	(-1.86)	(-0.69)
Return on Assets (ROA)	-0.671**	-0.689***	-0.586**	-0.448
	(-2.44)	(-2.59)	(-2.36)	(-1.19)
Earnings Growth	0.029	-0.039	0.066	0.177
	(0.11)	(-0.15)	(0.28)	(0.50)
Sales Growth	0.009	0.012	0.000	0.031
	(0.21)	(0.28)	(0.01)	(0.50)
Loss Indicator	0.043	0.032	0.070	0.070
	(0.65)	(0.51)	(1.19)	(0.78)
Big 8 Auditor Indicator	-0.022	-0.014	-0.002	-0.005
	(-0.19)	(-0.12)	(-0.02)	(-0.03)
Stock Volatility	0.711	0.620	0.497	0.445
	(1.26)	(1.14)	(0.98)	(0.58)
Institutional Ownership	-0.332**	-0.334**	-0.329***	-0.445**
	(-2.40)	(-2.51)	(-2.64)	(-2.35)
Stock Return	0.040	0.053	0.056	-0.130
	(0.58)	(0.79)	(0.91)	(-1.38)
Amihud Illiquidity	-0.270	-0.297	-0.345	-1.220
	(-0.37)	(-0.42)	(-0.52)	(-1.22)
Analyst Following (LN)	0.172***	0.170***	0.174***	0.326***
	(2.97)	(3.06)	(3.35)	(4.12)
Negative Earnings Surprise	-0.073*	-0.072*	-0.051	0.021
	(-1.78)	(-1.81)	(-1.38)	(0.36)
Constant	9.623***	8.182***	6.431***	5.394***
	(17.14)	(15.12)	(12.72)	(7.02)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	560	560	560	560
adj. R-sq	0.423	0.460	0.445	0.326

	Panel B: DV = Similarity of Disclosure			
	(5) Cosine	(6) Modified Jaccard	(7) Jaccard	(8) Minimal Distance
PASS	-0.003	-0.007	-0.008	0.011
	(-0.60)	(-0.95)	(-0.59)	(0.58)
Market Value (LN)	-0.001	0.001	-0.004	0.010
	(-0.24)	(0.20)	(-0.50)	(0.78)
Market to Book	-0.001	-0.002	-0.001	0.004
	(-0.66)	(-0.96)	(-0.41)	(0.79)
Return on Assets (ROA)	0.032	-0.024	0.017	-0.107
	(0.99)	(-0.45)	(0.19)	(-0.83)
Earnings Growth	-0.007	0.001	0.123	-0.194
	(-0.24)	(0.03)	(1.41)	(-1.59)
Sales Growth	0.001	0.005	0.001	-0.005
	(0.21)	(0.59)	(0.09)	(-0.26)
Loss Indicator	0.006	-0.009	-0.008	0.002
	(0.74)	(-0.70)	(-0.37)	(0.08)
Big 8 Auditor Indicator	-0.005	-0.033	-0.082**	0.049
	(-0.39)	(-1.47)	(-2.12)	(0.89)
Stock Volatility	-0.111	-0.101	-0.329*	0.616**
	(-1.65)	(-0.92)	(-1.75)	(2.34)
Institutional Ownership	-0.001	-0.007	0.026	-0.026
	(-0.07)	(-0.28)	(0.57)	(-0.41)
Stock Return	0.006	0.001	0.007	-0.011
	(0.75)	(0.05)	(0.32)	(-0.35)
Amihud Illiquidity	0.055	-0.003	-0.100	0.021
	(0.63)	(-0.02)	(-0.41)	(0.06)
Analyst Following (LN)	0.001	-0.003	-0.027	0.002
	(0.19)	(-0.31)	(-1.39)	(0.09)
Negative Earnings Surprise	-0.007	-0.009	-0.008	0.000
	(-1.35)	(-1.09)	(-0.59)	(0.02)
Constant	0.991***	0.992***	0.717***	0.346
	(14.79)	(9.13)	(3.82)	(1.31)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	560	560	560	560
adj. R-sq	0.055	0.038	0.217	0.202

Table 12b Placebo Test Assuming 25% Threshold for Passing (RDD – 10% Close Call Proposals)
This table presents the results on the relation between governance (proxied by the passing of governance-related proposals) and textual disclosure using Regression Discontinuity Design (RDD), as in equation (ii). However, here we are assuming the threshold for approval is 25% instead of 50%. The sample only includes proposals that pass or fail within 10 percentage point margin around the 25% threshold. The dependent variables are various textual disclosure measures of firms' 10-K filings. The control variables include market value, ROA, earnings growth, sales growth, loss indicator, big 8 auditor indicator, stock volatility, institutional ownership, stock return, Amihud illiquidity, analyst following, and negative earnings surprise. t-statistics are reported in the bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure			
	(1)	**(2)**	**(3)**	**(4)**
	LN (Word #)	**LN (Complex Word #)**	**LN (Sentence #)**	**LN (Paragraph #)**
PASS	-0.007	-0.003	-0.008	-0.029
	(-0.24)	(-0.11)	(-0.33)	(-0.93)
Market Value (LN)	0.138***	0.134***	0.131***	0.131***
	(8.08)	(8.16)	(8.43)	(6.90)
Market to Book	-0.054***	-0.054***	-0.052***	-0.051***
	(-4.75)	(-4.87)	(-4.95)	(-3.98)
Return on Assets (ROA)	-0.536**	-0.530**	-0.485**	-0.414*
	(-2.40)	(-2.46)	(-2.38)	(-1.66)
Earnings Growth	0.490*	0.430*	0.383	0.259
	(1.90)	(1.73)	(1.63)	(0.90)
Sales Growth	0.025	0.042	0.012	-0.080
	(0.28)	(0.50)	(0.14)	(-0.82)
Loss Indicator	0.134**	0.128**	0.124**	0.177***
	(2.33)	(2.30)	(2.34)	(2.76)
Big 8 Auditor Indicator	0.325***	0.294***	0.296***	0.221*
	(3.03)	(2.84)	(3.01)	(1.85)
Stock Volatility	1.950***	1.850***	1.759***	1.735***
	(4.98)	(4.91)	(4.92)	(3.98)
Institutional Ownership	-0.306***	-0.312***	-0.263**	-0.316**
	(-2.73)	(-2.90)	(-2.57)	(-2.53)
Stock Return	-0.074	-0.073*	-0.056	-0.071
	(-1.61)	(-1.65)	(-1.33)	(-1.37)
Amihud Illiquidity	-0.010	-0.037	0.013	0.004
	(-0.03)	(-0.12)	(0.05)	(0.01)
Analyst Following (LN)	-0.024	-0.014	-0.030	0.033
	(-0.52)	(-0.31)	(-0.71)	(0.64)
Negative Earnings Surprise	-0.001	-0.000	0.009	0.021
	(-0.02)	(-0.01)	(0.34)	(0.67)
Constant	8.835***	7.492***	5.746***	4.709***
	(25.73)	(22.67)	(18.33)	(12.32)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	1,191	1,191	1,191	1,191
adj. R-sq	0.506	0.539	0.529	0.460

	Panel B: DV = Similarity of Disclosure			
	(5) Cosine	(6) Modified Jaccard	(7) Jaccard	(8) Minimal Distance
PASS	0.005*	0.005	0.008	-0.017
	(1.79)	(1.06)	(1.03)	(-1.55)
Market Value (LN)	0.000	0.003	0.002	-0.009
	(0.20)	(1.08)	(0.39)	(-1.34)
Market to Book	-0.000	0.000	0.004	-0.003
	(-0.19)	(0.21)	(1.12)	(-0.55)
Return on Assets (ROA)	0.036*	0.041	0.092	-0.164*
	(1.68)	(1.10)	(1.39)	(-1.82)
Earnings Growth	0.002	-0.058	-0.051	0.065
	(0.10)	(-1.35)	(-0.67)	(0.63)
Sales Growth	-0.011	-0.026*	-0.044*	0.027
	(-1.24)	(-1.75)	(-1.69)	(0.75)
Loss Indicator	-0.006	-0.022**	-0.022	0.023
	(-1.14)	(-2.28)	(-1.30)	(0.99)
Big 8 Auditor Indicator	-0.012	-0.026	-0.042	0.111**
	(-1.15)	(-1.43)	(-1.34)	(2.58)
Stock Volatility	0.064*	0.233***	0.174	-0.312**
	(1.69)	(3.56)	(1.51)	(-1.98)
Institutional Ownership	-0.012	-0.008	-0.026	0.040
	(-1.10)	(-0.42)	(-0.79)	(0.89)
Stock Return	-0.006	-0.016**	-0.015	0.036*
	(-1.34)	(-2.06)	(-1.14)	(1.95)
Amihud Illiquidity	0.020	0.031	0.106	-0.093
	(0.64)	(0.58)	(1.11)	(-0.72)
Analyst Following (LN)	0.001	0.000	0.002	0.007
	(0.16)	(0.06)	(0.12)	(0.36)
Negative Earnings Surprise	-0.010***	-0.012**	-0.023***	0.028**
	(-3.63)	(-2.50)	(-2.72)	(2.38)
Constant	0.995***	0.941***	0.641***	0.352**
	(30.14)	(16.42)	(6.33)	(2.55)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	1,191	1,191	1,191	1,191
adj. R-sq	0.070	0.097	0.192	0.166

Table 13 Governance and Disclosure (RDD Analysis – 10% Close Call Proposals) – Post 2003
This table presents the results on the relation between governance (proxied by the passing of governance-related proposals) and textual disclosure using Regression Discontinuity Design (RDD), as in equation (ii). The sample only includes proposals that pass or fail within a 10 percentage point margin around the 50% threshold. The dependent variables are various textual disclosure measures of firms' 10-K filings. The control variables include market value, ROA, earnings growth, sales growth, loss indicator, big 8 auditor indicator, stock volatility, institutional ownership, stock return, Amihud illiquidity, analyst following, and negative earnings surprise. t-statistics are reported in the bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure			
	(1)	(2)	(3)	(4)
	LN (Word #)	LN (Complex Word #)	LN (Sentence #)	LN (Paragraph #)
PASS	0.053*	0.050*	0.059**	0.047*
	(1.87)	(1.81)	(2.41)	(1.82)
Market Value (LN)	0.149***	0.148***	0.135***	0.144***
	(8.14)	(8.36)	(8.52)	(8.67)
Market to Book	-0.039***	-0.041***	-0.040***	-0.042***
	(-4.00)	(-4.28)	(-4.75)	(-4.72)
Return on Assets (ROA)	-1.100***	-1.110***	-1.013***	-1.234***
	(-5.54)	(-5.82)	(-5.92)	(-6.87)
Earnings Growth	-0.120	-0.120	-0.058	-0.078
	(-0.71)	(-0.74)	(-0.39)	(-0.51)
Sales Growth	0.105	0.119	0.071	0.024
	(1.39)	(1.64)	(1.09)	(0.36)
Loss Indicator	0.017	0.014	0.038	0.003
	(0.30)	(0.25)	(0.75)	(0.06)
Big 8 Auditor Indicator	0.170*	0.163*	0.157**	0.112
	(1.90)	(1.90)	(2.04)	(1.39)
Stock Volatility	1.846***	1.686***	1.372***	1.533***
	(4.66)	(4.43)	(4.02)	(4.28)
Institutional Ownership	-0.057	-0.041	-0.102	-0.063
	(-0.44)	(-0.33)	(-0.91)	(-0.53)
Stock Return	-0.098*	-0.091*	-0.082*	-0.057
	(-1.89)	(-1.82)	(-1.83)	(-1.21)
Amihud Illiquidity	0.212	0.397	0.035	-0.088
	(0.27)	(0.52)	(0.05)	(-0.12)
Analyst Following (LN)	0.023	0.032	0.016	0.010
	(0.50)	(0.73)	(0.41)	(0.24)
Negative Earnings Surprise	0.017	0.013	0.014	-0.002
	(0.61)	(0.49)	(0.57)	(-0.09)
Constant	9.222***	7.858***	6.331***	5.027***
	(18.99)	(16.83)	(15.12)	(11.44)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	997	997	997	997
adj. R-sq	0.435	0.468	0.479	0.483

	Panel B: DV = Similarity of Disclosure			
	(5) Cosine	(6) Modified Jaccard	(7) Jaccard	(8) Minimal Distance
PASS	0.004	0.016***	0.026***	-0.029**
	(1.61)	(2.97)	(2.81)	(-2.25)
Market Value (LN)	0.004**	0.010***	0.012**	-0.020**
	(2.58)	(2.90)	(2.05)	(-2.39)
Market to Book	-0.001	-0.002	0.001	0.003
	(-1.36)	(-1.10)	(0.30)	(0.59)
Return on Assets (ROA)	-0.013	-0.028	-0.002	0.029
	(-0.88)	(-0.76)	(-0.04)	(0.32)
Earnings Growth	-0.016	-0.025	-0.020	0.030
	(-1.20)	(-0.79)	(-0.37)	(0.40)
Sales Growth	0.008	0.007	-0.001	-0.017
	(1.40)	(0.51)	(-0.05)	(-0.49)
Loss Indicator	-0.008*	-0.026**	-0.037**	0.025
	(-1.85)	(-2.41)	(-1.97)	(0.96)
Big 8 Auditor Indicator	0.002	0.011	0.022	-0.020
	(0.36)	(0.66)	(0.78)	(-0.49)
Stock Volatility	-0.005	0.030	-0.038	0.088
	(-0.18)	(0.41)	(-0.30)	(0.49)
Institutional Ownership	0.010	0.034	0.067	-0.018
	(1.01)	(1.42)	(1.61)	(-0.31)
Stock Return	0.004	0.002	0.016	-0.034
	(1.00)	(0.22)	(0.96)	(-1.45)
Amihud Illiquidity	0.118*	0.288*	0.325	-0.459
	(1.93)	(1.92)	(1.26)	(-1.28)
Analyst Following (LN)	-0.001	-0.002	-0.012	0.016
	(-0.16)	(-0.28)	(-0.84)	(0.76)
Negative Earnings Surprise	-0.004*	-0.006	-0.005	0.005
	(-1.67)	(-1.10)	(-0.55)	(0.42)
Constant	0.919***	0.788***	0.408***	0.662***
	(24.65)	(8.67)	(2.61)	(3.03)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	997	997	997	997
adj. R-sq	0.049	0.054	0.134	0.095

Table 14 Governance and Disclosure (RDD Analysis – 5% Close Call Proposals) – Post 2003 Period
This table presents the results on the relation between governance (proxied by the passing of governance-related proposals) and textual disclosure using Regression Discontinuity Design (RDD), as in equation (ii). The sample only includes proposals that pass or fail within 5 percentage point margin around the 50% threshold. The dependent variables are various textual disclosure measures of firms' 10-K filings. The control variables include market value, ROA, earnings growth, sales growth, loss indicator, big 8 auditor indicator, stock volatility, institutional ownership, stock return, Amihud illiquidity, analyst following, and negative earnings surprise. t-statistics are reported in the bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure			
	(1)	**(2)**	**(3)**	**(4)**
	LN (Word #)	**LN (Complex Word #)**	**LN (Sentence #)**	**LN (Paragraph #)**
PASS	0.014	0.011	0.022	0.015
	(0.39)	(0.29)	(0.70)	(0.45)
Market Value (LN)	0.123***	0.123***	0.113***	0.130***
	(4.95)	(5.13)	(5.29)	(6.06)
Market to Book	-0.119***	-0.117***	-0.107***	-0.107***
	(-5.57)	(-5.66)	(-5.83)	(-5.77)
Return on Assets (ROA)	-0.694**	-0.716***	-0.706***	-1.015***
	(-2.56)	(-2.73)	(-3.03)	(-4.32)
Earnings Growth	-0.316	-0.315*	-0.251	-0.372**
	(-1.61)	(-1.66)	(-1.48)	(-2.19)
Sales Growth	0.109	0.126	0.083	0.106
	(1.08)	(1.29)	(0.95)	(1.21)
Loss Indicator	-0.027	-0.042	-0.030	-0.053
	(-0.35)	(-0.58)	(-0.46)	(-0.82)
Big 8 Auditor Indicator	0.141	0.138	0.144	0.097
	(1.20)	(1.21)	(1.42)	(0.95)
Stock Volatility	1.923***	1.802***	1.401***	1.338***
	(3.47)	(3.37)	(2.94)	(2.79)
Institutional Ownership	-0.178	-0.163	-0.198	-0.095
	(-0.96)	(-0.91)	(-1.25)	(-0.60)
Stock Return	0.064	0.059	0.052	0.081
	(0.88)	(0.84)	(0.83)	(1.28)
Amihud Illiquidity	1.407	1.445	0.878	0.965
	(1.16)	(1.23)	(0.84)	(0.92)
Analyst Following (LN)	0.151**	0.151**	0.107**	0.091*
	(2.44)	(2.52)	(2.02)	(1.69)
Negative Earnings Surprise	0.044	0.038	0.037	0.023
	(1.08)	(0.95)	(1.05)	(0.66)
Constant	9.375***	8.005***	6.535***	5.149***
	(17.65)	(15.59)	(14.31)	(11.19)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	478	478	478	478
adj. R-sq	0.431	0.463	0.483	0.518

	Panel B: DV = Similarity of Disclosure			
	(5) Cosine	(6) Modified Jaccard	(7) Jaccard	(8) Minimal Distance
PASS	0.008***	0.024***	0.040***	-0.044***
	(2.81)	(3.77)	(3.58)	(-2.60)
Market Value (LN)	0.001	-0.000	-0.002	-0.005
	(0.62)	(-0.07)	(-0.23)	(-0.41)
Market to Book	-0.001	0.000	0.007	-0.003
	(-0.50)	(0.06)	(1.09)	(-0.31)
Return on Assets (ROA)	-0.003	0.001	0.053	-0.042
	(-0.14)	(0.03)	(0.65)	(-0.34)
Earnings Growth	-0.013	-0.030	0.009	0.015
	(-0.93)	(-0.91)	(0.15)	(0.16)
Sales Growth	0.006	0.004	-0.003	0.001
	(0.80)	(0.22)	(-0.09)	(0.02)
Loss Indicator	-0.010*	-0.033**	-0.028	0.028
	(-1.89)	(-2.58)	(-1.22)	(0.81)
Big 8 Auditor Indicator	0.002	-0.008	-0.001	-0.022
	(0.19)	(-0.40)	(-0.01)	(-0.41)
Stock Volatility	0.060	0.085	0.150	-0.329
	(1.50)	(0.91)	(0.89)	(-1.31)
Institutional Ownership	-0.013	-0.018	-0.017	0.078
	(-1.00)	(-0.58)	(-0.30)	(0.93)
Stock Return	0.000	-0.015	-0.026	-0.001
	(0.07)	(-1.24)	(-1.16)	(-0.02)
Amihud Illiquidity	0.025	0.031	-0.082	-0.207
	(0.28)	(0.15)	(-0.22)	(-0.37)
Analyst Following (LN)	0.003	0.009	-0.012	-0.006
	(0.76)	(0.85)	(-0.62)	(-0.20)
Negative Earnings Surprise	-0.004	-0.009	-0.017	0.024
	(-1.42)	(-1.36)	(-1.36)	(1.30)
Constant	0.946***	0.917***	0.596***	0.546**
	(24.50)	(10.22)	(3.70)	(2.26)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	478	478	478	478
adj. R-sq	0.092	0.103	0.193	0.134

Table 15 Governance and Disclosure (Alternative RDD Analysis – All Proposals with Polynomial Terms) – Post 2003 Period

This table presents the results on the relation between governance (proxied by the passing of governance-related proposals) and textual disclosure using Regression Discontinuity Design (RDD), as in equation (iii). The sample includes all proposals. The dependent variables are various textual disclosure similarity measures of firms' 10-K filings. The control variables include market value, ROA, earnings growth, sales growth, loss indicator, big 8 auditor indicator, stock volatility, institutional ownership, stock return, Amihud illiquidity, analyst following, and negative earnings surprise. t-statistics are reported in the bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure			
	(1)	(2)	(3)	(4)
	LN (Word #)	LN (Complex Word #)	LN (Sentence #)	LN (Paragraph #)
PASS	0.040	0.037	0.044*	0.025
	(1.49)	(1.41)	(1.83)	(0.95)
Polynomial of order 1	-0.000	-0.000	-0.000	-0.000
	(-0.34)	(-0.15)	(-0.56)	(-0.31)
Polynomial of order 2	0.000	0.000	0.000*	0.000**
	(1.51)	(1.38)	(1.81)	(2.34)
Market Value (LN)	0.131***	0.130***	0.121***	0.128***
	(15.20)	(15.57)	(15.83)	(14.94)
Market to Book	-0.040***	-0.040***	-0.041***	-0.041***
	(-8.26)	(-8.50)	(-9.49)	(-8.56)
Return on Assets (ROA)	-0.814***	-0.808***	-0.709***	-0.824***
	(-8.45)	(-8.71)	(-8.34)	(-8.65)
Earnings Growth	0.104	0.100	0.148*	0.106
	(1.03)	(1.03)	(1.66)	(1.07)
Sales Growth	0.089***	0.092***	0.061**	0.056*
	(2.92)	(3.11)	(2.26)	(1.86)
Loss Indicator	0.063**	0.060**	0.079***	0.081***
	(2.19)	(2.16)	(3.10)	(2.86)
Big 8 Auditor Indicator	0.089*	0.093*	0.119***	0.152***
	(1.79)	(1.94)	(2.69)	(3.09)
Stock Volatility	1.424***	1.346***	1.159***	1.119***
	(7.69)	(7.55)	(7.09)	(6.12)
Institutional Ownership	-0.240***	-0.231***	-0.226***	-0.216***
	(-4.39)	(-4.38)	(-4.67)	(-4.00)
Stock Return	-0.054**	-0.050**	-0.033*	-0.040*
	(-2.55)	(-2.46)	(-1.78)	(-1.93)
Amihud Illiquidity	-0.322	-0.297	-0.241	-0.353
	(-1.32)	(-1.26)	(-1.12)	(-1.46)
Analyst Following (LN)	-0.002	0.002	-0.003	-0.016
	(-0.11)	(0.11)	(-0.14)	(-0.75)
Negative Earnings Surprise	-0.009	-0.011	-0.001	0.012
	(-0.63)	(-0.79)	(-0.07)	(0.82)
Constant	9.724***	8.344***	6.640***	5.303***
	(50.24)	(44.77)	(38.83)	(27.74)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	3,758	3,758	3,758	3,758
adj. R-sq	0.445	0.476	0.478	0.450

	Panel B: DV = Similarity of Disclosure			
	(5) Cosine	(6) Modified Jaccard	(7) Jaccard	(8) Minimal Distance
PASS	0.003	0.013***	0.021**	-0.026**
	(1.22)	(2.67)	(2.54)	(-2.21)
Polynomial of order 1	-0.000	-0.000*	-0.000**	0.001**
	(-1.36)	(-1.82)	(-2.28)	(2.42)
Polynomial of order 2	-0.000	-0.000	-0.000	0.000
	(-0.01)	(-0.39)	(-0.16)	(0.05)
Market Value (LN)	0.002***	0.005***	0.007***	-0.012***
	(2.97)	(3.41)	(2.58)	(-3.20)
Market to Book	-0.001	-0.001	0.003*	-0.000
	(-1.33)	(-1.17)	(1.77)	(-0.04)
Return on Assets (ROA)	-0.008	-0.017	0.001	-0.008
	(-0.95)	(-1.03)	(0.05)	(-0.19)
Earnings Growth	-0.006	-0.007	0.013	-0.028
	(-0.67)	(-0.42)	(0.43)	(-0.64)
Sales Growth	0.003	-0.000	-0.007	-0.010
	(1.13)	(-0.02)	(-0.74)	(-0.73)
Loss Indicator	-0.006***	-0.013**	-0.017**	0.018
	(-2.63)	(-2.54)	(-1.98)	(1.49)
Big 8 Auditor Indicator	-0.001	-0.008	-0.022	0.012
	(-0.27)	(-0.87)	(-1.41)	(0.54)
Stock Volatility	0.008	0.054*	0.004	-0.022
	(0.54)	(1.68)	(0.06)	(-0.28)
Institutional Ownership	0.002	0.006	0.019	0.003
	(0.41)	(0.65)	(1.16)	(0.13)
Stock Return	-0.000	0.001	0.005	-0.006
	(-0.05)	(0.32)	(0.83)	(-0.69)
Amihud Illiquidity	0.049**	0.053	0.122	-0.205*
	(2.41)	(1.25)	(1.63)	(-1.95)
Analyst Following (LN)	-0.002	-0.002	-0.012*	0.022**
	(-0.94)	(-0.56)	(-1.80)	(2.26)
Negative Earnings Surprise	-0.003**	-0.005*	-0.006	0.007
	(-2.39)	(-1.91)	(-1.35)	(1.15)
Constant	0.964***	0.902***	0.595***	0.444***
	(60.11)	(26.85)	(10.05)	(5.33)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	3,758	3,758	3,758	3,758
adj. R-sq	0.045	0.045	0.135	0.113

Table 16 Governance and Disclosure (RDD – 10% Close Call Proposals) – Proposals on G-Index
This table presents the results on the relation between governance (proxied by the passing of governance-related proposals) and textual disclosure using Regression Discontinuity Design (RDD), as in equation (ii). The sample only includes proposals that pass or fail within a 10 percentage point margin around the 50% threshold. The dependent variables are various textual disclosure measures of firms' 10-K filings. The control variables include market value, ROA, earnings growth, sales growth, loss indicator, big 8 auditor indicator, stock volatility, institutional ownership, stock return, Amihud illiquidity, analyst following, and negative earnings surprise. t-statistics are reported in the bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure			
	(1)	(2)	(3)	(4)
	LN (Word #)	LN (Complex Word #)	LN (Sentence #)	LN (Paragraph #)
PASS	0.053	0.052	0.062	0.089*
	(1.03)	(1.05)	(1.39)	(1.78)
Market Value (LN)	0.124***	0.125***	0.111***	0.109***
	(3.89)	(4.05)	(4.02)	(3.52)
Market to Book	-0.011	-0.014	-0.018	-0.021
	(-0.53)	(-0.69)	(-1.03)	(-1.04)
Return on Assets (ROA)	-1.488***	-1.520***	-1.285***	-1.266***
	(-3.24)	(-3.42)	(-3.22)	(-2.85)
Earnings Growth	0.107	0.068	0.147	0.091
	(0.30)	(0.20)	(0.48)	(0.27)
Sales Growth	-0.199	-0.191	-0.206	-0.210
	(-1.34)	(-1.33)	(-1.60)	(-1.47)
Loss Indicator	0.056	0.057	0.106	0.041
	(0.49)	(0.52)	(1.08)	(0.38)
Big 8 Auditor Indicator	0.127	0.112	0.128	0.096
	(0.98)	(0.90)	(1.14)	(0.76)
Stock Volatility	2.476***	2.309***	2.022***	2.236***
	(3.46)	(3.34)	(3.25)	(3.23)
Institutional Ownership	-0.365	-0.308	-0.381**	-0.154
	(-1.65)	(-1.44)	(-1.98)	(-0.72)
Stock Return	0.026	0.027	0.032	0.038
	(0.26)	(0.29)	(0.38)	(0.40)
Amihud Illiquidity	0.378	0.452	0.019	-0.073
	(0.39)	(0.49)	(0.02)	(-0.08)
Analyst Following (LN)	0.074	0.075	0.084	0.119
	(0.86)	(0.91)	(1.13)	(1.44)
Negative Earnings Surprise	-0.003	-0.014	-0.006	-0.007
	(-0.06)	(-0.29)	(-0.14)	(-0.14)
Constant	9.447***	7.997***	6.389***	5.243***
	(17.57)	(15.39)	(13.66)	(10.07)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	514	514	514	514
adj. R-sq	0.440	0.478	0.493	0.424

	Panel B: DV = Similarity of Disclosure			
	(5) Cosine	(6) Modified Jaccard	(7) Jaccard	(8) Minimal Distance
PASS	0.008*	0.015*	0.032**	-0.041**
	(1.87)	(1.82)	(2.36)	(-2.29)
Market Value (LN)	0.001	0.006	0.003	-0.000
	(0.39)	(1.18)	(0.33)	(-0.03)
Market to Book	0.002	0.003	0.004	-0.004
	(1.22)	(0.85)	(0.83)	(-0.50)
Return on Assets (ROA)	-0.012	-0.145**	-0.011	-0.006
	(-0.31)	(-1.97)	(-0.09)	(-0.04)
Earnings Growth	-0.026	-0.028	0.047	-0.050
	(-0.83)	(-0.50)	(0.52)	(-0.40)
Sales Growth	0.009	0.007	-0.008	-0.006
	(0.72)	(0.28)	(-0.22)	(-0.11)
Loss Indicator	-0.010	-0.045**	-0.046	0.034
	(-0.97)	(-2.49)	(-1.57)	(0.87)
Big 8 Auditor Indicator	-0.009	-0.018	-0.040	0.056
	(-0.76)	(-0.88)	(-1.17)	(1.23)
Stock Volatility	0.056	0.182	0.191	-0.180
	(0.89)	(1.59)	(1.03)	(-0.72)
Institutional Ownership	-0.009	-0.006	-0.011	0.001
	(-0.45)	(-0.17)	(-0.19)	(0.02)
Stock Return	0.000	-0.010	-0.004	-0.019
	(0.02)	(-0.63)	(-0.17)	(-0.56)
Amihud Illiquidity	-0.024	-0.035	-0.321	0.416
	(-0.28)	(-0.23)	(-1.29)	(1.24)
Analyst Following (LN)	-0.005	-0.016	-0.028	0.013
	(-0.68)	(-1.20)	(-1.25)	(0.44)
Negative Earnings Surprise	-0.012***	-0.014*	-0.018	0.017
	(-2.60)	(-1.73)	(-1.37)	(0.96)
Constant	0.988***	0.992***	0.648***	0.466**
	(20.99)	(11.52)	(4.64)	(2.47)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	514	514	514	514
adj. R-sq	0.089	0.082	0.218	0.189

Table 17 Governance and Disclosure (RDD – 5% Close Call Proposals) – Proposals on G-Index

This table presents the results on the relation between governance (proxied by the passing of governance-related proposals) and textual disclosure using Regression Discontinuity Design (RDD), as in equation (ii). The sample only includes proposals that pass or fail within 5 percentage point margin around the 50% threshold. The dependent variables are various textual disclosure measures of firms' 10-K filings. The control variables include market value, ROA, earnings growth, sales growth, loss indicator, big 8 auditor indicator, stock volatility, institutional ownership, stock return, Amihud illiquidity, analyst following, and negative earnings surprise. t-statistics are reported in the bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure			
	(1)	(2)	(3)	(4)
	LN (Word #)	LN (Complex Word #)	LN (Sentence #)	LN (Paragraph #)
PASS	0.028	0.021	0.027	0.041
	(0.38)	(0.29)	(0.43)	(0.65)
Market Value (LN)	0.129***	0.134***	0.117***	0.137***
	(3.01)	(3.22)	(3.18)	(3.65)
Market to Book	-0.025	-0.029	-0.030	-0.020
	(-0.86)	(-1.00)	(-1.20)	(-0.79)
Return on Assets (ROA)	-1.092*	-1.192**	-1.096**	-1.313**
	(-1.76)	(-1.98)	(-2.05)	(-2.42)
Earnings Growth	0.309	0.226	0.223	-0.062
	(0.74)	(0.55)	(0.62)	(-0.17)
Sales Growth	-0.231	-0.201	-0.190	-0.215
	(-1.21)	(-1.09)	(-1.16)	(-1.29)
Loss Indicator	0.010	-0.001	0.046	-0.064
	(0.07)	(-0.01)	(0.36)	(-0.50)
Big 8 Auditor Indicator	0.169	0.166	0.171	0.209
	(0.96)	(0.96)	(1.12)	(1.35)
Stock Volatility	2.276**	2.222**	1.885**	2.127**
	(2.26)	(2.27)	(2.17)	(2.41)
Institutional Ownership	-0.220	-0.152	-0.182	0.084
	(-0.67)	(-0.48)	(-0.64)	(0.29)
Stock Return	0.029	0.021	0.016	-0.056
	(0.22)	(0.17)	(0.15)	(-0.49)
Amihud Illiquidity	0.648	0.803	0.446	1.950*
	(0.49)	(0.62)	(0.39)	(1.67)
Analyst Following (LN)	0.078	0.072	0.093	0.062
	(0.68)	(0.64)	(0.94)	(0.61)
Negative Earnings Surprise	-0.030	-0.043	-0.027	-0.090
	(-0.39)	(-0.57)	(-0.40)	(-1.35)
Constant	9.432***	7.937***	6.266***	5.120***
	(13.92)	(12.04)	(10.72)	(8.63)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	270	270	270	270
adj. R-sq	0.431	0.465	0.490	0.472

	Panel B: DV = Similarity of Disclosure			
	(5) Cosine	(6) Modified Jaccard	(7) Jaccard	(8) Minimal Distance
PASS	0.010*	0.024**	0.047***	-0.054**
	(1.80)	(2.31)	(2.63)	(-2.16)
Market Value (LN)	-0.001	0.003	-0.006	0.009
	(-0.22)	(0.53)	(-0.53)	(0.64)
Market to Book	0.004	0.008*	0.013*	-0.008
	(1.61)	(1.94)	(1.84)	(-0.77)
Return on Assets (ROA)	0.004	-0.070	0.083	-0.013
	(0.08)	(-0.79)	(0.55)	(-0.06)
Earnings Growth	-0.022	-0.040	0.045	0.029
	(-0.71)	(-0.67)	(0.44)	(0.20)
Sales Growth	0.008	-0.004	-0.024	-0.022
	(0.59)	(-0.16)	(-0.51)	(-0.34)
Loss Indicator	-0.007	-0.035*	-0.024	0.023
	(-0.64)	(-1.67)	(-0.67)	(0.46)
Big 8 Auditor Indicator	0.004	-0.002	-0.014	0.021
	(0.32)	(-0.09)	(-0.33)	(0.34)
Stock Volatility	0.099	0.192	0.242	-0.328
	(1.32)	(1.34)	(0.99)	(-0.95)
Institutional Ownership	-0.005	0.017	-0.037	0.003
	(-0.22)	(0.36)	(-0.46)	(0.03)
Stock Return	-0.019*	-0.057***	-0.062*	0.031
	(-1.91)	(-3.03)	(-1.96)	(0.68)
Amihud Illiquidity	-0.072	0.117	-0.311	0.534
	(-0.73)	(0.62)	(-0.96)	(1.17)
Analyst Following (LN)	-0.008	-0.018	-0.028	0.023
	(-0.98)	(-1.10)	(-1.02)	(0.59)
Negative Earnings Surprise	-0.007	-0.011	-0.002	0.010
	(-1.25)	(-1.03)	(-0.12)	(0.37)
Constant	1.007***	1.001***	0.701***	0.381
	(19.98)	(10.37)	(4.27)	(1.64)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	270	270	270	270
adj. R-sq	0.276	0.344	0.400	0.309

Table 18 Governance and Disclosure (Alternative RDD Analysis – All Proposals with Polynomial Terms) – Proposals on G-Index

This table presents the results on the relation between governance (proxied by the passing of governance-related proposals) and textual disclosure using Regression Discontinuity Design (RDD), as in equation (iii). The sample includes all proposals. The dependent variables are various textual disclosure similarity measures of firms' 10-K filings. The control variables include market value, ROA, earnings growth, sales growth, loss indicator, big 8 auditor indicator, stock volatility, institutional ownership, stock return, Amihud illiquidity, analyst following, and negative earnings surprise. t-statistics are reported in the bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure			
	(1)	(2)	(3)	(4)
	LN (Word #)	LN (Complex Word #)	LN (Sentence #)	LN (Paragraph #)
PASS	0.059	0.051	0.067	0.101*
	(1.27)	(1.14)	(1.62)	(1.89)
Polynomial of order 1	-0.001	-0.001	-0.001	-0.003*
	(-0.73)	(-0.53)	(-1.20)	(-1.86)
Polynomial of order 2	0.000	0.000	0.000*	0.000
	(1.04)	(0.99)	(1.67)	(1.61)
Market Value (LN)	0.118***	0.116***	0.108***	0.099***
	(7.09)	(7.22)	(7.14)	(5.10)
Market to Book	-0.025***	-0.027***	-0.027***	-0.026***
	(-2.97)	(-3.35)	(-3.64)	(-2.66)
Return on Assets (ROA)	-0.812***	-0.847***	-0.773***	-0.720***
	(-4.06)	(-4.38)	(-4.27)	(-3.09)
Earnings Growth	0.184	0.174	0.228	0.276
	(0.94)	(0.92)	(1.29)	(1.21)
Sales Growth	0.003	0.009	-0.003	-0.007
	(0.06)	(0.23)	(-0.09)	(-0.15)
Loss Indicator	0.036	0.033	0.065	0.072
	(0.72)	(0.67)	(1.43)	(1.23)
Big 8 Auditor Indicator	0.061	0.057	0.047	0.023
	(0.72)	(0.70)	(0.61)	(0.23)
Stock Volatility	2.452***	2.377***	2.074***	2.269***
	(6.46)	(6.48)	(6.04)	(5.13)
Institutional Ownership	-0.379***	-0.363***	-0.383***	-0.357***
	(-3.60)	(-3.57)	(-4.02)	(-2.92)
Stock Return	-0.009	-0.002	0.008	-0.050
	(-0.20)	(-0.05)	(0.21)	(-1.01)
Amihud Illiquidity	0.196	0.186	0.045	-0.198
	(0.41)	(0.41)	(0.11)	(-0.36)
Analyst Following (LN)	0.037	0.043	0.043	0.094**
	(0.91)	(1.10)	(1.17)	(1.97)
Negative Earnings Surprise	-0.002	-0.006	0.007	0.025
	(-0.08)	(-0.24)	(0.29)	(0.82)
Constant	9.088***	7.710***	6.053***	4.990***
	(17.42)	(15.31)	(12.83)	(8.22)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	1,471	1,471	1,471	1,471
adj. R-sq	0.450	0.488	0.483	0.353

	Panel B: DV = Similarity of Disclosure			
	(5) Cosine	(6) Modified Jaccard	(7) Jaccard	(8) Minimal Distance
PASS	0.006	0.013*	0.026**	-0.043**
	(1.28)	(1.73)	(1.98)	(-2.43)
Polynomial of order 1	-0.000*	-0.001***	-0.001**	0.002***
	(-1.94)	(-2.60)	(-2.55)	(3.35)
Polynomial of order 2	0.000	0.000	0.000	-0.000
	(0.59)	(0.69)	(0.23)	(-0.84)
Market Value (LN)	-0.001	0.000	-0.003	0.004
	(-0.82)	(0.00)	(-0.58)	(0.58)
Market to Book	-0.000	-0.001	-0.000	0.003
	(-0.42)	(-0.83)	(-0.08)	(0.81)
Return on Assets (ROA)	0.014	-0.043	0.055	-0.067
	(0.72)	(-1.32)	(0.97)	(-0.87)
Earnings Growth	-0.004	-0.004	0.015	-0.051
	(-0.22)	(-0.12)	(0.27)	(-0.68)
Sales Growth	0.001	0.000	0.002	-0.010
	(0.20)	(0.01)	(0.15)	(-0.60)
Loss Indicator	0.002	-0.013	-0.014	0.010
	(0.33)	(-1.57)	(-0.96)	(0.51)
Big 8 Auditor Indicator	-0.011	-0.025*	-0.055**	0.079**
	(-1.42)	(-1.79)	(-2.31)	(2.44)
Stock Volatility	-0.010	0.040	-0.071	0.143
	(-0.26)	(0.64)	(-0.67)	(0.99)
Institutional Ownership	-0.013	-0.014	-0.016	0.038
	(-1.34)	(-0.84)	(-0.55)	(0.95)
Stock Return	0.003	0.005	0.008	-0.013
	(0.72)	(0.71)	(0.71)	(-0.78)
Amihud Illiquidity	0.001	-0.014	-0.026	0.104
	(0.02)	(-0.18)	(-0.20)	(0.57)
Analyst Following (LN)	0.002	0.001	-0.010	0.002
	(0.51)	(0.18)	(-0.83)	(0.15)
Negative Earnings Surprise	-0.010***	-0.014***	-0.020***	0.020**
	(-3.88)	(-3.13)	(-2.73)	(1.99)
Constant	1.014***	0.996***	0.706***	0.291
	(20.32)	(11.65)	(4.82)	(1.46)
Industry Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
N	1,471	1,471	1,471	1,471
adj. R-sq	0.096	0.083	0.221	0.204

Appendix A: Definition of Control Variables

Variable Name	Definition
Market Value	Natural logarithm of market value of equity
Market-to-Book Ratio	(Total Long-Term Debt + Market Value of Equity) / (Total Long-Term Debt + Book Value of Equity)
Return on Assets (ROA)	EBITDA scaled by total assets
Earnings Growth	Change in net income relative to the previous year, scaled by total assets
Sales Growth	Percentage growth in sales relative to the previous year
Loss Indicator	Dummy variable equal to one if net income for the year is negative, and zero otherwise
Auditor Quality	Dummy variable equal to one if the auditor codes are between 1 and 8, and zero otherwise
Stock Volatility	Annualized standard deviation of monthly stock returns
Institutional Ownership	Total institutional ownership as a percentage of shares outstanding
Stock Return	Natural logarithm of annualized stock return
Amihud Illiquidity	The direct illiquidity measure based on Amihud (2002)
Analyst Following	Natural logarithm of 1 + the number of analysts following the firm
Negative Earnings Surprise	Dummy variable equal to one if SUE score is negative, and zero otherwise. SUE (Standardized Unanticipated Earnings) Score = (Actual EPS – Surprise Mean) / Standard Deviation.

Appendix B: Examples of Changes in 10-K (deletions shown in red; additions shown in blue)

Exxon Mobil Corporation – 10K – 2017 vs. 2016

ITEM 1A. RISK FACTORS

ExxonMobil's financial and operating results are subject to a variety of risks inherent in the global oil, gas, and petrochemical businesses. Many of these risk factors are not within the Company's control and could adversely affect our business, our financial and operating results, or our financial condition. These risk factors include:

Supply and Demand

The oil, gas, and petrochemical businesses are fundamentally commodity businesses. This means ExxonMobil's operations and earnings may be significantly affected by changes in oil, gas, and petrochemical prices and by changes in margins on refined products. Oil, gas, petrochemical, and product prices and margins in turn depend on local, regional, and global events or conditions that affect supply and demand for the relevant commodity. Any material decline in oil or natural gas prices could have a material adverse effect on certain of the Company's operations, especially in the Upstream segment, financial condition, and proved reserves. On the other hand, a material increase in oil or natural gas prices could have a material adverse effect on certain of the Company's operations, especially in the Downstream and Chemical segments.

Economic conditions. The demand for energy and petrochemicals ~~correlates~~ is generally linked closely with ~~general~~ broad-based economic ~~growth rates.~~ activities and levels of prosperity. The occurrence of recessions or other periods of low or negative economic growth will typically have a direct adverse impact on our results. Other factors that affect general economic conditions in the world or in a major region, such as changes in population growth rates, periods of civil unrest, government austerity programs, or currency exchange rate fluctuations, can also impact the demand for energy and petrochemicals. Sovereign debt downgrades, defaults, inability to access debt markets due to credit or legal constraints, liquidity crises, the breakup or restructuring of fiscal, monetary, or political systems such as the European Union, and other events or conditions that impair the functioning of financial markets and institutions also pose risks to ExxonMobil, including risks to the safety of our financial assets and to the ability of our partners and customers to fulfill their commitments to ExxonMobil.

Other demand-related factors. Other factors that may affect the demand for oil, gas, and petrochemicals, and therefore impact our results, include technological improvements in energy efficiency; seasonal weather patterns, which affect the demand for energy associated with heating and cooling; increased competitiveness of alternative energy sources that have so far generally not been competitive with oil and gas without the benefit of government subsidies or mandates; ~~and~~ changes in technology or consumer preferences that alter fuel choices, such as ~~toward~~ technological advances in energy storage that make wind and solar more competitive for power generation or increased consumer demand for alternative fueled or electric vehicles; and broad-based changes in personal income levels.

Other supply-related factors. Commodity prices and margins also vary depending on a number of factors affecting supply. For example, increased supply from the development of new oil and gas supply sources and technologies to enhance recovery from existing sources tend to reduce commodity prices to the extent such supply increases are not offset by commensurate growth in demand. Similarly, increases in industry refining or petrochemical manufacturing capacity relative to demand tend to reduce margins on the affected products. World oil, gas, and petrochemical supply levels can also be affected by factors that reduce available supplies, such as adherence by member countries to OPEC production quotas and the occurrence of wars, hostile actions, natural disasters, disruptions in competitors' operations, or unexpected unavailability of distribution channels that may disrupt supplies. Technological change can also alter the relative costs for competitors to find, produce, and refine oil and gas and to manufacture petrochemicals.

Other market factors. ExxonMobil's business results are also exposed to potential negative impacts due to changes in interest rates, inflation, currency exchange rates, and other local or regional market conditions. ~~We generally do not use financial instruments to hedge market exposures.~~

Government and Political Factors

ExxonMobil's results can be adversely affected by political or regulatory developments affecting our operations.

Access limitations. A number of countries limit access to their oil and gas resources, or may place resources off-limits from development altogether. Restrictions on foreign investment in the oil and gas sector tend to increase in times of

high commodity prices, when national governments may have less need of outside sources of private capital. Many countries also restrict the import or export of certain products based on point of origin.

Restrictions on doing business. ExxonMobil is subject to laws and sanctions imposed by the United States or by other jurisdictions where we do business that may prohibit ExxonMobil or certain of its affiliates from doing business in certain countries, or restricting the kind of business that may be conducted. Such restrictions may provide a competitive advantage to competitors who may not be subject to comparable restrictions.

Lack of legal certainty. Some countries in which we do business lack well-developed legal systems, or have not yet adopted, or may be unable to maintain, clear regulatory frameworks for oil and gas development. Lack of legal certainty exposes our operations to increased risk of adverse or unpredictable actions by government officials, and also makes it more difficult for us to enforce our contracts. In some cases these risks can be partially offset by agreements to arbitrate disputes in an international forum, but the adequacy of this remedy may still depend on the local legal system to enforce an award.

Cisco Systems, Inc. – 10K – 2011 vs. 2010

Item 1A. Risk Factors

Set forth below and elsewhere in this report and in other documents we file with the SEC are descriptions of the risks and uncertainties that could cause our actual results to differ materially from the results contemplated by the forward-looking statements contained in this report.

OUR OPERATING RESULTS MAY FLUCTUATE IN FUTURE PERIODS, WHICH MAY ADVERSELY AFFECT OUR STOCK PRICE

Our operating results have been in the past, and will continue to be, subject to quarterly and annual fluctuations as a result of numerous factors, some of which may contribute to more pronounced fluctuations in an uncertain global economic environment. These factors include:

- Fluctuations in demand for our products and services, especially with respect to telecommunications service providers and Internet businesses, in part due to changes in the global economic environment
- Changes in sales and implementation cycles for our products and reduced visibility into our customers' spending plans and associated revenue
- Our ability to maintain appropriate inventory levels and purchase commitments
- Price and product competition in the communications and networking industries, which can change rapidly due to technological innovation and different business models from various geographic regions
- The overall movement toward industry consolidation among both our competitors and our customers
- The introduction and market acceptance of new technologies and products and our success in new and evolving markets, including in our New Products category and emerging ~~and advanced~~ technologies, as well as the adoption of new standards
- Variations in sales channels, product costs, or mix of products sold
- The timing, size, and mix of orders from customers
- Manufacturing and customer lead times
- Fluctuations in our gross margins, and the factors that contribute to such fluctuations, as described below
- The ability of our customers, channel partners, contract manufacturers and suppliers to obtain financing or to fund capital expenditures, especially during a period of global credit market disruption or in the event of customer, channel partner, contract manufacturer or supplier financial problems
- Share-based compensation expense
- Actual events, circumstances, outcomes, and amounts differing from judgments, assumptions, and estimates used in determining the values of certain assets (including the amounts of related valuation allowances), liabilities, and other items reflected in our Consolidated Financial Statements
- How well we execute on our strategy and operating plans and the impact of changes in our business model that could result in significant restructuring charges
- Our ability to achieve targeted cost reductions
- Benefits anticipated from our investments in engineering, sales and manufacturing activities
- Changes in tax laws or regulations or accounting rules

As a consequence, operating results for a particular future period are difficult to predict, and, therefore, prior results are not necessarily indicative of results to be expected in future periods. Any of the foregoing factors, or any other factors discussed elsewhere herein, could have a material adverse effect on our business, results of operations, and financial condition that could adversely affect our stock price.

Appendix C: Distraction Measure from Kempf et al. (2017)

The distraction measure is calculated using equation (1), pg. 1668 from Kempf et al. (2017) as shown below:

$$D_{fq} = \sum_{i \in F_{q-1}} \sum_{IND \neq IND_f} w_{ifq-1} \times w_{iq-1}^{IND} \times IS_q^{IND}$$

$F_{q\text{-}1}$ refers to the set of firm *f*'s institutional investors at the end of quarter *q*-1, *IND* denotes Fama-French 12 industries, and IND_f refers to firm *f*'s Fama-French industry. The weight $w_{ifq\text{-}1}$ considers how large investor *i*'s stake is in firm *f* and how much of an investor *i*'s portfolio is comprised of the investment in *f*. IS_q^{IND} is an indicator variable that picks up whether a distracting event occurred in an industry other than IND_f, by measuring whether that industry had the highest or the lowest returns of all Fama-French 12 industries that quarter. w_{iq-1}^{IND} denotes how much investor *i* cares about the other industry by computing the weight of industry *IND* in investor *i*'s portfolio at the end of the last quarter. Finally, $w_{ifq\text{-}1}$ is computed using equation (2), pg. 1669 from Kempf et al. (2017) as shown below:

$$w_{ifq-1} = \frac{QPFweight_{ifq-1} + QPercOwn_{ifq-1}}{\sum_{i \in F_{q-1}} \left(QPFweight_{ifq-1} + QPercOwn_{ifq-1} \right)}$$

Where, $PercOwn_{ifq-1}$ refers to the fraction of firm *f*'s stocks held by institutional shareholder *i*. $PFweight_{ifq-1}$ denotes the market value weight of firm *f* in institutional investor *i*'s portfolio. Furthermore, all stocks held by investor *i* in quarter *q*-1 are sorted by $PFweight_{ifq-1}$ into quintiles (i.e., $QPFweigt_{ifq-1}$), and all firm *f*'s institutional investors are also grouped by $PercOwn_{ifq-1}$ into quintiles (i.e., $QPercOwn_{ifq-1}$) to diminish the impact of outliers and measurement error. Higher values of the distraction measure D_{fq} denote that the firm *i* has investors that are more distracted. The original Kempf et al. (2017) data is up till 2010 and is extended to match our sample period.