

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 the techniques developed in text analytics to examine whether better corporate governance *causally* impacts 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. Such results are robust to several diagnostic tests, alternative RDD bandwidths, different specifications, and are more pronounced when the investors are not distracted.

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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."

- 29th Chairwoman of the SEC, Mary L. Schapiro, Dec 16, 2009

I. Introduction

In this paper, we examine the impact of corporate governance on both the quantity 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. As an 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 most essential demands laid out by the SEC for the settlement included changes pertaining to corporate governance, specifically - (1) Elon Musk must step down as chairman of the board and be replaced by an independent chairman, and (2) Tesla must add two independent directors.² The idea behind these two changes demanded was the underlying presumption of the SEC that better

² <https://www.sec.gov/news/press-release/2018-226>

governance would effectively oversee the communications from Musk, and would lead to better disclosure practices in Tesla. Such similar views from regulators are also vividly depicted in a speech in 2009 by the 29th Chairwoman of the SEC, Mary 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.”

Since both corporate governance structures (Demsetz and Lehn, 1985) and firm disclosure (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. It is plausible that the extant literature has not controlled for an observable or an unobservable variable that determines both corporate governance and disclosure practices, simultaneously. Finally, empirical research examining the association between corporate governance and firm disclosure is also prone to measurement errors in quantifying both corporate governance and disclosure, another common culprit for

endogeneity. For instance, it is difficult to quantify the information in the texts of firm disclosures, and so there is scant evidence on the impact of corporate governance on firms' narrative disclosures (i.e., the voluntary soft information) in the SEC filings, which often account for a significant fraction of pages in disclosure documents (Liberti and Petersen, 2019). Also, researchers face nearly insurmountable endogeneity issues arising from the commonly used measures that proxy for corporate governance (Larcker, Richardson, and Tuna, 2007; Bebchuk, Cohen, and Ferrell, 2009).

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) and estimate the impact of the passing of governance-enhancing shareholder proposals not only on the quantity but also on the boilerplate nature of firms' disclosures in the narratives of their 10-K filings. Although Regression Discontinuity (RD) designs were first introduced by Thistlethwaite and Campell 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).³ 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 in a small neighborhood or bandwidth of the 50% cutoff are comparable with respect to having similar observable and

³ 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).

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 us an opportunity for causal inference.

One plausible concern about using an empirical set-up as described above is that these corporate governance-related shareholder proposals are nonbinding and are only advisory in nature. However, the econometric reasoning of using such a setting is that since the passing of shareholder proposals exerts pressure on the management to enact such proposals in the future, it increases the likelihood of their implementation, satisfying the critical identification assumption in the Fuzzy RDD methodology (Cuñat, Gine, and Guadalupe, 2012; Roberts and Whited, 2013).⁴

Our identification strategy using Fuzzy RDD suggests a positive effect of corporate governance on the quantity of textual disclosure, but 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 measures of distraction. Such findings are contrary to the intended goal of the Securities Exchange Commission (SEC), as the SEC encourages and provides guidance to firms periodically to limit boilerplate language in their disclosures. For example, in a speech given in 2005, the then SEC Commissioner Cynthia A. Glassman states:

⁴ 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% that fail get implemented.

“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.”⁵

Our results also complement the findings of the prior and current literature in finance and accounting that document that the boilerplate language that uses rote recitations make the 10-K filings less informative (Brown and Tucker, 2011; Cohen, Malloy, and Nguyen, 2019). We have relied 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.⁶ 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 investor distraction hypothesis using two different measures investor distraction: First, short-term investor distractions arising from events in other industries that are exogenous to the firm under consideration by construction (Kempf, Manconi, and Spalt, 2017). And, second a media-based measure of distraction.

We begin Section II with a discussion of the existing literature related to our study and the formulation of our primary research question. Section III describes the sample and the data used in this study, followed by Section IV, which discusses the identification strategy using the Fuzzy RD design, and presents the main results. Section V complements the discussion of the main results using the cross-sectional variation in the level of firms’ shareholder distraction, and

⁵ <https://www.sec.gov/news/speech/spch022205cag.htm>

⁶ 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, 2019).

Section VI conducts several placebo tests as robustness for the main results. Finally, Section VII concludes with some cautionary policy implications of our findings.

II. Related Literature and the Main Research Question

Good corporate governance and greater firm disclosure are generally perceived by regulators and investors 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 the primary research question of this study. While on the one hand disclosure can be written as an increasing function of corporate governance, since the monitoring role of corporate governance would ensure more informative firm disclosures, on the other hand, disclosure can also be described as a decreasing function of corporate governance, as it might serve as a substitute for governance deficit. 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 (Holmstrom, 1979) that corporate governance begins to matter, and hence, they can behave as substitutes 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 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. Firm disclosure practices also develop endogenously with 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 split 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, the focus of our

study is 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.⁷ We further distinguish between the quantity and information contained in the narratives of disclosures using several accepted statistical measures of text summarization in the literature, since greater disclosure does not always necessarily mean more informative disclosure.

In sum, we believe that determining the causal relation between corporate governance and disclosure is essential as it can have real implications for both the firms and the capital markets (e.g., Grossman and Stiglitz, 1980; Diamond and Verrecchia, 1991; Easley and O'hara, 2004; 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 find a credible causal inference and not just correlation.

III. Data and Summary Statistics

We collect the governance data and the data on shareholder proposals' vote information from RiskMetrics and SharkRepellent for the period 1997 to 2015. We start in the year 1997 due to the availability of such data and stop at the year 2015 in order to allow us to collect 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

⁷ 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.

sample comprises of 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

Panel A of Table 1 presents the distribution of shareholder proposals by year for all S&P 1,500 firms plus 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, 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 votings 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 that there is 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.⁸

Insert Figure 1 Here

(A) Control Variables

Firm-level accounting and return data are from Compustat and CRSP, respectively. Institutional ownership data has been 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. The definitions of these covariates have been provided in Appendix A of the paper and have been selected based on the extant literature in finance and accounting.

Insert Table 3 Here

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.⁹

⁸ In untabulated results we also conduct more formal tests as recommended by McCrary (2008) and more recently by Cattaneo, Jansson, and Ma (2019), 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.

⁹ <https://www.ravenpack.com/>

(B) Dependent Variables

We use a web crawler to download the 10-Ks from the SEC's EDGAR (Electronic Data Gathering, Analysis, and Retrieval) system.¹⁰ To clean the filings prior to creating the textual variables for quantity and similarity of narratives in the 10-Ks, we have closely followed the standard methodologies used in finance and accounting papers such as Li (2008), Miller (2010), Loughran and McDonald (2011) and Hwang and Kim (2017). We use the programming language Python to create the textual outcome variables from these cleaned 10-K text files and have broadly classified them as the quantity and similarity of textual disclosure as described below.¹¹

(i) The Quantity of Textual Disclosure

We measure the quantity of disclosure in the narratives of 10-Ks using variables such as the word count, the complex word count, the sentence count, and the paragraph count. While the word count is simply the number of words in the filings, the complex word count is the number of words containing three or more syllables in the filings. We define the 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) in order to identify sentence boundaries. Finally, we also compute the paragraph count of the filings, where the minimum number of words needed to be considered a paragraph is ten. All these four measures

¹⁰ <https://www.sec.gov/edgar.shtml>

¹¹ 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/>

proxy for the degree or quantity of disclosure in the narratives of 10-Ks and have been widely used in both the finance and the accounting literature (Loughran and McDonald, 2016).

(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:

Cosine Similarity

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

$$\text{Similarity}_{\text{Cosine}}(D_1, D_2) = \frac{\vec{D}_1 \cdot \vec{D}_2}{|\vec{D}_1| \times |\vec{D}_2|} \quad \text{----- (1)}$$

where, \vec{D}_1 and \vec{D}_2 are m -dimensional vectors over the term set $T = \{t_1, t_2, \dots, t_m\}$.

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 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, 2019). For example, in a concurrent working paper, Cohen, Malloy, and Nguyen (2019) use cosine similarity method to analyze the text in 10-Ks of U.S. firms for the period 1995-2014 and document that changes to the 10-Ks 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

Jaccard Similarity Coefficient

The second similarity measure between 10-Ks of firms in our sample and their prior 10-K filings that we compute is known as 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-Ks. Mathematically, the Jaccard coefficient is the similarity between two 10-Ks (let us denote them as documents D_1 and D_2), defined as:

$$\text{Similarity}_{\text{Jaccard}}(D_1, D_2) = \frac{|T_1 \cap T_2|}{|T_1 \cup T_2|} \quad \text{----- (2)}$$

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-Ks are entirely different, and if the value is 1, then it indicates that the

¹² <http://hobergphillips.tuck.dartmouth.edu/>

two 10-Ks are the same with respect to their texts. Cohen, Malloy, and Nguyen (2019) have also used 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:

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

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

Minimum Edit Distance

Our final similarity measure to pick up the boilerplate language in 10-Ks is minimum edit distance measure, which is mathematically defined as:

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

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 opposite to the

previous three measures of similarity. Cohen, Malloy, and Nguyen (2019) have also utilized the minimum edit distance in their paper to measure changes in the texts of 10-Ks.

We 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 the 10-Ks with their prior 10-Ks (*i.e., the cosine similarity, the Jaccard coefficient, the modified Jaccard coefficient, and the minimum edit distance*) are picking up what they are supposed to measure, by computing the correlations between these textual variables for the sample used in the study. The results are reported in Table 4a. The results show that each of these measures of *quantity* and *similarity* of textual disclosure is highly correlated with each other, providing us confidence in using these proxies not only for the main tests but also in interpreting each of them as robustness tests, alleviating the concerns of measurement error to some extent.

Insert Table 4a Here

Before we conduct rigorous RD regressions, we also conduct univariate tests to see the difference in different 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 have been 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 the word count, the complex word count, the sentence count, and the 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 regression discontinuity design (RDD) to establish causality.

IV. Identification Strategy and Main Results

(A) Ordinary Least Squares (OLS) Panel Results

Researchers in finance and accounting have provided us with useful insights into the relation between corporate governance and disclosure, as discussed in the preceding sections. However, the extant literature has also recognized that such 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 have been 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:

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

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 have also included 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 quantity of disclosure. The results in models (2)-(4) show a significant and positive association between governance and the quantity of disclosure. The coefficient estimate of the E-Index in model (1) is not significant but is in the same direction. Note that this positive association between governance and 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 boilerplate nature in the narratives of disclosures. The coefficient estimates of the E-Index are not significant in models (5)-(8).

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.

Even though we have used a long list of controls, different proxies for measuring textual quantity and similarity and have also used firm and year fixed effects in the specifications shown in Table 5, we are cognizant that in the absence of a shock on the governance quality of a firm we cannot claim causality because of the remaining endogeneity concerns that might arise due to omitted variable bias.¹⁴

(B) Identification

To address such issues of endogeneity, we implement a fuzzy Regression Discontinuity Design (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:

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

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 the passing of governance proposal 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

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 also 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).

extant literature and as used in specification (i). Note that the fuzzy RD 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 are unable to include firm-fixed effects in the 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). 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 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 firm’s 10-Ks. More interestingly, the results from Panel B show that the boilerplate nature of the texts used in narratives also significantly increases after such 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 other words, the passing of a

governance-related proposal within the 10% bandwidth translates into a predicted increase in 10-K similarity by 0.026, which is an increase by approximately 0.3 standard deviations in Jaccard Similarity, implying a significant economic consequence of good governance on the narratives of 10-Ks. 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 anymore 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 the 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 ($t=3.99$), significant at the 1% level indicating that the passing of a governance-related proposal within the narrower 5% bandwidth translates into a predicted increase in 10-K similarity by 0.043, which is an increase by approximately 0.5 standard deviations in Jaccard Similarity, implying an even greater significant economic consequence of good governance on the narratives of 10-Ks. Such findings within a narrower bandwidth that further reduces the bias suggest that the causal impact of governance is more on the boilerplate nature of the narratives. 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.

(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 only 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 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):

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

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 proposal 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 noises that come 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 have been provided in Table 8.

Insert Table 8 Here

Both panels A and B of Table 8 show consistent results that are in line with our baseline RDD regressions, as presented in Table 6.

(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 the issue of 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 RDD specifications used in this paper, and the results have been 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.

V. Cross-Sectional Analyses

In this section, we explore 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 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-Ks.

(A) Distracted Shareholders

Recent research in empirical corporate finance has shown 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 its 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 B describes in detail how such a measure has been 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, with and without distracted institutional investors, using the exogenous firm-level shareholder distraction scores aggregated across all investors for a firm as described above. 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 has also shown that public opinion, as channeled via media coverage, can also play a governance role for corporations by lessening the costs of shareholder monitoring. 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 the years 1992-2008. Relying on the extant literature, we hypothesize that if the passing of the governance-related proposals indeed impacts the narratives of disclosures in 10-Ks, 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 even investor distraction (Hirshleifer, Lim, and Teoh, 2009; Fang, Peress, and Zheng, 2014). 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.¹⁶

RavenPack also provides a relevance score, ranging between 0-100, which indicates how strongly the news article is related to the firm. In order 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

¹⁶ The results (untabulated) are qualitatively similar if we also include the firm-generated PR news in our analyses.

least 75, as RavenPack considers values above 75 significantly relevant. The median number of news articles per year for the firms in our sample that have a relevance score of at least 75 is 507. We separate our sample of firms into two sub-samples, the firms with high media coverage and the firms with low media coverage based on whether the number of articles about the firm is above or below the median and repeat the 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 placebo tests for our main results.

VI. 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% that is needed for the approval of governance-related 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 have been presented in Table 12a (assuming a 70% threshold) and in Table 12b (assuming a 25% threshold).

Insert Tables 12a and 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.

VII. Conclusion and Policy Implications

In this paper, we study the causal impact of corporate governance on the firms' disclosures in the narratives of 10-Ks. Utilizing locally exogenous variations in corporate governance created by "close-call" governance-related shareholder proposal votes, that renders a quasi-experimental fuzzy regression discontinuity design (RDD), and techniques in analyzing textual data borrowed from computational linguistics, we find that better corporate governance in firms results in more boilerplate and plausibly less informative disclosures in the narratives of subsequent 10-Ks. 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-Ks, such results become insignificant at the 5% bandwidth, around the 50% threshold.

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 models of disclosure 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 is distinct from sentiments and readability, commonly used in *textual analysis* – an emerging line of research in both finance and accounting. Overall, this study adds to our understanding of the intertwined concepts of corporate governance and disclosure.

References

- Abraham, S. and Cox, P., 2007. Analysing the determinants of narrative risk information in UK FTSE 100 annual reports. *The British Accounting Review*, 39(3), pp.227-248.
- Admati, A.R. and Pfleiderer, P., 2000. Forcing firms to talk: Financial disclosure regulation and externalities. *The Review of Financial Studies*, 13(3), pp.479-519.
- Akerlof, G., A. 1970. The Market for Lemons: Quality Uncertainty and the Market Mechanism. *Quarterly Journal of Economics*, 84(488-500).
- Almeida, H., Fos, V. and Kronlund, M., 2016. The real effects of share repurchases. *Journal of Financial Economics*, 119(1), pp.168-185.
- Amihud, Y., 2002. Illiquidity and stock returns: cross-section and time-series effects. *Journal of Financial Markets*, 5(1), pp.31-56.
- Bebchuk, L., Cohen, A. and Ferrell, A., 2009. What matters in corporate governance? *The Review of Financial Studies*, 22(2), pp.783-827.
- Beekes, W. and Brown, P., 2006. Do better-governed Australian firms make more informative disclosures? *Journal of Business Finance & Accounting*, 33(3-4), pp.422-450.
- Bird, A. and Karolyi, S.A., 2016. Do institutional investors demand public disclosure? *The Review of Financial Studies*, 29(12), pp.3245-3277.
- Black, B.S., Kim, W., Jang, H. and Park, K.S., 2015. How corporate governance affect firm value? Evidence on a self-dealing channel from a natural experiment in Korea. *Journal of Banking & Finance*, 51, pp.131-150.
- Boone, A.L. and White, J.T., 2015. The effect of institutional ownership on firm transparency and information production. *Journal of Financial Economics*, 117(3), pp.508-533.

- Box, T., 2018. Qualitative similarity and stock price comovement. *Journal of Banking & Finance*, 91, pp.49-69.
- Brown, P., Beekes, W. and Verhoeven, P., 2011. Corporate governance, accounting and finance: A review. *Accounting and Finance*, 51(1), pp.96-172.
- Brown, S.V. and Tucker, J.W., 2011. Large-sample evidence on firms' year-over-year MD&A modifications. *Journal of Accounting Research*, 49(2), pp.309-346.
- Bushman, R.M. and Smith, A.J., 2003. Transparency, financial accounting information, and corporate governance. *Financial Accounting Information, and Corporate Governance. Economic Policy Review*, 9(1).
- Cattaneo, M.D. and Escanciano, J.C., 2017. Regression Discontinuity Designs: Theory and Applications (Advances in Econometrics, volume 38), *Emerald Publishing*.
- Cattaneo, M.D., Jansson, M. and Ma, X., 2019. Simple local polynomial density estimators. *Journal of the American Statistical Association*, (just-accepted), pp.1-11.
- Chemmanur, T.J. and Tian, X., 2018. Do antitakeover provisions spur corporate innovation? A regression discontinuity analysis. *Journal of Financial and Quantitative Analysis*, 53(3), pp.1163-1194.
- Cohen, L., Malloy, C. and Nguyen, Q., 2019. *Lazy prices* (No. w25084). National Bureau of Economic Research.
- Cuñat, V., Gine, M. and Guadalupe, M., 2012. The vote is cast: The effect of corporate governance on shareholder value. *The Journal of Finance*, 67(5), pp.1943-1977.
- Das, S.R., 2014. Text and Context: Language Analytics in Finance. *Foundations and Trends (R) in Finance*, 8(3), pp.145-261.

- Demsetz, H. and Lehn, K., 1985. The structure of corporate ownership: Causes and consequences. *Journal of Political Economy*, 93(6), pp.1155-1177.
- Diamond, D.W. and Verrecchia, R.E., 1991. Disclosure, liquidity, and the cost of capital. *The Journal of Finance*, 46(4), pp.1325-1359.
- Dyck, A., Volchkova, N. and Zingales, L., 2008. The corporate governance role of the media: Evidence from Russia. *The Journal of Finance*, 63(3), pp.1093-1135.
- Dye, R.A., 2001. An evaluation of “essays on disclosure” and the disclosure literature in accounting. *Journal of Accounting and Economics*, 32(1-3), pp.181-235.
- Easley, D. and O'hara, M., 2004. Information and the cost of capital. *The Journal of Finance*, 59(4), pp.1553-1583.
- Eng, L.L. and Mak, Y.T., 2003. Corporate governance and voluntary disclosure. *Journal of Accounting and Public Policy*, 22(4), pp.325-345.
- Ertimur, Y., Ferri, F. and Stubben, S.R., 2010. Board of directors' responsiveness to shareholders: Evidence from shareholder proposals. *Journal of Corporate Finance*, 16(1), pp.53-72.
- Fang, L.H., Peress, J. and Zheng, L., 2014. Does media coverage of stocks affect mutual funds' trading and performance? *The Review of Financial Studies*, 27(12), pp.3441-3466.
- García-Meca, E. and Sánchez-Ballesta, J.P., 2010. The association of board independence and ownership concentration with voluntary disclosure: A meta-analysis. *European Accounting Review*, 19(3), pp.603-627.
- Gelman, A. and Imbens, G., 2018. Why high-order polynomials should not be used in regression discontinuity designs. *Journal of Business & Economic Statistics*, pp.1-10.

- Gillick, D., 2009, May. Sentence boundary detection and the problem with the US. *Proceedings of Human Language Technologies: The 2009 Annual Conference of the North American Chapter of the Association for Computational Linguistics, Companion Volume: Short Papers* (pp. 241-244). Association for Computational Linguistics.
- Goldstein, I. and Yang, L., 2019. Good disclosure, bad disclosure. *Journal of Financial Economics*, 131(1), pp.118-138.
- Gompers, P., Ishii, J. and Metrick, A., 2003. Corporate governance and equity prices. *The Quarterly Journal of Economics*, 118(1), pp.107-156.
- Grossman, S.J. and Stiglitz, J.E., 1980. On the impossibility of informationally efficient markets. *The American Economic Review*, 70(3), pp.393-408.
- Hirshleifer, D., Lim, S.S. and Teoh, S.H., 2009. Driven to distraction: Extraneous events and underreaction to earnings news. *The Journal of Finance*, 64(5), pp.2289-2325.
- Hoberg, G. and Phillips, G., 2010. Product market synergies and competition in mergers and acquisitions: A text-based analysis. *The Review of Financial Studies*, 23(10), pp.3773-3811.
- Hoberg, G. and Phillips, G., 2016. Text-based network industries and endogenous product differentiation. *Journal of Political Economy*, 124(5), pp.1423-1465.
- Hoberg, G., Phillips, G. and Prabhala, N., 2014. Product market threats, payouts, and financial flexibility. *The Journal of Finance*, 69(1), pp.293-324.
- Holmstrom, B., 1979. Moral hazard and observability. *Bell Journal of Economics*, 10(1), pp.74-91.
- Hwang, B.H. and Kim, H.H., 2017. It pays to write well. *Journal of Financial Economics*, 124(2), pp.373-394.

- Imbens, G.W. and Lemieux, T., 2008. Regression discontinuity designs: A guide to practice. *Journal of Econometrics*, 142(2), pp.615-635.
- Kearney, C. and Liu, S., 2014. Textual sentiment in finance: A survey of methods and models. *International Review of Financial Analysis*, 33, pp.171-185.
- Kempf, E., Manconi, A. and Spalt, O., 2017. Distracted shareholders and corporate actions. *The Review of Financial Studies*, 30(5), pp.1660-1695.
- Kuhnen, C.M. and Niessen, A., 2012. Public opinion and executive compensation. *Management Science*, 58(7), pp.1249-1272.
- Larcker, D.F., Richardson, S.A. and Tuna, I., 2007. Corporate governance, accounting outcomes, and organizational performance. *The Accounting Review*, 82(4), pp.963-1008.
- Lee, D.S., 2008. Randomized experiments from non-random selection in US House elections. *Journal of Econometrics*, 142(2), pp.675-697.
- Lee, D.S. and Lemieux, T., 2010. Regression discontinuity designs in economics. *Journal of Economic Literature*, 48(2), pp.281-355.
- Leuz, C. and Wysocki, P.D., 2016. The economics of disclosure and financial reporting regulation: Evidence and suggestions for future research. *Journal of Accounting Research*, 54(2), pp.525-622.
- Li, F., 2008. Annual report readability, current earnings, and earnings persistence. *Journal of Accounting and Economics*, 45(2-3), pp.221-247.
- Liberti, J.M. and Petersen, M.A., 2019. Information: Hard and soft. *Review of Corporate Finance Studies*, 8(1), pp.1-41.

- Liu, C., Low, A., Masulis, R.W. and Zhang, L., 2019. Monitoring the monitor: Distracted institutional investors and board governance. *European Corporate Governance Institute (ECGI)-Finance Working Paper*, (531).
- Loughran, T. and McDonald, B., 2011. When is a liability not a liability? Textual analysis, dictionaries, and 10-Ks. *The Journal of Finance*, 66(1), pp.35-65.
- Loughran, T. and McDonald, B., 2016. Textual analysis in accounting and finance: A survey. *Journal of Accounting Research*.
- Malenko, N. and Shen, Y., 2016. The role of proxy advisory firms: Evidence from a regression-discontinuity design. *The Review of Financial Studies*, 29(12), pp.3394-3427.
- McCrary, J., 2008. Manipulation of the running variable in the regression discontinuity design: A density test. *Journal of Econometrics*, 142(2), pp.698-714.
- Miller, B.P., 2010. The effects of reporting complexity on small and large investor trading. *The Accounting Review*, 85(6), pp.2107-2143.
- Roberts, M.R. and Whited, T.M., 2013. Endogeneity in empirical corporate finance. In *Handbook of the Economics of Finance* (Vol. 2, pp. 493-572). Elsevier.
- Thistlethwaite, D.L. and Campbell, D.T., 1960. Regression-discontinuity analysis: An alternative to the ex post facto experiment. *Journal of Educational Psychology*, 51(6), p.309-317.

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.

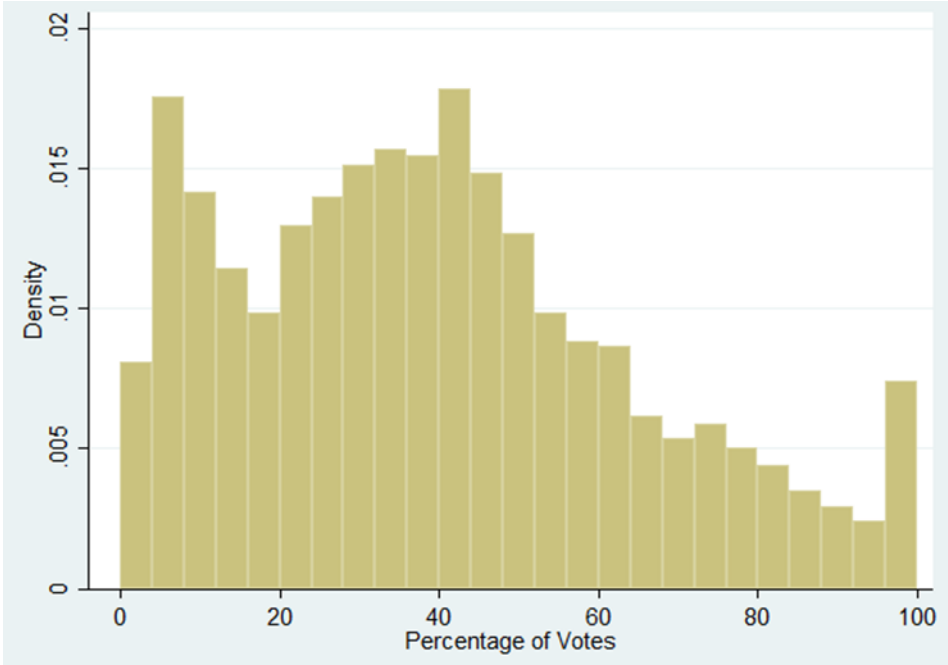


Table 1 Summary Statistics – Shareholder Proposals

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 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	Average 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 th , 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:	November 12 th , 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. Firm Size is the measured by the natural logarithm of equity market value; Market-to-Book is measured by (total debt + market value of equity)/(total debt + book value of equity); Return on Assets (ROA) is the net income scaled by total assets; Earnings Growth is the change in net income relative to the prior year, scaled by total assets; Sales Growth is the change in sales relative to the prior year; Loss Indicator is a dummy that equals to one if the net income for the year is negative, and zero otherwise; Big 8 Auditor Indicator is a dummy that equals to one if the auditor codes are between 1 and 8, and zero otherwise; Stock Volatility is annualized standard deviation of month stock returns; Institutional Ownership is the total institutional ownership as a percentage of shares outstanding; Stock Return is natural logarithm of annualized stock return adjusted by inflation; Amihud Illiquidity is the direct illiquidity measure based on Amihud (2002); Analyst Following is the natural logarithm of 1 + the number of analyst following the firm; Negative Earnings Surprise is a dummy that equals to one if SUE score is negative, and zero otherwise.

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 Similarity	Modified Jaccard Similarity	Jaccard Similarity	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 firm level, and t-statistics are reported in bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure				Panel B: DV = Similarity of Disclosure			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	LN (Word Count)	LN (Complex Word Count)	LN (Sentence Count)	LN (Paragraph Count)	Cosine Similarity	Modified Jaccard Similarity	Jaccard Similarity	Minimal Distance
E-Index	-0.010 (-1.61)	-0.011* (-1.69)	-0.011** (-2.00)	-0.016** (-2.50)	0.000 (0.33)	0.000 (0.08)	0.001 (0.39)	-0.001 (-0.50)
Market Value (LN)	0.006 (0.40)	0.006 (0.39)	0.005 (0.41)	0.019 (1.37)	0.000 (0.05)	-0.000 (-0.21)	0.002 (0.52)	-0.004 (-0.70)
Market to Book	-0.011*** (-2.81)	-0.011*** (-2.95)	-0.011*** (-2.67)	-0.017*** (-3.28)	-0.000 (-0.37)	0.000 (0.21)	0.001 (0.78)	-0.000 (-0.04)
Return on Assets (ROA)	-0.259*** (-3.92)	-0.250*** (-3.94)	-0.219*** (-3.71)	-0.189*** (-3.02)	0.013** (2.23)	0.022** (1.96)	0.064*** (3.00)	-0.075** (-2.49)
Earnings Growth	0.038 (1.49)	0.036 (1.46)	0.034 (1.51)	0.042 (1.64)	-0.001 (-0.19)	-0.001 (-0.19)	-0.001 (-0.21)	-0.005 (-0.25)
Sales Growth	0.006 (1.35)	0.006 (1.31)	0.006 (1.35)	0.007* (1.72)	-0.000 (-0.23)	-0.001 (-0.70)	-0.000 (-0.06)	-0.001 (-0.76)
Loss Indicator	0.032*** (2.65)	0.031*** (2.65)	0.024** (2.30)	0.030** (2.06)	0.002 (1.21)	0.003 (0.94)	-0.003 (-0.64)	0.002 (0.26)
Big 8 Auditor Indicator	0.052 (0.82)	0.053 (0.87)	0.050 (0.82)	0.099* (1.89)	0.001 (0.25)	0.001 (0.08)	-0.001 (-0.06)	0.002 (0.08)
Stock Volatility	0.357*** (4.46)	0.351*** (4.59)	0.368*** (5.24)	0.303*** (3.77)	-0.002 (-0.18)	-0.027 (-1.50)	-0.086*** (-2.63)	0.095** (2.16)
Institutional Ownership	0.022 (0.42)	0.023 (0.46)	0.036 (0.76)	0.052 (1.01)	-0.001 (-0.13)	0.001 (0.06)	-0.006 (-0.37)	0.000 (0.00)
Stock Return	0.005 (0.67)	0.003 (0.49)	0.006 (0.97)	0.008 (0.86)	0.001 (0.65)	0.002 (1.35)	0.000 (0.12)	0.000 (0.11)
Amihud Illiquidity	0.084 (0.55)	0.052 (0.37)	0.082 (0.64)	0.270* (1.79)	0.007 (0.46)	0.017 (0.50)	0.076 (1.33)	-0.076 (-1.00)
Analyst Following (LN)	0.027 (1.64)	0.027* (1.70)	0.016 (1.14)	0.032** (2.03)	-0.001 (-0.52)	-0.002 (-0.59)	-0.002 (-0.40)	0.003 (0.45)
Negative Earnings Surprise	0.007 (1.09)	0.007 (1.06)	0.006 (0.93)	0.002 (0.34)	-0.001 (-1.64)	-0.003* (-1.74)	-0.005 (-1.61)	0.005 (1.26)
Constant	9.720*** (68.97)	8.343*** (61.91)	6.563*** (52.96)	5.482*** (44.49)	0.959*** (83.44)	0.922*** (39.81)	0.551*** (13.56)	0.553*** (10.10)
Firm Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clustering	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm
N	17,151	17,151	17,151	17,151	17,151	17,151	17,151	17,151
adj. R-sq	0.700	0.728	0.735	0.620	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 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 bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure				Panel B: DV = Similarity of Disclosure			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	LN (Word Count)	LN (Complex Word Count)	LN (Sentence Count)	LN (Paragraph Count)	Cosine Similarity	Modified Jaccard Similarity	Jaccard Similarity	Minimal Distance
PASS	0.059** (1.97)	0.056* (1.93)	0.061** (2.34)	0.065** (2.38)	0.004* (1.66)	0.015*** (2.81)	0.026*** (3.03)	-0.030** (-2.52)
Market Value (LN)	0.134*** (7.25)	0.133*** (7.44)	0.118*** (7.34)	0.120*** (7.07)	0.001 (0.81)	0.004 (1.33)	0.002 (0.42)	-0.007 (-0.93)
Market to Book	-0.029*** (-2.92)	-0.030*** (-3.19)	-0.029*** (-3.43)	-0.026*** (-2.85)	-0.000 (-0.13)	-0.001 (-0.38)	0.003 (0.97)	-0.000 (-0.07)
Return on Assets (ROA)	-1.066*** (-5.03)	-1.089*** (-5.32)	-0.993*** (-5.37)	-1.190*** (-6.08)	-0.009 (-0.52)	-0.046 (-1.24)	-0.013 (-0.22)	0.023 (0.27)
Earnings Growth	-0.091 (-0.53)	-0.093 (-0.56)	-0.041 (-0.27)	-0.068 (-0.43)	-0.013 (-0.90)	-0.025 (-0.83)	-0.012 (-0.25)	0.011 (0.16)
Sales Growth	0.046 (0.57)	0.060 (0.78)	0.010 (0.14)	-0.045 (-0.61)	0.005 (0.81)	0.003 (0.19)	-0.005 (-0.19)	-0.011 (-0.33)
Loss Indicator	-0.045 (-0.77)	-0.047 (-0.83)	-0.025 (-0.48)	-0.063 (-1.16)	-0.008 (-1.62)	-0.031*** (-3.07)	-0.043** (-2.48)	0.022 (0.94)
Big 8 Auditor Indicator	0.200** (2.35)	0.187** (2.27)	0.177** (2.38)	0.103 (1.31)	-0.004 (-0.60)	-0.001 (-0.09)	-0.010 (-0.39)	0.025 (0.74)
Stock Volatility	2.288*** (5.64)	2.152*** (5.49)	1.865*** (5.27)	2.111*** (5.64)	0.008 (0.25)	0.062 (0.88)	-0.008 (-0.07)	0.046 (0.28)
Institutional Ownership	-0.092 (-0.70)	-0.072 (-0.56)	-0.131 (-1.14)	-0.092 (-0.75)	0.002 (0.21)	0.010 (0.42)	0.012 (0.31)	0.023 (0.44)
Stock Return	-0.028 (-0.55)	-0.024 (-0.47)	-0.017 (-0.38)	-0.004 (-0.08)	0.003 (0.75)	0.001 (0.16)	0.011 (0.74)	-0.026 (-1.26)
Amihud Illiquidity	0.402 (0.62)	0.497 (0.80)	0.049 (0.09)	-0.490 (-0.83)	0.014 (0.26)	0.048 (0.43)	-0.181 (-0.97)	0.258 (1.00)
Analyst Following (LN)	0.010 (0.21)	0.019 (0.40)	0.015 (0.35)	0.032 (0.74)	0.000 (0.02)	0.000 (0.03)	-0.009 (-0.68)	0.012 (0.62)
Negative Earnings Surprise	0.021 (0.71)	0.017 (0.58)	0.020 (0.77)	0.001 (0.02)	-0.007*** (-3.03)	-0.008 (-1.60)	-0.013 (-1.45)	0.013 (1.09)
Constant	8.705*** (16.31)	7.323*** (14.21)	5.849*** (12.58)	4.847*** (9.85)	0.955*** (21.66)	0.884*** (9.58)	0.553*** (3.56)	0.465** (2.17)
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	1,158	1,158	1,158	1,158	1,158	1,158	1,158	1,158
adj. R-sq	0.429	0.466	0.476	0.465	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 textural 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 bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure				Panel B: DV = Similarity of Disclosure			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	LN (Word Count)	LN (Complex Word Count)	LN (Sentence Count)	LN (Paragraph Count)	Cosine Similarity	Modified Jaccard Similarity	Jaccard Similarity	Minimal Distance
PASS	0.026 (0.65)	0.019 (0.50)	0.028 (0.79)	0.032 (0.93)	0.008*** (2.79)	0.024*** (3.87)	0.043*** (3.99)	-0.050*** (-3.25)
Market Value (LN)	0.107*** (4.23)	0.109*** (4.46)	0.100*** (4.57)	0.118*** (5.35)	0.000 (0.20)	-0.001 (-0.13)	-0.006 (-0.94)	0.004 (0.43)
Market to Book	-0.055*** (-2.95)	-0.057*** (-3.19)	-0.053*** (-3.24)	-0.047*** (-2.92)	0.001 (0.58)	0.002 (0.82)	0.009* (1.87)	-0.004 (-0.56)
Return on Assets (ROA)	-0.957*** (-3.19)	-0.973*** (-3.34)	-0.968*** (-3.70)	-1.276*** (-4.88)	-0.001 (-0.04)	-0.015 (-0.33)	0.037 (0.46)	-0.043 (-0.37)
Earnings Growth	-0.222 (-1.08)	-0.234 (-1.17)	-0.196 (-1.09)	-0.347* (-1.93)	-0.006 (-0.40)	-0.023 (-0.74)	0.028 (0.52)	-0.004 (-0.05)
Sales Growth	0.027 (0.24)	0.048 (0.45)	0.008 (0.08)	0.013 (0.13)	0.003 (0.40)	-0.002 (-0.13)	-0.012 (-0.40)	-0.001 (-0.02)
Loss Indicator	-0.136* (-1.71)	-0.149* (-1.93)	-0.132* (-1.90)	-0.161** (-2.32)	-0.007 (-1.17)	-0.034*** (-2.79)	-0.033 (-1.56)	0.026 (0.83)
Big 8 Auditor Indicator	0.171 (1.49)	0.167 (1.50)	0.169* (1.69)	0.130 (1.30)	-0.001 (-0.13)	-0.007 (-0.40)	-0.018 (-0.58)	0.017 (0.38)
Stock Volatility	2.230*** (3.95)	2.158*** (3.94)	1.790*** (3.64)	1.754*** (3.56)	0.067 (1.57)	0.157* (1.80)	0.209 (1.38)	-0.328 (-1.50)
Institutional Ownership	-0.242 (-1.27)	-0.217 (-1.17)	-0.222 (-1.33)	-0.111 (-0.67)	-0.007 (-0.49)	-0.010 (-0.34)	-0.047 (-0.92)	0.077 (1.04)
Stock Return	0.038 (0.51)	0.036 (0.50)	0.036 (0.55)	0.053 (0.82)	-0.008 (-1.34)	-0.022* (-1.88)	-0.034* (-1.71)	0.019 (0.65)
Amihud Illiquidity	0.560 (0.62)	0.669 (0.76)	0.323 (0.41)	0.696 (0.88)	-0.003 (-0.04)	0.106 (0.76)	-0.215 (-0.89)	0.212 (0.60)
Analyst Following (LN)	0.082 (1.29)	0.084 (1.37)	0.063 (1.15)	0.053 (0.97)	-0.000 (-0.01)	0.006 (0.63)	-0.008 (-0.46)	-0.004 (-0.16)
Negative Earnings Surprise	0.037 (0.87)	0.030 (0.74)	0.035 (0.94)	-0.010 (-0.27)	-0.010*** (-3.18)	-0.015** (-2.25)	-0.025** (-2.23)	0.034** (2.07)
Constant	9.122*** (15.91)	7.716*** (13.87)	6.183*** (12.36)	5.014*** (10.03)	0.967*** (22.13)	0.912*** (10.33)	0.605*** (3.95)	0.437* (1.96)
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	575	575	575	575	575	575	575	575
adj. R-sq	0.419	0.454	0.469	0.483	0.145	0.260	0.331	0.229

Table 8 Governance and Disclosure (Alternative RDD Analysis – 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 bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure				Panel B: DV = Similarity of Disclosure			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	LN (Word Count)	LN (Complex Word Count)	LN (Sentence Count)	LN (Paragraph Count)	Cosine Similarity	Modified Jaccard Similarity	Jaccard Similarity	Minimal Distance
PASS	0.068** (2.49)	0.062** (2.36)	0.066*** (2.70)	0.050* (1.70)	0.002 (0.84)	0.011** (2.42)	0.019** (2.37)	-0.022** (-2.01)
Polynomial of order 1	-0.001 (-1.45)	-0.001 (-1.23)	-0.001 (-1.50)	-0.001 (-0.93)	-0.000* (-1.83)	-0.000** (-2.41)	-0.000*** (-2.82)	0.001*** (2.82)
Polynomial of order 2	0.000 (0.86)	0.000 (0.79)	0.000 (1.33)	0.000 (1.62)	-0.000 (-0.33)	-0.000 (-0.90)	-0.000 (-0.64)	0.000 (0.51)
Market Value (LN)	0.123*** (14.13)	0.120*** (14.41)	0.113*** (14.65)	0.113*** (12.14)	0.001 (1.43)	0.003* (1.95)	0.003 (1.41)	-0.009*** (-2.68)
Market to Book	-0.038*** (-8.10)	-0.039*** (-8.48)	-0.038*** (-8.94)	-0.036*** (-7.04)	-0.000 (-0.07)	-0.001 (-0.88)	0.003* (1.91)	-0.001 (-0.61)
Return on Assets (ROA)	-0.827*** (-8.33)	-0.826*** (-8.64)	-0.741*** (-8.39)	-0.790*** (-7.41)	-0.001 (-0.17)	-0.026 (-1.57)	-0.007 (-0.26)	0.001 (0.03)
Earnings Growth	0.104 (1.04)	0.098 (1.01)	0.138 (1.55)	0.124 (1.15)	-0.006 (-0.66)	-0.015 (-0.90)	-0.008 (-0.29)	-0.008 (-0.20)
Sales Growth	0.060* (1.87)	0.066** (2.14)	0.032 (1.12)	0.005 (0.16)	0.002 (0.58)	-0.000 (-0.08)	-0.003 (-0.37)	-0.010 (-0.79)
Loss Indicator	0.061** (2.23)	0.059** (2.22)	0.073*** (2.95)	0.083*** (2.80)	-0.004* (-1.80)	-0.014*** (-3.17)	-0.020*** (-2.58)	0.016 (1.49)
Big 8 Auditor Indicator	0.184*** (4.15)	0.179*** (4.18)	0.185*** (4.68)	0.191*** (4.01)	-0.006 (-1.54)	-0.013* (-1.76)	-0.036*** (-2.81)	0.045** (2.57)
Stock Volatility	1.628*** (8.81)	1.531*** (8.60)	1.371*** (8.33)	1.387*** (6.98)	0.002 (0.10)	0.035 (1.13)	-0.029 (-0.54)	0.015 (0.20)
Institutional Ownership	-0.224*** (-4.06)	-0.217*** (-4.08)	-0.215*** (-4.39)	-0.189*** (-3.19)	-0.002 (-0.32)	-0.000 (-0.00)	0.006 (0.35)	0.014 (0.65)
Stock Return	-0.042** (-2.04)	-0.039* (-1.93)	-0.024 (-1.29)	-0.039* (-1.73)	0.000 (0.13)	-0.001 (-0.16)	0.004 (0.61)	-0.000 (-0.03)
Amihud Illiquidity	-0.166 (-0.71)	-0.154 (-0.69)	-0.206 (-1.00)	-0.294 (-1.18)	0.018 (0.91)	0.000 (0.01)	0.009 (0.14)	0.009 (0.10)
Analyst Following (LN)	-0.007 (-0.32)	0.001 (0.04)	-0.004 (-0.22)	0.037 (1.54)	-0.002 (-1.29)	-0.004 (-1.12)	-0.018*** (-2.86)	0.029*** (3.38)
Negative Earnings Surprise	0.008 (0.53)	0.005 (0.37)	0.018 (1.38)	0.019 (1.21)	-0.006*** (-4.49)	-0.007*** (-2.89)	-0.013*** (-3.06)	0.012** (2.13)
Constant	9.042*** (43.38)	7.660*** (38.14)	5.996*** (32.32)	4.829*** (21.57)	0.983*** (54.53)	0.956*** (27.83)	0.657*** (11.05)	0.360*** (4.36)
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	4,453	4,453	4,453	4,453	4,453	4,453	4,453	4,453
adj. R-sq	0.456	0.490	0.491	0.420	0.068	0.070	0.189	0.161

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 bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	10% Threshold Sample		5% Threshold Sample		Full Sample	
	(1) Disclosure	(2) Similarity	(3) Disclosure	(4) Similarity	(5) Disclosure	(6) Similarity
PASS	0.196** (2.22)	0.271*** (2.71)	0.085 (0.73)	0.465*** (3.85)	0.203** (2.46)	0.184** (2.03)
Polynomial of order 1					-0.002 (-1.36)	-0.005** (-2.57)
Polynomial of order 2					0.000 (1.21)	-0.000 (-0.68)
Market Value (LN)	0.412*** (7.54)	0.058 (0.94)	0.352*** (4.76)	-0.024 (-0.32)	0.383*** (14.65)	0.050* (1.73)
Market to Book	-0.093*** (-3.22)	0.005 (0.15)	-0.173*** (-3.18)	0.066 (1.17)	-0.123*** (-8.62)	0.005 (0.31)
Return on Assets (ROA)	-3.522*** (-5.61)	-0.520 (-0.73)	-3.376*** (-3.83)	0.022 (0.02)	-2.593*** (-8.67)	-0.244 (-0.74)
Earnings Growth	-0.238 (-0.47)	-0.412 (-0.71)	-0.801 (-1.32)	-0.148 (-0.24)	0.380 (1.26)	-0.223 (-0.67)
Sales Growth	0.064 (0.27)	0.074 (0.28)	0.078 (0.24)	-0.018 (-0.05)	0.135 (1.41)	0.005 (0.05)
Loss Indicator	-0.144 (-0.82)	-0.514*** (-2.61)	-0.469** (-2.01)	-0.487** (-2.02)	0.224*** (2.69)	-0.249*** (-2.72)
Big 8 Auditor Indicator	0.552** (2.19)	-0.106 (-0.37)	0.523 (1.55)	-0.141 (-0.40)	0.602*** (4.50)	-0.320** (-2.18)
Stock Volatility	6.845*** (5.70)	0.545 (0.40)	6.479*** (3.91)	2.935* (1.71)	4.827*** (8.67)	0.167 (0.27)
Institutional Ownership	-0.319 (-0.81)	0.153 (0.34)	-0.656 (-1.17)	-0.362 (-0.63)	-0.692*** (-4.16)	0.001 (0.01)
Stock Return	-0.061 (-0.40)	0.099 (0.57)	0.132 (0.60)	-0.404* (-1.79)	-0.116* (-1.85)	0.013 (0.20)
Amihud Illiquidity	0.430 (0.23)	-0.181 (-0.08)	1.803 (0.68)	-0.101 (-0.04)	-0.660 (-0.94)	0.288 (0.38)
Analyst Following (LN)	0.060 (0.43)	-0.034 (-0.22)	0.231 (1.25)	0.014 (0.07)	0.018 (0.26)	-0.137* (-1.87)
Negative Earnings Surprise	0.049 (0.56)	-0.213** (-2.15)	0.079 (0.64)	-0.351*** (-2.73)	0.041 (0.92)	-0.182*** (-3.74)
Constant	-6.332*** (-4.01)	-1.170 (-0.65)	-5.246*** (-3.11)	-0.587 (-0.34)	-5.659*** (-9.01)	0.163 (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 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) Disclosure	(2) Similarity	(3) Disclosure	(4) Similarity	(5) Disclosure	(6) Similarity
PASS	0.358*** (2.85)	0.336** (2.23)	0.250 (1.44)	0.560*** (3.19)	0.309** (2.52)	0.097 (0.69)
Polynomial of order 1					-0.005* (-1.93)	0.001 (0.22)
Polynomial of order 2					-0.000 (-0.15)	0.000 (0.42)
Market Value (LN)	0.452*** (5.27)	0.081 (0.78)	0.271** (2.15)	-0.093 (-0.74)	0.450*** (9.39)	0.122** (2.20)
Market to Book	-0.279*** (-4.01)	-0.026 (-0.31)	-0.450*** (-4.40)	0.091 (0.88)	-0.192*** (-6.52)	-0.030 (-0.88)
Return on Assets (ROA)	-1.527 (-1.30)	1.367 (0.97)	-0.877 (-0.54)	2.018 (1.23)	-2.673*** (-4.52)	0.605 (0.89)
Earnings Growth	-0.472 (-0.67)	-0.829 (-0.98)	-1.351 (-1.54)	-0.303 (-0.34)	-0.033 (-0.06)	0.077 (0.13)
Sales Growth	0.174 (0.54)	-0.033 (-0.09)	0.435 (0.85)	-0.024 (-0.05)	0.531*** (2.62)	-0.433* (-1.86)
Loss Indicator	0.095 (0.32)	-0.364 (-1.03)	-0.364 (-0.94)	0.030 (0.08)	0.271* (1.88)	-0.210 (-1.26)
Big 8 Auditor Indicator	0.780** (2.28)	0.062 (0.15)	0.902* (1.94)	0.332 (0.71)	0.778*** (3.83)	-0.451* (-1.92)
Stock Volatility	7.301*** (4.39)	1.629 (0.82)	5.081** (2.06)	2.179 (0.88)	5.269*** (5.99)	1.862* (1.83)
Institutional Ownership	-1.233** (-2.04)	-0.286 (-0.40)	-2.285** (-2.56)	-1.421 (-1.58)	-0.865*** (-2.80)	-0.067 (-0.19)
Stock Return	-0.161 (-0.67)	0.329 (1.15)	0.192 (0.56)	0.241 (0.71)	-0.105 (-1.08)	0.027 (0.24)
Amihud Illiquidity	4.520 (0.61)	-8.175 (-0.92)	5.595 (0.55)	-10.195 (-0.99)	-3.495 (-1.00)	0.177 (0.04)
Analyst Following (LN)	0.114 (0.54)	-0.320 (-1.26)	0.366 (1.34)	-0.260 (-0.94)	-0.137 (-1.30)	-0.225* (-1.85)
Negative Earnings Surprise	-0.048 (-0.38)	-0.253* (-1.66)	-0.115 (-0.62)	-0.011 (-0.06)	-0.044 (-0.65)	-0.190** (-2.41)
Constant	-2.905* (-1.71)	-1.229 (-0.60)	-1.874 (-0.87)	0.678 (0.31)	-4.110** (-2.55)	0.106 (0.06)
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
N	539	539	271	271	2000	2000
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)	(2)	(3)	(4)	(5)	(6)
	Disclosure	Similarity	Disclosure	Similarity	Disclosure	Similarity
PASS	0.178 (1.29)	0.077 (0.53)	0.014 (0.08)	0.425** (2.18)	0.153 (1.20)	0.143 (1.12)
Polynomial of order 1					0.000 (0.10)	-0.007*** (-2.68)
Polynomial of order 2					0.000** (2.04)	-0.000 (-1.57)
Market Value (LN)	0.443*** (4.08)	0.028 (0.25)	0.593*** (4.04)	0.126 (0.80)	0.369*** (7.96)	0.014 (0.30)
Market to Book	0.020 (0.35)	0.118* (1.94)	0.073 (0.82)	0.084 (0.89)	-0.079*** (-3.43)	0.041* (1.75)
Return on Assets (ROA)	-5.887*** (-4.57)	-4.070*** (-2.99)	-8.622*** (-4.30)	-2.295 (-1.07)	-3.538*** (-6.10)	-1.531*** (-2.61)
Earnings Growth	0.429 (0.40)	-0.452 (-0.40)	-0.775 (-0.60)	0.063 (0.05)	0.550 (0.95)	-0.496 (-0.85)
Sales Growth	0.224 (0.44)	1.186** (2.23)	0.230 (0.32)	0.611 (0.79)	-0.020 (-0.09)	0.614*** (2.63)
Loss Indicator	-0.288 (-1.07)	-1.082*** (-3.79)	-0.884** (-2.43)	-0.870** (-2.24)	0.325*** (2.59)	-0.517*** (-4.07)
Big 8 Auditor Indicator	0.422 (0.83)	-0.753 (-1.40)	0.501 (0.72)	-1.392* (-1.86)	0.596** (2.43)	-0.440* (-1.77)
Stock Volatility	11.047*** (4.35)	-1.135 (-0.42)	13.600*** (3.98)	-0.131 (-0.04)	7.494*** (6.78)	-2.134* (-1.91)
Institutional Ownership	-0.169 (-0.25)	0.216 (0.31)	0.170 (0.19)	0.208 (0.22)	-0.379 (-1.35)	0.256 (0.90)
Stock Return	0.347 (1.41)	-0.167 (-0.64)	0.433 (1.18)	-1.032*** (-2.64)	0.160 (1.37)	-0.161 (-1.36)
Amihud Illiquidity	10.078 (0.97)	22.433** (2.05)	6.996 (0.48)	15.752 (1.00)	4.067 (1.38)	5.826* (1.95)
Analyst Following (LN)	0.483* (1.76)	0.473 (1.63)	0.456 (1.20)	-0.340 (-0.84)	0.183 (1.64)	0.027 (0.24)
Negative Earnings Surprise	0.122 (0.88)	-0.326** (-2.24)	0.061 (0.31)	-0.807*** (-3.83)	0.152** (2.30)	-0.139** (-2.08)
Constant	-9.788*** (-4.94)	-2.283 (-1.09)	-10.698*** (-3.93)	1.683 (0.58)	-6.761*** (-6.34)	-0.207 (-0.19)
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
N	512	512	261	261	2000	2000
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 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) Disclosure	(2) Similarity	(3) Disclosure	(4) Similarity	(5) Disclosure	(6) Similarity
PASS	0.247* (1.78)	0.300** (2.08)	0.136 (0.71)	0.482*** (2.63)	0.265* (1.88)	0.282** (2.03)
Polynomial of order 1					-0.004 (-1.12)	-0.008** (-2.17)
Polynomial of order 2					0.000 (0.29)	-0.000 (-1.34)
Market Value (LN)	0.536*** (3.67)	0.091 (0.60)	0.424* (1.96)	-0.102 (-0.50)	0.439*** (6.13)	0.111 (1.56)
Market to Book	-0.276*** (-4.25)	0.036 (0.54)	-0.503*** (-4.28)	0.024 (0.21)	-0.278*** (-8.81)	-0.052* (-1.65)
Return on Assets (ROA)	-3.472*** (-2.67)	0.216 (0.16)	-1.906 (-1.04)	0.573 (0.33)	-3.003*** (-4.51)	0.889 (1.35)
Earnings Growth	-0.285 (-0.25)	-1.349 (-1.16)	-0.961 (-0.53)	-2.235 (-1.29)	0.525 (0.73)	-1.149 (-1.62)
Sales Growth	-0.415 (-0.91)	-0.407 (-0.86)	0.079 (0.12)	-0.331 (-0.55)	0.071 (0.30)	-0.260 (-1.11)
Loss Indicator	-0.488 (-1.59)	-1.896*** (-5.93)	-0.813* (-1.76)	-2.230*** (-5.05)	-0.071 (-0.47)	-0.912*** (-6.11)
Big 8 Auditor Indicator	1.367*** (2.87)	-0.670 (-1.36)	1.395* (1.92)	-0.833 (-1.20)	0.727*** (2.76)	-0.608** (-2.33)
Stock Volatility	12.327*** (5.52)	2.768 (1.19)	10.712*** (2.62)	8.343** (2.14)	9.855*** (8.93)	0.125 (0.11)
Institutional Ownership	-0.093 (-0.11)	-0.811 (-0.94)	-1.342 (-1.12)	-2.089* (-1.82)	-0.562 (-1.59)	-0.249 (-0.71)
Stock Return	-0.247 (-0.95)	-0.005 (-0.02)	0.312 (0.78)	-0.028 (-0.07)	-0.192 (-1.39)	0.142 (1.04)
Amihud Illiquidity	-41.864 (-1.26)	47.802 (1.38)	-37.045 (-0.70)	-11.274 (-0.22)	-34.411** (-2.51)	41.186*** (3.04)
Analyst Following (LN)	-0.372 (-1.13)	0.653* (1.91)	-0.189 (-0.38)	0.351 (0.75)	-0.142 (-0.87)	0.350** (2.17)
Negative Earnings Surprise	0.071 (0.51)	-0.372** (-2.54)	0.133 (0.62)	-0.672*** (-3.27)	-0.033 (-0.47)	-0.201*** (-2.90)
Constant	-4.228 (-1.48)	-2.224 (-0.75)	-0.497 (-0.11)	0.639 (0.15)	-4.738*** (-3.42)	-1.247 (-0.91)
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
N	560	560	270	270	2093	2093
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)
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
N	532	532	266	266	2096	2096
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 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). However, here we are assuming the threshold for approval is 70% instead of 50%. The sample only includes proposals that pass or fail within 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 bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure				Panel B: DV = Similarity of Disclosure			
	(1) LN (Word Count)	(2) LN (Complex Word Count)	(3) LN (Sentence Count)	(4) LN (Paragraph Count)	(5) Cosine Similarity	(6) Modified Jaccard Similarity	(7) Jaccard Similarity	(8) Minimal Distance
PASS	0.007 (0.18)	0.007 (0.19)	-0.002 (-0.05)	-0.019 (-0.35)	-0.003 (-0.60)	-0.007 (-0.95)	-0.008 (-0.59)	0.011 (0.58)
Market Value (LN)	0.064** (2.43)	0.062** (2.42)	0.051** (2.13)	0.031 (0.86)	-0.001 (-0.24)	0.001 (0.20)	-0.004 (-0.50)	0.010 (0.78)
Market to Book	-0.017* (-1.66)	-0.018* (-1.78)	-0.018* (-1.86)	-0.010 (-0.69)	-0.001 (-0.66)	-0.002 (-0.96)	-0.001 (-0.41)	0.004 (0.79)
Return on Assets (ROA)	-0.671** (-2.44)	-0.689*** (-2.59)	-0.586** (-2.36)	-0.448 (-1.19)	0.032 (0.99)	-0.024 (-0.45)	-0.017 (0.19)	-0.107 (-0.83)
Earnings Growth	0.029 (0.11)	-0.039 (-0.15)	0.066 (0.28)	0.177 (0.50)	-0.007 (-0.24)	0.001 (0.03)	0.123 (1.41)	-0.194 (-1.59)
Sales Growth	0.009 (0.21)	0.012 (0.28)	0.000 (0.01)	0.031 (0.50)	0.001 (0.21)	0.005 (0.59)	0.001 (0.09)	-0.005 (-0.26)
Loss Indicator	0.043 (0.65)	0.032 (0.51)	0.070 (1.19)	0.070 (0.78)	0.006 (0.74)	-0.009 (-0.70)	-0.008 (-0.37)	0.002 (0.08)
Big 8 Auditor Indicator	-0.022 (-0.19)	-0.014 (-0.12)	-0.002 (-0.02)	-0.005 (-0.03)	-0.005 (-0.39)	-0.033 (-1.47)	-0.082** (-2.12)	0.049 (0.89)
Stock Volatility	0.711 (1.26)	0.620 (1.14)	0.497 (0.98)	0.445 (0.58)	-0.111 (-1.65)	-0.101 (-0.92)	-0.329* (-1.75)	0.616** (2.34)
Institutional Ownership	-0.332** (-2.40)	-0.334** (-2.51)	-0.329*** (-2.64)	-0.445** (-2.35)	-0.001 (-0.07)	-0.007 (-0.28)	0.026 (0.57)	-0.026 (-0.41)
Stock Return	0.040 (0.58)	0.053 (0.79)	0.056 (0.91)	-0.130 (-1.38)	0.006 (0.75)	0.001 (0.05)	0.007 (0.32)	-0.011 (-0.35)
Amihud Illiquidity	-0.270 (-0.37)	-0.297 (-0.42)	-0.345 (-0.52)	-1.220 (-1.22)	0.055 (0.63)	-0.003 (-0.02)	-0.100 (-0.41)	0.021 (0.06)
Analyst Following (LN)	0.172*** (2.97)	0.170*** (3.06)	0.174*** (3.35)	0.326*** (4.12)	0.001 (0.19)	-0.003 (-0.31)	-0.027 (-1.39)	0.002 (0.09)
Negative Earnings Surprise	-0.073* (-1.78)	-0.072* (-1.81)	-0.051 (-1.38)	0.021 (0.36)	-0.007 (-1.35)	-0.009 (-1.09)	-0.008 (-0.59)	0.000 (0.02)
Constant	9.623*** (17.14)	8.182*** (15.12)	6.431*** (12.72)	5.394*** (7.02)	0.991*** (14.79)	0.992*** (9.13)	0.717*** (3.82)	0.346 (1.31)
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	560	560	560	560	560	560	560	560
adj. R-sq	0.423	0.460	0.445	0.326	0.055	0.038	0.217	0.202

Table 12b Placebo Test Assuming 25% Threshold for Passing (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). 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 bracket. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Panel A: DV = Quantity of Disclosure				Panel B: DV = Similarity of Disclosure			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	LN (Word Count)	LN (Complex Word Count)	LN (Sentence Count)	LN (Paragraph Count)	Cosine Similarity	Modified Jaccard Similarity	Jaccard Similarity	Minimal Distance
PASS	-0.007 (-0.24)	-0.003 (-0.11)	-0.008 (-0.33)	-0.029 (-0.93)	0.005* (1.79)	0.005 (1.06)	0.008 (1.03)	-0.017 (-1.55)
Market Value (LN)	0.138*** (8.08)	0.134*** (8.16)	0.131*** (8.43)	0.131*** (6.90)	0.000 (0.20)	0.003 (1.08)	0.002 (0.39)	-0.009 (-1.34)
Market to Book	-0.054*** (-4.75)	-0.054*** (-4.87)	-0.052*** (-4.95)	-0.051*** (-3.98)	-0.000 (-0.19)	0.000 (0.21)	0.004 (1.12)	-0.003 (-0.55)
Return on Assets (ROA)	-0.536** (-2.40)	-0.530** (-2.46)	-0.485** (-2.38)	-0.414* (-1.66)	0.036* (1.68)	0.036* (1.10)	0.041 (1.39)	-0.164* (-1.82)
Earnings Growth	0.490* (1.90)	0.430* (1.73)	0.383 (1.63)	0.259 (0.90)	0.002 (0.10)	-0.058 (-1.35)	-0.051 (-0.67)	0.065 (0.63)
Sales Growth	0.025 (0.28)	0.042 (0.50)	0.012 (0.14)	-0.080 (-0.82)	-0.011 (-1.24)	-0.026* (-1.75)	-0.044* (-1.69)	0.027 (0.75)
Loss Indicator	0.134** (2.33)	0.128** (2.30)	0.124** (2.34)	0.177*** (2.76)	-0.006 (-1.14)	-0.022** (-2.28)	-0.022 (-1.30)	0.023 (0.99)
Big 8 Auditor Indicator	0.325*** (3.03)	0.294*** (2.84)	0.296*** (3.01)	0.221* (1.85)	-0.012 (-1.15)	-0.026 (-1.43)	-0.042 (-1.34)	0.111** (2.58)
Stock Volatility	1.950*** (4.98)	1.850*** (4.91)	1.759*** (4.92)	1.735*** (3.98)	0.064* (1.69)	0.233*** (3.56)	0.174 (1.51)	-0.312** (-1.98)
Institutional Ownership	-0.306*** (-2.73)	-0.312*** (-2.90)	-0.263** (-2.57)	-0.316** (-2.53)	-0.012 (-1.10)	-0.008 (-0.42)	-0.026 (-0.79)	0.040 (0.89)
Stock Return	-0.074 (-1.61)	-0.073* (-1.65)	-0.056 (-1.33)	-0.071 (-1.37)	-0.006 (-1.34)	-0.016** (-2.06)	-0.015 (-1.14)	0.036* (1.95)
Amihud Illiquidity	-0.010 (-0.03)	-0.037 (-0.12)	0.013 (0.05)	0.004 (0.01)	0.020 (0.64)	0.031 (0.58)	0.106 (1.11)	-0.093 (-0.72)
Analyst Following (LN)	-0.024 (-0.52)	-0.014 (-0.31)	-0.030 (-0.71)	0.033 (0.64)	0.001 (0.16)	0.000 (0.06)	0.002 (0.12)	0.007 (0.36)
Negative Earnings Surprise	-0.001 (-0.02)	-0.000 (-0.01)	0.009 (0.34)	0.021 (0.67)	-0.010*** (-3.63)	-0.012** (-2.50)	-0.023*** (-2.72)	0.028** (2.38)
Constant	8.835*** (25.73)	7.492*** (22.67)	5.746*** (18.33)	4.709*** (12.32)	0.995*** (30.14)	0.941*** (16.42)	0.641*** (6.33)	0.352** (2.55)
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191
adj. R-sq	0.506	0.539	0.529	0.460	0.070	0.097	0.192	0.166

Appendix A: Definition of Control Variables

Variable Name	Definition
Firm Size	Natural logarithm of equity market value
Market-to-Book Ratio	$(\text{Total Long-Term Debt} + \text{Market Value of Equity}) / (\text{Total Long-Term Debt} + \text{Book Value of Equity})$
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 that equals to one if net income for the year is negative, and zero otherwise
Auditor Quality	Dummy variable equals to one if the auditor codes are between 1 and 8, and zero otherwise
Stock Volatility	Annualized standard deviation of month stock returns
Institutional Ownership	Total institutional ownership as a percentage of shares outstanding
Stock Return	Natural logarithm of annualized stock return adjusted by inflation
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 that equals to one if SUE score is negative, and zero otherwise. SUE (Standardized Unanticipated Earnings) Score = $(\text{Actual EPS} - \text{Surprise Mean}) / \text{Standard Deviation}$.

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

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-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-1} considers how large investor i 's stake is in firm f , and how much of 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-1} is computed using equation (2), pg. 1669 from Kempf et al. (2017) as shown below:

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

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., $QPFWeight_{ifq-1}$) 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 f 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.