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# Repetitive Disclosure in the MD&A

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## **Repetitive Disclosures in the MD&A**

**ABSTRACT:** This study is the first to empirically analyze repetitive disclosures in the Management Discussion and Analysis (MD&A) section of the 10-K filing. Repetitive disclosures refer to the extent that content in the MD&A is repeated from the audited financial statement notes. I empirically analyze repetitive disclosures in the MD&A section of the 10-K filing, and find that firms tend to use more repetitive disclosures when firms have a new CEO, a high level of new disclosures in the notes, issued equity, and have missed the prior year's earnings benchmark. These findings suggest that not all managers use repetitive disclosures to simply obfuscate disclosures. Rather, some managers use repetitive disclosures to emphasize firm-specific events, consistent with the succession hypothesis. The Securities and Exchange Commission (SEC) states that repetitive disclosures are uninformative and that such disclosures decrease the informativeness of other disclosures in the MD&A. Casting doubts on the SEC's comments, in my primary analyses, I find that repetitive disclosures are informative to investors; this result is stronger for individual investors. Overall, my results suggest that repetitive disclosures are informative, and such disclosures may be effective tools for providing information to investors.

**Keywords:** Repetitive disclosures, MD&A, textual disclosures, successive communication

**Data availability statement:** The data supporting findings of this study are openly available under the SEC EDGAR Filings & Forms at <https://www.sec.gov/edgar.shtml>. Any other relevant financial data are available through subscription sources discussed under Section 4 of the paper.

## **Repetitive Disclosures in the MD&A**

### **1. Introduction**

Repetition is an essential part of life.<sup>1</sup> We repeat ourselves because it is quicker and uses fewer mental and physical resources. Repetition can also be an effective rhetorical tool to communicate messages to desired audiences (Leonardi, Neeley, & Gerber, 2012). Repetition is catching regulators' and standard setters' attention, as managers use it frequently in financial disclosures (Ernst & Young, 2014; SEC, 2014b; SolomonEdwards, 2014). As the volume of financial disclosures has grown, regulators and standard setters claim that financial disclosures are so repetitive that it is difficult for investors to find the most important information (Ernst & Young, 2014).

The International Accounting Standards Board (IASB) Discussion Forum has listed duplicative (i.e., repetitive) disclosures as an urgent matter that needs to be addressed through the examination of the annual report (IASB, 2010, 2013). The Securities and Exchange Commission (SEC) documents many instances in which firms repeat disclosures from the audited financial statement notes section ("notes") in the Management Discussion and Analysis (MD&A), inconsistent with the SEC's call to eliminate repetition between the notes and MD&A (SEC, 2003, 2014a). Supporting the views of the SEC and the IASB, in 2007, the Financial Accounting Standards Board's (FASB) Investors Technical Advisory Committee recommended to eliminate repetition between the MD&A and the notes. The FASB emphasized the need to work with the SEC and minimize duplicative disclosures in annual reports because generally accepted accounting principles (GAAP) and SEC rules often contain similar disclosure requirements (FASB, 2001, 2012).

I define repetitive disclosures as the percentage of content in the MD&A repeated from the notes. Examining such repetitive disclosures is important for three main reasons: (1) the MD&A is one of the

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<sup>1</sup> Note, there is a subtle difference between repetition and redundancy. The English dictionary defines "redundancy" as something that is repeated unnecessarily or something that is not useful because there is already another or more advanced version. However, repetition is simply the act of repeating something that has already been said or written. Without empirical analyses, this paper does not draw any conclusion on the usefulness of financial disclosure repetitions. Therefore, the term "repetitive" is used.

most widely read disclosures in annual reports (e.g., Li, 2010); (2) the SEC, the FASB, and the IASB have all shown an interest in understanding and eliminating repetitive disclosures between the MD&A and the notes;<sup>2</sup> and (3) the level of repetition between the MD&A and the notes is significantly higher than it is between the MD&A and other 10-K sections. Based on my analysis, repetitive disclosures have been steadily increasing since SEC EDGAR became available, particularly after major disclosure policy changes (such as the Sarbanes–Oxley Act).<sup>3</sup>

Regulators and standard setters maintain that repetitive disclosures result from ambiguity in disclosure requirements and are uninformative (SEC, 2003; FASB, 2001), leading to less transparent financial reporting and worse decision making.<sup>4</sup> However, the succession hypothesis from the communication literature argues that the use of repetitive disclosures is an effective tool for disseminating information to recipients (Stephens, 2007). For instance, the MD&A and the notes can be considered two separate information channels because a person can obtain information separately from each of the two sections. This hypothesis posits that repetitive disclosures are informative because users of financial statements may miss the information communicated in one channel but notice it through another channel. The succession hypothesis further argues that repeating information through an alternative channel (e.g., repeating the note information in the MD&A) does not overburden a person's processing capacity; rather, the information is reinforced (Dahle, 1954). Using an experimental design, Stephens and Rains (2011) find that using repetitive messaging to communicate in a situation of informational overload decreases perceptions of overload and increases perceptions of information effectiveness.

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<sup>2</sup> Under the IFRS, the MD&A-equivalent financial disclosure is the Management Commentary. The IASB defines Management Commentary as a narrative report that provides financial and non-financial information useful to users of financial reports, where “other financial” is defined as information outside the financial statements that assists in the interpretation of financial statements or improves users' ability to make better economic decisions (IASB, 2018). Due to the fact that machine-readable Management Commentaries are not readily available, using the MD&A should also provide insight into the IASB's concerns regarding the repetition between the Management Commentaries and the notes (ISAB, 2010; Zhang, Aerts, & Pan, 2018).

<sup>3</sup> For example, in untabulated analysis, I find that the percentage of textual content in repetitive disclosures belonging to the significant accounting policy notes increased from 25% to 40% from 1995 to 2013.

<sup>4</sup> See “Speech by SEC Commissioner: Twelfth Annual A.A. Sommer, Jr. Lecture on Corporate, Securities and Financial Law,” <http://www.sec.gov/news/speech/2011/spch102711tap.htm> (accessed March 3, 2012).

Motivated by the discrepancy between regulators' arguments and the succession hypothesis, I conduct the following empirical analyses. I apply the Measure of Software Similarity (MOSS) plagiarism-detecting program to a large sample of MD&As spanning from 1995 to 2013 to examine two research questions.<sup>5</sup> First, I examine the determinants of repetitive disclosures. I find that firms tend to use more repetitive disclosures when they have a new CEO, a high level of new disclosures in the notes, issued equity, and have missed the prior year's earnings benchmark, while controlling for the competitive and litigation environments. These findings suggest that not all managers use repetitive disclosures to simply obfuscate disclosures. Rather, some managers use repetitive disclosures to emphasize firm-specific events, consistent with the succession hypothesis.

Second, I investigate whether repetitive disclosures are informative for investors. This question is the focal point of my study because it addresses regulators' and standard setters' concerns. I find that repetitive disclosures are informative for investors. Specifically, the magnitude of absolute cumulative market-adjusted stock returns over the three days beginning with the 10-K filing date is positively associated with the level of repetitive disclosures. However, this relation is only significant in firms with low institutional ownership, suggesting that individual investors may find repetitive disclosures to be more informative. Additional analyses show that repetitive disclosures are not associated with analyst earnings forecast revisions immediately following the 10-K release date, indicating that repetitive disclosures may not be informative to financial analysts. The findings are robust to controlling for a number of other 10-K filing and firm characteristics and to alternative variable measurements.

In addition to my main contribution of providing insightful empirical evidence of regulators' and standard setters' concerns over repetitive disclosures, I contribute to the literature in the following three ways. First, I provide initial empirical evidence suggesting that repetitive disclosures are informative to users of financial statements, particularly to individual investors. My results cast doubts on the SEC's comments that firms should eliminate repetitive disclosures. Understanding how individual investors use

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<sup>5</sup> MOSS is a web-based plagiarism-detecting program hosted through the Stanford server by Professor Alex Aiken. For further details, see: <http://theory.stanford.edu/~aiken/moss/>.

financial information is an important concern for standard setters and regulators. My results can assist the SEC as it works closely with the FASB and the IASB in deciding how best to address repetitive disclosures, while keeping in mind their mandate to protect individual investors.

Second, with a growing interest in the textual analysis literature to use advances in computer science, my paper introduces a new computer linguistic tool into accounting disclosure research (El-Haj, Rayson, Walker, Young, & Simaki, 2019). Using the advantages of MOSS, I provide the first large-sample study to further our understanding of repetitive disclosures, focusing specifically on the repetition between the MD&A and the notes. Finally, I contribute to both communication and advertising literature fields with a longstanding interest in the topic of repetitive communication (Shannon & Weaver, 1949; Johnson & Watkins, 1971; Pechmann & Stewart, 1988), which has become increasingly common (Law, 2002; Leonardi et al., 2012). My use of a financial reporting setting to test the succession hypothesis, developed in the communication literature, helps broaden our understanding of financial reporting as well as repetitive communication.

## **2. Background and hypotheses development**

Courtis (1996) manually examines the repetition level within the voluntary disclosures of 145 Hong Kong annual reports. Cazier and Pfeiffer (2017) use a sample of 63,695 firm-years, spanning from 1994 to 2013, to examine disclosures repeated between sections of 10-K excluding the notes versus the notes. Merkley (2014) uses disclosure repetition as a measure of quality to improve our understanding of R&D disclosures in the 10-K. It is important to keep in mind that the sample sizes of the aforementioned studies are relatively small in comparison to this study. The evidence found is also mixed and inconclusive. For instance, Courtis (1996) finds that repetition within annual reports' voluntary disclosures does not overload users with too much information, but Cazier and Pfeiffer (2017) find repetition to be negative and used to hamper the interpretation of 10-Ks. What is more important is that none of the aforementioned studies speak directly to the understanding of the determinants and

consequences of the repetition between the MD&A and the notes, which remains a key concern for the SEC and the FASB.

Item 303 of Regulation S-K mandates that companies should disclose the MD&A as Item 7 in the 10-K filing. According to the SEC, the MD&A should: (1) provide an insider's view of a company's financial performance with a forward-looking orientation; and (2) complement as well as supplement audited financial statements in providing a discussion of capital resources, results of operations, off-balance sheet arrangements, critical accounting estimates, significant contractual obligations, and other material and relevant information (SEC, 2003, 1987). The SEC emphasizes the need for managers to discuss factors that would likely cause future results to differ from those reported in the past.<sup>6</sup> Managers are not supposed to merely repeat financial information in narrative form.

The content of the MD&A is unaudited and considered discretionary. In fact, the SEC encourages managers to exercise discretion and provide “investors with an opportunity to look at the company through the eyes of management by providing both a short- and long-term analysis of the business of the company” (SEC, 1987). Given the MD&A's discretionary nature, managers may be repeating information due to similarities in regulatory disclosure requirements, or they may be strategically deciding where and what information to repeat. I expect there is variation across firms in their use of repetitive disclosures. Research focused on the succession hypothesis affords potential incentives for managers to use repetitive disclosures. I discuss these incentives in the following paragraphs.

### *2.1. Repetitive disclosures and managerial incentives*

Under the succession hypothesis, a channel is defined as a tool that handles information and enables communication among people (Stephens, 2007). Leonardi et al. (2012) find that managers often use repetitive communication to ensure that receivers are aware of significant events and that information

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<sup>6</sup> To clearly differentiate between the notes and the MD&A, the FASB states that the notes should not include forecasts, predictions, or expectations about the future. See “FASB issues proposal on board decision process for disclosure framework project,” [https://www.fasb.org/cs/ContentServer?c=FASBContent\\_C&cid=1176163869073&d=&pagename=FASB%2FFASBContent\\_C%2FNewsPage](https://www.fasb.org/cs/ContentServer?c=FASBContent_C&cid=1176163869073&d=&pagename=FASB%2FFASBContent_C%2FNewsPage) (accessed March 15, 2014).

relating to such events is processed by receivers. More specifically, they conducted an ethnographic investigation to learn why managers often communicate the same message through different media channels.<sup>7</sup> They examine the communication patterns of project managers in six companies across three industries and find that repetitive communication is a response to unexpected endogenous or exogenous threats to meeting work goals.

Stephan, Stephan, and Gudykunst (1999) conclude that using repetitive communication lowers the rate of error and increases the credibility of the information transferred. Belanger and Watson-Manheim (2007) suggest that when the same message is sent through multiple media channels, the recipient is led to think that the transmitted message is more important than if the message is communicated only once. Westerman, Van Der Heide, Klein, and Walther (2008) support the idea that the succession hypothesis is applicable in settings where the mass media are anonymous, that is, senders and receivers of messages generally do not know each other. Senders make channel choices for conveying information. This is consistent with the idea that investors and managers generally do not know each other, and managers make choices regarding which channel to provide information to investors.

The succession hypothesis suggests that the use of repetitive disclosures is an effective tool for disseminating information (Stephens, 2007). Hence, repetitive communication could be a useful tool for managers to communicate significant events and increase the likelihood of such information reaching investors. In a financial-disclosure setting, significant events can be interpreted as unexpected operational events that have impacted firms' financial performance in a way unexpected by investors. Managers, who usually have first-hand knowledge, can choose to use repetitive disclosures to communicate such significant events to ensure investors have the relevant information. For instance, because some investors will read only the MD&A and not the notes, if a manager wants all investors reading their 10-K to be aware of something important, the manager may choose to repeat disclosures in both places. Taken together, the above discussion suggests that firms with significant economic events are more likely to

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<sup>7</sup> The participants in this study were all enrolled in an executive education course for project managers at a major research university in the San Francisco Bay Area.



have repetitive disclosures. I propose my directional hypothesis (in alternative form):

*H1: Managers facing significant economic events use more repetitive disclosures.*

In contrast to the argument above, the “obfuscation hypothesis” claims that only firms with negative information would have more repetitive disclosures, because self-serving managers may use repetitive disclosures to increase disclosure volume and obfuscate negative results in an attempt to conceal their firm’s true performance and obstruct investors’ monitoring abilities. For example, Bloomfield (2008) demonstrates how Teradyne, a company with poor fiscal performance, used approximately 1,200 repetitive words in the MD&A section that were already included in the notes. Bloomfield (2008) suggests that managers have the intention to obfuscate investors by increasing repetitive disclosures and delaying investors’ reactions to bad news. Li (2008) reinforces this argument by finding that firms with negative earnings news tend to have less readable MD&As than firms with positive earnings news. Thus, when I examine *H1*, I incorporate an indicator variable to distinguish firms experiencing negative earnings news from firms experiencing positive earnings news to test this alternative explanation.

## *2.2. Repetitive disclosures and market reactions*

In this section, I discuss market consequences of repetitive disclosures for investors. The succession hypothesis argues that people have different preferences for how they receive a message (Carlson & Zmud, 1999; King & Xia, 1999), and by successively communicating a repetitive message using two or more channels, the sender increases the probability of choosing a channel more tailored toward recipient needs (Stephens, 2007). It is possible that a recipient may be unwilling to process a message if it is sent through a channel he or she does not prefer (Fulk, Schmitz, & Steinfield, 1990). Hence, successively communicating through various channels implies that a single message is sent through more than one channel.

Applying the succession hypothesis to my setting, repetitive disclosures are informative because investors have two channels to process information: the notes and the MD&A. Supporting the premise of the succession hypothesis, a 2008 “Mandatory Disclosure Documents Telephone Survey” commissioned

by the SEC concludes that, on average, investors spend around ten to thirty minutes reviewing annual reports. Given that annual reports often exceed 38,000 words, the short time frame investors allocate to reviewing the report implies that they limit their review to only certain sections of the report (Loughran & McDonald, 2014).

Supporting above arguments, advertising research demonstrates that by providing additional processing opportunities, repetition leads to better recall and generally results in a significant positive effect on consumers. Repetition can lead to a more thorough learning of information, which will reduce the likelihood that it will be forgotten (Johnson & Watkins, 1971). Advertising research does not have a consensus on the level of repetitive exposure that would start having no impact or negative impact on consumer. The ultimate impact of high repetitive exposure depends on concurrent factors, such as customers' experience, gender, age, etc. High level of repetitive exposure is not a concern for repetitive disclosures, because Arnold, Bedard, Phillips and Sutton (2010) conclude that when investors require information, only a small percentage of them review both the MD&A and the notes. Furthermore, the "repetition-priming effect" from cognitive research argues that the memory formed during a first reading can facilitate the processing ability during a second reading (Harrison, 1968; Johnson, Thomson, & Frincke, 1960; Matlin, 1970; Zajonc, 1968), also suggesting that repetitive disclosures may help investors' information-processing ability.

Hence, summarizing arguments from the succession hypothesis and advertising research, repetitive disclosures provide additional learning opportunities to help investors process the information more easily, which in turn makes repetitive disclosures informative. These discussions lead to my *H2*.

*H2: Disclosures in the MD&A that repeat information from the notes are informative.*

However, the SEC states that repetitive disclosures are uninformative for investors because they contain the exact same information already included in the notes, which is available to all investors concurrently with the MD&A. The SEC suggests that repetitive disclosures "overwhelm investors' information environment and make it difficult for investors to identify and process material information" (SEC, 2003). In consensus with the SEC, a 2011 KPMG disclosure survey concludes that repetitions in

annual reports are redundant and unnecessary. This survey suggests that the removal of repetitive disclosures would help control the length of annual reports (KPMG, 2011).

The SEC's claim that repetitive disclosures are uninformative is further supported by the following arguments. In an efficient market, repetitive disclosures should not have market effects and would be considered uninformative, because repeating information conveys no new information (Fama, 1970). Furthermore, the "no differences" view, discussed in Schipper (2007), posits that once an item enters the annual reports, its location and presentation should have no direct implication. According to this view, all information in annual reports is processed based on the informational content, not on how and where it is presented. Thus, investors should not be reacting to repetitive disclosures contained in the MD&A.

### **3. Measuring Repetitive Disclosures**

Consistent with the SEC's recommendation to "say it well, but say it once," I define repetitive disclosures as the percentage of content in the MD&A repeated from the notes.<sup>8</sup> This *within-firm* design isolates the effect of repetitive disclosures from other disclosure factors that might create cross-sectional and time-series differences.

To obtain repetitive disclosures from the MD&A, I perform the following steps. First, for each firm-year, I use the MOSS plagiarism-detecting program to compare the MD&A with the notes. For each compared file, MOSS generates a plagiarism score. The plagiarism score ranges from 0% to 100%, and it depicts the percentage of text in one file that is considered to be plagiarized from the other file: the higher the score, the greater the amount of text that is plagiarized in the file. In addition to the score, for each file uploaded, MOSS generates an HTML page that indicates sections of documents that are plagiarized and sections of documents that are not plagiarized. Repetitive disclosures are the textual content considered repeated from the notes (i.e., plagiarized sections).

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<sup>8</sup> See "SEC's Advisory Committee on Improvements to Financial Reporting Releases Final Report," SEC Flash Report (Protiviti Independent Risk Consulting, 2008)

The MOSS plagiarism-detecting program was developed in 1994 by Professor Alex Aiken, currently at Stanford University.<sup>9</sup> The MOSS submission script works for Unix/Linux platforms. MOSS has been shown in various computer science publications to be a top plagiarism-detection performer, and it is widely used by professors and university teaching assistants (Bowyer & Hall, 1999; Hage, Rademaker, & van Vugt, 2011). MOSS is also used in practice by companies to help with intellectual property lawsuits. Although MOSS is mainly used in the field of computer science to detect plagiarized code, it is also capable of detecting plagiarism in plain text (Upreti & Kumar, 2012). MOSS has thousands of users who use the program to detect plagiarism in various documents; the program should thus be capable of identifying repetitive disclosures in my study with reasonable accuracy.

I use MOSS in my setting because, to the best of my knowledge, alternative non-proprietary plagiarism programs do not allow submission “bash” commands.<sup>10</sup> MOSS is effective and efficient in generating results, and it saves manual processing time when working with a large number of textual files. Using MOSS, I can automate the comparison of the MD&A with the notes to extract repetitive disclosures. MOSS is not an open source program; the exact computational method used by MOSS is proprietary. Therefore, in providing a description of the program’s computational plagiarism methodology, I am constrained by Professor Aiken’s intellectual property rights.

MOSS treats all submitted files as text files and uses a document fingerprinting algorithm called *winnowing* (Schleimer, Wilkerson, & Aiken, 2003). Winnowing divides a document into contiguous substrings, called *tokens*. Every token is hashed, and a subset of tokens is selected as the document's fingerprint. Essentially, MOSS transforms the original file into string tokens, where tokens are the building blocks of a file (e.g., identifiers, keywords, and such), while whitespace, punctuation, uppercase

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<sup>9</sup> According to discussions with Professor Aiken, MOSS has around 145,000 users. Professor Aiken estimates there are approximately 10,000 active users at any point of time.

<sup>10</sup> A bash command is a sh-compatible command language interpreter that executes commands read from the standard input or from a file. If I had to use MOSS manually to perform each comparison, I would need approximately six months to extract repetitive disclosures from each MD&A. To illustrate, with a sample of 50,000 firm-year observations and approximately two minutes required to use MOSS manually to decompose each MD&A, I would need a total of 1,666.7 hours. Assuming nine hours a day, the work would require approximately 185 days just for the first part of the data processing.

characters, and non-alphanumeric symbols are thrown out. The token representations of the files are then compared to detect similarities.

Specifically, MOSS conducts the following steps:

1. Removing all whitespace and punctuation from each file and converting all characters to lowercase.
2. Dividing the remaining non-whitespace characters of each file into *k-grams*, which are contiguous substrings of length *k*, by sliding a window of size *k* through the file. In this way, the second character of the first *k*-gram is the first character of the second *k*-gram, and so on.
3. Hashing each *k*-gram and selecting a subset of all *k*-grams to be the fingerprints of the document. The fingerprint includes information about the position of each selected *k*-gram in the document.
4. Comparing file fingerprints to find similar files.

With every research approach comes trade-offs, and this study is no exception. Natural-language processing has advanced significantly in recent years, but most of the natural-language processing proxies used by researchers remain approximations of how humans interpret textual information. In theory, MOSS should capture the underlying construct, which is a disclosure copied from the notes to the MD&A. However, the MOSS program was not designed specifically for a financial-disclosure setting, and as such, there is always a risk that MOSS might not accurately detect repetitive disclosures.

To gain additional assurance on MOSS's performance, I randomly select 50 MD&As to confirm that MOSS has reasonably detected repetitive disclosures. For each MD&A selected by Python, I match the selected MD&A with the corresponding note disclosures. I then manually compare the extracted repetitive disclosures with the notes. For repetitive disclosures, I gain reasonable assurance that those disclosures are either repetitions and/or paraphrased versions of the disclosures in the notes. Due to space limitation, Appendix A provides some examples of repetitive disclosures. As observed, repetitive disclosures are repetitions from the notes with minor modifications and include topics from taxation to segment reporting.<sup>11</sup> Appendix A shows that if a piece of information exists in the notes, then managers

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<sup>11</sup> Each extraction is associated with a unique pair of CIK and filing date identifier used to match with the original MOSS output.

can include such information in the MD&A as repetitive disclosures. In conclusion, MOSS accurately extracts repetitive disclosures from the MD&A.

#### **4. Sample and Content Analyses**

To conduct my empirical analyses, I obtain my sample in the following steps. First, I obtain all available 10-Ks, spanning from 1995 to 2013, from SEC EDGAR. My sample starts with 1995 because I require the previous year's filings to be on EDGAR, and 1994 is the first year that companies started to file 10-Ks electronically. I then follow Lehavy, Li, and Merkley (2011) and remove filings with fewer than 3,000 words or 100 lines to ensure that a complete filing is examined and that no errors were made in the filing transmission. Second, I separately extract the MD&A from Item 7 and the notes from Item 8 for each available 10-K.<sup>12</sup> I combine the Central Index Key (CIK) and the 10-K filing date as a unique identifier to match the extracted MD&As and notes sections. I remove all extractions for which I am unable to obtain a matching MD&A/notes pair. Third, I merge the extracted EDGAR data with Compustat, using the CIK and fiscal year end, to arrive at 68,996 firm-year observations for my initial analyses.

Figure 1 illustrates the distribution of *Raw\_Repetitive* has increased over time from 18.5% to 26.7%, especially after periods of major disclosure policy changes (such as after the enactment of the Sarbanes-Oxley Act on July 30, 2002). Panel A of Table 1 provides the sample distribution for each fiscal year, consistent with regulators' and standard setters' comments regarding the prevalence of repetitive disclosures; from 1995 to 2013, repetitive disclosures increased over time. The sample size is based on the SEC EDGAR 10-K filings, where repetitive disclosures are electronically extractable without constraining to control variables required for empirical analyses.

##### *4.1. Content analyses of repetitive disclosures*

To provide an understanding of the content of repetitive disclosures, I use two different methods.

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<sup>12</sup> The details of the extraction process are available upon request. I use regular expression and the NLTK package from Python to complete the extraction process.

For the first method (i.e., informational content), I extract significant accounting policy, litigation, and revenue recognition note disclosures separately from the notes.<sup>13</sup> I compare the textual content of each extracted note section against repetitive disclosures to determine the percentage of disclosures considered plagiarized. Although this content analysis method is extremely time-consuming, it has the benefit of providing the exact type of information contained in repetitive disclosures.

In the second method (i.e., linguistic characteristics), I follow prior work by Li (2008), Li (2010), and Merkley (2014) and attempt to understand the content of repetitive disclosures using linguistic proxies. These proxies include the number of forward-looking statements, the number of numerical sentences, readability, and tone. This method has the benefit of providing different aspects of the content of repetitive disclosures. A sentence is defined as numerical if it contains numerical information that is not in the form of a date (Merkley, 2014). A sentence is identified as forward-looking if it contains future-related words and phrases specified in Li (2010). Readability is the fog index and measured as  $(\text{words per sentence} + \text{percent of complex words}) \times 0.4$  (Li, 2008). A sentence is considered positive or negative based on whether it has more positive or negative words, and the tone of repetitive disclosures is measured as the number of positive sentences less the number of negative sentences divided by the total number of sentences (Merkley, 2014; Li, 2010; Loughran & McDonald, 2011).

Appendix B provides the results of the content analysis. Under the informational content categories, mean averages indicate that within repetitive disclosures' content, approximately 36% comes from repeating significant accounting policy note disclosures, 14% comes from repeating litigation note disclosures, and 6% comes from repeating revenue recognition note disclosures. Significant accounting policy, litigation, and revenue note disclosures form almost 56% of repetitive disclosures' content. This result confirms the regulators and standard setters' ongoing claim that repetitive disclosures mainly contain repetitive information from aforementioned note sections. In terms of linguistic characteristics, repetitive disclosures on average have 42% of sentences containing numerical information and 85% of

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<sup>13</sup> The decision to extract these three note sections is based on the fact that the discussion of disclosure repetitions by the SEC and the FASB often focuses on these sections. This extraction process is conducted for the full sample.

sentences with future-related words. The tone of repetitive disclosures is generally positive, and the average readability is comparable to other sections of the 10-K (El-Haj et al., 2019).

## 5. Determinants of Repetitive Disclosures

I use the specification in Equation (1) to investigate the determinants of repetitive disclosures.

$$\begin{aligned} Repetitive_{it} = & \beta_0 + \beta_1 CEO\_Turnover_{it} + \beta_2 MA_{it} + \beta_3 SEO_{it} + \beta_4 Notes\_modifications_{it} \\ & + \beta_5 |Earnings\_news|_{it} + \beta_6 Neg\_earnings + firm\_controls \\ & + Industry\ FE + Year\ FE + Auditor\ FE + \eta_{it}. \end{aligned} \quad (1)$$

*Repetitive* is the natural logarithm of 1 plus *Raw\_Repetitive*, where *Raw\_Repetitive* is the MOSS-generated plagiarism score that captures the percentage of textual content in the MD&A copied from the notes for firm *i* in year *t*.<sup>14</sup> To illustrate, if the notes section has twenty sentences and the MD&A has ten sentences, of which five are highly similar and five are more novel, then the *Raw\_Repetitive* would be 50%.

To capture firm-specific significant economic events, I use the following variables: CEO turnover, mergers and acquisitions, seasoned equity offerings, and new disclosures in the notes. CEO turnover (*CEO\_Turnover*) is an indicator variable set to 1 for a firm that has changed its CEO in year *t*, and 0 otherwise. *MA* measures firm-year-specific mergers and acquisitions; it is set to 1 for year *t* if company appears in the SDC Platinum M&A database as an acquirer, and 0 otherwise. *SEO* captures seasoned equity offering events. *SEO* is set to 1 for a year in which a company has a common equity offering in the secondary market according to the SDC Global New Issues database, and 0 otherwise. New disclosure modifications in the notes (*Notes\_modifications*) capture the amount of new disclosures the notes contain in year *t* in comparison to year *t-1*. The succession hypothesis predicts a positive relation

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<sup>14</sup> I take the natural logarithm of the scores generated by the MOSS program to decrease the influence of skewness because the score is strictly positive and skewed. In untabulated results, I also rerun the analyses using the raw scores, and inferences do not change.



between *Repetitive* and those firm-specific economic event proxies.<sup>15</sup>

To examine the obfuscation hypothesis, I use a firm's change in earnings to proxy for signed events because Graham, Harvey, and Rajgopal (2005) report that 85.1% of CFO survey respondents considered earnings in the same quarter of the prior year as the most important earnings benchmark to meet. The idea is that if a firm misses the prior year's earnings benchmark, it faces negative earnings news. I use *Neg\_earnings*, an indicator variable that equals 1 if the firm has experienced negative earnings news, and 0 otherwise. The obfuscation hypothesis predicts a positive  $\beta_6$  because managers have incentives to obfuscate investors by using repetitive disclosures when facing negative news (Bloomfield, 2008). To untangle managers' motives in using repetitive disclosures when facing positive and negative news, I also control for the magnitude of the change in earnings. I use  $|Earnings\_news|$ , an indicator variable that equals 1 if a firm's year-to-year absolute change in earnings is greater than the sample median year-to-year absolute change in earnings, and 0 otherwise. The succession hypothesis predicts a positive coefficient on  $\beta_5$  because the firm is likely to use more repetitive disclosures to explain a greater change in earnings. In untabulated results, I also use analyst earnings forecasts as a benchmark for earnings information. I include both signed and unsigned differences between analyst earnings forecasts and the firm's earnings in year  $t$ . The main inference—that firms are likely to use more repetitive disclosures to explain a greater change in earnings—does not change.

A key objective of financial disclosure is to reduce uncertainty in the investors' information environment (Beyer, Cohen, Lys, & Walther, 2010). Thus, I examine whether managers' decision to include repetitive disclosures is impacted by uncertainty. Psychological studies, such as Lee (2001), suggest that uncertainty exists in new and developing relationships as well as in established, ongoing relationships. When people communicate in an environment with uncertainty, repetition allows for consistent communication because individuals prefer familiar information over new information. Thus,

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<sup>15</sup> As this study is the first to explore repetitive disclosures, there is little guidance from prior literature on what constitutes significant economic events in relation to repetitive disclosures. I empirically explore different significant economic events that are potentially relevant to financial disclosure decisions, as it is empirically infeasible to capture all firm-specific significant economic events.

repetitive disclosure could be used as a tool in an environment with high uncertainty to enable communication between managers and investors. I use the standard deviation of a firm's twelve-month returns to proxy for a firm's uncertainty.

I also control for a firm's competitive and legal environment. According to the SEC, the purpose of the MD&A is to give management an opportunity to provide meaningful disclosures about future operational performance. However, such information could potentially damage firms' competitive position (Healy & Palepu, 2001). To prevent such an outcome, firms in a competitive environment can choose to provide repetitive information from the notes instead of disclosing sensitive and detailed operational information that is incremental to that in the notes. I use the Herfindahl index to proxy for firms' competitive environment (*Comp*).<sup>16</sup>

The "safe harbor," under the Private Securities Litigation Reform Act of 1995, encourages managers to provide forward-looking information in the MD&A. However, Tarca, Street, and Aerts (2011) find that the legal environment is a major deterrent for managers who consider providing such forward-looking information in the MD&A. In fact, some argue that the current legal environment incentivizes managers to write the MD&A in a more compliance-oriented and checklist-driven manner (Tarca et al., 2011). Providing audited information from the notes, instead of unaudited information in the MD&A, may decrease managers' litigation risk. If a given disclosure is found to be inaccurate after the fact, the managers can argue they were not intentionally misleading investors, and in turn, they can blame auditors for not detecting this mistake. Following Bova, Dou, and Hope (2015), among others, I categorize firms with SIC codes, 2833–2836, 3570–3577, 3600–3674, 5200–5961, 7370–7374, and 8731–8734, as firms facing high litigation risk (*Litig*). I make no particular predictions on the control variables, as there are no direct ex-ante theory-based predictions on how they should relate to repetitive disclosures.

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<sup>16</sup> The Herfindahl index is a measure of the size of firms in relation to the industry, and it is an indicator of the amount of competition among them: the lower the Herfindahl index, the higher the level of competition.

## Additional firm-level controls

To control for a firm's disclosure environment, I include the following variables: the standard deviation of the firm's operating earnings during the prior five fiscal years (*Earn\_vol*); the firm's special items scaled by book value of its total assets in year  $t$  (*Special*); the logarithm of the number of non-missing items in Compustat in year  $t$  (*NewItems*); and firm size in year  $t$  (*Size*). These characteristics were identified in prior studies as associated with corporate voluntary disclosure policies, and thus, they may be associated with the level of repetitive disclosures (Li, 2008).

### 5.1. Descriptive statistics

Panel A of Table 2 includes descriptive statistics of the variables used. The means of *MD&A\_modifications* and *Notes\_modifications* are similar in magnitude, indicating that the MD&A and the notes are providing a similar level of new disclosures in year  $t$ . The mean value on *CEO\_Turnover* indicates that approximately 1% of the sample experienced a change in CEO. The means of *MA* and *SEO* are 17% and 12%, respectively. These indicate that firms have a higher level of mergers and acquisitions than of seasoned equity offerings. The mean value for  $|Earnings\_news|$  suggests that 34% of the sample significantly deviated from year  $t-1$ 's earnings, and the mean value for *Neg\_earnings* suggests that 42% of the firms deviating from year  $t-1$ 's earnings experienced a negative deviation.

Panel B of Table 2 presents the correlation table for Equation (1). There is a significant positive correlation between *Repetitive* and variables of interest, such as the *CEO\_Turnover*. This indicates that when the firm faces more significant economic events, there are more repetitive disclosures. Although several of the variables are significantly correlated with each other, most correlation coefficients are not large.

### 5.2. Empirical results

Following Equation (1), Table 3 presents Panel A and Panel B to examine determinant factors of repetitive disclosures. Panel A provides regression results of repetitive disclosures on economic event determinants. Column 1 includes all variables of interest. From column 2 to column 5, each variable of interest is regressed individually in relation to repetitive disclosures. Excluding column 3, in all other

columns, *Repetitive* is positively associated with the variable of interest (the coefficient on *CEO\_Turnover* is 0.04 with a *t*-statistic of 2.79; the coefficient on *SEO* is 0.02 with a *t*-statistic of 4.12; the estimated coefficient on *|Earnings\_news|* is 0.02 with a *t*-statistic of 5.03). This finding indicates that when a firm is facing significant economic events, managers use more repetitive disclosures, supporting the succession hypothesis. In column 6, the coefficient on *Neg\_earnings* is 0.02 with a *t*-statistic of 3.74, indicating managers incorporate more repetitive disclosures when facing negative year-to-year change in earnings, supporting the obfuscation hypothesis. With respect to the control variables, the coefficient estimates on *Uncertainty* and *Size* are positive and significant, suggesting that larger firms and firms with higher uncertainty are more likely to use repetitive disclosures.

Panel B provides regression results of repetitive disclosures and textual characteristic determinants. In column 1, the coefficient on *Notes\_modifications* is 0.15 with a *t*-statistic of 15.34, suggesting that firms provide more repetitive disclosures when more new disclosures exist in the notes. From column 2 to column 4, new disclosures in the significant accounting policy, new disclosures in the litigation note disclosures, and new disclosures in the revenue note disclosures represent components of *Notes\_modifications*. *Repetitive* is positively associated with each variable of interest (the coefficient on *Sig\_modifications* is 0.07 with a *t*-statistic of 11.15; the coefficient on *Litig\_modifications* is 0.02 with a *t*-statistic of 6.46; the estimated coefficient on *Rev\_modifications* is 0.01 with a *t*-statistic of 5.09). Supporting results under Appendix B, repetitive disclosures are higher when there is a change in mandatory accounting standards, when firms face new litigation, or when firms have changed the way they recognize revenue.

To ensure that I have a more complete determinants model, additional textual linguistic characteristics of repetitive disclosures are included to determine whether those characteristics can more fully explain variations in repetitive disclosures. Those linguistic characteristics are *Fog\_RP*, *FLS\_RP*, *Num\_RP*, and *Tone\_RP*. *Fog\_RP* is  $-1 \times$  the Gunning-Fog index for repetitive disclosures. *FLS\_RP* is the number of forward looking statements contained in repetitive disclosures in year *t*. *Num\_RP* is the number of numerical statements contained in repetitive disclosures in year *t*. *Tone\_RP* is the tone of repetitive

disclosures. The interpretations on the main variables of interests are consistent when these additional control variables are included in the regression.

Overall, results from Table 3 suggest that not all managers use repetitive disclosures simply to obfuscate disclosures. Rather, some managers use repetitive disclosures to emphasize firm-specific significant events, consistent with the succession hypothesis.

## 6. Market Consequences of Repetitive Disclosures

To test *H2*, I examine the relation between absolute cumulative market-adjusted stock returns ( $|CAR^{10K}|$ ), the dependent variable, and repetitive disclosures (*Repetitive*), the main variable of interest. My coefficient of interest is  $\alpha_1$ , and *H2* predicts it will be associated with the dependent variable. I use the following multivariate regression, motivated by Brown and Tucker (2011):

$$\begin{aligned} |CAR^{10K}|_{it} = & \alpha_0 + \alpha_1 Repetitive_{it} + \alpha_2 MD\&A\_modifications_{it} + \alpha_3 NotesLength_{it} \\ & + \alpha_4 Filedate_{it} + \alpha_5 |CAR^{EA}|_{it} + \alpha_6 NewItems_{it} + \alpha_7 Size_{it} + firm\_controls \\ & + Industry\ FE + Year\ FE + Auditor\ FE + \eta_{it}. \end{aligned} \quad (2)$$

$|CAR^{10K}|$  is measured over the three days beginning with the 10-K filing date, and it proxies for investors' reaction around that date (Griffin, 2003).<sup>17</sup> Using MOSS, I compare a firm's MD&A at year  $t$  to year  $t-1$ . I obtain a plagiarism score ranging from 0 to 100, with a higher score indicating more similarity. The difference score is 100 minus the similarity score. *MD&A\_modifications* is the natural logarithm of 1 plus the difference score. A higher *MD&A\_modifications* implies that firm  $i$  has incorporated more new information into year  $t$ 's MD&A disclosure.

Given that a portion of the notes contains the same information as the repetitive disclosures, I control for the information content of the notes using *NotesLength*. *NotesLength* is measured as the natural logarithm of 1 plus the number of words in the notes.<sup>18</sup> *Fileddate* is an indicator variable that equals 1 if the 10-K filing date is at least 90 days after the fiscal year end, and 0 otherwise. *Fileddate* controls for

<sup>17</sup> Griffin (2003) documents that the absolute value of excess returns is reliably greater on the day of, and on the one or two days immediately following, the filing date.

<sup>18</sup> I take the natural logarithm of the number of words in the notes, rather than the raw number of words, due to the skewness in the number of words across firms.

the potential market reactions in firms that have delayed their 10-K filings (Choudhary, Merkley, & Schloetzer, 2013).  $|CAR^{EA}|$  is the three-day absolute cumulative market-adjusted stock returns centered on the earnings announcement date and controls for the complementary or substitutive relation between the earnings announcement and the subsequent 10-K filing. *NewItems* is the natural logarithm of 1 plus the number of non-missing items on COMPUSTAT for firm  $i$  in year  $t$ ; it controls for the new numerical information in the 10-K.<sup>19</sup> *Size* is the natural logarithm of total assets for firm  $i$  at year  $t$  and controls for market reactions when firms differ in size.

### 6.1. Descriptive statistics

Panel A of Table 2 presents descriptive statistics for the variables used in my empirical analyses. Here, I focus my discussion on the variables not present in Panel A of Table 1. The mean (median) for the year-to-year disclosure differences in the MD&A (*MD&A\_modifications*) is 3.92 (4.01). The mean *Fileddate* indicates that 7% of the sample firms are late 10-K filers. The mean of the absolute cumulative stock return around the earnings announcement date is 6%. The descriptive statistics on *NewItems* suggest that firms have a similar number of basic financial statement items for year  $t$ . Panel C of Table 2 includes the correlations among the variables used to test Equation (2). There is a significant positive correlation between *Repetitive* and  $|CAR^{10K}|$ . This indicates that repetitive disclosures may be informative for investors.

### 6.2. Empirical results

Table 4 summarizes the results of *H2* using Equation (2) and ordinary least-squares (OLS). The 0.03 coefficient on *Repetitive* in column 1 is positive and statistically significant, with a  $t$ -statistic of 3.98, which indicates that repetitive disclosures are positively related to the absolute cumulative market-adjusted stock return over the three days beginning with the 10-K filing date. This finding is consistent with repetitive disclosures being informative. To provide some perspective on the economic significance,

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<sup>19</sup> The underlying assumption, with *NewItems* as a proxy for the numerical information in the 10-K, is that firms with more information, on average, have to report more items in their financial statements. As a robustness test, I also use the change in *NewItems* as an alternative proxy. This alternative proxy is not significant in the consequence regression, and the main inference concerning repetitive disclosures and market reactions does not change.

on average, these results imply that a one-standard-deviation increase in *Repetitive* increases  $|CAR^{10K}|$  by 5.5% of the sample median.<sup>20</sup>

In terms of control variables, I focus my discussion on column 1. The positive coefficient on *MD&A\_modifications*, 0.03 with a *t*-statistic of 3.85, indicates that the new information in the MD&A is informative for investors. *NotesLength* is positively associated with  $|CAR^{10K}|$ . I make no specific predictions on *NotesLength*, as there is little guidance from prior literature on how it might relate to  $|CAR^{10K}|$ . *Fileddate* and  $|CAR^{EA}|$  are both positively related to  $|CAR^{10K}|$ , suggesting that additional information is revealed in the delayed filing and that earnings announcements complement 10-K filings. *Size* and *NewItems* are negatively related to  $|CAR^{10K}|$ .<sup>21</sup>

To provide information regarding the mechanism that is leading to more informative repetitive disclosures, I include (untabulated) interaction variables between economic events identified in Equation (1) (i.e., *CEO\_Turnover*, *MA*, *SEO*,  $|Earnings\_news|$ , *Neg\_earnings*) with *Repetitive*. After including various interaction variables, repetitive disclosures remain positively significant around the 10-K filing date, suggesting that repetitive disclosures do improve the 10-K's information environment beyond the existence of significant economic events.<sup>22</sup>

### **Additional control variables**

This is the first study to examine the relation between repetitive disclosures and market reactions. Prior literature provides limited guidance on how to control for other potential omitted variables. Therefore, I include a battery of firm-level controls to mitigate omitted variable concerns. In column 1, I

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<sup>20</sup> The coefficient estimate on *Repetitive* is scaled by 10 to ease its interpretation.

<sup>21</sup> In untabulated results, I also ran of H2 using two-stage least squares (2SLS). In the first stage, I control for determinants of repetitive disclosures and include additional firm characteristics. The finding that repetitive disclosures are positively related to the absolute cumulative market-adjusted stock return over the three days beginning with the 10-K filing date remains consistent.

<sup>22</sup> To provide additional evidence on H2 and on the cross-sectional variations in the informativeness of repetitive disclosures, I partition (untabulated) the sample to examine cross-sectional variations in repetitive disclosures and market reactions. Specifically, I partition firms facing positive and negative earnings news. I find that all the main inferences continue to hold. In particular, there is no difference in the relation between repetitive disclosures and market reactions for the partitioning of positive and negative earnings news.

include firm specific events from the determinants model. In column 2, the textual characteristics of the repetitive disclosures is controlled by including the fog index, forward-looking statements, numerical statements, and the tone of the repetitive disclosures. In column 3, I include content proxies of MD&A because repetitive disclosures are a component of the MD&A. In column 4, I control for the occurrence of specific note disclosure changes that may be discussed in repetitive disclosures. Finally, in column 5, I rerun Table 4 by including all control variables in one regression. The conclusion that repetitive disclosures are informative for investors remains robust.<sup>23</sup>

### **Falsification test**

In addition to running the short-window market-reaction test and including additional control variables, I also conduct a falsification test. More specifically, I examine the relation between repetitive disclosures and the absolute cumulative market-adjusted stock returns of a random selection of pseudo-event dates. The benefit of a falsification test is that when we cannot conclusively affirm a hypothesis, we may use a falsification test to show that the finding from Table 4 is not a random occurrence. The results are presented in Table 5. As observed, the relation between repetitive disclosures and market returns is not significant.

It is important to acknowledge that although I have a battery of tests to ensure my inferences are robust, any event study using the 10-K report date suffers from the limitation that there is no easy way to control for all possible changes in economic circumstances at the time the 10-K is released. There is simply too much information in the 10-K. Notwithstanding my controls for changes in economic circumstances, it is impossible to rule out the alternative interpretation that the positive coefficient on *Repetitive* is evidence that firms with more repetitive disclosures experience larger changes in economic circumstances. In an ideal world, there should be no difference in changes in economic circumstances for

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<sup>23</sup> As a robustness check, I also use two different dependent variables to proxy for market reaction. I use the absolute cumulative market-adjusted stock return over the three days centered on the 10-K filing date to proxy for investors' reactions. I also use the standardized absolute cumulative market-adjusted stock return over the three days centered on the 10-K filing date. I find the same conclusion for repetitive disclosures.



firms with high and low levels of repetitive disclosures, for the interpretation that repetitive disclosures are informative around the 10-K release date to hold perfectly.

Overall, consistent with the predictions under the succession hypothesis and advertising research, the findings above suggest that repetitive disclosures are informative and that such disclosures are an effective tool for providing information to investors.

## **7. Investor type and repetitive disclosures**

Arnold et al. (2010) find that when individual (i.e., retail) investors acquire information, in 59% of instances, such investors review at least one item in the MD&A section, and in approximately 30% of instances, they review at least one item in the notes. However, when institutional (i.e., professional) investors acquire information, in 85% of instances, such investors review at least one item in the MD&A section, and in around 69% of instances, they review at least one item in the notes. This survey hence suggests that, relative to institutional investors, a greater percentage of individual investors neglect the notes but review the MD&A. This result is consistent with the succession hypothesis, which argues that people have different preferences about the channel through which they would like to receive information (Stephens, 2007). Taken together, these arguments suggest that repetitive disclosures are more informative and useful to individual investors because such investors are likely more dependent on repetitive disclosures for information.

To test the difference between individual and institutional investors, I partition my sample based on whether the firm's institutional ownership is below or above the median and re-estimate Equation (2) using these two subsamples. Firms with institutional ownership above the sample median are considered to have high institutional ownership (e.g., Hillary & Hsu, 2013; D'Souza, Ramesh, & Shen, 2010). I obtain the data from Thomson-Reuters Institutional Holdings (13F) and measure institutional ownership as firm  $i$ 's averaged institutional holdings during year  $t$ .

Table 6 presents evidence on whether the relation between repetitive disclosures and market reactions differs by investor type. The sample size is smaller for this test ( $N = 38,009$ ), as I require data on

institutional ownership. Consistent with the hypothesis, the informativeness of repetitive disclosures does indeed vary by investor type. The coefficient on *Repetitive* in column 1 (high institutional ownership) is not significant, whereas in column 2 (low institutional ownership), *Repetitive* is 0.05 with a *t*-statistic of 3.49. These results suggest that repetitive disclosures are only informative in firms with lower institutional ownership, a finding that is consistent with survey results suggesting that individual investors are more likely than institutional investors to review only the MD&A.<sup>24</sup>

## 8. Repetitive disclosures and financial analysts

I examine the association between analysts' forecast revisions and repetitive disclosures because analysts are major information intermediaries who use and interpret accounting data (Schipper, 1991). The intuition is that, after the 10-K release date, repetitive disclosures may impact analysts' likelihood of issuing a revision in their earnings forecasts due to changes in uncertainty or opinion diversity (Zhang, Aerts, & Pan, 2018). Furthermore, Lehavy et al. (2011) provide evidence that 10-K disclosures are an important informational source for financial analysts. I examine whether analysts' forecast revisions are associated with repetitive disclosures after the 10-K release date. To test this notion, I estimate Equation (2) with  $|Revision|$  as the dependent variable.  $|Revision|$  is the absolute value of the difference between the mean analyst forecast for year  $t+1$ , issued in the 90-day window before the 10-K filing, and the mean forecasts for year  $t+1$  issued in the 30-day window after the filing, scaled by the end-of-year stock price.

Table 7 column 1 summarizes the results of estimating Equation (2) using  $|Revision|$  as the dependent variable. Although the coefficient on *Repetitive* in column 1 is positive, it provides no evidence on the relation between repetitive disclosures and analyst forecast revisions following the 10-K filing date, suggesting that analysts do not use repetitive disclosures in revising earnings forecasts. In terms of control variables, *NotesLength* is positively associated with analysts' forecast revisions, with a coefficient

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<sup>24</sup> In my analysis of investor types, I exclude observations where there is no 13-F (filing), as those firms are not available in the dataset. To ensure this drop in the sample size does not bias my results, I re-run the Table 6 analysis including all those firms without institutional ownership information and firms with low institutional holdings. Inferences do not change.

of 0.03 and a  $t$ -statistic of 2.43. *Filed* is positive, with a coefficient of 0.10 and a  $t$ -statistic of 1.69, suggesting that analysts are using the information, relating to delayed 10-K filings, in earnings forecast revisions. *NewItems* is unassociated with  $|Revision|$ , and *Size* is negatively related to  $|Revision|$ .

## 9. Conclusions

Using all available 10-K filings spanning 1995–2013, I investigate the determinants and consequences of repetitive disclosures in the MD&A. I find that firms tend to use more repetitive disclosures when they have a new CEO, a high level of new disclosures in the notes, issued equity, and have missed the prior year's earnings benchmark, while controlling for firms' competitive and litigation environment. These findings suggest that not all managers use repetitive disclosures to obfuscate disclosures. Rather, some managers use repetitive disclosures to emphasize firm specific events, consistent with the succession hypothesis. In my primary analyses, I examine whether repetitive disclosures are informative. I find that repetitive disclosures are informative for investors.

This study is the first to empirically examine contemporaneous repetitive disclosures in the same annual reports. I use a *within-firm* design to isolate the effect of repetitive disclosures from other disclosure factors that might create cross-sectional and time-series differences. I provide evidence that suggests repetitive disclosures are informative for users of financial statements. As information is relevant only if it is used, I offer my study as an important step toward understanding the implications of repetitive disclosures' existence within annual reports. My study can help regulators and standard setters to better comprehend how users process repetitive disclosures in the financial-reporting setting and form more constructive future disclosure policies.

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## Appendix A

### Illustrations of Repetitive disclosures in the MD&A

The following provides examples of repetitive disclosures after MOSS compares the MD&A and the notes for firm *i* in year *t*. The purpose of this appendix is to provide information on what managers are repeating from the notes to the MD&A. Minimum formatting is required to remove extra spacing between the textual extractions when copying MOSS results to produce the following table.

MD&A	The notes
<p>CIK: 20 YEAR: 2008-03-12</p> <p>Only tax positions that met the more-likely-than-not recognition threshold at the adoption date were recognized and, with respect to later dates, only those that met or meet the threshold on those later dates have been or will be recognized at those dates. The company is subject to income taxes in the U.S. federal jurisdiction and also in various state, local and foreign jurisdictions. Tax laws and regulations within each jurisdiction are subject to interpretation and require significant judgment to apply. with few exceptions, the company is no longer subject to U.S. federal, state or local or non-U.S. income tax examinations by tax authorities for years before 2004. the company recognizes interest accrued related to uncertain tax liabilities in interest expense and recognizes penalties in operating expenses. The company had accrued approximately \$153,000 for the payment of interest.</p> <p>The citizens loan agreement contains financial and other covenants, including a minimum fixed charge coverage ratio, a minimum net worth and a maximum debt ratio, and includes limitations on, among other things, liens, acquisitions, consolidations, sales of assets, incurrences of debt and capital expenditures. as of december 29, 2007, the borrowers were in compliance with these covenants and limitations. If an event of default, such as non-payment or failure to comply with a covenant, were to occur under the citizens loan agreement, and subject to any applicable grace period, the lenders would be entitled to declare all amounts outstanding under the facility immediately due and payable. as of december 29, 2007, the total borrowing under the revolving credit facility was \$33,750,000,</p>	<p>CIK: 20 YEAR: 2008-03-12</p> <p>Only tax positions that met the more-likely-than-not recognition threshold at the adoption date were recognized and, with respect to later dates, only those that met or meet the threshold on those later dates have been or will be recognized at those dates. The company is subject to income taxes in the u.s. federal jurisdiction and also in various state, local and foreign jurisdictions. tax laws and regulations within each jurisdiction are subject to interpretation and require significant judgment to apply. with few exceptions, the company is no longer subject to u.s. federal, state or local or non-u.s. income tax examinations by tax authorities for years before 2004. the company recognizes interest accrued related to uncertain tax liabilities in interest expense and recognizes penalties in operating expenses. The company had accrued approximately \$153,000 for the payment of interest.</p> <p>The citizens loan agreement contains financial and other covenants, including a minimum fixed charge coverage ratio, a minimum net worth and a maximum debt ratio, and includes limitations on, among other things, liens, acquisitions, consolidations, sales of assets, incurrences of debt and capital expenditures. as of december 29, 2007, the company was in compliance with these covenants and limitations. if an event of default, such as non-payment or failure to comply with a covenant, were to occur under the citizens loan agreement, and subject to any applicable grace period, the lenders would be entitled to declare all amounts outstanding under the facility immediately due and payable. as of december 29, 2007, the total borrowing under the revolving credit facility was \$33,750,000,</p>
<p>CIK: 1750 YEAR: 2008-07-11</p> <p>General Overview We report our activities in four business segments: Aviation Supply Chain; Maintenance, Repair and Overhaul; Structures and Systems; and Aircraft Sales and Leasing. Sales in the Aviation Supply Chain segment are derived from the sale and lease of a wide variety of new, overhauled and repaired engine and airframe parts and components to the commercial aviation and defense markets, as well as the repair and overhaul of a wide range of commercial and military aircraft parts and components. We also offer customized programs for inventory supply and</p>	<p>CIK: 1750 YEAR: 2008-07-11</p> <p>Segment Reporting We report our activities in four business segments: Aviation Supply Chain; Maintenance, Repair and Overhaul; Structures and Systems; and Aircraft Sales and Leasing. Sales in the Aviation Supply Chain segment are derived from the sale and lease of a wide variety of new, overhauled and repaired engine and airframe parts and components to the commercial aviation and defense markets, as well as the repair and overhaul of a wide range of commercial and military aircraft parts and components. We also offer customized programs</p>



<p>management and performance-based logistics. Sales also include the sale and lease of commercial jet engines. Cost of sales consists principally of the cost of product (primarily aircraft and engine parts), direct labor and overhead (primarily indirect labor, facility cost and insurance). Sales in the Maintenance, Repair and Overhaul segment are principally derived from aircraft maintenance and storage and the repair and overhaul of landing gear. Cost of sales consists principally of the cost of product (primarily replacement aircraft parts), direct labor and overhead. Sales in the Structures and Systems segment are derived from the engineering, design and manufacture of containers, pallets and shelters used to support the U.S. military's tactical deployment requirements, complex machined and fabricated parts, components and sub-systems for various aerospace and defense programs and other applications, in-plane cargo loading and handling systems for commercial and military applications and composite products for aviation and industrial use. Cost of sales consists principally of the cost of product, direct labor and overhead.</p>	<p>for inventory supply and management and performance-based logistics. Sales also include the sale and lease of commercial jet engines. Cost of sales consists principally of the cost of product (primarily aircraft and engine parts), direct labor and overhead (primarily indirect labor, facility cost and insurance). Sales in the Maintenance, Repair and Overhaul segment are principally derived from aircraft maintenance and storage and the repair and overhaul of landing gear. Cost of sales consists principally of the cost of product (primarily replacement aircraft parts), direct labor and overhead. Sales in the Structures and Systems segment are derived from the engineering, design and manufacture of containers, pallets and shelters used to support the U.S. military's tactical deployment requirements, complex machined and fabricated parts, components and sub-systems for various aerospace and defense programs and other applications, in-plane cargo loading and handling systems for commercial and military applications and composite products for aviation and industrial use. Cost of sales consists principally of the cost of product, direct labor and overhead.</p>
<p>CIK: 1800 YEAR: 2008-02-19</p>	<p>CIK: 1800 YEAR: 2008-02-19</p>
<p>the valuation method used to fair value the projects was the multi-period excess earnings method (income approach) and the risk-adjusted discount rates used ranged from 16 percent to 25 percent. in developing assumptions for the valuation model, comparable abbott products or products marketed by competitors were used to estimate pricing, margins and expense levels. as of December 31, 2007, the research efforts were primarily on schedule. the estimated projected costs to complete totaled approximately \$390 million as of december 31, 2007, with anticipated product launch dates from 2008 through 2013. there have been no significant changes in the development plans for the acquired incomplete projects. significant net cash inflows will commence within one to two years after product launch. in order to facilitate boston scientific's acquisition of guidant, abbott also acquired 64.6 million shares of boston scientific common stock directly from boston scientific and loaned \$900 million to a wholly-owned subsidiary of boston scientific. the common stock was valued at \$1.3 billion and the note receivable was valued at \$829 million at the acquisition date. in connection with the acquisition of the shares, boston scientific is entitled to certain after-tax gains upon abbott's sale of the shares. in addition, boston scientific agreed to reimburse abbott for certain borrowing costs on debt incurred to acquire the boston scientific shares. abbott recorded a net derivative financial instruments liability of \$59 million for the gain-sharing derivative financial instrument liability and the interest derivative financial instrument asset. the effect of recording the shares, the loan to boston scientific and the derivative financial instruments at fair value on the date of acquisition resulted in the recording of additional goodwill of approximately \$204 million. changes in the fair value of the derivative financial instruments, net are recorded in other</p>	<p>the valuation method used to fair value the projects was the multi-period excess earnings method (income approach) and the risk-adjusted discount rates used ranged from 16 percent to 25 percent. in developing assumptions for the valuation model, comparable abbott products or products marketed by competitors were used to estimate pricing, margins and expense levels. As of december 31, 2007, the research efforts were primarily on schedule. the estimated projected costs to complete totaled approximately \$390 million as of december 31, 2007, with anticipated product launch dates from 2008 through 2013. there have been no significant changes in the development plans for the acquired incomplete projects. significant net cash inflows will commence within one to two years after product launch. in order to facilitate boston scientific's acquisition of guidant, abbott also acquired 64.6 million shares of boston scientific common stock directly from boston scientific and loaned \$900 million to a wholly-owned subsidiary of boston scientific. the common stock was valued at \$1.3 billion and the note receivable was valued at \$829 million at the acquisition date. in connection with the acquisition of the shares, boston scientific is entitled to certain after-tax gains upon abbott's sale of the shares. in addition, boston scientific agreed to reimburse abbott for certain borrowing costs on debt incurred to acquire the boston scientific shares. abbott recorded a net derivative financial instruments liability of \$59 million for the gain-sharing derivative financial instrument liability and the interest derivative financial instrument asset. the effect of recording the shares, the loan to boston scientific and the derivative financial instruments at fair value on the date of acquisition resulted in the recording of additional goodwill of approximately \$204 million. changes in the fair value of the derivative financial instruments, net are recorded in other</p>

(income) expense, net. in 2005, abbott acquired the remaining interest in a small medical products company and a less than 50 percent equity interest in a small medical products company for \$25 million.	(income) expense, net. in 2005, abbott acquired the remaining interest in a small medical products company and a less than 50 percent equity interest in a small medical products company for \$25 million.
CIK: 1923 YEAR: 2008-07-30	CIK: 1923 YEAR: 2008-07-30
The Company leases space in its income-producing properties to tenants and recognizes minimum base rentals as revenue on a straight-line basis over the lease term. The lease term usually begins when the tenant takes possession of, or controls the physical use of, the leased asset. Generally, this occurs as of the lease commencement date. In determining what constitutes the leased asset, the Company evaluates whether the Company or the tenant is the owner of the improvements. If the Company is the owner of the improvements, then the leased asset is the finished tenant space. In such instances, revenue recognition begins when the tenant takes possession of the finished space, typically when the improvements are substantially complete. If the Company determines that the improvements belong to the tenant, then the leased asset is the unimproved tenant space, and any improvement allowances funded by the Company under the lease are treated as lease incentives that reduce the revenue recognized over the term of the lease. In these circumstances, the Company begins revenue recognition when the tenant takes possession of the unimproved space. The Company considers a number of different factors in order to determine whether the Company or the tenant owns the improvements. These factors include: (1) whether the lease stipulates the terms and conditions of how an improvement allowance may be spent; (2) whether the tenant or the Company retains legal title to the improvements; (3) the uniqueness of the improvements; (4) the expected economic life of the improvements relative to the length of the lease; and (5) who constructs or directs the construction of the improvements. The determination of who owns the improvements is subject to significant judgment. In making this determination, the Company considers all of the above factors; however, no one factor is determinative in reaching a conclusion. Certain leases may also require tenants to pay additional rental amounts as partial reimbursements for their share of property operating and common area expenses, real estate taxes, and insurance, which reimbursements are recognized as revenues when earned. In addition, certain leases require retail tenants to pay incremental rental amounts, which are contingent upon their individual store s sales.	The Company leases space in its income-producing properties to tenants and recognizes minimum base rentals as revenue on a straight-line basis over the lease term. The lease term usually begins when the tenant takes possession of, or controls the physical use of, the leased asset. Generally, this occurs as of the lease commencement date. In determining what constitutes the leased asset, the Company evaluates whether the Company or the tenant is the owner of the improvements. If the Company is the owner of the improvements, then the leased asset is the finished tenant space. In such instances, revenue recognition begins when the tenant takes possession of the finished space, typically when the improvements are substantially complete. If the Company determines that the improvements belong to the tenant, then the leased asset is the unimproved tenant space, and any improvement allowances funded by the Company under the lease are treated as lease incentives that reduce the revenue recognized over the term of the lease. In these circumstances, the Company begins revenue recognition when the tenant takes possession of the unimproved space. The Company considers a number of different factors in order to determine whether the Company or the tenant owns the improvements. These factors include: (1) whether the lease stipulates the terms and conditions of how an improvement allowance may be spent; (2) whether the tenant or the Company retains legal title to the improvements; (3) the uniqueness of the improvements; (4) the expected economic life of the improvements relative to the length of the lease; and (5) who constructs or directs the construction of the improvements. The determination of who owns the improvements is subject to significant judgment. In making this determination, the Company considers all of the above factors; however, no one factor is determinative in reaching a conclusion. Certain leases may also require tenants to pay additional rental amounts as partial reimbursements for their share of property operating and common area expenses, real estate taxes, and insurance, which reimbursements are recognized as revenues when earned. In addition, certain leases require retail tenants to pay incremental rental amounts, which are contingent upon their individual store s sales.
CIK: 2034 YEAR: 2008-09-05	CIK: 2034 YEAR: 2008-09-05
contaminated property in tennessee called the pulvair site. the prp group has alleged that aceto shipped hazardous substances to the site which were released into the environment. the state had begun administrative proceedings against the members of the prp group and aceto with respect to the cleanup of the pulvair site and the group has begun to undertake cleanup. the prp group is seeking a settlement of approximately \$2,100 from the company for its share to remediate the site	to remediate a contaminated property in tennessee called the pulvair site. the prp group has alleged that aceto shipped hazardous substances to the site which were released into the environment. the state had begun administrative proceedings against the members of the prp group and aceto with respect to the cleanup of the pulvair site and the group has begun to undertake cleanup. the prp group is seeking a settlement of approximately \$2,100 from the company for its share to

<p>contamination. although the company acknowledges that it shipped materials to the site for formulation over twenty years ago, the company believes that the evidence does not show that the hazardous materials sent by aceto to the site have significantly contributed to the contamination of the environment. accordingly, the company believes that the settlement offer is unreasonable. alternatively, counsel to the prp group has proposed that aceto join it as a participating member and pay 3.16% of the prp group's cost. the company believes that this percentage is high because it is based on the total volume of materials that aceto sent to the site, most of which were non-hazardous substances and as such, believes that, at most, it is a de minimus contributor to the site contamination. The impact of the resolution of this matter on the company's results of operations in a particular reporting period is not known.</p>	<p>remediate the site contamination. although the company acknowledges that it shipped materials to the site for formulation over twenty years ago, the company believes that the evidence does not show that the hazardous materials sent by aceto to the site have significantly contributed to the contamination of the environment. accordingly, the company believes that the settlement offer is unreasonable. alternatively, counsel to the prp group has proposed that aceto join it as a participating member and pay 3.16% of the prp group's cost. the company believes that this percentage is high because it is based on the total volume of materials that aceto sent to the site, most of which were non-hazardous substances and as such, believes that, at most, it is a de minimus contributor to the site contamination. The impact of the resolution of this matter on the company's results of operations in a particular reporting period is not known.</p>
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## Appendix B

### Content of repetitive disclosures

This appendix provides content information of repetitive disclosures. Under informational content, the scores represent the average percentage of textual content within repetitive disclosures that is considered plagiarized from the significant accounting policy notes, or the litigation notes, or the revenue notes. Under linguistic characteristics, numerical sentence is the percentage of sentences containing numerical information that is not in the form of a date (Merkley, 2014); forward-looking statement is the percentage of sentences identified as forward-looking if it contains future-related words and phrases specified in Li (2010); readability is calculated as (words per sentence + percent of complex words)  $\times$  0.4 following Li (2008); mean tone is measured as the number of positive sentences less the number of negative sentences divided by the total number of sentences.

<i><b>Informational Content</b></i>	Mean	Median	Std. Dev.
Significant Accounting Policy Note Disclosures	35.98	32.00	21.70
Litigation Note Disclosures	14.43	8.00	16.45
Revenue Note Disclosures	5.76	3.00	7.61
<i><b>Linguistic Characteristics</b></i>			
Numerical Sentence	0.42	0.41	0.17
Forward-looking Statement	0.85	0.94	0.24
Readability	20.74	20.61	2.76
Mean Tone	0.13	0.09	0.29

## Appendix C

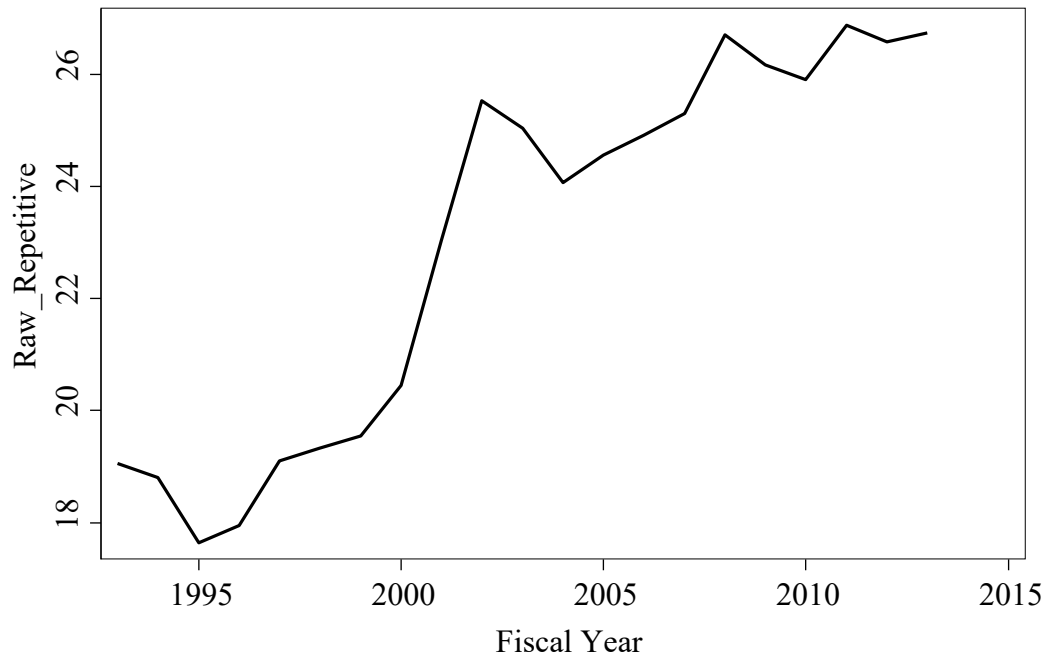
### Variable definitions

Variable	Definitions
<b>Market reactions</b>	
$ CAR^{10K} $	= Absolute cumulative market decile-adjusted stock returns over the three days beginning with the 10-K filing date, obtained from CRSP;
$ Revision $	= The absolute difference between the mean analyst forecasts for year $t+1$ issued in the 90-day window before the 10-K filing and the mean forecasts for year $t+1$ issued in the 30-day window after the filing, scaled by the stock price at the end of year $t$ ;
$lg\_ Revision $	= Natural logarithm of 1 plus $ Revision $ ;
$ CAR^{random} $	= Absolute cumulative market decile-adjusted stock returns over the three days based on randomly chosen pseudo-event date during fiscal year $t+1$ , and 10-K filing dates are excluded, obtained from CRSP;
<b>Measures of repetitive disclosures</b>	
$Raw\_Repetitive$	= MOSS-generated plagiarism score that captures the percentage of textual content in the MD&A repeated from the notes for firm $i$ in year $t$ ;
$Repetitive$	= The natural logarithm of 1 plus the $Raw\_Repetitive$ for firm $i$ in year $t$ ;
<b>Variables of interests</b>	
$CEO\_Turnover$	= An indicator variable set to 1 for firm $i$ that has changed CEO in year $t$ , 0 otherwise;
$MA$	= An indicator variable set to 1 for firm $i$ that appears in the SDC Platinum merger-and-acquisition database as an acquirer, 0 otherwise;
$SEO$	= An indicator variable set to 1 for firm $i$ that has a common equity offering in the secondary market according to the SDC Global New Issues database, 0 otherwise;
$MD\&A\_modifications$	= Natural logarithm of 1 plus the MOSS-generated disclosure modification score by comparing the MD&A at year $t$ with the MD&A at year $t-1$ ;
$Notes\_modifications$	= Natural logarithm of 1 plus the MOSS-generated disclosure modification score by comparing the notes at year $t$ with the notes at year $t-1$ ;
$ Earnings\_news $	= An indicator variable that equals 1 when firm $i$ 's absolute difference from the prior period earnings is greater than the sample median absolute difference from the prior period earnings, 0 otherwise; Absolute difference from the prior period earnings is measured as the absolute difference between earnings at year $t$ and earnings at year $t-1$ scaled by total assets at year $t$ ;
$Neg\_earnings$	= An indicator variable that equals 1 when firm $i$ 's year-to-year change in earnings is negative at year $t$ , 0 otherwise;

### Additional control variables

<i>Sig_modifications</i>	=	Natural logarithm of 1 plus the MOSS-generated disclosure modification score by comparing the significant accounting policy note at year $t$ with the significant accounting policy note at year $t-1$ ;
<i>Litig_modifications</i>	=	Natural logarithm of 1 plus the MOSS-generated disclosure modification score by comparing the litigation note disclosures at year $t$ with the litigation note disclosures at year $t-1$ ;
<i>Rev_modifications</i>	=	Natural logarithm of 1 plus the MOSS-generated disclosure modification score by comparing the revenue note disclosures at year $t$ with the revenue note disclosures at year $t-1$ ;
<i>NewItems</i>	=	The natural logarithm of 1 plus the number of non-missing items on COMPUSTAT for firm $i$ in year $t$ ;
<i>Uncertainty</i>	=	The standard deviation of firm's 12 monthly returns at year $t$ ;
<i>Earn_vol</i>	=	The standard deviation of the operating earnings during the prior five fiscal years;
<i>Special</i>	=	Special items scaled by book value of assets in year $t$ ;
$ CAR^{EA} $	=	Absolute cumulative market-adjusted stock return over the three days centered with firm $i$ 's earnings announcement date in year $t$ ;
<i>NotesLength</i>	=	Natural logarithm of the 1 plus word count of firm $i$ 's 10-K notes disclosures in year $t$ ;
<i>Fileddate</i>	=	An indicator variable that equals to 1 when the 10-K filing date is at least 90 days after the year end, 0 otherwise;
<i>Size</i>	=	Natural logarithm of total assets at the end of the year $t$ ;
<i>Comp</i>	=	Herfindahl index at year $t$ . The Herfindahl index is calculated as the sum of the squared market share of each publicly traded company in a particular two-digit SIC code. Market share is calculated as the sales of a particular company divided by the total sales of the SIC code;
<i>Litig</i>	=	An indicator variable that equals 1 when firm $i$ is within SIC codes 2833–2836, 3570–3577, 3600–3674, 5200–5961, 7370–7374, and 8731–8734, 0 otherwise;
<i>FogMD&amp;A</i>	=	The Gunning-Fog Index for the MD&A, calculated as: (words per sentence + percent of complex words) $\times$ 0.4;
<i>MD&amp;A_Length</i>	=	Natural logarithm of 1 plus word count of firm $i$ 's MD&A in year $t$ ;
<i>FLS_RP</i>	=	The number of forward looking statements contained in repetitive disclosures in year $t$ . A forward looking statement is classified based future-related words and phrases defined in Li (2010);
<i>Num_RP</i>	=	The number of numerical statements contained in repetitive disclosures in year $t$ . A sentence is defined as numerical if it contains numerical information that is not in the form of a date (Merkley, 2014);
<i>Fog_RP</i>	=	-1 $\times$ the Gunning-Fog Index for repetitive disclosures, calculated as: (words per sentence + percent of complex words) $\times$ 0.4;
<i>Tone_RP</i>	=	The tone of repetitive disclosures is measured as the number of positive sentences less the number of negative sentences divided by the total number of sentences in year $t$ . A sentence is considered as positive or negative based on whether it has more positive or negative words.

**Figure 1**  
*Repetitive Disclosure Trend*



Distribution of *Raw\_Repetitive*. *Raw\_Repetitive* measures the percentage of textual content in the MD&A that is repeated from the notes. A higher score indicates more repetition from the notes. Sample means are used for each year.

**Table 1**  
**Descriptive distribution of repetitive disclosures**

*Panel A: Sample Means (Medians) by Year*

	Obs.	<i>Raw Repetitive</i>	<i>Repetitive</i>
1995	373	18.52 (16.00)	2.84 (2.83)
1996	756	18.21 (17.00)	2.82 (2.89)
1997	1,114	18.20 (17.00)	2.83 (2.89)
1998	1,940	18.54 (17.00)	2.85 (2.89)
1999	2,271	19.16 (18.00)	2.90 (2.94)
2000	2,357	19.97 (19.00)	2.93 (3.00)
2001	2,554	20.76 (19.00)	2.97 (3.00)
2002	2,694	24.29 (24.00)	3.14 (3.22)
2003	2,901	26.18 (26.00)	3.22 (3.30)
2004	2,999	24.53 (24.00)	3.16 (3.22)
2005	3,227	24.48 (24.00)	3.16 (3.22)
2006	3,338	24.94 (24.00)	3.18 (3.22)
2007	3,318	24.91 (24.00)	3.18 (3.22)
2008	3,354	25.73 (25.00)	3.21 (3.26)
2009	3,428	27.50 (27.00)	3.28 (3.33)
2010	3,336	26.58 (26.00)	3.25 (3.30)
2011	3,250	26.70 (26.00)	3.25 (3.30)
2012	3,265	27.27 (26.00)	3.27 (3.30)
2013	3,190	26.74 (26.00)	3.25 (3.30)
<b>Total</b>	<b>49,665</b>	<b>24.38 (24.00)</b>	<b>3.14 (3.22)</b>

*See variables definition in Appendix C.*



**Table 2**  
**Descriptive statistics and correlations**

*Panel A: Descriptive Statistics*

	Mean	St. Dev.	25th	Median	75th
<i>Raw_Repetitive</i>	23.38	11.58	15.00	22.00	30.00
<i>Repetitive</i>	3.07	0.55	2.77	3.14	3.43
$ CAR^{10K} $	0.05	0.07	0.01	0.03	0.06
$ Revision $	0.09	1.31	0.01	0.02	0.04
$lg\_ Revision $	0.05	0.16	0.01	0.02	0.04
<i>MD&amp;A_modifications</i>	3.92	0.51	3.76	4.01	4.23
<i>Notes_modifications</i>	3.85	0.41	3.66	3.89	4.09
<i>CEO_Turnover</i>	0.01	0.12	0.00	0.00	0.00
<i>MA</i>	0.17	0.38	0.00	0.00	0.00
<i>SEO</i>	0.12	0.33	0.00	0.00	0.00
$ Earnings\_news $	0.34	0.47	0.00	0.00	1.00
<i>Neg_earnings</i>	0.42	0.49	0.00	0.00	1.00
<i>NotesLength</i>	9.15	0.72	8.75	9.21	9.62
<i>Fileddate</i>	0.07	0.26	0.00	0.00	0.00
$ CAR^{EA} $	0.06	0.08	0.02	0.04	0.08
<i>NewItems</i>	4.96	0.20	4.87	4.99	5.09
<i>Uncertainty</i>	0.00	0.02	0.00	0.00	0.00
<i>Comp</i>	0.06	0.06	0.03	0.04	0.07
<i>Litig</i>	0.28	0.45	0.00	0.00	1.00
<i>Size</i>	5.71	2.39	4.20	5.80	7.27

*See variables definition in Appendix C.*

Panel B: Pearson correlations for the information content of repetitive disclosures

	<i>Repetitive</i>	<i>CEO</i>	<i>Notes</i>	<i>MA</i>	<i>SEO</i>	<i>Earnings</i>	<i>Neg</i>	<i>Uncertainty</i>	<i>Comp</i>	<i>Litig</i>
		<i>Turnover</i>	<i>modifications</i>			<i>news</i>	<i>earnings</i>			
<i>CEO_Turnover</i>	0.03***									
<i>Notes_modifications</i>	0.10***	0.00								
<i>MA</i>	0.04***	0.01*	0.08***							
<i>SEO</i>	0.07***	-0.02***	0.10***	0.09***						
<i> Earnings_news </i>	-0.00	-0.02***	0.04***	-0.05***	0.05***					
<i>Neg_earnings</i>	0.02***	0.01*	0.05***	-0.07***	0.00	-0.06***				
<i>Uncertainty</i>	-0.02***	-0.01**	0.01**	-0.08***	0.03***	0.09***	0.00			
<i>Comp</i>	0.00	0.01**	-0.02***	-0.00	-0.04***	-0.02***	-0.02***	-0.03***		
<i>Litig</i>	0.05***	-0.02***	0.02***	0.00	0.04***	0.03***	0.01	0.10***	-0.17***	
<i>Size</i>	0.13***	0.06***	0.00	0.22***	0.02***	-0.17***	-0.08***	-0.34***	0.02***	-0.25***

See variables definition in Appendix C.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Panel C: Pearson correlations for repetitive disclosures and market reactions

	<i>Repetitive</i>	<i> CAR<sup>10K</sup> </i>	<i>MD&amp;A</i>	<i>NotesLength</i>	<i>Fileddate</i>	<i> CAR<sup>EA</sup> </i>	<i>NewItems</i>
			<i>modifications</i>				
<i> CAR<sup>10K</sup> </i>	0.02***						
<i>MD&amp;A_modifications</i>	-0.04***	0.06***					
<i>NotesLength</i>	0.37***	-0.06***	-0.02***				
<i>Fileddate</i>	-0.02***	0.16***	0.07***	-0.08***			
<i> CAR<sup>EA</sup> </i>	0.03***	0.40***	0.04***	-0.05***	0.09***		
<i>NewItems</i>	0.23***	-0.03***	0.07***	0.30***	-0.05***	0.05***	
<i>Size</i>	0.11***	-0.20***	-0.03***	0.55***	-0.19***	-0.17***	0.26***

See variables definition in Appendix C.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Table 3**  
**Repetitive disclosures and determinants**

*Panel A: Repetitive disclosures and economic event determinants*

This table shows the regression results of repetitive disclosures on economic event determinants. These determinants include CEO turnover, mergers and acquisitions, seasoned equity offering, absolute earnings difference from year  $t-1$ , and negative earnings difference from year  $t-1$ . Column 1 includes all variables of interest. Columns 2–6 show the regression results for each variable of interest. Industry, auditor, and year fixed effects are included for each model but not tabulated. I cluster the standard errors at the firm level. Coefficient  $t$ -statistics are in parentheses. \*\*\*, \*\*, and \* denote significant at the 1%, 5%, and 10% (two-sided) levels, respectively. Variables are defined in Appendix C.

VARIABLES	Pred. Sign	(1) <i>Repetitive</i>	(2) <i>Repetitive</i>	(3) <i>Repetitive</i>	(4) <i>Repetitive</i>	(5) <i>Repetitive</i>	(6) <i>Repetitive</i>
<i>CEO_Turnover</i>	+	<b>0.04***</b> (2.81)	<b>0.04***</b> (2.79)				
<i>MA</i>	+	<b>-0.00</b> (-0.11)		<b>0.00</b> (0.27)			
<i>SEO</i>	+	<b>0.02***</b> (3.83)			<b>0.02***</b> (4.12)		
<i> Earnings_news </i>	+	<b>0.02***</b> (4.90)				<b>0.02***</b> (5.03)	
<i>Neg_earnings</i>	+	<b>0.02***</b> (4.03)					<b>0.02***</b> (3.74)
<i>Uncertainty</i>	?	0.59** (2.41)	0.58** (2.39)	0.59** (2.41)	0.59** (2.41)	0.57** (2.32)	0.61** (2.50)
<i>Comp</i>	?	0.03 (0.26)	0.03 (0.22)	0.03 (0.23)	0.03 (0.27)	0.03 (0.23)	0.03 (0.22)
<i>Litig</i>	?	0.04 (1.09)	0.05 (1.12)	0.05 (1.10)	0.04 (1.07)	0.04 (1.07)	0.05 (1.12)
<i>Earn_vol</i>	?	-0.00** (-2.30)	-0.00** (-2.06)	-0.00** (-2.03)	-0.00** (-1.99)	-0.00** (-2.19)	-0.00** (-2.13)
<i>NewItems</i>	?	0.00*** (6.60)	0.00*** (6.31)	0.00*** (6.35)	0.00*** (6.55)	0.00*** (6.52)	0.00*** (6.40)
<i>Special</i>	?	-0.04** (-2.46)	-0.04** (-2.51)	-0.04** (-2.50)	-0.04** (-2.48)	-0.04** (-2.54)	-0.04** (-2.44)

<i>Size</i>	?	0.02*** (8.45)	0.02*** (8.03)	0.02*** (7.98)	0.02*** (7.97)	0.02*** (8.50)	0.02*** (8.21)
<i>Constant</i>	?	2.50 (0.00)	2.54 (0.00)	2.54 (0.00)	2.53 (0.00)	2.52 (0.00)	2.52 (0.00)
Observations		60,367	60,367	60,367	60,367	60,367	60,367
Adjusted R <sup>2</sup>		0.15	0.15	0.15	0.15	0.15	0.15
Industry FE		YES	YES	YES	YES	YES	YES
Year FE		YES	YES	YES	YES	YES	YES
Auditor FE		YES	YES	YES	YES	YES	YES

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*Panel B: Repetitive disclosures and textual characteristic determinants*

This table shows the regression results of repetitive disclosures on textual characteristic determinants. These determinants include new disclosures in the notes, new disclosures in the significant accounting policy notes, new disclosures in the contingencies notes, and new disclosures in the revenue recognition notes. Columns 1–4 show the regression results for each variable of interest with additional control variables. Industry, auditor, and year fixed effects are included for each model but not tabulated. I cluster the standard errors at the firm level. Coefficient *t*-statistics are in parentheses. \*\*\*, \*\*, and \* denote significant at the 1%, 5%, and 10% (two-sided) levels, respectively. Variables are defined in Appendix C.

VARIABLES	Pred. Sign	(1) <i>Repetitive</i>	(2) <i>Repetitive</i>	(3) <i>Repetitive</i>	(4) <i>Repetitive</i>
<i>Notes_modifications</i>	+	<b>0.15***</b> <b>(15.34)</b>			
<i>Sig_modifications</i>	+		<b>0.07***</b> <b>(11.15)</b>		
<i>Litig_modifications</i>	+			<b>0.02***</b> <b>(6.46)</b>	
<i>Rev_modifications</i>	+				<b>0.01***</b> <b>(5.09)</b>
<i>Fog_RP</i>	?	-0.00 (-0.23)	-0.00 (-0.66)	-0.00 (-0.93)	-0.00 (-0.39)
<i>FLS_RP</i>	?	0.21*** (6.01)	0.18*** (5.44)	0.13*** (3.80)	0.23*** (5.93)
<i>Num_RP</i>	?	0.78*** (24.36)	0.70*** (21.59)	0.71*** (22.64)	0.70*** (19.90)
<i>Tone_RP</i>	?	0.07*** (3.50)	0.12*** (5.87)	0.09*** (4.71)	0.10*** (4.37)
<i>Uncertainty</i>	?	0.82*** (2.97)	0.96*** (3.59)	0.66** (2.46)	0.93*** (3.08)
<i>Comp</i>	?	0.06 (0.50)	0.04 (0.25)	0.10 (0.75)	0.10 (0.62)
<i>Litig</i>	?	0.04 (0.91)	0.05 (1.11)	0.04 (0.95)	0.06 (1.35)
<i>Earn_vol</i>	?	-0.00 (-0.75)	0.00 (0.17)	-0.00 (-0.95)	0.00 (0.04)
<i>NewItems</i>	?	0.00*** (3.73)	0.00*** (4.21)	0.00*** (5.17)	0.00*** (4.46)

<i>Special</i>	?	-0.04*** (-3.38)	-0.04*** (-3.65)	-0.05*** (-2.98)	-0.06*** (-2.97)
<i>Size</i>	?	0.02*** (7.76)	0.02*** (7.07)	0.02*** (6.41)	0.03*** (8.25)
<i>Constant</i>	?	2.21 (0.00)	2.24 (0.00)	1.20*** (8.42)	2.98 (0.00)
Observations		45,388	39,806	43,250	33,266
Adjusted R <sup>2</sup>		0.22	0.20	0.19	0.20
Industry FE		YES	YES	YES	YES
Year FE		YES	YES	YES	YES
Auditor FE		YES	YES	YES	YES

**Table 4**  
**Repetitive disclosures and market informativeness**

This table reports an analysis of the relation between market returns and repetitive disclosures with additional controls. Column 1 presents the results with controlling for significant firm events. Column 2 presents the results with controlling for the content of repetitive disclosures. Column 3 presents the results with controlling for MD&A characteristics. Column 4 presents the results with controlling for significant disclosure changes in the notes. Column 5 presents the results with including all control variables examined in columns 1–4. Industry, auditor, and year fixed effects are included for each model but not tabulated. I cluster the standard errors at the firm level. Coefficient t-statistics are in parentheses. \*\*\*, \*\*, and \* denote significant at the 1%, 5%, and 10% (two-sided) levels, respectively. Variables are defined in Appendix C.

VARIABLES	Pred. Sign	(1) $ CAR^{10K} $	(2) $ CAR^{10K} $	(3) $ CAR^{10K} $	(4) $ CAR^{10K} $	(5) $ CAR^{10K} $
<i>Repetitive</i>	+/-	<b>0.03***</b> (3.98)	<b>0.04***</b> (5.22)	<b>0.04***</b> (6.16)	<b>0.03**</b> (2.41)	<b>0.04**</b> (2.45)
<i>MD&amp;A_modifications</i>	+	0.03*** (3.85)	0.04*** (5.02)	0.03*** (4.62)	0.04*** (2.94)	0.03* (1.67)
<i>NotesLength</i>	+	0.01*** (9.58)	0.01*** (9.50)	0.01*** (7.69)	0.01*** (5.38)	0.01*** (4.42)
<i>Fileddate</i>	?	0.02*** (11.75)	0.02*** (12.64)	0.02*** (12.73)	0.02*** (6.23)	0.02*** (5.55)
$ CAR^{EA} $	+	0.28*** (14.69)	0.28*** (15.07)	0.28*** (15.44)	0.26*** (7.73)	0.26*** (7.13)
<i>NewItems</i>	?	-0.01*** (-2.97)	-0.01*** (-3.52)	-0.01*** (-3.67)	-0.01** (-2.27)	-0.02** (-2.34)
<i>Notes_modifications</i>	?	0.00*** (2.76)				0.00 (0.91)
<i>CEO_Turnover</i>	?	-0.00 (-0.86)				-0.00 (-0.12)
<i>MA</i>	?	-0.00*** (-4.95)				-0.00 (-0.72)
<i>SEO</i>	?	0.00** (2.57)				0.00 (1.00)
$ Earnings\_news $	?	0.00*** (5.43)				0.00** (2.51)
<i>Neg_earnings</i>	?	0.00*** (6.60)				0.00*** (3.38)
<i>Fog_RP</i>	?		0.00*** (3.27)			-0.00 (-0.06)
<i>FLS_RP</i>	?		-0.00 (-0.81)			-0.01** (-2.08)
<i>Num_RP</i>	?		-0.00** (-2.06)			-0.00 (-0.62)
<i>Tone_RP</i>	?		-0.00*** (-3.50)			-0.00 (-1.27)
<i>MD&amp;A_Length</i>	?			0.00*** (6.69)		0.00* (1.68)

<i>FogMD&amp;A</i>	-			0.00** (2.31)		-0.00 (-0.58)
<i>Sig_modifications</i>	+				0.04*** (3.77)	0.00*** (3.36)
<i>Litig_modifications</i>	+				0.00 (0.46)	-0.00 (-0.14)
<i>Rev_modifications</i>	+				0.00 (0.69)	0.00 (0.39)
<i>Size</i>	?	-0.00*** (-14.56)	-0.00*** (-15.48)	-0.00*** (-16.21)	-0.00*** (-8.19)	-0.00*** (-7.18)
<i>Constant</i>	?	0.08 (0.00)	0.01 (0.00)	0.05*** (2.70)	0.06* (1.80)	0.00 (0.14)
Observations		46,133	47,653	50,289	15,820	14,347
Adjusted R <sup>2</sup>		0.22	0.22	0.22	0.23	0.23
Industry FE		YES	YES	YES	YES	YES
Auditor FE		YES	YES	YES	YES	YES
Year FE		YES	YES	YES	YES	YES



**Table 5****Repetitive disclosures and pseudo-market informativeness**

This table reports an analysis of the relation between market returns and repetitive disclosures. It summarizes the results of regressing absolute abnormal cumulative market-adjusted stock return over the three days centered on random pseudo-event date on repetitive disclosures, controlling for other 10-K filing and firm characteristics and additional controls. Industry, auditor, and year fixed effects are included for the model but not tabulated. I cluster the standard errors at the firm level. Coefficient t-statistics are in parentheses. \*\*\*, \*\*, and \* denote significant at the 1%, 5%, and 10% (two-sided) levels, respectively. Variables are defined in Appendix C.

VARIABLES	(1) $ CAR^{random} $
<b><i>Repetitive</i></b>	<b>0.00</b> <b>(0.57)</b>
<i>NotesLength</i>	0.01*** (6.87)
<i>Fileddate</i>	0.01*** (4.61)
$ CAR^{EA} $	0.02*** (5.98)
<i>NewItems</i>	-0.01*** (-3.90)
<i>MD&amp;A_modifications</i>	0.01 (1.05)
<i>Notes_modifications</i>	0.00*** (4.89)
<i>CEO_Turnover</i>	0.00 (1.01)
<i>MA</i>	-0.00 (-1.55)
<i>SEO</i>	0.00*** (3.97)
$ Earnings\_news $	0.00*** (4.25)
<i>Neg_earnings</i>	0.00*** (4.65)
<i>Size</i>	-0.00*** (-17.29)
<i>Constant</i>	0.04 (0.00)
Observations	43,167
Adjusted R <sup>2</sup>	0.10
Industry FE	YES
Year FE	YES
Auditor FE	YES

**Table 6**  
**Repetitive disclosures and investor type**

This table reports an analysis of the relation between market returns and repetitive disclosures partitioned by high and low institutional ownership (i.e., institutional and non-institutional investors). It summarizes the results of regressing absolute abnormal cumulative market-adjusted stock return over the three days beginning with the 10-K filing date on repetitive disclosures, controlling for other 10-K filing and firm characteristics. Industry, auditor, and year fixed effects are included for each model but not tabulated. I cluster the standard errors at the firm level. Coefficient *t*-statistics are in parentheses. \*\*\*, \*\*, and \* denote significant at the 1%, 5%, and 10% (two-sided) levels, respectively. Variables are defined in Appendix C.

VARIABLES	Pred. Sign	High Instit. Own	Low Instit. Own
		(1) $ CAR^{10K} $	(2) $ CAR^{10K} $
<b><i>Repetitive</i></b>	+/-	<b>0.01</b> <b>(1.35)</b>	<b>0.05***</b> <b>(3.49)</b>
<i>MD&amp;A_modifications</i>	+	0.03*** (3.52)	0.06*** (4.31)
<i>NotesLength</i>	?	0.01*** (7.16)	0.01*** (4.89)
<i>Fileddate</i>	+	0.02*** (5.96)	0.02*** (9.49)
$ CAR^{EA} $	+	0.21*** (8.34)	0.31*** (12.25)
<i>NewItems</i>	+	-0.01** (-2.21)	-0.01* (-1.66)
<i>Size</i>	-	-0.00*** (-10.22)	-0.00*** (-7.81)
<i>Constant</i>	?	0.13*** (5.37)	0.04 (0.00)
Observations		19,880	18,129
Adjusted R <sup>2</sup>		0.19	0.26
Industry FE		YES	YES
Auditor FE		YES	YES
Year FE		YES	YES

**Table 7**  
**Repetitive disclosures and analyst earnings forecast revisions**

This table reports an analysis of the relation between analyst earnings forecast revisions and repetitive disclosures. It summarizes the results of regressing the absolute difference between the mean analyst forecasts for year  $t+1$  issued before the 10-K filing and the mean forecasts issued after the filing on repetitive disclosures, controlling for other 10-K filing and firm characteristics. Column 2 presents the results of regressing natural logarithm of 1 plus the absolute difference between the mean analyst forecasts for year  $t+1$  issued before the 10-K filing and the mean forecasts issued after the filing on repetitive disclosures. Industry, auditor, and year fixed effects are included for each model but not tabulated. I cluster the standard errors at the firm level. Coefficient  $t$ -statistics are in parentheses. \*\*\*, \*\*, and \* denote significant at the 1%, 5%, and 10% (two-sided) levels, respectively. Variables are defined in Appendix C.

VARIABLES	Pred. Sign	(1) $ Revision $	(2) $\lg  Revision $
<i>Repetitive</i>	+/-	<b>0.00</b> <b>(0.11)</b>	<b>0.00</b> <b>(0.77)</b>
<i>MD&amp;A_modifications</i>	+	-0.02 (-0.26)	0.03 (1.46)
<i>NotesLength</i>	?	0.03** (2.43)	0.02*** (8.35)
<i>Fileddate</i>	+	0.10* (1.69)	0.02*** (3.25)
$ CAR^{EA} $	+	0.11 (1.52)	0.08*** (4.55)
<i>NewItems</i>	+	0.02 (0.24)	0.01 (1.19)
<i>Size</i>	-	-0.03*** (-7.65)	-0.02*** (-17.24)
<i>Constant</i>	?	-0.03 (-0.00)	-0.10* (-1.86)
Observations		31,965	32,785
Adjusted $R^2$		0.01	0.06
Industry FE		YES	YES
Auditor FE		YES	YES
Year FE		YES	YES