

# **Word Speaks Louder than Action: Do Firms Window Dress Their Social Capital?**

NAJAH ATTIG  
Saint Mary's University  
[najah.attig@smu.ca](mailto:najah.attig@smu.ca)

WENYAO HU  
Saint Mary's University  
[wenyao.hu@smu.ca](mailto:wenyao.hu@smu.ca)

MOHAMMAD M. RAHAMAN  
Saint Mary's University  
[mohammad.rahaman@smu.ca](mailto:mohammad.rahaman@smu.ca)

ASHRAF AL ZAMAN  
Saint Mary's University  
[ashraf.zaman@smu.ca](mailto:ashraf.zaman@smu.ca)

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## **Abstract:**

We show that top executives hype-up their firms' Corporate Social Responsibility (CSR) narratives during the turn-of-the-year earnings conference calls to project an overly responsible public image of their firms. The use of such CSR narratives to manage firms' public impressions is unrelated to subsequent actual CSR performances. We find that such CSR window-dressing phenomenon is more pronounced among firms operating in dirty industries, but less prevalent among firms facing greater product-market threats. Although the increase in CSR narrative is associated with reduced financial report readability and lower near-term stock price crash risk, capital market does not appear to reward CSR window-dressing behavior. Our analyses suggest that CSR window-dressing at the turn-of-the-year is a pervasive phenomenon in the corporate landscape and may have significant valuation and governance implications.

Key words: CSR window dressing, Impression management, Public image of firms.

JEL classification: G30, M14, M40

\*The authors are from the Sobey School of Business, Saint Mary's University, 923 Robie Street, Halifax, Nova Scotia, B3H 3C3, Canada. Attig, Rahman, and Zaman are thankful for the generous support from the Sobey School of Business. Attig and Rahman also appreciate the financial support from Canada's Social Sciences and Humanities Research Council (SSHRC).

## I. INTRODUCTION

*“Deductively, one would expect management to make most of their manipulation decisions when the need is most certain-in the last quarter of the year.”* Hassler and Buckmaster (1975).

Are firms as socially responsible as their top executives say? Answering this question is important because societal trust in executive communication constitutes a key element of a firm’s social capital. Embedded in a firm’s relationships and networks, social capital is an important intangible asset that “must be managed appropriately” (Leana and van Buren 1999, p. 538) to enhance productivity (Coleman, 1988) and to mitigate the adverse impact of market failures on the firm’s operations (Karlan, 2005). At the aggregate level, social capital also plays a significant role in fostering financial (Guiso et al., 2004) and economic (Fukuyama, 1995; Knack and Keefer, 1997) development. Despite such prominence, social capital remains an under-researched topic (Servaes and Tamayo, 2017) in the extant literature.<sup>1</sup> In this paper, we use discretionary narrative disclosure in corporate documents to investigate whether firms window dress their social capital to manage public impressions<sup>2</sup> of their firms (Cho et al., 2015; Solomon et al., 2013; Cho et al., 2012) and to unduly gain the trust of their stakeholders.

Social capital is inherently difficult to measure due to the lack of consensus in defining it and the absence of a market in pricing it. To address such a concern, we build on Servaes and Tamayo’s (2017) insights that social capital can be broadly ascribed to the quality of the relationships of the firm with its various stakeholders, and thus corporate social responsibility

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<sup>1</sup> Social capital has been a rapidly growing area of interest for business ethics (e.g. Spence et al., 2003, Russo and Perrini, 2010), economics (e.g. Woolcock and Narayan, 2000; Knack and Keefer, 1997; Guiso et al., 2004; Sacconi and Degli Antoni 2009; Sacconi and Degli Antoni, 2011), sociologists (e.g. Coleman, 1988), political science (e.g. Putnam, 2000; Ostrom, 1994), management (Nahapiet and Ghoshal, 1998; Adler and Kwon, 2002), and more recently finance and accounting (e.g. Lins et al., 2017; Jha and Cox., 2015; Jha and Chen 2015). Importantly, the World Bank (1998) recognized the importance of social capital for sustainable development and launched the Social Capital Initiative —supported by a grant of the Government of Denmark — to fund projects on defining, measuring, investing and monitoring social capital.

<sup>2</sup> Impression management refers to the behavioral strategies used by people to create desired social images or identities (Tetlock and Manstead, 1985) in order to control or manipulate the reactions of others (e.g. Leary and Kowalski, 1990). This is similar to greenwashing, which is the practice of selectively disclosing positive information about firm environmental or social performance while withholding related negative information to frame activities as ‘green’ (Lyon and Maxwell, 2011; Laufer, 2003).

(CSR) can be used to operationalize social capital construct. Indeed, Sacconi and Degli Antoni (2011, and references therein) suggest that CSR initiatives can be used as a proxy of a firm's social capital. Jha and Cox (2015) document a positive association between social capital and CSR and Russo and Perrini (2010) stress that the notion of social capital is useful in understanding the CSR (of SMEs). More recently, Lins et al. (2017) use CSR as a measure of social capital.

While we recognize that there is no consensus definition of social capital and that CSR is not a perfect measure of a firm's social capital, CSR activities “could be considered as building blocks of a firm's social capital” (Servaes, and Tamayo 2017, p. 208). This is because CSR investments are embedded in the management of firm's relationship with its stakeholders (Clarkson, 1995) and generally “involve aspects of civic engagement, shared beliefs, and disposition towards cooperation between the firm and its stakeholders”, which tends to map directly into the theoretical foundations of social capital (Lins et al. 2017, p. 1790). Furthermore, since trust is arguably the most important feature of social capital (Bridger and Luloff, 2001) and social capital relates to other important aspects of business ethics (Spence et al., 2003; Russo and Perrini 2010), a firm can enhance its social capital through CSR investments that meet the expectations of its stakeholders and gain their trust.<sup>3</sup>

Although CSR itself is difficult to measure empirically (Carroll, 1991), the focus of our study does not center on the accuracy in measuring CSR as an empirical construct.<sup>4</sup> Our focus is rather on the extent to which top executives use CSR discretionary narrative in earnings conference call to manage the public impression of their firms' social capital, and the trust associated with it. While annual reports are commonly researched corporate documents

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<sup>3</sup> This is because social capital can be described as an asset that inheres in social ties (e.g., Coleman, 1990; Nahapiet and Ghoshal, 1998; Leana and van Buren 1999) and is predicated on the “connections among individuals—social networks and the norms of reciprocity and trustworthiness that arise from them.” (Putnam 2000, p. 19).

<sup>4</sup> In the rest of the paper, we use the terms social capital, CSR, ESG, and sustainability interchangeably (e.g. Attig 2021), unless stated otherwise.

for managing external impressions (e.g., Merkl-Davies and Brennan, 2007), we use the transcripts of quarterly earnings conference calls to investigate the extent of CSR window dressing. Earnings calls are especially appropriate for the purpose of our study for a few reasons.

First, transcripts of quarterly earnings conference calls are unaudited, giving manager more maneuvering capabilities for impression management, which may not be easily achievable with audited annual reports (Neu et al., 1998).<sup>5</sup> Second, transcripts of periodic earnings calls are conduits through which top executives communicate directly to market participants (Hassan et al., 2021; Hassan et al., 2019), giving researchers a unique window to top executives' impressions about their firms' CSR initiatives. Neu et al. (1998, p. 267) note that "it is often easier to manage one's image through communication than through changing one's output, goals and methods of operations." To explain the sustained increase (since 2011) in CSR reputation of US firms, Stephen Hahn-Griffiths, the Chief Reputation Officer of the Reputation Institute, argued that "it's not necessarily that companies have done anything dramatically different, but they're doing a better job of providing reasons to believe that they have good intentions" (Forbes, 2019). Given the lack of uniform and verifiable CSR reporting standards, the unaudited transcripts of quarterly earnings conference calls, therefore, are fertile grounds to examine whether and to what extent top executives window dress their CSR narratives to project an overly responsible public image of their firms. Finally, the presence of four earnings calls within a fiscal year and the potential variability in their narrative disclosures allow us to examine CSR narrative dynamics not only over time and across firms but also within a firm in a given fiscal year, providing more granular evidence on CSR window dressing.

The natural question that follows is why do we expect managers to engage in biased narrative of CSR and environmental reporting at the turn-of-the year? Hassler and Buckmaster (1975, p. 128) note that managers are expected "to make most of their manipulation decisions when the need is most certain - in the last quarter of the year." Kiger (1974) also finds

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<sup>5</sup> Annual reports are audited and a primary information source for sophisticated investors (e.g., institutional investors) and other major stakeholders (e.g., creditors, employees, environmental groups and the government) (Neu et al. 1998), which may decrease managerial incentives for CSR impression management in these reports.

that the fourth fiscal quarter reports also tend to be associated with greater volatility and potentially more manipulative behavior. In theory, managers may use the fourth quarter CSR narrative disclosure in earning calls to reduce information asymmetry, alleviate external financing frictions (Kim and Verrecchia, 1994), signal lower environmental risk, and reassure investors during periods of heightened uncertainty (Blacconiere and Patten, 1994; Cormier et al., 2009; Attig et al. 2020).<sup>6</sup> However, consistent dressing up of CSR narrative during the fourth fiscal-quarter earnings conference call can also be construed as window dressing for impression management to distort the users' perceptions of corporate performance (Clatworthy and Jones, 2001; Yuthas et al., 2002).

Further, managers can engage in opportunistic narrative discretionary disclosures in the fourth-fiscal quarter to tout CSR and environmental initiatives to divert attention from their inherently unfriendly environmental footprint or lack of real effort to curb pollution and other environmental problems (Attig et al., 2020). This is plausible because CSR disclosures are largely voluntary (Cherry, 2014) and involve several estimates, judgments, and assumptions (Goto et al., 2008). Relatedly, since corporate narratives are largely unregulated (Merkl-Davies and Brennan, 2007), managers may favor opportunistic impression management, which in turn can create (misleading) social capital impression among firms' stakeholders (Godfrey, 2005). Self-interested managers may also strategically engage in CSR narrative disclosures to "hype" the stock and minimize the potential turn-of-the year adverse effect or divert attention from negative news or organizational outcomes that are delayed until the fourth-quarter earnings announcement.<sup>7</sup>

While the bulk of the arguments above suggest that managers have incentives to use discretionary CSR narratives during the turn-of-the-year earnings conference calls, it is not a priori clear whether they use it to ameliorate the informational environment or to manipulate public impression of firms. To examine this research question empirically, we apply natural-

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<sup>6</sup> Lins et al. (2017) suggest that investment in social capital can be thought of as an insurance policy that pays off when corporations and markets suffers a negative shock of trust.

<sup>7</sup> Managing the public impression of firms is not de facto fraudulent when done within the allowances of investor protection regulations (Attig, 2021).

language processing and semi-supervised machine learning to transcripts of earnings conference calls over the period 2007-2020 to construct a text-based measure of the extent of CSR rhetorical and thematic discussion. We rely on Pencle and Mălăescu's (2016) dictionary to measure our index of CSR/environmental discretionary narrative disclosure based on the absolute and relative frequency of CSR-related words in the narratives of the earnings conference calls. This index is relevant for the purpose of our focus since it reflects the extent of CSR rhetorical and thematic discussion in the narratives of earnings conference calls.<sup>8</sup>

Our analysis yields other important findings. We first document a sustained increase in CSR narrative disclosure over our sample period, confirming the growing importance of non-financial performance.<sup>9</sup> Second, and perhaps most importantly, we uncover a novel phenomenon showing that managers consistently increase discretionary CSR narratives during the turn-of-the-year earnings calls compared to the other three quarters. This empirical phenomenon remains statistically and economically significant after a series of robustness checks to account for unobserved heterogeneity. We further examine the sentiment and tone of communication (Loughran and McDonald, 2011) across quarters within a fiscal year in addition to the volume of CSR narratives. Third, we find that not only do top executives use more CSR narrative in the fourth fiscal quarter but also do this with a more positive tone compared to other quarters of the fiscal year. Finally, we document a significant increase in CSR narrative disclosure during the COVID-19 pandemic, possibly to reduce corporation's susceptibility to shocks (Albuquerque et al. 2019, Attig et al. 2020) during periods of heightened economic uncertainty.

Next, we examine whether firms use elevated fourth-quarter discretionary narratives for window dressing their social capital to project an overly responsible public image or such narratives reflect a proper organizational commitment to the disclosed CSR activities. We find that a significant portion of the elevated CSR narrative in the fourth fiscal quarter is

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<sup>8</sup> Sydserff and Weetman (1999) conclude that texture index “is potentially a powerful tool for analysis of accounting narratives and association testing.” (p. 459).

<sup>9</sup> The 2016 PWC Global CEO Survey shows that 64% of CEOs believe that corporate social responsibility (CSR) “is core to [their] business rather than being a stand-alone program.”

reversed in the subsequent quarter. We show also that CSR narrative hike in the fourth fiscal quarter is not associated with subsequent actual CSR activities, measured by the KLD CSR score.<sup>10</sup>, of firms. Our analyses suggest that fourth-quarter CSR narrative hike is essentially CSR window dressing, an opportunistic impression management practice, to influence the perceptions and decisions of stakeholders.

We delve deeper into the sources of cross-sectional heterogeneity determining why some firms engage in CSR window dressing behaviors while others do not. We find that CSR window-dressing is more pronounced among firms embedded in dirty industries such as oil and gas, mining, or chemicals industries, plausibly because such firms in controversial industries have more incentives to make advertising efforts to influence their CSR perception (Oh et al. 2017). We also show that firms facing heightened product-market competition are more likely engage in CSR window dressing behavior. While CSR commitments help in product differentiation (Albuquerque et al. 2019) and strategic CSR is value enhancing (Flammer 2015), our new evidence indicates that, firms facing heightened product-market competition may use CSR narratives as a disclosure tactic to mislead competitors about their sustainability strategies (Attig, Brockman and Trabelsi 2020).

Finally, we examine the consequences of CSR window dressing phenomenon on two key corporate outcomes. First, we examine the impact of CSR window-dressing and elevated CSR narrative on the financial-report readability as measured by the Bog Index (Bonsall IV et al. 2017) and find that such behavior significantly reduces the readability of firms' financial report. Second, we examine whether CSR window-dressing has any implication for future stock price crash risk, an important dimension in risk management and investment decisions, captured by the conditional skewness of return distribution (Kim et al., 2014). We show that CSR window-dressing does not bear any significant effect on future crash risk. We, however,

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<sup>10</sup> Kinder Lydenburg Domini (KLD) data are drawn from MSCI ESG Research and are widely used in studies of corporate social performance, to construct a proxy for CSR activity based on a firm's engagement in social, ethical, governance, and legal practices (e.g. Boubakri et al. 2019; Lins et al. 2017; Attig and Brockman 2017, and references therein).

find that the use of CSR narratives across the four-earnings conference call is negatively associated with the near-term stock price crash risk but such association disappears for longer-term stock price crash risk. Taken together, our findings suggests that although elevated CSR narrative is associated with reduced financial report readability and lower near-term stock price crash risk, capital market does not factor CSR window-dressing at the turn-of-the-year into firms' security risk assessment, pointing to the fact that market participants attribute such behaviors to opportunistic impression management. These findings complement Kim et al. (2014), who show that firms' CSR performance (as measured by KLD ratings) is negatively associated with future crash risk while we document that top executive of firms try to enhance firms' CSR perceptions by actively engaging in narrative disclosures.

Our paper makes two important contributions. First, by documenting the pervasive CSR window dressing phenomenon at the turn-of-the-year and its cross-sectional determinants, we contribute to the growing line of inquiry that uses content analysis to investigate whether and to what extent managers use discretionary narrative disclosure in corporate documents for impression management purposes (Merkl-Davies and Brennan, 2007; Loughran and McDonald, 2016; Gentzkow et al., 2019). Germane to the focus of our study is the work of Abrahamson and Park (1994), who use computer-assisted content analysis to investigate whether managers conceal negative organizational outcomes from shareholders in the president's letters. Smith and Taffler (2000) examine the association between discretionary narrative disclosures in chairman's statement and firm failure. In a series of papers, Lang and Lundholm examine the bias in voluntary disclosure during equity offerings (2000), the use of positive and negative word lists to gauge sentiment (2011), and the readability of business documents (2014). More broadly, we add to the growing literature that uses computational linguistics and employs a wide range of content analysis techniques to construct machine-learning based measures of different corporate characteristics. For instance, content analysis of firm-level texts has been recently fruitful in measuring firm-level political and non-political risk (Hassan et al., 2019), overall risk (Handley and Li, 2018), and risk exposure



to Covid-19 and other epidemic diseases (Hassan et al., 2019).<sup>11</sup> Our research complements these studies by extending such analyses to CSR discretionary narrative disclosure during quarterly earnings conference calls.

Second, our research sheds light on the question of the materiality of CSR reporting, which, in the absence of any concrete regulatory framework, remains a sharply debated issue. Indeed, much less has been researched about the extent of corporate posturing and window dressing in voluntary CSR and environmental disclosures (Laufer, 2003). The paucity of research on the quality of a firm's CSR or environmental disclosure is surprising because the materiality of such disclosure impacts stakeholders' perception of the firm's legitimacy and provides investors with information they need to make investment and voting decisions (SEC, 2020). As such, our study adds to the recent line of inquiry that examines greenwashing and, more broadly, the materiality of sustainability reporting. For instance, Attig et al. (2020) show that uncertainty over government policies reduces firms' incentives to engage in deceptive environmental reporting, whereas Attig et al. (2021) find that a firm's greenwashing has significant implications for the structure and design of loan contracts. Khan et al. (2016), using calendar-time portfolio stock return regressions, find that firms with good performance on material sustainability issues significantly outperform firms with poor performance on these issues. Our study adds to the intersection of these two strands of literature by providing novel evidence on CSR window-dressing at the turn-of-the-year. As suggested by Sydserff and Weetman (1999), studies on impression management may have wide-ranging policy implications for the use of narratives in corporate reporting. Our study points to the need for properly designed policies and standards so that firms accurately disclose verifiable social and environmental performances.

The remainder of the paper is organized as follows. Section 2 discusses theoretical background and develops our main hypothesis. Section 3 describes the research design and

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<sup>11</sup> The exponential increase in computing power has led to a significant increase in the application of textual analysis techniques across many disciplines, yet, its application in accounting and finance is still an emerging area (Loughran and McDonald 2016).

sample construction. Section 4 presents our baseline empirical analyses and results. Section 5 and 6 analyze the cross-sectional determinants and consequences of CSR window dressing behavior. Finally, Section 7 concludes the paper.

## **2. THEORITICAL UNDERPINNINGS**

CSR has been a thorn for financial economists. Central to the debate is the orthodox view (Friedman 1970) that CSR initiatives are taken at the expense of shareholders and firms should fulfill their societal obligations by increasing their profits and complying with applicable laws and regulations. The alternative view posits that CSR plays a non-negligible role in creating and preserving a firm's competitive advantage by serving its stakeholders' interests (e.g. Davis 1973; Freeman 1984). This debate has received wide academic attention and is mostly confined to understanding the link between CSR and financial performance. While related early evidence is not unequivocal,<sup>12</sup> recent evidence appears to lend support to the shareholder value creation of CSR (e.g. El Ghouli et al. 2011; Attig et al. 2013; Deng et al. 2013; Cheng et al. 2014; Kim et al. 2014; Lins et al. 2017, among others).

Underlying much of this positive view of CSR is that CSR builds social capital for the firm, leading to more trust and cooperation between the firm and its stakeholders. Servaes and Tamayo (2017) argue that promoting the well-being of all stakeholders in the firm is commonly accepted driver of social capital and suggest that CSR investments can be considered as building blocks of a firm's social capital. Since CSR investments reflect firms' actions and policies "that appear to further some social good" (McWilliams and Siegel, 2001, p. 117) and that take into account stakeholders' expectations (Clarkson, 1995), they are likely to strengthen stakeholders' trust in the firm, which will result in stronger stakeholder support and cooperation. This perspective maps into the Putnam's (1993, 2000) view of social capital. Putnam (1993, 2000) stresses the importance of reciprocity and trustworthiness that arise

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<sup>12</sup> Margolis and Walsh (2003) show that 48 of 109 reviewed studies do not find a distinguishable relationship between CSR and financial performance, and 54 (7) document a positive (negative) relationship. The meta-analytic findings of Orlitzky et al. (2003) support a modest positive correlation between CSR and financial performance.

from connections among individuals — social networks — in producing socially efficient outcomes.

It is important to note that CSR is generally unobservable, and it would be costly for external publics to gather related information. That's why communicating CSR to stakeholders is as important as engaging in CSR initiatives (Tata and Prasad 2015).<sup>13</sup> However, the lack of CSR reporting standards and verifiability of CSR initiatives may provide the opportunity for managers to engage in selective disclosures in the narratives of corporate documents. Neu et al. (1998, and references therein<sup>14</sup>) note that the symbolic aspects of organizational actions and textually-mediated discourses are relevant in sustaining organizational legitimacy, which “form part of the organization’s public image, and through symbolic meanings which are often peripheral to the organization’s primary goals, methods of operation and output” (p. 267). A recent line of inquiry, suggests that organizations use discretionary CSR narrative disclosure in corporate documents for impression management purposes (e.g. Cho et al. 2015, Solomon et al. 2013, Cho et al. 2012).<sup>15</sup>

We add to this literature by investigating the extent to which managers use CSR discretionary disclosure narratives, during earnings conference calls to window-dress the social capital of their firms. The underpinnings of this research question lie at the intersection of many theoretical intuitions. As stated in the outset, narratives of transcripts of quarterly earnings conference calls can be used as a medium by managers to engage in discretionary CSR disclosure either to reduce the incongruity between the firm real social performance and the information perceived by stakeholders, and thus reduce information asymmetry, or to use CSR rhetoric to unduly influence stakeholders’ perception of a favorable social image of the firm. Since our focus is on the extent of CSR window-dressing, we expect this to be evidenced

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<sup>13</sup> Coleman (1988) stresses also the relevance of information in providing a basis for action.

<sup>14</sup> e.g. Dowling and Pfeffer (1975) and Meyer and Rowan (1977) as cited in Neu et al. (1998).

<sup>15</sup> A plethora of anecdotal evidence suggests that firms use selective disclosure to present an overly responsible public image (e.g. McDonnell and King, 2013). For instance, the CFA Institute, in its reports on the integration of ESG in the Americas (2018) and Europe, the Middle East, and Africa (2019, p. 6), concludes that ESG investing is “often used as a marketing slogan.” The Boston College Center for Corporate Citizenship (2013) reports that over 70 percent of surveyed companies cite ‘enhanced reputation’ among the top three business goals of their sustainability efforts. The Sustainability Accounting Standards Board (SASB), established in 2011, has recently developed 77 industry-specific standards to assist companies in disclosing material nonfinancial sustainability issues (SASB, 2020).

by a variation in the CSR narrative in the transcripts of the different quarters. Namely, we expect the use of discretionary selective CSR disclosure to be more pronounced at the turn-of-the-year earnings conference calls. This is because these calls tend to be associated with increased likelihood of manipulation (Hassler and Buckmaster 1975) and compared to the users of annual reports, may be subject to the attention of a more diverse (and arguably less sophisticated) group of stakeholders.<sup>16</sup>

Managers may engage in CSR impression management to unduly signal a favorable public image to conform to external expectations of environmental and social responsibility (e.g., Berrone et al., 2017; Dowling and Pfeffer, 1975; Lamin and Zaheer, 2012), and enhance the social legitimacy of their firms. This, in turn, can generate positive moral capital among the firm's stakeholders and thus provide insurance-like protection for a firm's relationship-based intangible assets (Godfrey 2005). Managers may have also incentives to use the turn-of-the-year earnings conference call to engage in CSR impression management to distract attention from reporting delayed bad news in the fourth quarter. This argument is predicated on the obfuscation hypothesis that assumes managers use narrative techniques to obscure the intended message (Courtis 1998) and on the view that management may not be neutral in its presentation in accounting narratives (Sydserrf and Weetman, 1999). It is thus possible that, in their efforts to manipulate the perception of a firm's CSR practices or to conceal (delayed)<sup>17</sup> negative outcome, managers use a biased narrative style, such as discretionary CSR disclosure, to deflect attention and reduce the adverse impact on stakeholders' perceptions (Courtis 2004).<sup>18</sup> In support of this conjecture, Leung and Snell (2017, 2021) show that

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<sup>16</sup> Caution is merited here, as we are not claiming that the perception of "sophisticated" or primary stakeholders can be (easily) manipulated, given their ability to collect and process firm information. It is possible however that other stakeholders can be influenced by impression management strategies (e.g. "general public", as in Dowling and Pfeffer 1975). Managers may engage in "cheap" talk to distort information in their CSR/environmental disclosures. However, "cheap talk" may attract the market's attention (Almazan, Banerji and De Motta, 2008). Further, annual reports tend to be associated with more credibility than other unaudited documents. Building on Unerman's (2000) insights, one can argue that discretionary CSR narrative disclosure are easier to produce and communicate during conference calls.

<sup>17</sup> Since bad news tend to be delayed (Mendenhall and Nichols 1988).

<sup>18</sup> This is plausible because the perception of a firm's CSR practices is a key driver of how individuals feel about a company (see Flammer and Kacperczyk (2019), and references therein). Merkl-Davies and Brennan (2007) discuss two main approaches to concealment: obfuscating bad news or emphasizing good news through thematic manipulation.

selective CSR disclosures is used to ‘camouflage’ legitimacy gaps and forestall perceptions of undesirable externalities (in the gambling industry).

In sum, the discussion above leads us to state the following main hypothesis:

*Main Hypothesis: In order to manipulate outside parties’ perceptions of the firm’s CSR, firms window-dress their social capital by biasing the narrative of the earnings conference at calls at the turn-of-the-year.*

### **3. DATA AND VARIABLES**

For our primary analyses, we make use of several databases. Our quarterly earnings conference call transcripts come from Capital IQ covering 2007 to 2020. Firm fundamentals, share price, and analyst coverage information are sourced from Compustat, CRSP, and Institutional Brokers’ Estimate System (I/B/E/S), respectively. Institutional ownership data comes from 13F data from Thomson-Reuters. We require each firm in our data set to have available stock price information in the CRSP database. After merging all data sets, we obtain a final sample of 80,189 firm-quarter level observations. To mitigate the effect of outliers, we winsorize all continuous variables at 1<sup>st</sup> and 99<sup>th</sup> percentiles. We also conduct some additional analysis using data on corporate CSR performance using the MSCI ESG Stats database, also known as the KLD Stats database. Finally, we complement our work by conducting tone and sentiment analysis using the word dictionary used in Loughran and McDonald (2011).

#### **3.1 Measures of CSR narrative disclosure**

Our primary dependent variable is the extent of CSR word usage in a firm’s quarterly earnings conference call. Pencil and Mălăescu (2016) developed a content-based CSR dictionary for analyzing CSR performance in the context of IPO. We use their CSR dictionary to construct our measures for CSR narrative disclosure. As argued in their paper, their dictionary captures four distinct dimensions of CSR related words used by companies: employee, environment, social and community, and human rights. Appendix I provides a sample of word list from the CSR dictionary for all four categories or dimensions. Following the approach of Loughran and McDonald (2011), we construct the measures for CSR related word

usage for each dimension as a percentage of CSR-related words in each call script. We further construct the total CSR words usage measure as the sum of all four dimensions as shown below.

$$\% Employee = \frac{Employment}{Total\ Words} \times 100 \quad (1)$$

$$\% Environment = \frac{Environemnt}{Total\ Words} \times 100 \quad (2)$$

$$\% Socail = \frac{Socail\ and\ Community}{Total\ Words} \times 100 \quad (3)$$

$$\% Human\ rights = \frac{Human\ rights}{Total\ Words} \times 100 \quad (4)$$

$$\% CSR = \% Employee + \% Environment + \% Socail + \% Human\ rights \quad (5)$$

To illustrate the within fiscal year CSR narrative dynamics, we split our sample based on a company's fiscal quarter and calculate the mean for each CSR-related word category. Figure 1 reports the results for our CSR related words across four fiscal quarters. As evident from the figure, the mean percentage for each category is higher for earnings calls related to the fourth fiscal quarter, which provides initial evidence that there is a difference in CSR word usage between the 4<sup>th</sup> quarter compared to other three fiscal quarters.

[Figures 1 is about here]

We also report the CSR words usage across industries in Figure 2. We split the sample based on the Fama-French 12 industries specification. The figure demonstrates that there are different preferences in CSR words usage across industries. For instance, utility firms are more willing to talk about CSR during their earnings calls. When we break down into each CSR words category, firms in the utility industry also show the highest words usage in each CSR category. Finally, to depict the time series trend in CSR words usage, we plot the quarterly mean and median of total CSR words across our sample period in Figure 3. The figure

shows that the usage of CSR related words is increasing over time. More importantly, the figure illustrates that there are significant hikes in CSR word usage in the 4<sup>th</sup> fiscal quarter compared to other quarters. Furthermore, sample firms appear to significantly increase their CSR narrative around the COVID-19 pandemic period.

[Figures 2 & 3 are about here]

### **3.2 Control variables**

To explain the variations in CSR words usage in firms' earnings conference call, we deploy univariate and multivariate regression analysis. In our multivariate analyses, in addition to the 4<sup>th</sup> fiscal quarter dummy, we include two types of control variables that are known to affect executive language during earnings conference calls. The first set relates to firm status and financial performance in each quarter. Specifically, we use logarithm of firm size (measured as the natural log of total assets), book value to market value ratio, return on total assets, accruals (measured as accruals relative to total assets), and a binary variable indicating negative earnings as our controls for quarterly firm performances. Furthermore, we control the logarithm of the number of days between the fiscal quarter end date and the earnings call date, capturing the preparation time for the content inside the earnings call.

The second set of control variables relates to monitoring from outside stakeholders such as investors and analysts. The variables are surprise earnings (measured as the difference between actual earnings and the consensus analyst forecast divided by the actual earnings), logarithm of the number of analysts present in the earnings conference call in each quarter, logarithm of the number of earnings estimates made by analysts during that quarter, and an indicator variable to distinguish whether the firm met earnings expectations in that quarter. Additionally, we also control for institutional ownership as previous research demonstrate that CSR engagement is related to the percentage of institutional ownership (Borghesi et al., 2014; Chen et al., 2020). Detailed variable definitions are provided in Appendix II.

### **3.3 Summary statistics**

Table 1 presents the summary statistics for our primary dependent, control variables, and other measures that we subsequently use in our analyses. The table shows that a sampled average firm has 1.65% of words related to the employee, 1.19% of terms associated with the environment, 1.45% of words belong to social and community, and 0.90% of words correspond to human rights in the earnings conference call. On average, 5.2% of conference call words are related to CSR and the percentage of CSR word usage increases to 6.1% when we just look at the presentation section of the conference call. Our sampled firms have an average of \$2.30 billion of assets, an average book-to-market ratio of 0.551, and institutional investors own an average of 74% of firms. In addition, 16% of the firms in our sample report a loss in a given quarter and 64.2% of the observations meet the consensus analyst earnings forecast. The table also reports that the average sampled firm has a following of 6.16 analysts with an average of 1.17 forecast revisions per analyst in a given quarter.

[Table 1 is about here]

## **4. DYNAMICS OF CSR NARRATIVE WITHIN A FISCAL YEAR**

### **4.1 Univariate analysis**

We begin our empirical analysis by providing univariate results of the CSR related word usage difference between the fourth fiscal quarter and the remaining three fiscal quarters. Table 2 provides descriptive statistics for the fourth quarter CSR related words usage and the remaining three quarters, separately. Column 7 presents the results for the univariate tests comparing these two groups. Our sample includes 21,414 firm-quarter observations from fourth fiscal quarters, constituting 26.7% of full sample. The average fourth quarter CSR related words usage is higher, and the usage difference is statistically significant than the remaining three fiscal quarters across all four dimensions of CSR words. For instance, the average usage of total CSR related words is 0.106% higher for the fourth fiscal quarters, which is around 2% higher than the total CSR words usage in the remaining 3 fiscal quarters. Interestingly, we also find that the net tone, measured from Loughran and McDonald (2011), is also higher in the last fiscal quarter of a year. All these differences are significant at 1% level. In addition to the CSR word usage, we further examine the tone around the usage of SR



words. The table shows that top executives not only use more CSR related words in the 4<sup>th</sup> fiscal quarter compared to others but also have stronger positive tone associated with those CSR words.

[Table 2 is about here]

## 4.2 Regression analysis

A potential concern of interpreting the hike of 4th-quarter CSR word usage is that the variation in quarterly CSR narrative disclosure during earnings call may simply be capturing quarterly variation in underlying firm characteristics. To formally assess the statistical and economic significance of 4th-quarter CSR word usage after controlling for firm characteristics, we conduct an ordinary least squares (OLS) regression using the following specification:

$$\% CSR_{itq} = \alpha + \beta \cdot FQTR_{it4} + X'_{itq} \delta + \eta_i + \mu_{tq} + \varepsilon_{itq} \quad (6)$$

where  $i$  indexes firm,  $t$  denotes year and  $q$  refers to the specific fiscal quarter.  $\% CSR_{it}$  is a measure which equals to the percentage of CSR related words in firm  $i$ 's earnings conference calls in fiscal year  $t$  and specific quarter  $q$ .  $FQTR_{it4}$  is an indicator variable that equals one if firm  $i$  is in its fourth fiscal quarter, zero otherwise.  $X_{it}$  represents a set of control variables that could affect executive language usage during earnings calls (e.g., Huang et al., 2014; Davis et al., 2015). In addition, we include two sets of fixed effects.  $\eta_i$  controls for firm-specific but time-invariant omitted variable, such as firm's disclosure preference. We also control for year-quarter fixed effects ( $\mu_{tq}$ ) to address time-varying factors, such as the regulatory environment or macroeconomics changes that could affect a firm's CSR words usage during earnings calls.

Our hypotheses assert that managers inflate their CSR communication during the last fiscal quarter earnings calls to manipulate outside parties' perception. Table 3 presents the results of estimating Equation (6). Column 1 to 3 report the results when only the firm and year-quarter fixed effects are included. In column 1, the coefficient on FQTR4 is positive

(0.108) and significant at the 1% level, suggesting that top executives use more CSR related words in the last fiscal quarter of a year than in the remaining three fiscal quarters.

[Table 3 is about here]

To mitigate the concerns that our results are driven by the mean effect of the first three fiscal quarters, we replace the fourth quarter indicator variable with the first three fiscal quarters binary variables in column 2. When we compare CSR words usage in the first three fiscal quarters with those in the fourth fiscal quarters separately, results show that firms talk uniformly less about CSR in the other three fiscal quarters compared to fourth fiscal quarters. Column 2 shows that the average CSR related words in the first, second and third quarters are significantly lower than in the fourth quarter, respectively.

A potential reason for the increase in CSR word usage during the fourth quarter is the external evaluation of a firm's CSR engagements and executive performance occurs more extensively at the calendar year-end. For instance, KLD data, which is the major ESG rating data used in academia, reflects each firm's ESG engagement at the calendar year-end. Consequently, firms would disclosure more about their CSR engagements at the calendar year end to achieve better score in ESG ratings. To investigate the calendar year-end effect, we define two separate fourth quarter binary variables: the December 4th-quarter indicator (*DEC. FQTR4*) for firms with fiscal year-ending in December and the non-December 4th-quarter dummy (*Non-DEC. FQTR4*) for firms with fiscal year end other than December. If the increase in CSR words usage in the 4th quarter is driven purely by the calendar year-end surge in external evaluation, then we should observe a positive and statistically significant effect in *DEC.FQTR4* but not in *Non-DEC.FQTR4* indicator variable. Column 3 of Table 3 shows that the coefficients on *DEC. FQTR4* and *Non-DEC. FQTR4* are 0.138 and 0.084, respectively. Both are statistically significant at 1% level, indicating that the hike in CSR words usage in the 4th fiscal quarter is similar between firms with fiscal year-end in December and those with fiscal year-end in the other months. The results suggest that the increase in CSR related word usage during the fourth quarter is not driven by the calendar year-end effect.

Column 4 to 6 further include a series of additional controls. We find the number of days between 4<sup>th</sup> fiscal quarter end date to earnings call date for that quarter ( $\ln(\text{Days diff})$ ) is positively related to the CSR words usage. Also, firms that do not meet analysts' expectations, with higher analysts' coverage, higher institutional ownership, and larger book to market ratio appear to have lower CSR word usage during earnings calls. Nevertheless, the estimated coefficient on the Fourth Quarter indicator remains significant. However, these additional covariates only improve the fit of the model slightly, as seen by the increase in adjusted  $R^2$  from 61.7% to 61.9%. The minor increase in the fitness of the model indicates that most of the CSR word usages is determined by the macro-level characteristics or firm's preference (Di Giuli and Kostovetsky, 2014; Borghesi et al., 2014; and Jha and Cox, 2015). Our robustness check further includes the firm-year fixed effects to control for the yearly unseen firm characteristics.

The main results indicate that firms are systematically speaking more about CSR during the last fiscal quarter than the other three fiscal quarters. The increase in CSR words usage during the fourth fiscal quarter supports our argument that managers are engaged in the impression management for CSR at the-turn-of-the-year.

#### **4.6 Robustness**

Table 4 & 5 report results from a battery of robustness tests that restrict our sample period, apply our analysis to presentation session of earnings calls, and include additional fixed effects. Our qualitative conclusions remain robust to all these robustness tests. For example, the first test deals with the concern that the big spike in narrative CSR disclosures during 2020, the onset of COVID-19 global pandemic, may drive our results. To alleviate this concern, we conduct our estimation excluding the data from the year 2020. Our results remain unchanged as presented in Column 1 to 3 of Table 4.

[Table 4 & 5 are about here]

The second set of tests focus on the presentation section of earnings calls as executives answer questions from analysts during the Q&A section. It is possible that the CSR word

usage in Q&A session is not premeditated as the executives respond to analysts' questions in an impromptu manner. Consequently, there may be different levels of CSR word usage during different sessions. To mitigate this concern, we calculate the percentage of CSR related words in the presentation section only and replace our main dependent variable with percentage of CSR word usage in the presentation session only. The results are reported in the last three columns of Table 4. All coefficients for our key independent variables are statistically significant and similar to our main regression results in Table 3.

The third set of tests mitigate the potential selection issue of firms' disclosure decision. First, previous studies demonstrate that managers are more likely to issue bad news during Fridays as investors' preferences for leisure are stronger on Fridays, causing them to devote fewer resources to process firms' disclosures (Patell and Wolfson, 1982; and Damodaran, 1989). Therefore, in the first three columns of Table 5, we include additional days of week fixed effect to address the executives' spontaneous selection in information release date. Second, we also control for the firm per year fixed effect to relieve the concerns of omitted variables. As CSR disclosures are endogenous, the firm-year fixed effect can manage for the yearly firm-specific characteristics. The results for firm-year fixed effects are reported in the last three columns of Table 5. All the results in Table 5 are statistically significant at 1% level and have a similar sign and magnitude as our main results in Table 3.

Finally, in Table 6 we supplement our findings by examining the effect of the fourth fiscal quarter on other textual measurements. As indicated in the main hypothesis, managers may try to look good at the turn-of-the-year. Therefore, we try to determine whether the sentiment reflected in the earnings conference calls are different in the last fiscal quarter than the other three quarters. To measure the sentiment, we use the method developed by Loughran and McDonald (2011) and use Net Tone as our key outcome variable. We estimate the Net Tone as the percentage of positive words minus negative words in total words used during the earnings call. We redefine Equation (6) replacing our key dependent variable % CSR with Net Tone. Table 6 presents our results. Columns (1) to (3) report results that are similar in pattern relative to our results from Table 3, indicating that executives consistently use more positive tone in the last fiscal quarter. These results support our argument that

firms try to look good during the last fiscal year-end quarters to manage their impression to the market.

[Tables 6 is about here]

## 5. DO FIRMS WINDOW DRESS CSR NARRATIVES?

### 5.1. Measuring CSR window dressing and reversal

In this section, we examine whether and to what extent the elevated CSR narratives in the fourth fiscal quarter is tantamount to window dressing. By its very nature, window dressing is actions taken by managers to improve the appearance of a company's CSR performances while masking the true CSR attributes of firms. The practice merely makes the current period look better and is extremely short-term in nature. Although window dressing is difficult to measure, we follow Allen and Saunders (1992) to construct the following measure of CSR window dressing (CSRWD) and the subsequent reversal (CSRREV):

$$CSRWD_{it} = \left[ \frac{(\%CSR_{4,it} - \%CSR_{avg\ 1-3,it})}{\%CSR_{avg\ 1-3,it}} \right] \times 100 \quad (7)$$

$$CSRREV_{it+1} = \left[ \frac{(\%CSR_{avg\ 1-3,it+1} - \%CSR_{4,it})}{\%CSR_{avg\ 1-3,it+1}} \right] \times 100 \quad (8)$$

Equation (7) represents the formula for  $CSRWD_{it}$ , and we calculate it as the percentage increase of CSR word usage in the fourth fiscal quarter relative to the average of word usage in the first three quarters for firm  $i$  in year  $t$ . On the other hand, we use  $CSRREV_{it+1}$  to capture the CSR word usage reversal from the fourth fiscal quarter of a given year to first three quarter in the following year. To be specific,  $\%CSR_{avg\ 1-3,it+1}$  refers to the average CSR words usage in the first three quarter in the following year and  $\%CSR_{4,it}$  refers to the percentage of CSR words used in the fourth fiscal quarter of given year.

Figure 4 displays the annual average  $CSRWD_{it}$  and  $CSRREV_{it+1}$  during our sample period. The average  $CSRWD_{it}$  is around 3.187 %, indicating that the 4th quarter CSR word usage is about 3% higher than the mean of the prior three quarters. For  $CSRREV_{it+1}$ , we also find similar patterns as the reversal of CSR word usage from the current 4th quarter to the following three quarters is consistently negative with an average of -1.634%. The pattern identified in Figure 4 provide suggestive evidence that fourth fiscal quarter hike in CSR narrative is temporary dressing up since much of it is reversed back in the subsequent quarters.

[Figure 4 is about here]

## 5.2. CSR narrative and future CSR activities

So far, our analyses suggest that top executives inflate their CSR initiatives at the last fiscal quarter earnings calls and much of this hike is reserved back in the subsequent quarters. However, it not yet obvious whether top executives window dress discretionary CSR disclosure narratives for the impression management purpose of their social capital or such narratives reflect a real organizational commitment to enhance their social capital. Disentangling these two possible explanations motivates us to explore whether there is a direct relationship between CSR narrative disclosure and CSR ratings. For this purpose, we merge our data with the KLD ESG rating data. Following Lins et al. (2017), we measure CSR score as the total number of CSR strengths minus the total number of CSR concerns realigning all dimensions of CSR ratings for each year. Please note that not all firms in our sample have CSR scores as limited number of firms are rated and the KLD ESG rating data ended in 2018.

To illustrate the relation between CSR narratives and future CSR score, we construct two transition matrices based on fourth-quarter CSR narratives and our CSR window dressing measurement. We first split our sample into quintiles based on their CSR narratives in the fourth quarter as well as CSR window dressing. Then, we look at how firms in each quintile of fourth quarter CSR narratives and CSR window dressing locate in the quintile groups of next year's actual CSR score. The results are shown in Table 7.

[Tables 7 is about here]

Panel A of Table 7 reports the relationship between fourth quarter CSR narratives and next year's actual CSR score. We didn't find any significant relation between last fiscal quarter CSR narratives during earnings conference call and future CSR score as the transition matrix is equally split among groups. Panel B of Table 7 also presents a similar result if we replace our CSR narratives measure with the CSR window dressing measure. These results in Table 7 further corroborates our suggestive evidence in Figure 4 that elevated fourth quarter CSR narratives is not a good prognosis for firms' actual future engagement in CSR activities.

Next, we utilize regression framework to analyze whether the past CSR score is related to current CSR word usage as well as CSR window dressing. To do so, we augment our regression specification in Equation (6) by adding lagged CSR score and an interaction term involving lagged CSR score and fourth quarter dummy variable. Table 8 presents our results. As evident from the first column, while the relationship between the CSR narrative disclosure and CSR score is positive, it is not statistically significant. Similarly, when we consider the CSR window dressing and various components of CSR narrative window dressing, we do not find any statistically significant relationship at the conventional level. The lack of direct relationship between the CSR scores and the narrative disclosure of CSR in the fourth quarter indicates potential opportunistic intent from the top executives of firms.

[Tables 8 is about here]

### **5.3. Cross-sectional determinants of CSR window dressing**

Since window dressing is a costly endeavor, managers will engage in such behavior if the marginal benefit of doing so outweighs its marginal cost.<sup>19</sup> In this section, we investigate why some firms engage in CSR window dressing while others do not. Conventional wisdom suggests that the industry embeddedness of a firms is linked with how the firm is perceived on its CSR performance. Oh et al. (2017) show that firms in industries with low CSR reputa-

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<sup>19</sup> At the very least, window dressing requires additional managerial efforts. There could be additional reputational and regulatory-compliance cost associated with window dressing behavior.

tion are likely to engage in advertising their CSR engagements. Consequently, it is conceivable that the industry level differences in CSR disclosure during the fourth fiscal quarter is likely driven by impression management. To test this possibility, we construct an indicator variable based on whether a firm belong to “dirty” or “clean” industries. We define the “dirty” industries as the industries that involves firms in oil and gas, mining, and chemicals industries.<sup>20</sup> The remaining firms are categorized as being from the clean industries. The regression results are reported in columns (1) and (4) of Table 9 for this test. We find that coefficient for dirty industries is positive and statistically significant, indicating executives from firms in “dirty” industries try to engage in more CSR window dressing during their conference calls in the last fiscal quarter.

[Table 9 is about here]

Next, we examine the impact of product market competition in shaping our new evidence. Product market competition and the motive to differentiate products in competitive markets have been linked to firms’ CSR activities. Servaes and Tamayo (2013) find that CSR may affect customer awareness and reputation. Flammer (2015) finds that product market competition affects corporate social responsibility and provides evidence in favor of having CSR as a competitive strategy. Albuquerque et al. (2019) argue that CSR commitments help in product differentiation. These studies point to the fact that firms in competitive industries are likely to do more CSR, therefore, will have a less of an incentive to artificially hype-up CSR narrative to project an overly responsible public image of their firms. To assess whether executives from more competitive markets engage in less CSR window dressing, we use the product market fluidity, a proxy for product marker threat, from Hoberg, Phillips, and Prabhala (2014) and a sales-based Herfindahl-Hirschman Index (HHI) using Compustat data. Columns (2) and (5) Table 9 show that product market threat, measured by the product fluidity, is negative and statistically significant at the 1% level, suggesting that more predation threats from competitors will decrease CSR window dressing activities. By contrast, we find the co-

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<sup>20</sup> Our industry reference is based on Fama-French 48 industry classification. For “dirty” industry, we include Chems (14), Mines (28) and Oil (30) from Fama-French classification.



efficient for product market concentration from HHI index measurement is positive and statistically significant at 1% level in columns (3) and (6), indicating that executives from firms in less competitive industry will engage more in CSR window dressing during the conference calls in fourth fiscal quarters.

## **6. CONSEQUENCES OF ELEVATED CSR NARRATIVE**

The foregoing analyses highlight the pervasiveness of CSR window dressing behavior in the corporate landscape and a few of the cross-sectional determinants of such behavior. In this section, we augment our analyses by investigating the consequences of such behavior. Specifically, we examine the impact of CSR window dressing and CSR narrative hike on firms' financial statement readability and future stock price crash risk.

To measure the readability of financial statement, we acquire the bog index from Bon-sall et al. (2017). Then we run an OLS regression similar to Equation (6) but replacing the dependent variable to the Bog index. The results are shown in Column (1) and (4) of Table 10. The positive and statistically significant coefficient for CSR window dressing and CSR narrative hike indicate that elevated CSR related word usage during earnings calls will decrease the readability of financial statement. However, in column (4) we do not find a significant result for the interaction term between fourth fiscal quarter indicator and the CSR word usage, which illustrate that firms don't treat the fourth quarter differently when they prepare the financial statement.

Next, we switch focus on how capital market appraises the CSR window dressing behavior by looking at the future stock price crash risk. Kim et al. (2014) indicate that CSR performance is negatively associated with future crash risk. Therefore, to test whether CSR window dressing and fourth quarter CSR narrative hike have any valuation implication, we construct two measures of stock price crash risk following Chen et al. (2001). Our first measure, NCSKEW, is the negative conditional skewness of firm-specific weekly returns over the next fiscal quarter. It is calculated by taking the negative of the third moment of firm-specific weekly returns for each quarter and normalizing it by the standard deviation of firm-specific weekly returns raised to the third power. Our second measure, DUVOL, is the down-to-up

volatility measure of the crash likelihood. For each firm over a fiscal-quarter period, firm-specific weekly returns are separated into two groups: “down” weeks when the returns are below the quarterly mean, and “up” weeks when the returns are above the quarterly mean. Standard deviation of firm-specific weekly returns is calculated separately for each of these two groups and DUVOL is the natural logarithm of the ratio of the standard deviation in the “down” weeks to the standard deviation in the “up” weeks.

Columns (2) and (5) of Table 10 report the results for NCSKEW and columns (3) and (6) report the results for DUVOL. We find that more CSR related word usage, on average, is associated with lower risk of future stock price crash risk. However, window dressing CSR narratives or hyping-up CSR talking points at the turn-of-the-year earnings conference calls do not have any impact on the future stock price crash risk. These results highlight that capital market participants can figure out the cheap CSR talks from actual CSR performance and only reward companies for CSR actions and not for empty CSR words.

[Table 10 is about here]

## **7. CONCLUSION**

Issues related to CSR are increasingly becoming primary concerns for many investors in recent years, forcing corporate managers to adopt disclosure practices delineating their CSR footprints. However, the debate on whether firms are genuinely committed to CSR initiatives or merely hyping the discussion of it in their corporate reports and communications is yet to be settled. In this paper, we use discretionary CSR narrative disclosure in quarterly earnings conference calls to investigate whether firms window dress their CSR narratives to project an overly responsible public image of their firms.

We uncover a novel phenomenon on corporate social capital management. We document that, during their turn-of-the-year earnings conference calls, top executives actively promote their CSR activities, relative to remaining of quarters, by using more CSR related words. This pattern consistently emerges in a period covering 2007 to 2020 period. This is also a period when the use of CSR related narratives has been increasing. The pattern is

robust to various firm level controls and sources of unobserved heterogeneity. We demonstrate that the elevated CSR narratives in the fourth-fiscal quarter is not a good prognosis for a firm's subsequent actual CSR performance, suggesting that this phenomenon is essentially CSR window dressing. Finally, we find that narrative disclosure of CSR activities during all quarterly conference call reduce financial report readability and lower stock price crash risk. However, we do not observe any significant crash risk reduction attributed to fourth quarter CSR window dressing.

Our analyses suggest that CSR window-dressing at the turn-of-the-year is a pervasive phenomenon in the corporate landscape and are not affected by the consideration of calendar-year fourth quarter vs. fiscal-year fourth quarter as well as the choice of a firm's fourth fiscal quarter. Since corporate performance in the turn-of-the-year quarter is important for many aspects of corporate life, particularly for executive compensation, financing, credit rating, and governance, further investigations are needed to understand this phenomenon and its implications for corporations and their stakeholders. A direction that holds potential promise is re-examination of the linkages between CSR and financial performance, conditional on the discretionary narrative CSR and environmental disclosures of firms.

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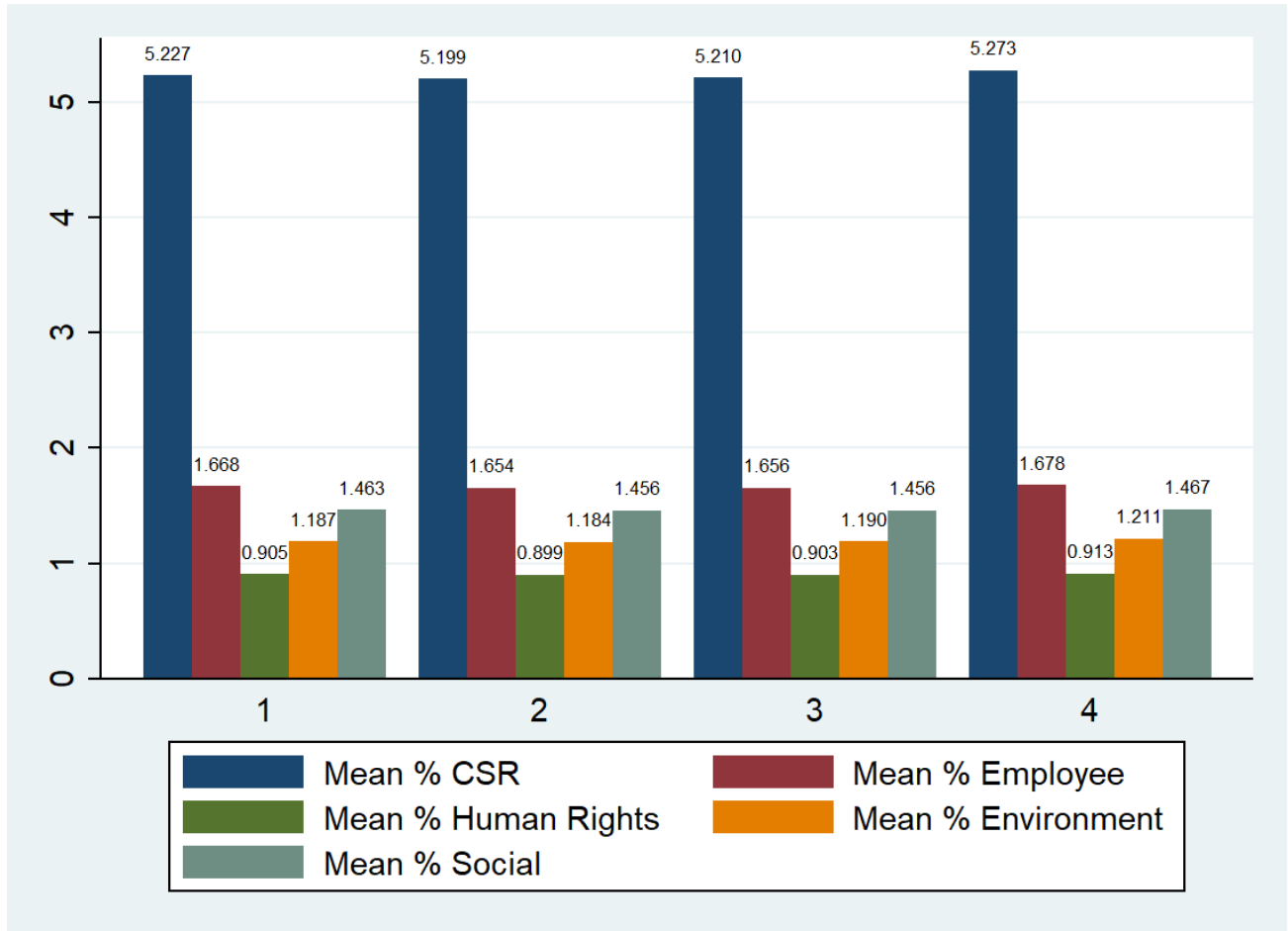
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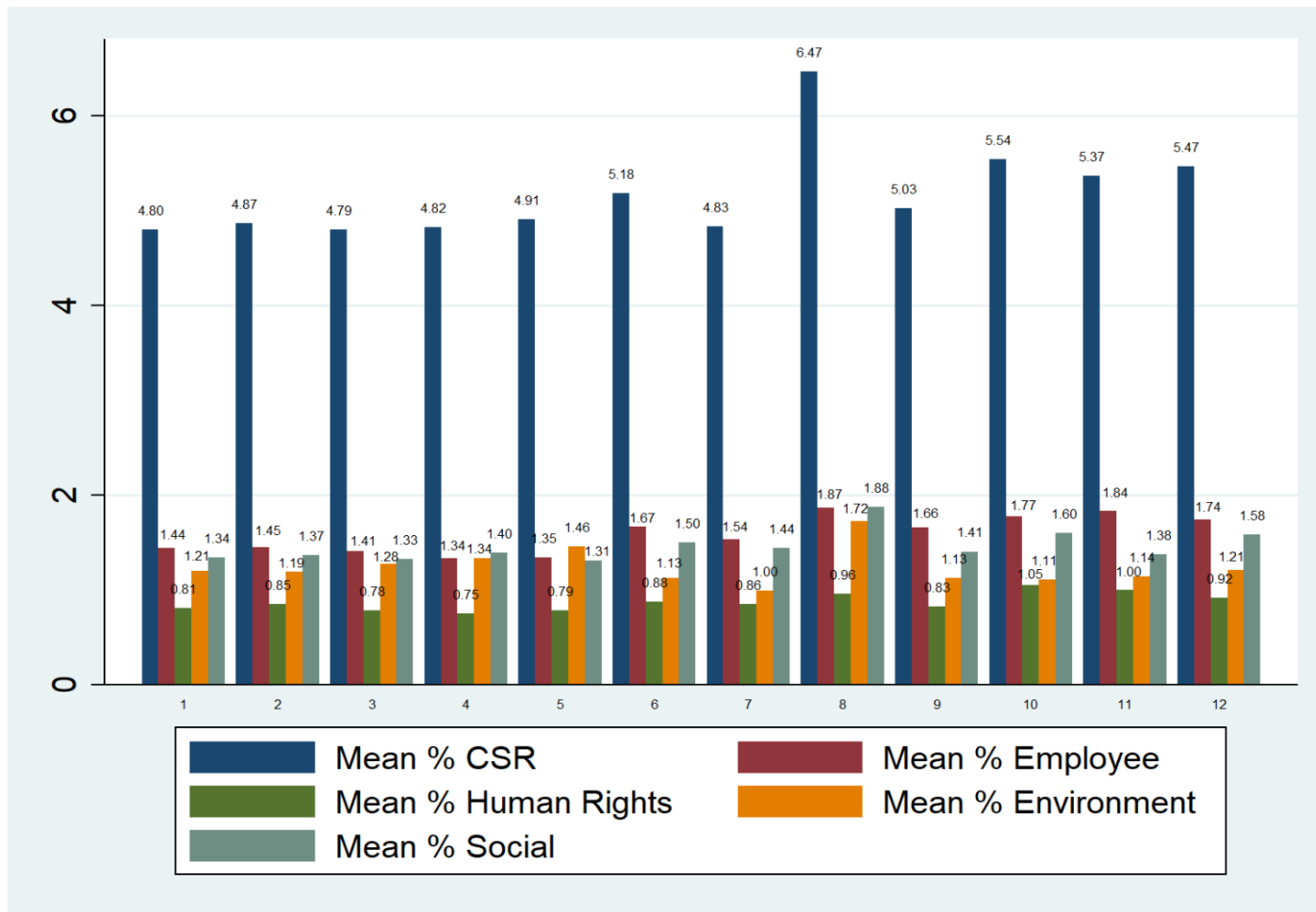
**Figure 1: CSR word usage across four fiscal quarters**

The figure shows the average CSR words usage in four fiscal quarters over the sample period 2007–2020.



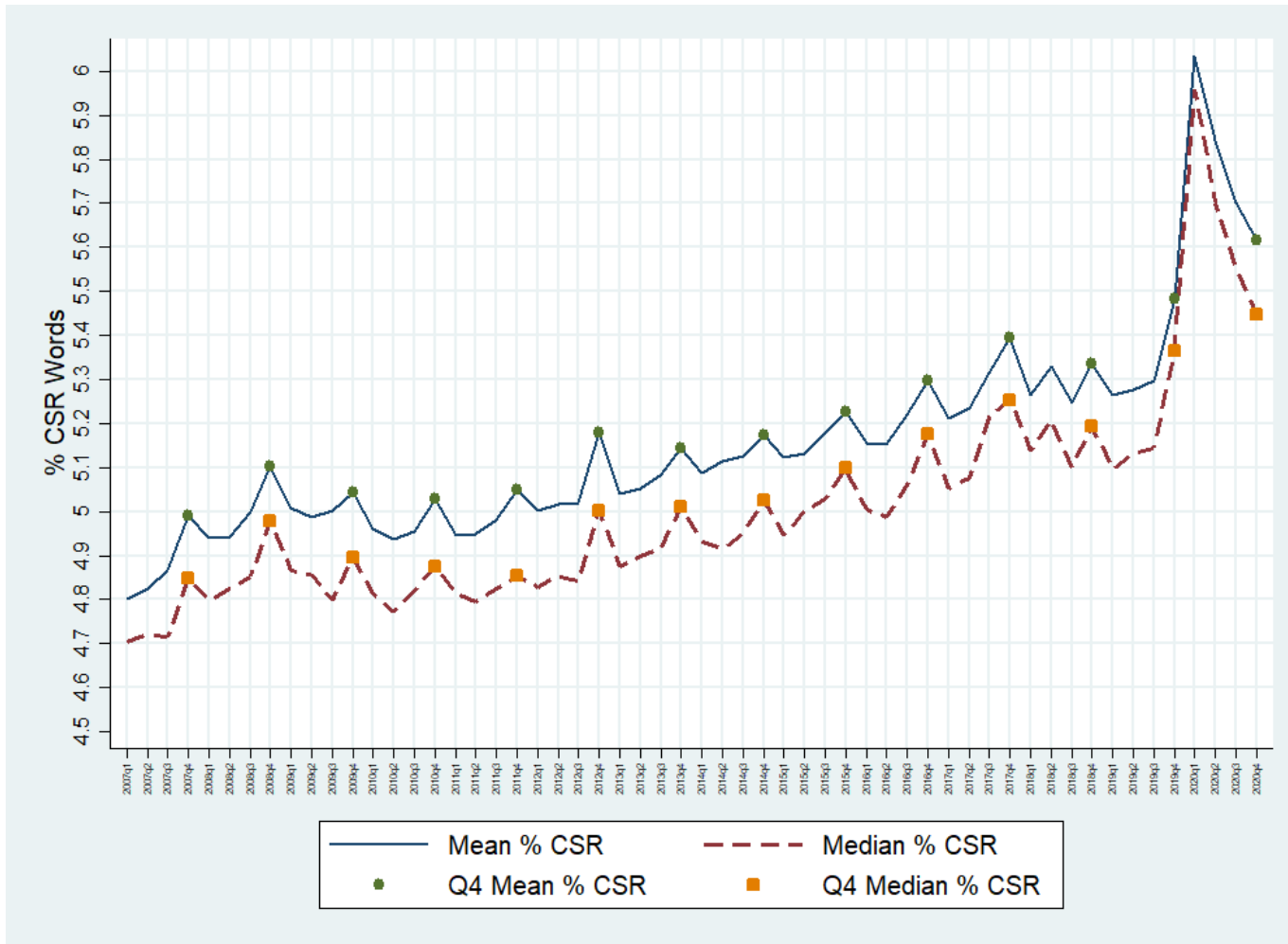
**Figure 2: CSR word usage across industries**

The figure shows the average CSR words usage across Fama-French 12 industry classification over the sample period 2007-2020. Fama-French Industries: 1- Consumer Non-Durables; 2 - Consumer Durables; 3- Manufacturing; 4 - Energy Oil and Gas Products; 5 - Chemicals and Allied Products; 6 - Business Equipment; 7- Telephone and Television Transmission; 8- Utilities; 9- Wholesale and Retail; 0- Healthcare; Medical Equipment; 11 – Finance; 12 – Other.



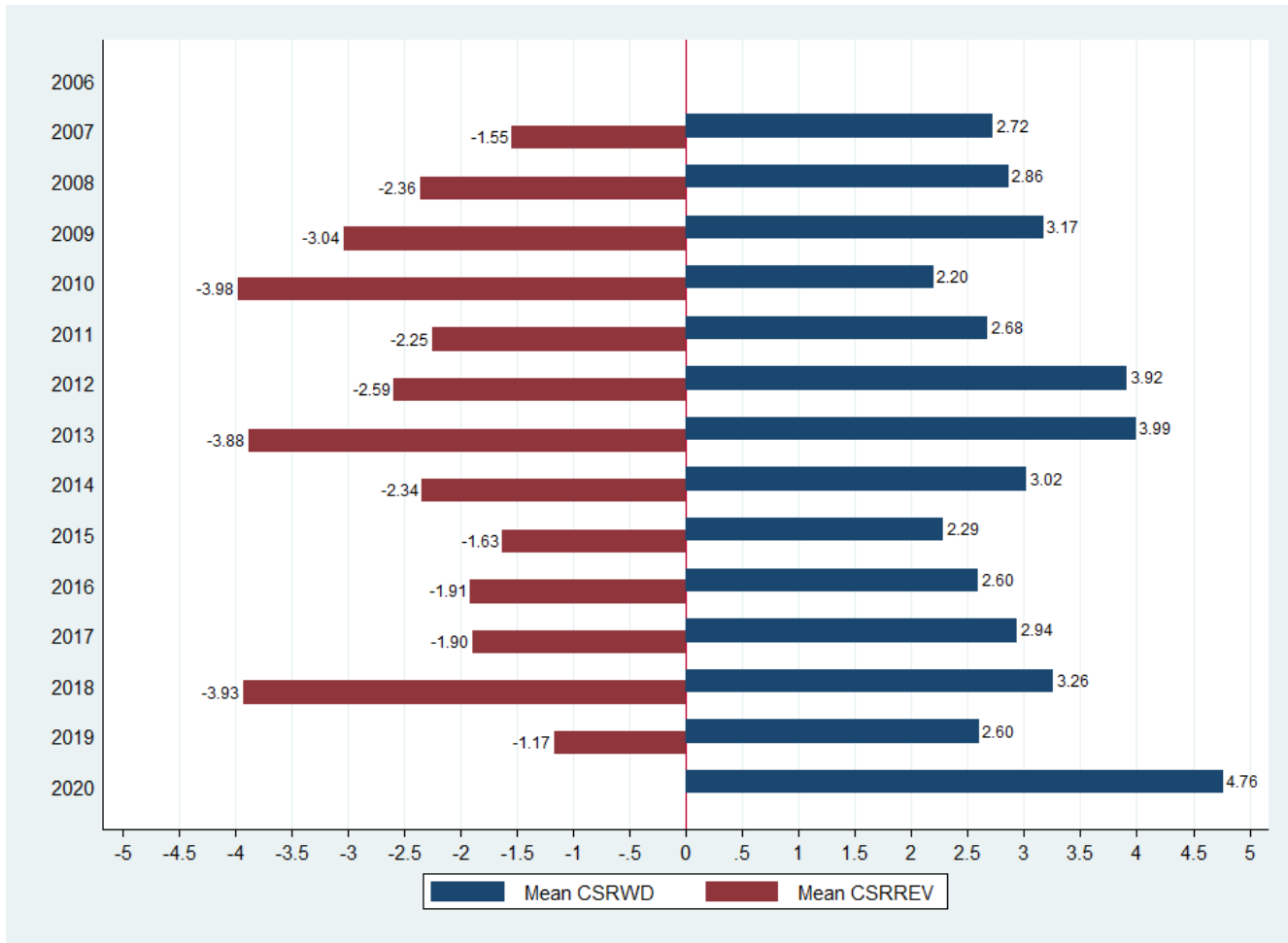
**Figure 3: Quarterly CSR word usage over time: 2007–2020**

This figure shows the average and median CSR word usage in quarterly earnings calls over our sample period.



**Figure 4: CSR window dressing and reversal**

This figure shows the average CSR window dressing (CSRWD) and reversal (CSRREV) measures over the sample 2007-2020.



**Table 1: Descriptive statistics**

This table presents summary statistics for all variables in our sample. The sample period is 2007-2020. Detailed definitions for each variable are provided in Appendix II. All continuous variables are winsorized at the 1% and 99% levels.

|                                   | [1]    | [2]   | [3]   | [4]     | [5]     | [6]    |
|-----------------------------------|--------|-------|-------|---------|---------|--------|
|                                   | N      | Mean  | SD    | P25     | P50     | P75    |
| <b>Textual measurements:</b>      |        |       |       |         |         |        |
| % Environment                     | 80,189 | 1.190 | 0.337 | 0.956   | 1.141   | 1.366  |
| % Social                          | 80,189 | 1.448 | 0.443 | 1.128   | 1.389   | 1.705  |
| % Human Rights                    | 80,189 | 0.899 | 0.295 | 0.688   | 0.859   | 1.064  |
| % Employee                        | 80,189 | 1.654 | 0.490 | 1.301   | 1.581   | 1.929  |
| Net Tone                          | 80,189 | 0.708 | 0.612 | 0.310   | 0.713   | 1.114  |
| % CSR                             | 80,189 | 5.194 | 1.215 | 4.33    | 5.047   | 5.897  |
| % CSR Pre                         | 80,189 | 6.117 | 1.727 | 4.897   | 5.942   | 7.143  |
| <b>Firm characteristic:</b>       |        |       |       |         |         |        |
| Ln (Days Diff)                    | 80,189 | 3.515 | 0.325 | 3.296   | 3.526   | 3.689  |
| Ln (Size)                         | 80,189 | 7.736 | 1.886 | 6.421   | 7.704   | 8.965  |
| Book to Market                    | 80,189 | 0.551 | 0.497 | 0.237   | 0.442   | 0.741  |
| Return on Asset                   | 80,189 | 0.003 | 0.041 | 0.00112 | 0.00891 | 0.0199 |
| Negative Earnings                 | 80,189 | 0.160 | 0.367 | 0       | 0       | 0      |
| Accrual                           | 80,189 | 0.010 | 0.097 | 0.00244 | 0.0176  | 0.0453 |
| Surprise Earnings                 | 80,189 | 0.075 | 0.713 | -0.0307 | 0.0476  | 0.179  |
| Ln (Analysts)                     | 80,189 | 1.818 | 0.850 | 1.386   | 1.946   | 2.485  |
| Ln (Estimates)                    | 80,189 | 2.067 | 0.968 | 1.386   | 2.079   | 2.773  |
| Meet Expectation                  | 80,189 | 0.642 | 0.479 | 0       | 1       | 1      |
| Institutional Ownership           | 80,189 | 0.740 | 0.239 | 0.621   | 0.798   | 0.911  |
| DUVOL                             | 78,541 | 0.067 | 1.074 | -0.652  | 0.048   | 0.774  |
| NCSKEW                            | 78,684 | 0.077 | 2.280 | -1.596  | 0.067   | 1.733  |
| <b>CSR Measurements (Yearly):</b> |        |       |       |         |         |        |
| CSR Score                         | 10,623 | 0.176 | 0.473 | 0       | 0       | 0.292  |
| CSR Strength                      | 10,623 | 0.308 | 0.498 | 0       | 0.111   | 0.434  |
| CSR Concerns                      | 10,623 | 0.131 | 0.248 | 0       | 0       | 0.143  |

**Table 2: Univariate analysis**

This table shows univariate analyses for major variables in our sample. We separate our sample into two groups based on whether the earnings call is held for the fourth fiscal quarter (FQTR). Fourth Quarter equals one when the earnings call is held for the fourth fiscal quarter for the firm. Detailed definitions for each variable are provided in Appendix II. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

|                    | FQTR4=1 |       |       | FQTR4=0 |       |       | Difference | t-stat |
|--------------------|---------|-------|-------|---------|-------|-------|------------|--------|
|                    | N       | Mean  | SD    | N       | Mean  | SD    |            |        |
| % CSR              | 21,414  | 5.273 | 1.208 | 58,775  | 5.167 | 1.216 | 0.106***   | 7.541  |
| % CSR-Presentation | 21,414  | 6.213 | 1.719 | 58,775  | 6.083 | 1.728 | 0.130***   | 9.461  |
| % Environment      | 21,414  | 1.211 | 0.340 | 58,775  | 1.182 | 0.335 | 0.029***   | 10.728 |
| % Social           | 21,414  | 1.466 | 0.438 | 58,775  | 1.442 | 0.445 | 0.024***   | 6.835  |
| % Human Rights     | 21,414  | 0.912 | 0.294 | 58,775  | 0.894 | 0.295 | 0.018***   | 7.663  |
| % Employee         | 21,414  | 1.678 | 0.490 | 58,775  | 1.645 | 0.490 | 0.033***   | 8.437  |
| Net Tone           | 21,414  | 0.732 | 0.601 | 58,775  | 0.699 | 0.615 | 0.033***   | 6.836  |



**Table 3: CSR narrative dynamics within a fiscal year: Baseline estimate**

This table shows multiple regression results for the relationship between fourth fiscal quarter and CSR word usage in earnings calls. We measure the CSR word usages from the word list provided by Pencle and Mălăescu (2016). Column (1) reports the results with fourth quarter indicator variable. Column (2) shows the results using first quarter, second quarter and third quarter as indicator variables, Column (3) further separate fourth quarter indicator variables into two subgroups according to whether the fourth fiscal quarter is coincided with December. Column (4) to (6) add additional controls corresponding to the first three columns. For all the regressions, we add firm, year-quarter fixed effects. All the variables are described in Appendix II. Standard errors are clustered by firm and t-statistics are shown in parentheses. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

|                         | [1]                   | [2]                    | [3]                   | [4]                   | [5]                   | [6]                   |
|-------------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| FQTR4                   | 0.108***<br>[12.602]  |                        |                       | 0.074***<br>[6.256]   |                       |                       |
| FQTR1                   |                       | -0.103***<br>[-10.286] |                       |                       | -0.069***<br>[-5.363] |                       |
| FQTR2                   |                       | -0.109***<br>[-10.243] |                       |                       | -0.077***<br>[-5.812] |                       |
| FQTR3                   |                       | -0.113***<br>[-11.153] |                       |                       | -0.078***<br>[-5.814] |                       |
| DEC. FQTR4              |                       |                        | 0.138***<br>[10.043]  |                       |                       | 0.113***<br>[6.270]   |
| Non-DEC. FQTR4          |                       |                        | 0.084***<br>[6.426]   |                       |                       | 0.050***<br>[3.325]   |
| Log(Days diff)          |                       |                        |                       | 0.099***<br>[4.432]   | 0.099***<br>[4.446]   | 0.100***<br>[4.486]   |
| Log(Size)               |                       |                        |                       | -0.004<br>[-0.190]    | -0.004<br>[-0.191]    | -0.004<br>[-0.194]    |
| Book-to-market ratio    |                       |                        |                       | 0.050***<br>[2.620]   | 0.050***<br>[2.623]   | 0.051***<br>[2.633]   |
| Return on assets        |                       |                        |                       | -0.271*<br>[-1.684]   | -0.275*<br>[-1.709]   | -0.270*<br>[-1.678]   |
| Negative earnings       |                       |                        |                       | 0.016<br>[0.987]      | 0.016<br>[0.963]      | 0.016<br>[0.986]      |
| Accrual                 |                       |                        |                       | 0.025<br>[0.338]      | 0.029<br>[0.381]      | 0.030<br>[0.396]      |
| Surprise earnings       |                       |                        |                       | 0.005<br>[1.111]      | 0.005<br>[1.113]      | 0.005<br>[1.115]      |
| Log(Analysts)           |                       |                        |                       | -0.090***<br>[-3.950] | -0.091***<br>[-3.967] | -0.091***<br>[-3.964] |
| Log(Estimates)          |                       |                        |                       | 0.001<br>[0.049]      | 0.001<br>[0.074]      | 0.001<br>[0.067]      |
| Meet expectation        |                       |                        |                       | 0.041***<br>[5.766]   | 0.041***<br>[5.764]   | 0.041***<br>[5.772]   |
| Institutional ownership |                       |                        |                       | -0.139***<br>[-3.115] | -0.138***<br>[-3.106] | -0.139***<br>[-3.130] |
| Time trend              |                       |                        |                       | 0.015<br>[0.696]      | 0.013<br>[0.595]      | -0.016<br>[-0.691]    |
| Constant                | 6.016***<br>[315.545] | 6.120***<br>[289.732]  | 6.019***<br>[315.253] | 5.717***<br>[17.091]  | 5.813***<br>[17.060]  | 6.118***<br>[16.995]  |
| Year-Quarter FE         | YES                   | YES                    | YES                   | YES                   | YES                   | YES                   |
| Firm FE                 | YES                   | YES                    | YES                   | YES                   | YES                   | YES                   |
| N                       | 80,189                | 80,189                 | 80,189                | 80,189                | 80,189                | 80,189                |
| Adj. R <sup>2</sup>     | 0.62                  | 0.62                   | 0.62                  | 0.62                  | 0.62                  | 0.62                  |

**Table 4: CSR narrative dynamics within a fiscal year: Robustness**

This table reports our robustness check to our main regression results reported in Table 3. Panel A below reposts the results for restricting our sample until 2019 and use only the CSR words in the presentation section. Detailed definitions for each variable are provided in Appendix II. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

| Restricting sample until 2019 & presentation section only |                     |                       |                     |                         |                         |                         |
|---|---------------------|-----------------------|---------------------|-------------------------|-------------------------|-------------------------|
|   | [1]                 | [2]                   | [3]                 | [4]                     | [5]                     | [6]                     |
|   | Until 2019<br>% CSR | Until 2019<br>% CSR   | Until 2019<br>% CSR | Pres. only<br>% CSR-Pre | Pres. only<br>% CSR-Pre | Pres. only<br>% CSR-Pre |
| FQTR4   | 0.080***<br>[6.531] |                       |                     | 0.098***<br>[5.639]     |                         |                         |
| FQTR1   |                     | -0.073***<br>[-5.509] |                     |                         | -0.060***<br>[-3.181]   |                         |
| FQTR2   |                     | -0.085***<br>[-6.243] |                     |                         | -0.117***<br>[-6.075]   |                         |
| FQTR3   |                     | -0.083***<br>[-6.016] |                     |                         | -0.125***<br>[-6.617]   |                         |
| DEC. FQTR4  |                     |                       | 0.110***<br>[5.754] |                         |                         | 0.167***<br>[6.589]     |
| Non-DEC. FQTR4  |                     |                       | 0.063***<br>[4.065] |                         |                         | 0.056***<br>[2.588]     |
| Controls  | YES                 | YES                   | YES                 | YES                     | YES                     | YES                     |
| Year-Quarter FE   | YES                 | YES                   | YES                 | YES                     | YES                     | YES                     |
| Firm FE   | YES                 | NO                    | YES                 | YES                     | NO                      | YES                     |
| N   | 74,696              | 74,696                | 74,696              | 80,189                  | 80,189                  | 80,189                  |
| Adj. R <sup>2</sup>                                       | 0.62                | 0.62                  | 0.62                | 0.61                    | 0.61                    | 0.61                    |

**Table 5: CSR narrative dynamics within fiscal year: Robustness (continued)**

This table reports additional robustness check to our main regression results reported in Table 3. Panel B below displays the results for adding two additional fixed effects: days of week fixed effect and firm-year fixed effects. Detailed definitions for each variable are provided in Appendix II. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

| Including days of week fixed effects and firm per year fixed effect |                     |                       |                     |                     |                       |                     |
|---|---------------------|-----------------------|---------------------|---------------------|-----------------------|---------------------|
|   | [1]                 | [2]                   | [3]                 | [4]                 | [5]                   | [6]                 |
|   | % CSR               | % CSR                 | % CSR               | % CSR               | % CSR                 | % CSR               |
| FQTR4   | 0.072***<br>[6.090] |                       |                     | 0.085***<br>[6.527] |                       |                     |
| FQTR1   |                     | -0.067***<br>[-5.219] |                     |                     | -0.079***<br>[-5.545] |                     |
| FQTR2   |                     | -0.075***<br>[-5.672] |                     |                     | -0.088***<br>[-6.036] |                     |
| FQTR3   |                     | -0.076***<br>[-5.657] |                     |                     | -0.089***<br>[-5.906] |                     |
| DEC. FQTR4  |                     |                       | 0.110***<br>[6.129] |                     |                       | 0.130***<br>[6.372] |
| Non-DEC. FQTR4  |                     |                       | 0.049***<br>[3.230] |                     |                       | 0.056***<br>[3.398] |
| Controls  | YES                 | YES                   | YES                 | YES                 | YES                   | YES                 |
| Year-Quarter FE   | YES                 | YES                   | YES                 | YES                 | YES                   | YES                 |
| Days of Week FE   | YES                 | YES                   | YES                 | NO                  | NO                    | NO                  |
| Firm FE   | YES                 | YES                   | YES                 | NO                  | NO                    | NO                  |
| Firm-Year FE  | NO                  | NO                    | NO                  | YES                 | YES                   | YES                 |
| N   | 80,189              | 80,189                | 80,189              | 80,189              | 80,189                | 80,189              |
| Adj. R <sup>2</sup>   | 0.62                | 0.62                  | 0.62                | 0.74                | 0.74                  | 0.74                |

**Table 6: CSR narrative dynamics within fiscal year: Robustness (Net tone)**

This table shows multiple regression results for the relationship between fourth fiscal quarter and sentiment in earnings calls. We use the same net tone measurement from Loughran and McDonald (2011). Column (1) to (3) reports the results for net tone. For all the regressions, we add firm, year-quarter fixed effects. All the variables are described in Appendix II. Standard errors are clustered by firm and t-statistics are shown in parentheses. Significance level: \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

|                         | [1]                    | [2]                    | [3]                    |
|-------------------------|------------------------|------------------------|------------------------|
| FQTR4                   | 0.034***<br>[5.269]    |                        |                        |
| FQTR1                   |                        | -0.026***<br>[-3.816]  |                        |
| FQTR2                   |                        | -0.024***<br>[-3.244]  |                        |
| FQTR3                   |                        | -0.053***<br>[-7.596]  |                        |
| DEC. FQTR4              |                        |                        | 0.049***<br>[5.163]    |
| Non-DEC. FQTR4          |                        |                        | 0.024***<br>[2.903]    |
| Log(Days diff)          | -0.004<br>[-0.341]     | -0.004<br>[-0.302]     | -0.004<br>[-0.304]     |
| Log (Size)              | -0.039***<br>[-3.187]  | -0.039***<br>[-3.206]  | -0.039***<br>[-3.191]  |
| Book-to-market ratio    | -0.106***<br>[-9.187]  | -0.105***<br>[-9.172]  | -0.105***<br>[-9.179]  |
| Return on assets        | 0.892***<br>[9.853]    | 0.880***<br>[9.752]    | 0.892***<br>[9.855]    |
| Negative earnings       | -0.089***<br>[-8.917]  | -0.090***<br>[-8.976]  | -0.089***<br>[-8.914]  |
| Accrual                 | 0.118***<br>[3.100]    | 0.129***<br>[3.373]    | 0.119***<br>[3.145]    |
| Surprise earnings       | 0.008***<br>[3.118]    | 0.008***<br>[3.123]    | 0.008***<br>[3.120]    |
| Log(Analysts)           | 0.086***<br>[6.789]    | 0.086***<br>[6.713]    | 0.086***<br>[6.776]    |
| Log(Estimates)          | -0.163***<br>[-16.441] | -0.162***<br>[-16.352] | -0.163***<br>[-16.419] |
| Meet expectation        | 0.157***<br>[35.513]   | 0.156***<br>[35.539]   | 0.157***<br>[35.517]   |
| Institutional ownership | -0.022<br>[-0.887]     | -0.020<br>[-0.827]     | -0.022<br>[-0.899]     |
| Time trend              | -0.006<br>[-0.504]     | -0.015<br>[-1.325]     | -0.018<br>[-1.433]     |
| Constant                | 0.779***<br>[4.492]    | 0.925***<br>[5.267]    | 0.940***<br>[4.983]    |
| Year-Quarter FE         | YES                    | YES                    | YES                    |
| Firm FE                 | YES                    | YES                    | YES                    |
| N                       | 80,189                 | 80,189                 | 80,189                 |
| Adj. R <sup>2</sup>     | 0.53                   | 0.53                   | 0.53                   |

**Table 7: CSR words usage and future CSR score: Transition matrix**

This table reports the relations between sample firms' CSR word usage in the 4<sup>th</sup> fiscal quarter (relative to other quarters) in period 't' and their CSR scores in period 't+1'. To generate the transition matrix, we classify the sample firms into quintiles based on their CSR word usage in the 4<sup>th</sup> fiscal quarter (relative to other quarters) in period 't' and their CSR scores in period 't+1', where Q1 refers to the lowest quintile and Q5 refers to the highest quintile. The transition matrix shows that CSR word usage in the 4<sup>th</sup> fiscal quarter (relative to other quarters) in period 't' is not a good prognosis for sample firms' CSR scores in period 't+1'.

| Panel A: FQTR4 CSR words and future CSR score     |    |                            |         |         |         |         |
|---|----|----------------------------|---------|---------|---------|---------|
|   |    | Future CSR score quintiles |         |         |         |         |
|   |    | Q1                         | Q2      | Q3      | Q4      | Q5      |
| FQTR4 % CSR<br>quintiles                          | Q1 | 23.27 %                    | 21.25 % | 19.92 % | 18.93 % | 15.57 % |
|   | Q2 | 21.67 %                    | 20.33 % | 20.55 % | 18.59 % | 18.79 % |
|   | Q3 | 20.85 %                    | 19.24 % | 21.42 % | 19.70 % | 19.86 % |
|   | Q4 | 17.04 %                    | 19.78 % | 18.97 % | 21.41 % | 22.67 % |
|   | Q5 | 17.17 %                    | 19.40 % | 19.13 % | 21.37 % | 23.11 % |
| Panel B: CSR window dressing and future CSR score |    |                            |         |         |         |         |
|   |    | Future CSR score quintiles |         |         |         |         |
|   |    | Q1                         | Q2      | Q3      | Q4      | Q5      |
| CSR WD<br>quintiles                               | Q1 | 19.19 %                    | 20.98 % | 19.23 % | 21.33 % | 18.30 % |
|   | Q2 | 19.50 %                    | 19.76 % | 20.99 % | 20.78 % | 19.57 % |
|   | Q3 | 20 %                       | 19.13 % | 21.66 % | 19.48 % | 21.02 % |
|   | Q4 | 20.90 %                    | 19.70 % | 17.98 % | 19.84 % | 20.88 % |
|   | Q5 | 20.41 %                    | 20.44 % | 20.15 % | 18.58 % | 20.23 % |

**Table 8: CSR words usage and future CSR score: Regression analysis**

This table reports the relations between past CSR scores, CSR word usage during earnings calls, and CSR window dressing. We regress the past CSR score on current CSR disclosure and CSR window dressing. In column (1), the dependent variable is the %CSR word usage in the earnings conference calls. In column (2), the dependent variable is the CSR window dressing measure. In columns (3) to (6) the dependent variables are Employee-related CSR window dressing, Social-related CSR window dressing, Environment-related CSR window dressing and Human rights-related CSR window dressing, respectively. Detailed definitions for each variable are provided in Appendix II. Significance level: \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

|                        | [1]                | [2]             | [3]             | [4]             | [5]               | [6]              |
|------------------------|--------------------|-----------------|-----------------|-----------------|-------------------|------------------|
|                        | %CSR               | CSRWD           | EMPWD           | SOCWD           | ENVWD             | HUMWD            |
| Past CSR Score         | 0.004<br>[0.16]    | 0.001<br>[0.12] |                 |                 |                   |                  |
| Past Employee Score    |                    |                 | 0.011<br>[0.62] |                 |                   |                  |
| Past Social Score      |                    |                 |                 | 0.002<br>[0.14] |                   |                  |
| Past Environment Score |                    |                 |                 |                 | -0.022<br>[-1.13] |                  |
| Past Human right Score |                    |                 |                 |                 |                   | -0.027<br>[-.87] |
| FQTR4                  | 0.096***<br>[6.07] |                 |                 |                 |                   |                  |
| FQTR4* Past CSR Score  | 0.013<br>[0.66]    |                 |                 |                 |                   |                  |
| Controls               | YES                | YES             | YES             | YES             | YES               | YES              |
| Year-Quarter FE        | YES                | YES             | YES             | YES             | YES               | YES              |
| Firm FE                | YES                | YES             | YES             | YES             | YES               | YES              |
| N                      | 41828              | 11102           | 11102           | 11102           | 11102             | 11102            |
| R <sup>2</sup>         | 0.65               | 0.19            | 0.19            | 0.17            | 0.18              | 0.17             |

**Table 9: Cross-sectional determinants of CSR window dressing**

This table shows the cross-sectional determinants of CSR window-dressing behavior. The dependent variable is the CSR window-dressing measure. An industry is defined as “dirty” if the primary business line of firms in the industry deals with fossil fuel and other heavy environmental pollutants. Product market threat uses market fluidity from Hoberg, Phillips, and Prabhala (2014). We also measure the product market concentration as the Herfindahl-Hirschman Index (HHI). Detailed definitions for each variable are provided in Appendix II. Significance level: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

|                              | [1]                | [2]                  | [3]                | [4]                  | [5]                  | [6]                  |
|------------------------------|--------------------|----------------------|--------------------|----------------------|----------------------|----------------------|
| Dirty industry               | 2.368***<br>[4.87] |                      |                    | 2.173***<br>[4.38]   |                      |                      |
| Product market threat        |                    | -0.133***<br>[-4.14] |                    |                      | -0.125***<br>[-3.61] |                      |
| Product market concentration |                    |                      | 3.585***<br>[3.80] |                      |                      | 3.470***<br>[3.07]   |
| Log(Days diff)               |                    |                      |                    | 1.369***<br>[3.77]   | 1.498***<br>[3.89]   | 1.430***<br>[3.95]   |
| Log(Size)                    |                    |                      |                    | 0.236***<br>[2.60]   | 0.202**<br>[2.07]    | 0.251***<br>[2.76]   |
| Book-to-market ratio         |                    |                      |                    | -0.089<br>[-0.36]    | 0.141<br>[0.54]      | -0.008<br>[-0.03]    |
| Return on assets             |                    |                      |                    | -6.325<br>[-1.41]    | -5.388<br>[-1.15]    | -6.242<br>[-1.39]    |
| Negative earnings            |                    |                      |                    | -1.113***<br>[-2.96] | -1.036***<br>[-2.63] | -1.095***<br>[-2.92] |
| Accruals                     |                    |                      |                    | 3.886**<br>[2.51]    | 2.449<br>[1.50]      | 3.765**<br>[2.44]    |
| Surprise earnings            |                    |                      |                    | -0.015<br>[-0.10]    | -0.089<br>[-0.56]    | -0.017<br>[-0.11]    |
| Log(Analysts)                |                    |                      |                    | -0.5<br>[-1.01]      | -0.477<br>[-0.92]    | -0.852*<br>[-1.73]   |
| Log(Estimates)               |                    |                      |                    | 0.237<br>[0.54]      | 0.46<br>[1.00]       | 0.616<br>[1.40]      |
| Meet expectation             |                    |                      |                    | 0.485**<br>[2.20]    | 0.527**<br>[2.30]    | 0.473**<br>[2.15]    |
| Institutional ownership      |                    |                      |                    | -0.164<br>[-0.33]    | -0.411<br>[-0.76]    | -0.115<br>[-0.23]    |
| Time trend                   |                    |                      |                    | 0.293<br>[1.04]      | 0.522*<br>[1.78]     | 0.451<br>[1.59]      |
| Constant                     | 1.89<br>[0.98]     | 4.406*<br>[1.83]     | 1.478<br>[1.11]    | -4.826*<br>[-1.88]   | -3.008<br>[-1.00]    | -6.019***<br>[-2.62] |
| Firm-level clustering        | Yes                | Yes                  | Yes                | Yes                  | Yes                  | Yes                  |
| Year FE                      | Yes                | Yes                  | Yes                | Yes                  | Yes                  | Yes                  |
| N                            | 20529              | 18888                | 26516              | 20529                | 18888                | 20559                |
| R <sup>2</sup>               | 0.01               | 0.01                 | 0.01               | 0.01                 | 0.01                 | 0.01                 |

**Table 10: Consequences of CSR window dressing**

This table reports the relations between CSR words usage during earnings calls, financial statement readability and, the future stock price crash risk. The dependent variable in columns (1)-(2) is the Bog Index of financial statement readability. The dependent variable in columns (3) and (4) is the negative conditional skewness of firm-specific weekly returns over the next fiscal quarter. The dependent variable in column (5) and (6) is the natural logarithm of the ratio of the standard deviation in the “down” weeks to the standard deviation in the “up” week. Detailed definitions for each variable are provided in Appendix II. Significance level: \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

|                      | [1]                   | [2]                  | [3]                  | [4]                   | [5]                   | [6]                   |
|----------------------|-----------------------|----------------------|----------------------|-----------------------|-----------------------|-----------------------|
|                      | BOGINDEX              | NCSKEW               | DUVOL                | BOGINDEX              | NCSKEW                | DUVOL                 |
| CSRWD                | 0.005**<br>[2.39]     | -0.002<br>[-1.14]    | -0.001<br>[-1.44]    |                       |                       |                       |
| %CSR                 |                       |                      |                      | 0.032**<br>[2.05]     | -0.048***<br>[-3.51]  | -0.025***<br>[-3.83]  |
| FQTR4                |                       |                      |                      | -0.025<br>[-0.22]     | -0.046<br>[-0.47]     | -0.035<br>[-0.78]     |
| %CSR × FQTR4         |                       |                      |                      | 0.005<br>[0.23]       | -0.008<br>[-0.45]     | 0.000<br>[0.01]       |
| Log(Size)            | 2.832***<br>[37.58]   | 0.226***<br>[4.22]   | 0.122***<br>[4.86]   | 0.975***<br>[24.54]   | 0.398***<br>[11.60]   | 0.184***<br>[11.47]   |
| Asset tangibility    | 5.085***<br>[9.49]    | -0.055<br>[-0.14]    | -0.163<br>[-0.91]    | -1.075***<br>[-4.49]  | -0.321<br>[-1.55]     | -0.245**<br>[-2.54]   |
| Leverage             | 3.832***<br>[12.60]   | -0.011<br>[-0.05]    | 0.034<br>[0.33]      | 1.214***<br>[9.08]    | -0.472***<br>[-4.05]  | -0.139***<br>[-2.56]  |
| Book-to-market ratio | -0.114<br>[-1.10]     | -0.129*<br>[-1.78]   | -0.093***<br>[-2.71] | 0.259***<br>[5.45]    | -0.928***<br>[-23.01] | -0.354***<br>[-18.79] |
| Return on assets     | -0.777<br>[-0.96]     | -4.071***<br>[-6.96] | -1.652***<br>[-6.02] | -1.737***<br>[-4.26]  | -3.698***<br>[-10.45] | -1.570***<br>[-9.52]  |
| Log(Analysts)        | -0.559***<br>[-7.42]  | 0.015<br>[0.27]      | 0.017<br>[0.68]      | -0.095***<br>[-2.95]  | -0.024<br>[-0.87]     | 0.004<br>[0.30]       |
| O-Score              | 0.169***<br>[7.73]    | -0.055***<br>[-3.50] | -0.023***<br>[-3.14] | 0.121***<br>[12.43]   | -0.037***<br>[-4.36]  | -0.018***<br>[-4.42]  |
| Sigma                | 0.370**<br>[2.33]     | 0.182<br>[1.58]      | -0.032<br>[-0.59]    | 0.877***<br>[10.61]   | 0.181**<br>[2.51]     | 0.048<br>[1.42]       |
| Constant             | 66.181***<br>[118.72] | -1.982***<br>[-4.96] | -0.936***<br>[-4.98] | 78.761***<br>[187.97] | -2.216***<br>[-6.39]  | -1.083***<br>[-6.70]  |
| Year-Quarter FE      | Yes                   | Yes                  | Yes                  | Yes                   | Yes                   | Yes                   |
| Firm FE              | Yes                   | Yes                  | Yes                  | Yes                   | Yes                   | Yes                   |
| N                    | 15162                 | 16205                | 16165                | 57771                 | 60865                 | 60748                 |
| R2                   | 0.84                  | 0.14                 | 0.14                 | 0.87                  | 0.04                  | 0.05                  |



## Appendix I: Sample Words List

This table displays the sample words from Pencil and Mălăescu's (2016).

| CSR Dimension        | Sample Words  |
|----------------------|---|
| Employee             | Adopted Child; Health Benefits; Educate; Educating; Discriminatory; Alternative Lifestyle; Health Care Benefits; Educating; Education; Diverse; Prejudiced; Health Insurance; Employ; Diversify; Certify; Healthy; Employee Equity; Employed; Diversifying; Civil, etc.   |
| Environment          | Acid Rain; Conservation; Environmental Disclosures; Green Engineering; Renewable Energy; Clean Energy; Depletes; Environmental Impact; GRI; Renewal; Affluence Carrying Capacity; Depleting Environmental Management Systems (EMS); Harmony; Resource Conservation; Depletion; Environmental Performance; Hazardous; Sustainable; Air Filtration; Double Bottom Line; Environmental Protection Agency; Hazardous Waste; Sustainable Consumption, etc.   |
| Human Rights         | Aboriginals; Fairness; Natural Rights; Salaries; Wheelchair Access; Native Peoples; Female; Oppressive Regime; Same Sex; Wheelchairs; Alaskan Natives; Fiduciary; Nationality; Scholarships; Religious Diversities; Labor; Freedom; Nationalization; Sexually; Religious Diversity; Labor Issue; Gay; Nationalize; Shared Norms; Reservation; Labor Right; Civil Liberty; Lesbians; Rights to Citizenship, etc.   |
| Social and Community | Transparent; Unemployable; Redeemable; Profit Sharing; Privileges; Benefit the Masses; Food Pantry; Native People; Unrestricted; Biodiesel; Charitable Foundation; Community Outreach; Impact on Society; Preserve Culture; Adopted; Charitable Giving; Community Project; Job Creation; Social Inclination; Affordable Housing; Zone; Conflict Mineral; Less Fortunate; Social Issue; Allocating; Civic Duty; Country; Local Community; Societal Development; Anti; Civic Engagement; Cultural Preservation; Local Development, etc. |

## Appendix II: Variable Definitions

| Variable          | Definition   |
|-------------------|--|
| Accrual           | Quarterly accruals over total assets. Accruals are defined as IBCY-OANCFY using quarterly Compustat data   |
| Book to Market    | Book equity over market equity   |
| Large Firm        | An indicator variable equal to one if firm size is larger than median firm size in the whole sample  |
| Ln (Analysts)     | Natural log of the number of analysts following the firm during the quarter of the company's earnings  |
| Ln (Days Diff)    | Natural log of the number of days between the quarter end date and the earnings call date  |
| Ln (Revisions)    | Natural log of the mean number of earnings estimate revisions during the quarter for the company   |
| Ln (Size)         | Natural log of the firm's total assets   |
| Meet Expectations | A dummy variable equal to one if the firm meets analyst earnings expectation in that quarter   |
| Negative Earnings | An indicator variable equal to one if the firm has negative earnings in that quarter   |
| Return on Assets  | Net income over assets   |
| Surprise Earnings | The difference between actual earnings and consensus analysts' forecast divided by the actual earnings   |
| % CSR             | Percentage of CSR related words provided by Pencle and Mălăescu (2016) in terms of total words in earnings calls   |
| % CSR Pre         | Percentage of CSR related words provided by Pencle and Mălăescu (2016) in terms of total words in presentation section of earnings calls                 |
| Net Tone          | The difference between the number of positive words and negative words in earnings call transcripts, scaled by the total number of words                 |
| CSR Score         | Total net CSR score of five sub-indices (environment, employee relations, human rights, community, and diversity) from the MSCI ESG Stats database       |
| CSR strengths     | Total CSR strengths score of five sub-indices (environment, employee relations, human rights, community, and diversity) from the MSCI ESG Stats database |
| CSR Concerns      | Total CSR concerns score of five sub-indices (environment, employee relations, human rights, community, and diversity) from the MSCI ESG Stats database  |
| CSR Hike          | The percentage increase in CSR related words in fourth fiscal quarter compared to previous three quarters  |
| Fourth Quarter    | An indicator variable equals one if the earnings call is held for the fourth fiscal quarter  |
| Third Quarter     | An indicator variable equals one if the earnings call is held for the third fiscal quarter   |
| Second Quarter    | An indicator variable equals one if the earnings call is held for the second fiscal quarter  |
| First Quarter     | An indicator variable equals one if the earnings call is held for the first fiscal quarter   |
| December          | An indicator variable equals one if the fourth fiscal quarter earnings call is held in December  |
| Non-December      | An indicator variable equals one if the fourth fiscal quarter earnings call is not held in December  |
| %Environment      | Percentage of environment related words provided by Pencle and Mălăescu (2016) in terms of total words in earnings calls                                 |

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|                |   |
|----------------|---|
| %Social        | Percentage of social related words provided by Pencle and Mălăescu (2016) in terms of total words in earnings calls       |
| % Human Rights | Percentage of human rights related words provided by Pencle and Mălăescu (2016) in terms of total words in earnings calls |
| % Employee     | Percentage of employee related words provided by Pencle and Mălăescu (2016) in terms of total words in earnings calls     |
| NCSKEW         | Negative conditional skewness of firm-specific weekly returns over the next fiscal quarter                                |
| DUVOL          | Natural logarithm of the ratio of the standard deviation in the “down” weeks to the standard deviation in the “up” week.  |

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