

The Effect of Enforcement Transparency: Evidence from SEC Comment-Letter Reviews

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This paper studies the effect of the public disclosure of the Securities and Exchange Commission (SEC) comment-letter reviews (CLs) on firms' financial reporting. We exploit a major change in the SEC's disclosure policy: in 2004, the SEC decided to make its CLs publicly available. Using a novel dataset of CLs, we analyze the capital-market responses to firms' quarterly earnings releases following CLs conducted before and after the policy change. We find that these responses increase significantly after the policy change. Consistent with CL disclosure increasing market discipline, we find that this increase is stronger among firms with a higher proportion of dedicated institutional investors or more substantive CLs. Corroborating these results, we also document a set of changes that firms make to their accounting reports following CLs. In contrast, we do not find conclusive evidence that CL disclosure increases SEC oversight intensity. Our results indicate that the disclosure of regulatory oversight activities can complement public enforcement with market monitoring.

Keywords: Disclosure Rules; SEC Comment-Letter Reviews; Public Enforcement.

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1. Introduction

In recent years, there has been a proliferation of policies to disseminate regulatory oversight actions.¹ One of the arguments in support of these policies is that the disclosure of regulatory oversight activities can enhance the effect of enforcement by increasing third-party monitoring. However, the validity of this assertion has rarely been tested. In this paper, we examine the effect of the public disclosure of the Securities and Exchange Commission (SEC) oversight activities on firms' financial reporting. To address this question, we exploit a major change in the SEC's policy regarding comment-letter reviews (henceforth "CLs" or "CL reviews"). Contrary to its prior policy, the SEC announced in 2004 that it would begin to publicly disseminate all CLs. From a research-design perspective, our setting provides three strengths: (1) the change was unexpected, (2) affected all public firms (all public firms are subject to CL reviews at least once every three years), and (3) did not modify the underlying regulation, but simply required the disclosure of CLs.

Prior research (e.g., Djankov et al. 2003; Goldstein and Sapra 2013) offers two arguments in favor of disclosing regulators' oversight activities. First, disclosure could allow market participants to impose "*market discipline*" (Goldstein and Sapra 2013). In our setting, the disclosure of CLs could strengthen the effect of the reviews on firms' financial reporting by facilitating market monitoring. Indeed, anecdotal evidence suggests that corporate executives are deeply concerned with investor perceptions of CLs and change their reporting practices in response to them (e.g., Dechow et al. 2016). Second, the public dissemination of oversight actions could affect the reputation of regulators, and thus increase "*supervisory*

¹ In the aftermath of the financial crisis, for instance, regulators stipulated to publicly disclose stress tests to better inform investors on the risks taken by banks (e.g., Goldstein and Sapra 2013). More recently, the Reed–Grassley bill sought to publicly disseminate the Public Company Accounting Oversight Board (PCAOB)'s inspection reports of auditors (PCAOB Enforcement Transparency Act of 2017).

discipline” (Goldstein and Sapra 2013). In our context, the SEC may exert more effort to protect its reputation when CLs become subject to public scrutiny.

Alternatively, disclosure of CLs could weaken the effect of the review process if companies infer the SEC’s oversight priorities from the letters sent to peer firms—thereby allowing firms to violate financial regulation in ways that are less likely to be the focus of CLs. This alternative hypothesis is consistent with prior theoretical and empirical research demonstrating that corporate financial reporting is shaped by managers’ anticipation of the behavior of other market participants (Becker 1968; Fischer and Verrecchia 2000) and regulators (Kedia and Rajgopal 2011; Blackburne 2014).

It is also possible that the disclosure of comment letters is inconsequential. One view is that CL reviews are ineffective and thus their disclosure is unlikely to have an effect.² While possible, this view is called into question by substantial anecdotal and empirical evidence on the effect of CLs (e.g., Boone et al. 2013; Bozanic et al. 2017; Johnston and Petacchi 2017; Brown et al. 2018).³ Another view is that, even if CLs are effective, firms could carefully address all comments regardless of whether CLs are publicly disclosed, because failing to do so could lead to negative repercussions such as more frequent CL reviews or, in the extreme, a costly enforcement action (OIG 2008a). Finally, it is possible that the disclosure of CLs incentivizes firms to be more vigilant about their financial reporting, improving overall reporting quality. In turn, higher reporting quality could reduce the likelihood of CLs identifying substantive issues, making CLs apparently inconsequential

² For instance, some politicians have raised concerns about “the utility of devoting hundreds of professional staff to a process that is not designed to detect fraudulent conduct.” (e.g., Paredes 2009; Katz 2010, 2011).

³ Several additional considerations suggest that CLs do matter. First, they allow the SEC to obtain answers to questions that are frequently dodged, dismissed, or ignored when asked by investors or analysts (Hollander et al. 2010). Second, the large backlog of Freedom of Information Act (FOIA) requests preceding the policy change suggests a vivid public interest in these letters (OIG 2007). Third, the SEC believes that these letters prompt firms to change their reporting practices (OIG 2008b). Finally, short-sellers use CLs (Dechow et al. 2016).

after the policy change (Goldstein and Sapra 2013). Ultimately, whether the disclosure of CLs shapes the effect of these reviews is an empirical question.

Our empirical tests are based on a novel dataset of CLs related to 10-Ks from 1998 through 2013. While comment letters issued prior to the policy change were not disseminated to the public, we obtain information on these letters through FOIA requests. Thus, our sample consists of CLs that were publicly disclosed (which we refer to as “public reviews”) and CLs that were not publicly disclosed (“private reviews”).

To analyze the effect of CLs, we study firms’ quarterly financial reporting around CL reviews. Specifically, we start by comparing the changes in short-window stock market reactions to earnings announcements (i.e., earnings response coefficients or ERCs) during the 360 days following the start of the review (which we refer to as the “treatment period”) to the ERCs during the 360 days prior to the review (the “control period”).⁴ To gauge the effect of the policy change, we compare the effect of public reviews to that of private reviews, i.e., we test difference-in-differences among ERCs of earnings announcements along two dimensions: (i) treatment vs. control periods, and (ii) public vs. private reviews.

ERCs tie directly to the SEC’s objective of improving firms’ disclosures and compliance with financial regulation through CLs by evaluating filings from an *investor’s perspective* (SEC 2015), because ERCs are a function of the informativeness of reported earnings for investors (Holthausen and Verrecchia 1988; Collins and Kothari 1989).⁵

⁴ We focus on earnings announcements rather than SEC filings, because prior work shows that these announcements are important disclosure events in terms of impact on security prices (e.g., Kothari 2001; Basu et al. 2013). We provide more insights on this choice in Section 3.3.

⁵ On its website, the SEC (2015) describes the objective of CL reviews as follows: “Much of the Division’s review involves evaluating the disclosure from a potential investor’s perspective and asking questions that an investor might ask when reading the document. When the staff identifies instances when it believes a company can improve its disclosure or enhance its compliance with the applicable disclosure requirements, it provides the company with comments.”

The results of these tests are consistent with firms producing more informative financial reports following CL reviews after the 2004 policy change. For public reviews, we observe an increase of approximately 10% in ERCs during the treatment period, but do not find substantive evidence of a significant change in ERCs for private reviews.

We also examine the timing and persistence of these results. Regarding the timing, we find that part of the reporting changes for public reviews occur while the review is still ongoing and before the public disclosure of the CL. Regarding the persistence, we find that the average increase in ERCs for public reviews does not reverse until eight quarters after the receipt of the initial letter. While temporary, the effect is economically important. Given the public mandate that the SEC reviews all public firms in the economy at least once every three years, the eight-quarter persistence implies that a given firm is more than half of the time under the effect of CL reviews.⁶ Moreover, the temporary nature of our findings is consistent with similar phenomena documented in the economics literature.⁷

Next, we explore the mechanisms underlying our primary results. Consistent with disclosure of CLs increasing market discipline, we find that our results are stronger among firms with higher dedicated institutional ownership or more substantive CLs. The intuition for these partitions is that, because dedicated institutional investors monitor firms' financial

⁶ There could be economic reasons for firms to adjust or drop disclosures triggered by CLs a certain time after the review. For example, changes in a firm's economics, modifications in the accounting standards, or changes in the materiality of a disclosure could lead firms to adjust or drop disclosures over time. The following quote by Wayne Carnall (the former Chief Accountant of the Division of Corporation Finance) illustrates this idea and suggests that the SEC does not necessarily expect a permanent effect from its CLs: "As with all disclosures, you provide what is right and meaningful and material. If it is not material, not relevant, companies do not have to continue to provide that disclosure." (PwC 2016b).

⁷ Research in economics has examined the effect of inspection frequency on the occurrence and persistence of violations in various contexts such as nuclear power plants (e.g., Feinstein 1989), pollution control in oil-transporting vessels (e.g., Epple and Visscher 1984), or restaurant hygiene inspections (e.g., Mathias et al. 1995). For example, Mathias et al. (1995) find that violations are more likely to occur when the time since the last inspection is greater than 12 months.

reports more extensively (Bushee 1998), and more substantive CLs attract the attention of investors, managers exert more effort in addressing the SEC's concerns.

While we observe changes in the characteristics of CLs after the 2004 policy change, our evidence does not allow us to unambiguously conclude that the effect is also driven by supervisory discipline. In particular, we observe that after the policy change, CLs are shorter and address fewer financial reporting topics, but the SEC employs relatively more supervisors than before the change.

To corroborate that the increase in ERCs around CLs that are publicly disclosed is related to reporting changes and additional disclosures prompted by the reviews, we conduct analogous tests using three characteristics of financial reports documented in prior literature as being related to the informativeness of these reports: restatement likelihood, discretionary accruals, and length of narratives.⁸ We find that earnings announcements following public reviews (compared to earnings announcements following private reviews) contain fewer discretionary accruals (a reduction of 0.3 percentage points). The associated filings exhibit lower restatement likelihood (a reduction of 2.4 percentage points) and include longer narratives (an increase of 2,642 words). Compared to the average value of discretionary accruals (3%), restatement likelihood (11%), and length of narratives (25,500 words) of our sample firms, these differences are substantive.

Two alternative explanations for our findings warrant special attention. First, it is possible that firms produce more informative earnings reports over time – independent of CLs. Second, it is possible that the effect of CLs increases over time – independent of the

⁸ Dechow et al. (2010) report that many studies use discretionary accruals and restatements as measures of reporting quality. Consistent with this, Blackburne (2014) and Cunningham et al. (2017) use discretionary accruals and restatements as measures of reporting quality in the context of SEC CLs. The evidence in Bozanic et al. (2017) suggests that the length of narratives is associated with the quality of firms' disclosures.

policy change. To explore the validity of these alternative explanations, we conduct three falsification tests. First, we randomize the dates of the treatment period (i.e., we shift the treatment period for firms receiving CLs). Second, we randomize the firms subject to CLs (i.e., we treat firms *not* receiving CLs as if they had received a CL). Third, we randomize the date of the policy change. We also repeat our tests restricting the sample to a short window of time around the policy change (as explained later in the paper, within this window we are able to exploit *exogenous within-year* variation in the disclosure of CLs). Results from these tests suggest that our findings are not driven by time trends in ERCs or SEC oversight.

Our study contributes to the growing body of research documenting the benefits of enforcement on financial reporting (see Leuz and Wysocki 2016, for a review). We expand this literature by offering evidence that the effect of regulatory oversight can be enhanced by the *public disclosure* of regulators' firm-specific oversight actions in the context of CLs. Our study also contributes to the literature on *private* and *public* enforcement as alternative mechanisms to protect investors (e.g., La Porta et al. 2006; Jackson and Roe 2009).⁹ While this literature suggests that public enforcement could be reinforced by the disciplining effect of private parties, there is little direct empirical evidence for this complementary interaction. Our findings provide evidence on this complementary interaction by showing that the disclosure of oversight actions can strengthen the effect of public enforcement through increased market discipline. We also contribute to the literature on the effects of the implementation of enforcement. Mahoney (2009), for example, emphasizes that small nuances in how securities regulation is enforced can lead to large differences in observed

⁹ "Public enforcement" refers to the actions taken by public parties (e.g., government agencies). "Private enforcement" refers to the actions taken by private parties (e.g., investors or interest groups) to enforce law and/or regulation, including market discipline and any other non-regulatory force that induces firms to comply with regulations (Jackson 2008; Karpoff et al. 2008a, 2008b).

outcomes, and Coffee (2007) argues that understanding how enforcement is carried out is much more important for understanding differences in economic outcomes than the rules “on the books.” Our study advances our understanding of the enforcement system by focusing on an increasingly popular policy in regulatory oversight, namely the disclosure of firm-specific regulatory oversight activities.

We also advance the growing literature on SEC comment letters (e.g., Cassell et al. 2013; Dechow et al. 2016; Bozanic et al. 2017; Heese et al. 2017; Johnston and Petacchi 2017). While this literature generally finds that CLs improve firms’ reporting practices, using our novel dataset, we extend this literature by showing that the disclosure of CLs enhances the effectiveness of these letters. Specifically, our results suggest that, consistent with criticism of the CL process, CLs had a weak effect on firms’ reporting and disclosure practices before their public dissemination. However, consistent with the conclusions of recent research, CLs appear to be effective once they are publicly disseminated.

Finally, our findings have regulatory implications. First, they suggest that the disclosure of oversight activities may help resource-constrained regulators to improve the effectiveness of their oversight; a finding that is timely given the current trend to reduce regulators’ budgets. However, when gauging the economic magnitude of our results, it is important to consider that—following the Sarbanes-Oxley Act of 2002 (SOX)—managers and auditors may be more careful in their response to CLs. Thus, the regulatory framework potentially contributes to the effect of the disclosure of oversight activities.¹⁰ Second, the implications of our findings extend beyond the U.S., as some non-U.S. jurisdictions are currently contemplating the public dissemination of regulatory reviews of financial reporting.

¹⁰ For example, Beaver et al. (2018) show that the ERC increased following SOX, and Cohen et al. (2008) document a decline in accruals-based earnings management after SOX. More broadly, Coates (2007) cautions researchers to be careful in drawing strong inferences around times of multifaceted regulatory change.

Under the 2004 Transparency Directive, for instance, European countries started to conduct CL reviews, but to date those reviews have not been made publicly available.

The paper proceeds as follows. Section 2 summarizes prior literature, provides institutional background on the SEC's comment letter process, and develops the hypothesis. Section 3 presents our main results. Section 4 explores the mechanisms. Section 5 explores alternative explanations for our findings and describes additional tests. Section 6 concludes.

2. Literature review, institutional background, and hypothesis

2.1. Literature review

Understanding which enforcement mechanisms work to protect investors has been the focus of research in accounting, economics, finance, and law, and an important policy issue across countries. Conceptually, the enforcement theory formulated by Djankov et al. (2003) and Shleifer (2005) argues that enforcement strategies in capital markets can be differentiated by their degree of public control. For example, market-based enforcement mechanisms such as auditors, analysts, institutional investors, or private litigation do not necessarily require public control. In contrast, public enforcement involves a public regulator such as the SEC, which reviews issuers' financials and disclosures, and penalizes issuers who break the rules.

Public enforcement in capital markets is often deemed necessary because market-based enforcement alone would yield suboptimal levels of disclosure, which could exacerbate information asymmetries between management and shareholders, and among investors (Coffee 1984; Verrecchia 2001; Kothari et al. 2010). For example, public enforcement in capital markets is typically motivated by either the failure of individual firms to internalize positive reporting externalities or the lack of private commitment mechanisms for disclosure (Kothari et al. 2010). Consistent with this view, a growing literature in finance and accounting documents the benefits of public enforcement in capital markets (see Beyer et al.

2010, and Leuz and Wysocki 2016, for reviews). Jackson and Roe (2009), for example, find that public enforcement is beneficial for the development of capital markets, but only if regulators are well staffed. In the context of SEC oversight, Blackburne (2014) finds that when public enforcement is more intense, as measured by higher SEC office budgets, firms report lower discretionary accruals, are less likely to issue financial reports that require subsequent restatement, and bid-ask spreads decrease.

However, extant research also raises important concerns about the efficacy of public enforcement. One concern is that regulators such as the SEC might not count on sufficient resources to optimally perform their oversight duties (e.g., Becker 1968; La Porta et al. 2006; Kedia and Rajgopal 2011). Research on public bureaucracies also points out that regulators could be captured by the industries they monitor (e.g., Stigler 1971; Correia 2014; Heese et al. 2017), or could be inconsistent in their enforcement behavior (Agarwal et al. 2014; Heese et al. 2016).

These frictions highlight the need to identify strategies that increase the effectiveness of regulatory oversight activities. One such strategy is to rely on the public disclosure of oversight activities as a way to complement public enforcement with market monitoring (see Djankov et al. 2003). While the use of this enforcement strategy is increasing, there is limited empirical evidence of its efficacy. The available evidence is restricted to a few papers in economics examining specific contexts outside of capital markets, including Healthcare Management Organizations (Jin and Sorensen 2006; Dafny and Dranove 2008), schools (Hastings and Weinstein 2008), and restaurants (Jin and Leslie 2003). The evidence in these studies typically rely on the argument that disclosure of oversight activities can mitigate information asymmetries between organizations and consumers.

However, these papers also show that the effect of the disclosure of oversight activities varies with the accessibility of the information, the underlying uncertainty regarding product quality, and the salience of the reported product characteristics. Moreover, while in some cases organizations respond to this regulatory disclosure in ways that appear to enhance welfare (Jin and Leslie 2003), in some other cases the social welfare implications of such disclosure are less clear (Dranove et al. 2003). This heterogeneity in the effect of the disclosure of oversight activities highlights the importance of considering the specific features of each setting and calls for further research to understand such effect in other contexts (for example, in the capital markets). Also, Becker et al. (2012) point out the need to learn about the underlying mechanisms driving the effect. In particular, further evidence is required to understand to which extent the effect of the disclosure of oversight activities is explained by a change in market participants' behavior and/or by a change in regulators' behavior.

2.2. Institutional Background

The SEC's Division of Corporation Finance (DCF) provides interpretive assistance to publicly listed companies with regards to SEC rules, which includes reviewing firms' financial reporting to monitor and enhance compliance, and improve disclosure. The review is designed to protect investors and is described by DCF as a "dialogue with a company about its disclosures" (SEC 2015). Much of the DCF's review involves evaluating the disclosure from an investor's perspective and asking questions that an investor might ask when reading the document (SEC 2015).

These reviews are conducted by one of eleven offices at the DCF, organized according to industries. Each is led by an assistant director, supervised by associate directors, and the deputy director and director of the DCF oversee the entire filing review process.

Similar to other regulatory agencies, the DCF does not discuss the specifics of when and why certain firms are reviewed. If questions arise during a review, the DCF issues a comment letter to the firm, both an expression of concern by the SEC and an opportunity for the firm to respond to SEC questions about the firm's reporting practices. Typically, the SEC requires the firm to address these questions and concerns by adjusting its financial reports filed following the receipt of the first letter. The back-and-forth between the firm and the SEC continues until the firm resolves all comments to the SEC's satisfaction. Consequently, the CL process varies considerably in duration to resolution and the number of rounds of formal questions and answers between the DCF and the firm. If the SEC's concerns are significant and remain unresolved, the CL process can end with the firm making a restatement of past financial reports. In a few cases, the CL process terminates with the DCF recommending the case to the Division of Enforcement. Typically, when a firm has resolved all comments, the SEC provides the firm with a letter to confirm that its review is complete (SEC 2015).

On June 24, 2004, the SEC announced the public release of comment and response letters related to 10-Ks filed after August 1, 2004 "to expand the *transparency* of the comment letter process so that this information is available to a broader audience, free of charge" (SEC 2004). The change in policy also sought to ensure that *all* comment letters were made available to *all* investors in a *timely* manner.¹¹

The SEC's policy change was prompted by a large backlog of FOIA requests. From 2002 to 2005, the backlog increased from 2,500 to 9,500 requests, causing delays in

¹¹ While CLs could have been obtained via Freedom of Information Act (FOIA) requests prior to 2004, the dissemination of these letters prior to 2004 was very limited because the SEC often denied FOIA requests or exempted material from disclosure. Obtaining CLs through FOIA requests is also burdensome and involves significant time. As such, even if some investors had access to CLs through FOIA requests, the information would be obtained with significant delay and thus would likely not affect investors' response to earnings information during the time window following the review. Finally, the number of letters the SEC disseminated through a FOIA request was restricted.

responding to FOIA requests of more than a year (OIG 2007). The timing of the policy change was unexpected. Instead of the SEC's usual practice of seeking comments from the public, the agency announced this policy change through a press release. According to some commentators, the SEC intentionally deviated from its usual procedure to slow the accumulation of FOIA requests as soon as possible (OIG 2007). The SEC began to publish CLs on EDGAR on May 12, 2005. The initial policy was to disseminate CLs no later than 45 days after the end of the review, but beginning January 1, 2012, this was reduced to the current policy of 20 business days (SEC 2011).

2.3. *Hypothesis*

Based on prior theoretical research (e.g., Djankov et al. 2003; Goldstein and Sapra 2013) we expect that the disclosure of CLs enhances the effect of these reviews for two reasons. First, the public dissemination of CLs introduces “market discipline” (Goldstein and Sapra 2013); the disclosure increases managers' incentives to exert more effort in addressing the SEC's concerns, because failing to carefully address all comments could negatively affect a firm's market reputation. Consistent with this argument, Jin and Leslie (2003), who study the disclosure of restaurant hygiene grade cards, argue that disclosure of oversight activities can mitigate information asymmetries between organizations and consumers. According to these authors, disclosure of hygiene inspections by the Department of Health Services may strengthen the effect of these inspections, because disclosure creates incentives for restaurants to invest in good hygiene. In the context of financial reporting, the SEC (2010) in its 2010-2015 strategic plan also emphasizes the important role of disclosure in helping market participants to enforce financial reporting regulation, “because an educated and informed investor ultimately provides the best defense against fraud and costly mistakes.”

Second, the public dissemination of CLs could also affect the reputation of the SEC, and thus increase “supervisory discipline” (Goldstein and Sapra, 2013). This is because, by disclosing CLs, the SEC could be held accountable as their supervisory approach becomes subject to greater scrutiny and discussion by the public.

Alternatively, disclosure of CLs could also weaken the effect of the reviews if companies infer the SEC’s oversight priorities from the letters sent to peer firms—thereby allowing firms to manage earnings in ways that are less likely to be the focus of CLs. This alternative hypothesis is consistent with prior theoretical and empirical research demonstrating that corporate financial reporting is shaped by managers’ anticipation of the behavior of other market participants (Becker 1968; Fischer and Verrecchia 2000) and regulators (Kedia and Rajgopal 2011; Blackburne 2014; Heese 2018). For example, Blackburne (2014) and Kedia and Rajgopal (2011) find that managers strategically respond to SEC oversight intensity. Jin and Leslie (2003) and Becker et al. (2012) also point out that disclosure of oversight activities could cause the regulator to become more lenient, either to avoid imposing large costs on the regulated firms or because firms allocate more resources to induce pressure on the regulator. Disclosure also facilitates Congressional monitoring, and could therefore increase the weight of political incentives in the SEC’s oversight process. Consistent with this concern, Choi et al. (2013) find that the SEC focused on lower-stake, but more salient, cases in the context of the option-back-dating scandal.

It is also possible that the disclosure of CLs is inconsequential. One view is that CL reviews are ineffective and thus their disclosure is unlikely to have an effect. While possible, this view is called into question by substantial anecdotal and empirical evidence (e.g., Boone et al. 2013; Bozanic et al. 2017; Johnston and Petacchi 2017; Brown et al. 2018). A related view is that, regardless of whether CLs are publicly disclosed, firms will carefully address all

comments, because failing to do so could lead to negative repercussions such as more frequent reviews or, in the extreme, a costly enforcement action (OIG 2008a).

The effect of publicly disclosing CLs could also be subtle and difficult to identify. In particular, the disclosure of CLs could incentivize firms to be more vigilant about their financial reporting, improving overall reporting quality. In turn, higher reporting quality would result in fewer CLs identifying substantive issues, making CLs apparently inconsequential after the policy change. In sum, all the above considerations suggest that, whether the disclosure of CLs translates into more informative financial reports around CL reviews, is an intriguing empirical question.

3. The informativeness of earnings announcements around comment letters

3.1. Data

Our initial sample comprises all CL reviews from 1998 to 2013. Data on the universe of CL reviews disclosed by the SEC starting in 2004 are collected from Audit Analytics. Data on the universe of CL reviews conducted before the 2004 policy change are obtained through FOIA requests. For each CL review before the 2004 policy change, the information provided by the SEC contains the recipient and the dates of the first and last letter. Due to the data requirements of our empirical tests, we restrict our analysis to firms covered by CRSP, Compustat, and I/B/E/S, and exclude foreign private issuers filing either form 20-F or 40-F (which are subject to additional foreign regulatory oversight). We focus on CLs related to firms' 10-K filings, which account for 77% of all periodic filing reviews conducted by the SEC. Our final sample consists of 11,215 CL reviews, of which 3,292 were initiated before the policy change. As stated above, we refer to these as "private reviews" and refer to the 7,923 publicly disclosed CLs as "public reviews."

3.2. Research design

To examine the effect of disclosure of CLs on firms' financial reporting, we analyze the characteristics of quarterly financial statements around CL reviews. Specifically, we test whether these characteristics change following CL reviews, and whether the change differs between private and public reviews. In our primary tests, we define the 360 days following the date of the first CL as the "treatment period" and compare the financial reporting information reported during the treatment period to the 360 days immediately prior to the first letter from the SEC (see Figure 1).

– Please insert Figure 1 about here –

The receipt of the first letter from the SEC marks the beginning of the treatment period, because the SEC requires firms to address its concerns by adjusting their financial reports filed following the receipt of the first letter (OIG 2008b; PwC 2014). In our sample of publicly disclosed CLs, in 75 percent of the cases where the SEC requires firms to make changes to the following filing, this request appears in the first letter.¹² In addition, in response to an audit by the Office of Inspector General (OIG 2008b), John W. White, the former Director of the Division of Corporation Finance, explains that companies typically respond to staff comments by adjusting their public disclosure documents. As the next filing often occurs before the review is completed and disclosed, changes prompted by CLs in firms' public reports are not necessarily restricted to the period after the review is completed or disseminated to the public (OIG 2008b).¹³ For example, Alleghany Corporation received a

¹² This statistics is based on the item "future comments" in the Audit Analytics CL database. This item refers to an SEC comment, which requires the registrant to revise or clarify disclosures, provide additional information, or reconcile an issue in future filings.

¹³ The notion that firms start adjusting their reports while under review is supported by the inner-workings of the CL process revealed in the OIG's audit of Bear Stearns' CL review (OIG 2008b). John W. White noted that the SEC sent a CL to Bear Stearns related to the company's fiscal year 2006 10-K on September 27, 2007. That letter included a focus on subprime mortgage matters. Soon after receiving this letter, and well before the public release of the CL as well as Bear Stearns' collapse in March 2008, Bear Stearns improved its disclosures about subprime mortgage securities in its form 10-Q filed on October 10, 2007 (specifically, details on net inventory markdowns related to losses in residential mortgages and leveraged finance areas were added). John W. White also emphasized that the CL review of Bear Stearns was not unique, and explained more generally how CLs

CL on April 29, 2009, in which the SEC required Alleghany to make changes to its future filings. In its response, Alleghany informed the SEC that it will improve its disclosures in its 10-Q for the quarter ended June 30, 2009. The 10-Q was released on August 6, 2009, while the SEC issued the final CL on August 17, 2009 (see Appendix A of Bens et al. 2016).

If CLs have an effect on firms' reporting behavior, we would expect to observe changes in the informativeness of the financial information produced during the treatment period. While in the case of private reviews, the effect of the review on firms' quarterly financial reporting would rely mainly on SEC oversight, in the case of public reviews this effect could be enhanced by market and/or supervisory discipline.

Overall, our research design has several features that collectively are intended to mitigate identification concerns. First, firms are subject to CLs at different times, mitigating concerns about parallel trends, economic shocks, or regulatory changes. Second, benchmarking each firm against itself reduces the possibility that firm-specific factors explain our findings.

3.3. Stock market reaction to financial reporting information

To examine whether the disclosure of CLs enhances the effect of CL reviews, we first analyze differences in the ERC of the quarterly earnings announcements (EAs) made around the reviews. ERCs tie directly to the stated goal of the CL review process (OIG 2008b). Prior empirical studies further show that firms with higher levels of disclosure and better reporting quality tend to have greater price responses to earnings (see Dechow et al. 2010 for a review). Consequently, many empirical studies use ERCs as a proxy for reporting quality (e.g., Teoh

improve disclosure. "The goal of disclosure of material information to investors is achieved by seeking improvements to a company's public disclosures in its periodic and current reports. Those reports are readily available to all investors. [...] Our experience is that, similar to the Bear Stearns review described above, a company may respond to staff comments in its public disclosure documents." For confirmation purposes, we also exploit an alternative research design using the *dissemination* date as the beginning of the 360-day period (untabulated). We find consistent results.

and Wong 1993; Francis et al. 2005; Francis and Ke 2006). In addition, higher reporting quality could reduce the cost of capital and hence increase the capitalization rate of the earnings surprise (Lambert et al. 2007). Therefore, if the CL process enhances disclosure and/or reporting quality, we would expect greater ERCs after the letters.

We focus on earnings announcements because prior research shows they are important disclosure events in terms of impact on security prices (e.g., Kothari 2001; Basu et al. 2013). Using the difference-in-difference design illustrated in Figure 1, we test whether the coefficient α_1 in equation (1) is different from zero.¹⁴

$$\begin{aligned}
 CAR_{it} = & \alpha_0 + \alpha_1 * UE_{it} * Treatment_Period_{it} * Public_Review_{it} + \\
 & \alpha_2 * UE_{it} * Treatment_Period_{it} + \alpha_3 * Treatment_Period_{it} * Public_Review_{it} + \alpha_4 * UE_{it} * Public_Review_{it} + \\
 & \alpha_5 * Treatment_Period_{it} + \alpha_6 * UE_{it} + \alpha_7 * Public_Review_{it} + \\
 & + \phi_1 * Controls_{it} + \phi_2 * UE_{it} * Controls_{it} + Fixed\ Effects + \varepsilon_{it}
 \end{aligned} \tag{1}$$

where i and t refer to firms and quarterly announcement dates, respectively. CAR is the compounded return over the $(-1, +1)$ day window around the EA less the CRSP market return over the same period. UE is the unexpected earnings-per-share (EPS) divided by price. Unexpected EPS is defined as actual minus expected EPS, measured as the median analyst EPS forecast during the 90-day period before the disclosure of earnings. $Treatment_Period$ is an indicator variable set to 1 if the quarterly earnings are announced in the 360 days following the date of the initial SEC comment letter, and 0 otherwise. $Public_Review$ equals 1 if the CL review is public (i.e., the CL review is related to annual reports filed after August 1, 2004), and 0 otherwise. Finding that α_1 is different from zero would indicate that the change in ERC around the treatment period is different for public and private reviews.

¹⁴ We estimate equation (1) using weighted-least-squares (“robust”) regressions that place less weight on estimates with large absolute residuals. We perform robust regressions using Stata’s “*rreg*” procedure, which eliminates any observations with a Cook’s distance greater than one and weighs the remaining observations based on the absolute residuals. As explained in Section 5.4., our results are robust to alternative approaches to deal with extreme UE observations.

Controls includes variables found by prior literature to be associated with the magnitude of a firm’s ERC (e.g., Collins and Kothari 1989; Easton and Zmijewski 1989; Gipper et al. 2017). *Size* is the log of market value of equity (in millions of dollars) measured at the prior fiscal year-end. *BM* is the ratio of the book value of equity to the market value of equity, measured at the prior fiscal year-end. *Leverage* is the ratio of total liabilities to total equity, measured at the prior fiscal year-end. *Past>Returns* is the compounded return over one year prior to the earnings announcement less the CRSP market return over the same period. *Beta* is the coefficient from regressing daily returns for firm *i* on market returns over one calendar year, ending on the prior fiscal year-end date. *Persistence* is measured as the autocorrelation parameter from Foster’s (1977) first-order autoregressive model in seasonally differenced earnings, estimated using the previous eight quarters. *Loss* equals 1 if quarterly earnings are negative, and 0 otherwise. *SEC_Budget* is the annual fractional change in the budget of the SEC’s Division of Corporation Finance, because our results could be driven by an increase in SEC resources resulting in higher regulatory oversight intensity. We also include interaction terms between *UE* and all *Controls*, as well as review fixed effects to control for the CL content and other idiosyncrasies of the reviews, and year fixed effects to control for economy-wide variation.

Alternatively, we also estimate the following model separately for private and public reviews (all variables are defined as above):

$$CAR_{it} = \beta_0 + \beta_1 * UE_{it} * Treatment_Period_{it} + \beta_2 * UE_{it} + \beta_3 * Treatment_Period_{it} + \phi_1 * Controls_{it} + \phi_2 * UE_{it} * Controls_{it} + Fixed\ Effects + \varepsilon_{it} \quad (2)$$

The coefficient β_1 tests the difference in ERC (i.e., the coefficient on *UE*) between the treatment and control periods.

Table 1 presents the descriptive statistics for the sample used to estimate equations (1) and (2). As shown, the values of *CAR* and *UE* are similar in the two subsamples, mitigating

the concern that there are systematic differences in these variables across subsamples. We also find that on average firms are larger, and have lower leverage, returns, or beta in the subsample of public reviews.

– Please insert Table 1 about here –

Table 2, Panel A, presents the results of estimating equation (1), and Panel B presents the results of estimating equation (2).¹⁵ In particular, the positive and significant coefficients on *UE*Treatment_Period*Public_Review* presented in Table 2, Panel A, column 2, shows that the difference in the change in ERCs during the treatment period between the subsamples of private and public reviews is statistically significant. The positive and significant coefficients on *UE*Treatment_Period* presented in Table 2, Panel B, columns 3-4, show that the increase in ERCs during the treatment period for public reviews is statistically significant in all specifications, i.e., including no, or review and year fixed effects.¹⁶ In contrast, Table 2, Panel B, columns 1-2, reveal that the coefficient on *UE*Treatment_Period* is not statistically significant for private reviews.

– Please insert Table 2 about here –

The evidence in Table 2 suggests that the SEC's 2004 disclosure policy enhanced the effect of CL reviews. In particular, firms produce considerably more informative financial reports following CL reviews after the policy change.¹⁷ While we find a statistically insignificant decrease in ERC for private reviews, for public reviews we find a statistically

¹⁵ Table 2, Panel A, does not report the main effects of *Public_Review* and *SEC_Budget*, because these variables are subsumed by the fixed effects.

¹⁶ We also report results from tests including alternative fixed effect structures and additional interactions for our pooled sample in Table 9. The results hold.

¹⁷ It is possible that the disclosure of CLs also affects firms' reporting credibility. As described in Section 5.3., we also rerun our main specification and define the period between the first and last letter from the SEC as the treatment period. Under this alternative research design, the public is still unaware of the CL during the treatment period. We find results similar to those in Table 2 (untabulated), suggesting that changes in reporting credibility alone are unlikely to explain our findings.

significant increase in ERC of approximately 10% during the treatment period (i.e., the coefficient on $UE*Treatment_Period$ compared to the coefficient on UE , which is close to 1 in the subset of public reviews).¹⁸ The magnitude of the effect is economically important; especially the aggregation of the effect across firms and years (note that the SEC reviews more than one third of all firms every year, and firms are reviewed on a recurring basis).¹⁹

One potential question raised by the results in Table 2 is whether earnings announcements (EAs) provide enough information to generate a stock price response. We offer several considerations to shed light on this question. First, EAs are often released simultaneously with SEC filings (in our sample, quarterly EAs coincide with the SEC filings in 21% of all cases), and SEC filings during the treatment period are likely to contain additional disclosures requested by the SEC. In fact, we find a similar ERC statistically significant pattern when we restrict the sample to observations for which the 10-Q or 10-K is filed at the same time as the earnings announcement (untabulated). Second, even if EAs are released in advance of the filing, they include substantial quantitative and qualitative information.²⁰ Consistent with this, prior research shows that EAs elicit substantial stock price reactions (e.g., Kothari 2001; Basu et al. 2013). Finally, the information contained in EAs is most likely consistent with the information contained in the subsequent filings; lack of

¹⁸ While the results presented in Table 2, Panel B, columns 3-4 show that the ERC effect is significant in the public period, this is less clear for our pooled sample (Table 2, Panel A, column 2). To examine this, we test whether the difference $0.820 (0.803 - 0.037 - 0.034 + 0.088) - 0.769 (0.803 - 0.034) = 0.051$ is statistically significant. We find that the difference is statistically significant at the $p < 0.02$ level, confirming a statistically significant increase in ERC following a CL in the public period.

¹⁹ The magnitude of our increase in ERC is modest in comparison to prior literature. For instance, Chen et al. (2014), who examine capital-market responses to unexpected earnings releases following material restatements, find a decrease in ERC of approximately 56% in the 11 quarters following the restatement. However, material restatements are much more severe and less frequent than CLs.

²⁰ Prior research shows that many firms provide substantial qualitative disclosures and detailed GAAP financial statement information in their EAs (Chen et al. 2002; Baber et al. 2006; Wasley and Wu 2006; D'Souza et al. 2010). Regulators and practitioners also strongly encourage companies to include more detailed disclosures in the EAs. For example, the SEC Committee on Improvements in Financial Reports (CIFiR) urges companies to include in their EAs a balance sheet and cash flow statement, in addition to the income statement (SEC 2008).

consistency or misreporting in EAs could trigger regulatory scrutiny and litigation, with managers potentially facing personal liability.²¹

3.4. Timing and persistence of the effect

Next, we examine the timing and persistence of the effect we document. To examine the timing of the effect of CLs on ERCs, we repeat our analysis for the subset of public reviews (i.e., Table 2, Panel B, column 4), and interact *UE* with separate indicator variables for each quarter around the date of the first CL. Specifically, we include three quarters prior to the first CL, denoted *Control_Period_Q-3* to *Control_Period_Q-1*, and four quarters following the receipt of the first CL, denoted *Treatment_Period_Q+1* to *Treatment_Period_Q+4*. The baseline quarter is Q-4, i.e., the fourth quarter before the receipt of the first CL. As shown in Table 3, Panel A, we find a significant coefficient on *UE x Treatment_Period* for all quarters following the receipt of the first CL. As the average CL review following the policy change lasts around one quarter (see Table 5), these findings suggest that part of the reporting changes occur while the review is still ongoing and before the public disclosure of the letter. In contrast, the results reveal that there is little change in ERCs prior to the receipt of the CL.

To examine the persistence of the effect of CLs on ERCs, we compare treatment periods of varying length, ranging from 540 days (or 6 quarters) to 900 days (or 10 quarters) following the date of the first CL, to a control period, defined as the four quarters preceding the date of the first CL. As shown in Table 3, Panel B, we find that the increase in ERCs for

²¹ The information provided in the earnings announcements (EAs) is subject to the anti-fraud provisions of Section 10(b) and Rule 10b-5 of the Securities Exchange Act of 1934 (Steinberg 2009). Consistent with this, PwC (2016a) emphasizes the importance of providing information in the EA consistent with the information included in the subsequent filing, especially as the SEC staff reviews public information for consistency. In fact, the SEC often pairs CL reviews of EAs and 10-Ks. For example, firms such as Abraxas Petroleum Corporation or Valeant received CLs criticizing their disclosures in the 10-K as well as EA.

public reviews reverses on average eight quarters after the receipt of the initial letter. These findings suggest that the changes in firms' reporting triggered by the CL are temporary.

The temporary nature of the effect of CLs justifies the current mandate for a minimum frequency of CL reviews. Indeed, consistent with the notion that there is a need to review firms on a recurring basis, the SEC often goes beyond the minimum review frequency imposed by federal law. While the mandate is to review each firm at least once every three years, the SEC has exceeded its goal of reviewing one third of corporations each year ever since 2008 (see Heese et al., 2017, Table 1, panel B). For example, in 2009 and 2010 about 43% of all firms received a comment letter related to their 10-Ks, and certain firms, for example large firms, are typically reviewed annually.

The temporary nature of the effect of CLs does not necessarily argue against the efficacy (and thus the economic importance) of these reviews. While the effect of CLs is not permanent, it does persist for a period of two years, long enough to be considered economically meaningful.

– Please insert Table 3 about here –

4. Mechanisms of the effect

The findings presented in the prior section suggest that the disclosure of CLs has a significant effect on capital-market responses to firms' quarterly EAs. In this section, we explore the mechanisms behind this effect. First, to better understand the motivations underlying firms' changes in reporting behavior, we analyze two (not mutually exclusive) governance channels through which such disclosure might affect firms' reporting practices, namely *market discipline* and *supervisory discipline*. Second, to better understand the specific reporting changes driving the ERC pattern around EAs, we examine quantitative and qualitative characteristics of the financial reports issued around private and public CLs.

4.1. Governance channels

4.1.1. Market discipline

To analyze whether the disclosure of CLs imposes market discipline in firms' reporting practices, we partition our sample into firms with above/below median values of *%Dedicated_Investors*, computed as the percentage of shares owned by “dedicated” institutions as defined by Bushee (1998).²² These investors specialize in the monitoring of firms (Bushee 1998) and are sophisticated in terms of assessing the quality of financial reports (Gietzmann and Isidro 2013). Consequently, managers exposed to these monitors change their reporting behavior more strongly because of the higher scrutiny by these investors. Additionally, we partition our sample into firms with above/below median values of *Review_Length*, computed as the number of days from the first to the last comment letter. As shown by prior literature (e.g., Heese et al. 2017), longer reviews are more substantive and more likely to result in amendments and restatements. As a consequence, these reviews are more likely to attract the attention of investors. Thus, if market discipline reinforces public enforcement, we expect to find that firms subject to longer reviews respond more strongly to the CL.

Table 4 presents the results of these tests. The correlation between *%Dedicated_Investors* and *Review_Length* is 0.020. The magnitude of the coefficient on *UE*Treatment_Period*Public_Review* is larger in the two subsamples with above-median values of *%Dedicated_Investors* and *Review_Length*. As shown in Table 4, the difference in this coefficient across subsamples is also statistically significant. This evidence is consistent with the contention that market discipline is a channel through which the public disclosure of CLs shapes the effect of these reviews. That said, this evidence could also be consistent with

²² Data on investor classification are retrieved from <http://acct3.wharton.upenn.edu/faculty/bushee/IIclass.html>.

supervisory discipline, as the presence of dedicated investors potentially increases reputation costs for the SEC, thus inducing the SEC to exert more effort in its reviews.

– Please insert Table 4 about here –

4.1.2. *Supervisory discipline*

To explore whether the policy change affects SEC behavior (i.e., whether it strengthens “*supervisory discipline*”), we first compare the characteristics of the CLs sent by the SEC before and after the change. This analysis is based on a random sample of 217 reviews from the period before the policy change. While the SEC provided us with the dates and recipients of all CLs before the policy change, we were granted access to the full text of only a subset of private reviews.²³

We compare the characteristics of these 217 reviews to three benchmark sets of public CLs obtained from Audit Analytics. We use three benchmark sets to mitigate any concern that differences between the subsets of letters could be driven by sample selection. As a first benchmark, we use all public CLs sent to the same 217 firms after the policy change. As a second benchmark, we match each of the random 217 firms to the firm in the same 4-digit SIC code with the closest value of *Size*, and obtain the first public CL for each of these firms. As a third benchmark, we use all public CLs sent to firms in the CRSP-Compustat universe.

We classify the CL content (both public and private) based on the taxonomy described in Appendix B. Specifically, in line with prior research (e.g., Cassell et al. 2013), we code the following variables.²⁴ *Review_Length* is the number of days from the first letter to the last letter of the CL review. *Time_from_Filing_Date* is the number of days from the

²³ Although we requested access to all CLs issued before the policy change, we were granted access to the full text of only a relatively small sample of private reviews. The SEC argued that our request had reached the maximum number of hours that can be devoted to one FOIA request without placing such request in a queue of more extensive FOIA requests.

²⁴ For methodological consistency, the random sample of private letters is classified following the methodology used by Audit Analytics for the universe of publicly available letters. We retained Audit Analytics for this task.

firm's 10-K filing to the start of the CL review (i.e., until the date of the first CL).

Total_Comments is the total number of unique topics raised by the SEC.

Accounting_Comments is the total number of comments classified as "Accounting Rules and Disclosure." *Accounting_Core_Comments* is the total number of accounting comments (sub)classified as "Accounts receivable & cash reporting issues," "Depreciation, depletion, or amortization reporting issues," "Expense (payroll, SGA, other) recording issues," "Inventory, vendor, and/or cost of sales issues," "Lease, leasehold issues (FAS 13 (98) and IAS 17)," "Liabilities, payables, and accrual estimate issues," "Revenue recognition (including deferred revenue) issues," "Percentage of completion issues," and "Research and Development issues."²⁵ *Accounting_Non-Core_Comments* is the total number of comments classified as "Accounting Rules and Disclosure" and not coded as *Accounting_Core_Comments*.

Operational_Control_and_Risk_Comments is the total number of comments classified as such (see Appendix B for details). *Other_Comments* is the total number of comments not coded as *Accounting_Comments* or *Operational_Control_and_Risk_Comments*.

Number_of_Rounds is the number of letters from the SEC during the CL review, representing the number of rounds of the review. *Unresolved_Comments* is an indicator variable that equals 1 if the firm has not resolved/replied to all comments raised by the SEC, and 0 otherwise. *Confidentiality_Requests* is an indicator variable that equals 1 if the firm has requested that some portion of the comment letter be redacted because the letter contains proprietary information, and 0 otherwise. *Extension_Requests* is an indicator variable that equals 1 if the firm has requested a time extension to reply to the SEC's comments, and 0 otherwise. *Involvement_of_a_Law_Firm* is an indicator variable that equals 1 if an external

²⁵ This classification follows Cassell et al. (2013) and Palmrose and Scholz (2004).

law firm is in copy on the CL, and 0 otherwise. Finally, *Supervisors* is the number of reviews divided by the number of supervisors.

Table 5, Panel A presents the characteristics of the previously described subsets of CLs. Several patterns deserve comment. While Table 5 shows that the review length is substantially shorter for public reviews, there is no significant difference in the number of rounds across all subsamples, suggesting that the turnaround is shorter for public reviews. This could be the result of firms (or the SEC) being more diligent in the process, or the SEC being more expeditious when processing firms' response letters. The significantly lower number of both general and accounting topics addressed in public reviews also suggests that the SEC is more expeditious after the policy change. We also find that the frequency of confidentiality requirements and extension requirements is significantly higher among public reviews. This is consistent with firms being more concerned about disclosing proprietary information when CLs are made publicly available. Finally, we find that the SEC employs more supervisors following the policy change. Before the policy change, the average supervisor had to supervise 21 CL reviews; after the policy change this number reduced to 12.5, a difference that is significant at the $p < 0.0001$ level (untabulated).²⁶

In Table 5, Panel B, we present regression results for the same characteristics described in Panel A. We follow Cassell et al. (2013) and include three sets of *Controls*: (i) those explicitly mentioned in Section 408 of Sarbanes-Oxley Act of 2002 (SOX), (ii) firm characteristics, and (iii) monitoring characteristics. The definitions of the variables corresponding to *Controls* are described in the Appendix C.1. These tests include firm and quarter fixed effects to control for the differences (such as the SEC's workload) across fiscal quarters. The inferences are consistent with those presented in Table 5, Panel A.

²⁶ We thank Terrence Blackburne for sharing this data with us.

It is possible that the differences documented in Table 5 are driven by SOX rather than by the 2004 SEC disclosure policy change. We examine this possibility by comparing the characteristics of private reviews conducted before and after SOX (untabulated). The only significant differences between these two types of private reviews are that, after SOX, the *Time_from_Filing_Date* is significantly shorter and the number of core accounting topics is significantly smaller. Therefore, it is unlikely that the pattern in Table 5 is driven by SOX.

That said, we acknowledge that the evidence in Table 5 is descriptive and subject to interpretation. For example, the shorter review length and fewer comments in public reviews could be interpreted as the SEC being less thorough. Thus, it is difficult to conclude from this evidence that the SEC's scrutiny of corporate filings is more intense after the policy change.

To further explore whether the policy change affected SEC behavior, we also analyze the determinants of receiving a CL before and after the policy change. As described in more detail in the Appendix C, the explanatory power of these models is moderate both before and after the SEC disclosure policy change. While this provides some evidence that reviews are being conducted on a selective basis, the relatively low explanatory power suggests that, by and large, firms are systematically subject to CL reviews.

– Please insert Table 5 about here –

4.2. Changes in firms' financial reports

Our interpretation of the results from the prior tests is that firms produce more informative financial reports after CL reviews when these reviews are publicly disclosed. In those tests we employ ERCs as a measure of reporting changes. In this section, we explore changes in reporting behavior more directly; we test for differences in the reported numbers and in the accompanying textual disclosures around CLs.

We start by analyzing the magnitude of abnormal accruals, a metric commonly used in prior literature to measure reporting behavior (e.g., Dechow et al. 2010). In the context of the SEC CLs, this measure is particularly appropriate, as discretionary accruals are an input in the model used by the SEC to identify firms that may require closer regulatory scrutiny (Lewis 2012; Blackburne 2014; Cunningham et al. 2017). Moreover, to the extent that disclosure facilitates the detection of earnings management (e.g., Kubick et al. 2016; Cunningham et al., 2017), the additional disclosures prompted by CLs can have an indirect effect on abnormal accruals. In parallel to Table 2 we estimate the following OLS regression:

$$Abnormal\ Accruals_{it} = \delta_0 + \delta_1 * Treatment_Period_{it} * Public_Review_{it} + \delta_2 * Treatment_Period_{it} + \delta_3 * Public_Review_{it} + \phi * Controls_{it} + Fixed\ Effects + \varepsilon_{it} \quad (3)$$

where the dependent variable, *Abnormal_Accruals*, is defined as the absolute value of abnormal accruals in the quarterly financial information scaled by total assets from the Dechow and Dichev (2002) model, which regresses *Accruals* on past, current, and future quarterly operating cash flows scaled by total assets, denoted as CFO_{t-1} , CFO_t , and CFO_{t+1} , by industry and year. *Accruals* are computed as $(\Delta CA - \Delta Cash) - (\Delta CL - \Delta STD - \Delta TP) - Dep$, where ΔCA is the change in current assets, $\Delta Cash$ is the change in cash/cash equivalents, ΔCL is the change in current liabilities, ΔSTD is the change in debt included in current liabilities, ΔTP is the change in income taxes payable, and *Dep* is the depreciation and amortization expense.²⁷ The absolute values of the residuals from this model are our measure of *Abnormal Accruals*. *Controls* includes the variables *Size*, *BM*, *Leverage*, *Past>Returns*, *ROA*, *Firm_Age*, *CEO_Chair*, and *%Independent_Directors*; variables that have been identified in prior studies as being associated with abnormal accruals (see Dechow et al.

²⁷ Our results also hold when we use the standard deviation of the residuals as the dependent variable.

2010).²⁸ All variables are defined in Appendix A. Consistent with the previous tests, we also include review and year fixed effects.

Next, we analyze the length of the narratives in the filings subsequent to the earnings announcements, because CLs often require firms to provide additional narrative disclosures. Our use of this measure is supported by prior work showing that changes in the length of narratives are associated with improvements in disclosure practices (e.g., Bozanic et al. 2017).²⁹ We re-estimate equation (3) replacing the dependent variable with *Text_Length*, which is defined as the number of words (in thousands) in the 10-K or 10-Q following the earnings announcement (Loughran and McDonald 2011).³⁰

Finally, we analyze the frequency of restatements following the quarterly earnings announcements around CLs, because more informative financial reports are likely to be associated with a lower frequency of restatements (e.g., Dechow et al. 2010). We re-estimate equation (3) replacing the dependent variable with *Restatements*, defined as the number of restatements announced within 365 calendar days after the date of the EA.³¹

Table 6 presents the results of these tests. The coefficient on *Treatment_Period* **Public_Review* is negative and statistically significant in column (1), suggesting that, after the policy change, firms have lower discretionary accruals in their earnings announcements following the review. We also find that, after the policy change, earnings announcements during the treatment period are associated with filings with longer narratives, as indicated by the positive and significant coefficient on *Treatment_Period* **Public_Review* in column (2).

²⁸ We cannot include the variable *Big4_Audit* (which equals 1 if the company has been audited by a Big Four accounting firm, and 0 otherwise) and *Public_Review* because they are subsumed by review fixed effects.

²⁹ Bozanic et al. (2017) construct an index from various measures such as length, readability, and tone, and find that the correlation between this index and the length of the narratives is very high (0.985).

³⁰ We obtain this measure from Bill McDonald's website (http://www3.nd.edu/~mcdonald/Word_Lists.html).

³¹ Using Audit Analytics' restatement data, we observe that the announcement of a restatement usually occurs within 365 days after the filing date of the restated report.

Finally, we find that, after the policy change, earnings announcements in the treatment period are less likely to be followed by a restatement, as indicated by the negative and statistically significant coefficient on *Treatment_Period * Public_Review* in column (3). The magnitude of the coefficients on *Treatment_Period * Public_Review* in all specifications is substantial when compared to the mean value of the corresponding dependent variable, namely *Accruals*, *Text_Length*, and *Restatements*.³² Overall, the evidence in Table 6 suggests that the disclosure of CLs results in actual changes in firms' reporting during the treatment period.³³

– Please insert Table 6 about here –

The text analysis in column (2) focuses on filings rather than earnings announcements (EAs) because, prior to 2005, it is not possible to conduct a similar analysis for EAs due to data limitations.³⁴ In untabulated tests, we repeat our text analysis using all EAs released after 2004 and find a significant increase in text length during the treatment period. In fact, the correlation between the text length of EAs and the corresponding filings is substantial (0.59).

5. Alternative explanations and research design choices

5.1. Time trends in earnings informativeness or in the effectiveness of CL reviews

A potential concern about our inferences is that the empirical pattern we document could reflect a general time trend in ERCs. In particular, it is possible that the information content of quarterly earnings increases over time due to institutional or economic changes

³² The means of *Accruals*, *Text_Length*, and *Restatements* are 0.03, 25.5, and 0.11, respectively.

³³ We also analyze whether earnings announcements during the review period are more likely to be followed by price reversals. A price reversal would suggest that investors overreact to the accounting information (perhaps because they consider this information more credible) and subsequently adjust their views about the informativeness of these announcements (e.g., Ball and Brown 1968). In particular, we re-estimate equation (1) and modify the measurement of the dependent variable, *CAR*, by compounding returns over the (+2, +90) window after the earnings announcement and subtract the market return compounded over the same horizon. In untabulated tests, we find a pattern qualitatively similar to that in Table 2, but the coefficient on *UE*Treatment_Period*Public_Review* is insignificant in all specifications. This suggests that our main results are unlikely to be driven by a market overreaction to earnings announcements during the review period.

³⁴ Before the SEC rule “Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date” issued in 2004, the classification of events reported in firms' 8-Ks is not reliable.

unrelated to CLs. Alternatively, the effect of CLs could increase over time for reasons unrelated to the 2004 policy change.

Several considerations suggest that our results are unlikely to be driven by a general time trend. To begin with, the average annual ERC in our sample does not exhibit any persistent increase in ERCs during the sample period (untabulated). We also control for year fixed effects as well as the SEC budget. In addition, our cross-sectional results showing that firms with higher institutional ownership and more substantive CLs have stronger ERCs cannot be explained by general time trends. That said, we conduct several additional analyses to rule out this alternative explanation.

5.1.1. Falsification tests

We conduct four falsification tests in which we randomize the key elements of the analysis presented in Table 2. First, we randomize the date of the start of the treatment period (we randomly select any date between 1998 and 2012) and keep the date of the policy change, and the treatment firms the same as in Table 2. Second, we randomize the firms that receive a comment letter (i.e., we treat firms *not* receiving a CL as if they had received a CL) and keep the date of the policy change and the dates of the treatment periods the same as in Table 2.³⁵ Third, we repeat the second randomization procedure restricting the pool of control firms to the subset of firms that did not receive a comment letter for at least three years. We apply this restriction to obtain a control group of firms that are less likely to have reporting and disclosure deficiencies.³⁶ Fourth, we randomize the date of the SEC's disclosure policy (we randomly select a date between December 2002 and December 2010 excluding dates

³⁵ In untabulated tests, we also conduct propensity-score matching tests following the procedure by Johnston and Petacchi (2017). We find consistent results.

³⁶ Using this alternative control group addresses the concern that the population of firms not receiving a CL could contain cases where the firm uses other firms' comment letters to anticipate and fix priority issues before the company is reviewed, thereby negating a minor review that might have otherwise elicited a comment letter (e.g., Brown et al. 2018). In this case, it is less clear that the disclosure of CLs would improve reporting.

from the one-year window around the actual policy-change date), and keep the dates of the treatment periods and treatment firms the same as in Table 2. Each randomization procedure consists of 100 random draws of the randomized element and yields an empirical distribution of the coefficient α_1 .

If our inferences are confounded by firms producing more-informative earnings reports over time or CL reviews having a stronger effect over time, we should find results similar to our primary results in these falsification tests. However, as reported in Table 7, this is not the case. In the four randomization exercises, the p -values (in brackets) reveal a small probability that the coefficient estimated using the randomized data (α_1) is greater than the coefficient estimated using the actual data ($\widehat{\alpha}_1$).³⁷

– Please insert Table 7 about here –

5.1.2. Short-window tests

To alleviate any remaining concern that our inferences are confounded by time trends and to further sharpen identification, we re-estimate equation (1) restricting our analysis to reviews initiated in 2004 and 2005 (Table 8, column 1), and reviews initiated within nine months before and after the date of the policy change, i.e., August 1, 2004 (Table 8, column 2). This analysis offers two advantages with respect to our main research design. First, focusing on a short window of time around the 2004 SEC policy change eliminates variation in the DCF's budget and other potential sources of time trends in the effect of CL reviews (e.g., the passage of SOX). Second, this analysis further sharpens identification by exploiting random within-year variation in the disclosure of CLs. As the policy change required the SEC to disclose CLs related to annual reports filed after August 1, 2004 and the filing date is

³⁷ In row (4) as the dates are counterfactually shifted from the true dates, the coefficient on β_1 is smaller (as expected, the coefficients remain significant because there is considerable overlap with the true dates).

mainly determined by the firm's fiscal year-end, the August-1 cut-off introduces randomness into the public disclosure of CL reviews of financial reports filed in 2004.³⁸

While a number of SOX provisions became effective around the change in the SEC's disclosure policy we analyze, when restricting the analysis to a short window around the change, the SOX provision with the closest overlap is SOX Section 404 (the compliance date for accelerated filers began with annual reports for periods ending after November 15, 2004).³⁹ As Section 404 only became effective for non-accelerated filers in later years, we repeat our short-window test for non-accelerated filers (i.e., firms with a market capitalization smaller than \$75 million), which are unaffected by Section 404 (Table 8, column 3).⁴⁰ As shown in Table 8, the coefficient on *UE*Treatment_Period*Public_Review* is positive and statistically significant in the three specifications, suggesting that the effect we document is indeed related to the SEC's disclosure policy change.⁴¹ The evidence in Table 8 provides confirmatory evidence that the change in the disclosure policy shaped the effect of CLs.

– Please insert Table 8 about here –

5.1.3. Controlling for time-series and cross-sectional variation in ERCs

³⁸ The SEC announced the disclosure policy change on June 24, 2004. While firms could have filed their reports before August 1, 2004 to avoid the public disclosure of a potential CL review, the time from the announcement to the start of the new disclosure policy was very short, thus limiting this possibility. In fact, we do not observe any unusual filing patterns between June 24 and August 1 of that year.

³⁹ While the original compliance date of SOX 404 for accelerated filer was June 15, 2004 (SEC Release No. 33-8238, published on June 5, 2003), SEC Release No. 33-8392 published on February 24, 2004 extended the compliance date to November 15, 2004. Other SOX provisions such as Regulation G became effective as of March 28, 2003 (<https://www.sec.gov/rules/final/33-8176.htm>). In a similar manner, Section 408 of SOX, which requires the SEC to review each company at least once every three years became effective with the passage of SOX in 2002. Similarly, firms had to be in compliance with Section 301 (<https://www.sec.gov/rules/final/33-8220.htm>) and Section 208(a) (<https://www.sec.gov/rules/final/33-8183.htm>) by the start of 2004.

⁴⁰ For non-accelerated filers Section 404 became effective for fiscal years ending on or after July 15, 2007 (SEC Release No. 33-8618, published on September 22, 2005).

⁴¹ Compared to the results presented in Table 2, Panel A, the magnitude of the coefficient on *UE*Treatment_Period*Public_Review* is larger. One potential explanation for the larger magnitude is that the policy change was unexpected and therefore initially firms made more substantial changes around publicly disclosed CL, resulting in a stronger initial ERC effect. Another possibility is that firms have improved their reporting over time and thus there is a decreasing need for CL reviews (Beaver et al. 2018).

As an additional check that our results are not driven by a time-trend or cross-sectional variation in ERCs, we modify the fixed effects structure. We modify equation (2) by interacting *UE* with year fixed effects, quarter-year fixed effects, and the triple interaction of *UE*, *Controls*, and *Treatment_Period*. As shown in Table 9, the coefficient on *UE*Treatment_Period*Public_Review* is positive and statistically significant, suggesting that our results are not driven by a time-trend or cross-sectional variation in ERCs.

– Please insert Table 9 about here –

5.2. Abnormal trading volume

To further mitigate potential measurement concerns regarding the use of ERCs in our main tests, we repeat our analysis using abnormal trading volume, a metric often used in prior literature to measure the information content of a disclosure (e.g., Asthana and Balsam 2001; Asthana et al. 2004; Leuz and Schrand 2009). Parallel to our main tests, we re-estimate equation (3) replacing the dependent variable with the abnormal trading volume around firm *i*'s earnings announcement at date *t*, *Abn_TradeVol* (subscripts omitted). This variable is computed as $\Delta Turnover - \Delta Turnover_Mkt$. $\Delta Turnover$ is the mean *Turnover* from one day prior to the earnings announcement to 3 days after the announcement, less the mean *Turnover* over a window of 2 months (60 days) prior to the announcement to 5 days prior to the announcement (to exclude any 3-day earnings announcement window days), divided by the standard deviation of *Turnover* over the same window. *Turnover* is the daily share turnover (daily trading volume scaled by number of shares outstanding). $\Delta Turnover_Mkt$ is constructed in the same way, replacing *Turnover* with *Turnover_Mkt*, which is the average daily trading volume of all firms in CRSP. Consistent with our prior tests based on ERCs, Table 10 shows that the abnormal trading volume around earnings announcements increases during the treatment period for public reviews. In contrast (and consistent with our prior

tests), we do not observe such pattern for the subsample of private reviews. Column 1 in Table 10 shows that the difference in abnormal trading volume around earnings announcements between private and public reviews is statistically significant.

– Please insert Table 10 about here –

5.3. Changes in reporting credibility

The dissemination of CLs could impact investors' perception of firms' reporting quality regardless of actual changes in firms' reporting. On one hand, if the SEC does not raise major concerns about a firm's reporting, investors could adjust upward their perception about a firm's reporting quality, resulting in higher ERCs (Dechow et al. 2010; Johnston and Petacchi 2017). On the other hand, the concerns raised by the SEC could undermine the credibility of the firm, resulting in lower ERCs (Dechow et al. 2016; Ryans 2018).

To confirm that our results hold independent of changes in reporting credibility around the dissemination of CLs, we repeat our analysis and redefine the treatment period as the time between the first and last letter of each CL review. During this alternative treatment period, the public is still unaware of the review, as the CLs have not yet been disseminated. Thus, an increase in ERC would suggest that the firm responded to the CL by improving its reporting quality and disclosures (note that Table 6 also provides evidence that firms improve their reporting quality and disclosures following a CL more strongly after the policy change), resulting in higher ERCs (Dechow et al. 2010). Using this alternative research design, we find results similar to those in Table 2 (untabulated), suggesting that the ERC effect cannot solely be attributed to a change in reporting credibility around the disclosure of CLs.

5.3. Spillover effects

It is possible that the disclosure of CLs enables firms to use other firms' CLs to anticipate and address issues before the company is reviewed (e.g., Brown et al. 2018). This

could result in CL reviews being concentrated among firms with more egregious accounting issues that cannot be avoided with relatively small adjustments that go unnoticed by the SEC. While consistent with our main hypothesis (i.e., the disclosure of CLs has an effect on firms' reporting practices), this possibility affects the interpretation of our results, and thus deserves further consideration.

To begin, we note that the coefficient on $UE*Public_Review$ in Table 2, Panel A, column 2, is negative (-0.034) and statistically insignificant. This finding suggests that the benchmark accounting quality of the reviewed firms is not significantly lower after the public disclosure (i.e., we do not find for this subset of firms a lower ERC in the control period after the policy change). This evidence is not consistent with the notion that firms with more severe accounting issues are more likely to receive CLs after the SEC policy change. As an additional confirmatory test, we estimate the ERC of control firms that do not receive a CL within three years across the private and public regime. As explained before (see the description of the randomization procedure in Table 7, row (3)), this group is more likely to include the set of firms that learn from reporting issues raised in other firms and adjust their accounting reports proactively to avoid receiving a letter. Unreported results suggest that firms without deficiencies did not increase their accounting quality following the public disclosure. This evidence is inconsistent with the notion that, after reading CLs received by other firms, these firms adjust their disclosures to avoid receiving a CL.

5.4. Other robustness tests

In untabulated tests, we examine whether our results are driven by a higher frequency of fourth-quarter EAs in the treatment period than in the control period. Accordingly, we include an indicator variable for the fourth-quarter announcement and its interaction with UE . Our inferences are unaffected. We also confirm that our results are robust to the requirement

that a firm receives at least one CL both before and after the policy change (untabulated). In addition, we check that our result is robust to the research design used by Johnston and Petacchi (2017), a study that examines the change in ERC for the subset of public reviews (untabulated). Finally, we explore whether our results are robust to extreme *UE* observations. Following prior literature (see Chen et al. 2014, and Gipper et al. 2017, for recent examples), we confirm that the pattern documented in Table 2, Panel A is not sensitive to excluding observations with studentized residuals larger than 2.5 in absolute value, excluding observations for which *UE* exceeds 100% in absolute value, or winsorizing *UE* at the 1% threshold (untabulated).

6. Conclusions

In 2004, the SEC announced the decision to begin publicly disclosing its comment-letter reviews. We examine the effect of this policy change on firms' financial reporting by analyzing the stock market responses to firms' quarterly earnings releases following CL reviews. We find that these responses are significantly stronger for publicly disclosed CLs, suggesting an enhancement of the effect of the reviews.

We also explore the mechanisms underlying our main findings. Consistent with disclosure of CLs increasing *market discipline*, our results are stronger among firms with a higher proportion of institutional investors or more substantive reviews. In contrast, we do not find conclusive evidence that CL disclosure increases *supervisory discipline*.

Our study contributes to the literature on public enforcement by showing that, in the context of SEC CLs, the effect of regulatory oversight can be enhanced by the public disclosure of firm-specific oversight actions. Our results also provide new insights into the complementary role of market discipline on the effectiveness of regulatory oversight.

We conclude by pointing out that our paper does not attempt to provide a complete cost-benefit analysis of the effects of the SEC's 2004 disclosure policy change. For instance, one argument against disclosure is that it generates proprietary costs for firms, arising from information leakage to competing firms. Furthermore, our study examines firm-specific reporting changes as a result of the policy change, but ignores potential spillover effects to non-CL firms. We leave the study of these issues to future research.

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Appendix A. Variable Definitions

The following variables are constructed using data from a proprietary dataset of comment letters obtained through FOIA requests [FOIA], Audit Analytics (Comment Letters, and Advanced Restatement Modules) [AA], Compustat [C], CRSP [CRSP], GAO Database (Restatements from 1998 to 2002) [GAO], Equilar [EQUILAR], Thomson Reuters and Bushee Investors' Classification [TR+BUSHEE], IBES [IBES], the SEC's Edgar database [EDGAR], AGR MSCI (Metrics and Scores Modules) [AGR], Loughran and McDonald (2011)'s textual analysis measures [LM], and SEC 2002–2012 Annual reports [SEC].

A. Stock Price Reaction to Earnings Announcements

<i>CAR</i>	Compounded return over the (–1, +1) day window around the earnings announcement less the CRSP market compounded return over the same period. [CRSP]
<i>UE</i>	Unexpected earnings-per-share (EPS) divided by price. Unexpected EPS is defined as actual minus expected earnings, where the expected value of earnings is calculated as the I/B/E/S forecast, which is the median analyst forecast of EPS during the 90-day period before the disclosure of earnings. [C+CRSP+IBES]
<i>Treatment_Period</i>	Indicator variable that equals 1 if quarterly earnings are announced in the 360 days following the date of the initial SEC comment letter, and 0 otherwise. [AA+FOIA]
<i>Public_Review</i>	Indicator variable that equals 1 if the CL review is public, and 0 otherwise.
<i>Size</i>	The log of market value of equity (in millions of dollars) measured at the prior fiscal year-end. [CRSP]
<i>BM</i>	The ratio of the book value of equity to the market value of equity, measured at the prior fiscal year-end. [CRSP]
<i>Leverage</i>	The ratio of total liabilities to total equity, measured at the prior fiscal year-end. [C]
<i>Past>Returns</i>	Compounded return over one year prior to the earnings announcement less the CRSP market return over the same period. [CRSP]
<i>Beta</i>	Coefficient from regressing daily returns for firm <i>i</i> on market returns over one calendar year, ending on the prior fiscal year-end date. [CRSP]
<i>Persistence</i>	The autocorrelation parameter from Foster's (1977) first-order autoregressive model in seasonally differenced earnings using the previous eight quarters. [C]
<i>Loss</i>	Indicator variable that equals 1 if quarterly earnings are negative, and 0 otherwise. [C]
<i>SEC_Budget</i>	Annual fractional change in the budget of the SEC's Division of Corporation Finance. [SEC]
<i>%Dedicated_Investors</i>	Percentage of shares owned by "dedicated" institutional investors. We categorize institutional investors as "dedicated" using data from http://acct3.wharton.upenn.edu/faculty/bushee/IIclass.html . [TR+BUSHEE]

B. Characteristics of SEC Comment Letters

<i>Review_Length</i>	Number of days from the first comment letter to the "no further comment" letter. [AA+FOIA]
<i>Time from Filing Date</i>	Number of days from the firm's 10-K filing to the start of the CL review (i.e., until the date of the first comment letter). [AA+FOIA]
<i>Total Comments</i>	Total number of unique issues addressed in the comment letters. [AA+FOIA]
<i>Accounting Comments</i>	Total number of comments classified as "Accounting Rules and Disclosure", as described in Appendix B. [AA+FOIA]
<i>Accounting Core Comments</i>	Total number of comments classified as "Accounting Rules and Disclosure" and (sub)classified as "Accounts receivable & cash reporting issues," "Depreciation, depletion, or amortization reporting issues," "Expense (payroll, SGA, other) recording issues," "Inventory, vendor, and/or cost of sales issues," "Lease, leasehold issues (FAS 13 (98) and IAS 17)," "Liabilities, payables, and accrual estimate issues," "Revenue recognition (including deferred

	revenue) issues,” “Percentage of completion issues,” and “Research and Development issues,” as described in Appendix B. [AA+FOIA]
<i>Accounting Non-Core Comments</i>	Total number of comments classified as “Accounting Rules and Disclosure” and not coded as <i>Accounting Core</i> . [AA+FOIA]
<i>Operational, Control and Risk Comments</i>	Total number of comments classified as such, as described in Appendix B. [AA+FOIA]
<i>Other Comments</i>	Total number of comments not coded as <i>Accounting Comments</i> or <i>Operational, Control and Risk Comments</i> . [AA+FOIA]
<i>Number of Rounds</i>	Number of letters from the SEC in the review, representing the number of rounds from the first letter until the “no further comment” letter. [AA+FOIA]
<i>Unresolved Comments</i>	Indicator variable that equals 1 if the firm has not resolved/replied to all comments raised by the SEC, and 0 otherwise. [AA+FOIA]
<i>Confidentiality Requests</i>	Indicator variable that equals 1 if the firm has requested that some portion of the comment letter be redacted because the letter contains proprietary information, and 0 otherwise. [AA+FOIA]
<i>Extension Requests</i>	Indicator variable that equals 1 if the firm has requested an extension to reply to the comment letter, and 0 otherwise. [AA+FOIA]
<i>Involvement of a Law Firm</i>	Indicator variable that equals 1 if an external law firm is in copy in the review, and 0 otherwise. [AA+FOIA]
<i>Supervisors</i>	Number of reviews divided by the number of supervisors [Shared by Terrence Blackburne].

C. Additional Dependent Variables

<i>Abnormal_Accruals</i>	Absolute value of abnormal accruals in the quarterly accounting information scaled by total assets. Accruals are computed as $(\Delta CA - \Delta Cash) - (\Delta CL - \Delta STD - \Delta TP) - Dep$, where ΔCA is the change in current assets, $\Delta Cash$ is the change in cash/cash equivalents, ΔCL is the change in current liabilities, ΔSTD is the change in debt included in current liabilities, ΔTP is the change in income taxes payable, and Dep is the depreciation and amortization expense. Abnormal accruals are based on the Dechow and Dichev (2002) model, which regresses accruals on past, current, and future quarterly operating cash flows scaled by total assets, denoted as CFO_{t-1} , CFO_t , and CFO_{t+1} . The absolute value of the residual from this model is <i>Abnormal_Accruals</i> . [C+CRSP+IBES]
<i>Text_Length</i>	Number of words (in thousands) in the 10-K or 10-Q following the earnings announcement. [LM]
<i>Restatements</i>	Number of restatements within 365 calendar days after the date of the earnings announcement. [AA+GAO]
<i>Abn_Trade_Vol</i>	Abnormal trading volume computed as $\Delta Turnover - \Delta Turnover_Mkt$. $\Delta Turnover$ is defined as the mean <i>Turnover</i> over the (-1, +3) day window around the earnings announcement less the mean <i>Turnover</i> over the (-60, -5) window prior to the announcement divided by the standard deviation of <i>Turnover</i> over the same window. <i>Turnover</i> is daily share turnover (daily trading volume scaled by number of shares outstanding). $\Delta Turnover_Mkt$ is constructed in the same way replacing <i>Turnover</i> with <i>Turnover_Mkt</i> , which is the average daily trading volume of all firms in CRSP. [CRSP]

D. Additional Control Variables

<i>ROA</i>	Quarterly return on assets. [C]
<i>Firm_Age</i>	A firm’s age based on first time occurrence in Compustat. [C]
<i>CEO_Chair</i>	Indicator variable that equals 1 if CEO is the chair of the board of directors, zero otherwise. [AGR]

*%Independent_
Directors*

Percentage of the board of directors that qualify as “independent” according to the listing requirements of the exchange where the firm is quoted. [EQUILAR]

Appendix B. Types of Comments

I. Accounting Rules and Disclosures

Accounts receivable & cash reporting issues	Acquisitions, mergers, and business combinations
Asset retirement obligation (FAS 143) issues	Asset sales, disposals, divestitures, reorganization issues
Balance sheet classification of assets issues	Capitalization of expenditures issues
Cash flow statement (FAS- 95 or IAS 7) classification errors	Changes in accounting estimates issues
Changes in accounting principles and interpretation	Comprehensive income (Equity Section) issues
Consolidation (Fin 46, variable interest, SIV, SPE & off-B/S)	Consolidation, foreign currency/inflation issue
Contingencies & Commit, legal, (FAS 5 or IAS 37)	Debt and/or equity classification issues
Debt, quasi-debt, warrants & equity (BCF) security issues	Deferred, stock-based and/or executive comp issues
Deferred, stock-based options backdating only	Deferred, stock-based SFAS 123 only (subcategory)
Depreciation, depletion or amortization reporting	Dividend and/or distribution issues
EPS, ratio and classification of income statement issues	Expense (payroll, SGA, other) recording issues
Fair value measurement, estimates, use (incl. VSOE)	Fin statement segment reporting ((FAS 131) subcategory) issues
Financial derivatives/hedging (FAS 133) accounting issues	Foreign (affiliate or subsidiary) issues
Gain or loss recognition issues	Intercompany accounting issues
Inventory, vendor and/or cost of sales issues	Investment in subsidiary/affiliate issues
Investments (SFAS 115) and cash and cash equivalents issues	Lease, leasehold issues (FAS 13 (98) and IAS 17)
Liabilities, payables, and accrual estimate issues	Loans receivable, valuation and allowances issues
Loss reserves (LAEs, Reinsurance) disclosure issues	Non-monetary exchange (APB 29, EITF 01-2) issues
Pension and related Employee Plan issues	Percentage of completion issues
PPE fixed asset (value/diminution) issues	PPE issues - Intangible assets and goodwill
Research and Development issues	Revenue recognition (incl. deferred revenue) issues
Subsidiary issues-- US or foreign (subcategory)	Tax expense/benefit/deferral/other (FAS 109) issues
Tax rate disclosure issues	

II. Operational, Control and Risk

Accuracy of financial statement given Disclosure Control and Internal Control (DC/IC) deficiency	Changes in internal controls (IC)—disclose
Incorrect language for DC/IC disclosure	Material weakness in DC/IC--disclose who discovered
Material weakness in DC/IC--fully disclose	Material weakness in DC/IC--impact on fin statements
Material weakness in DC/IC--proposed remedies	Non-effectiveness of DCs/ICs--needs to be stated explicitly
Timetable needed for remedy of DC/IC deficiency	8-K Disclosure issues
Business overview issues (MD&A)	Capital adequacy and/or calculation issues
Contingencies and Commitments (MD&A) disclosure issues	Contractual obligations
Credit ratings changes	Critical Accounting Policies and Estimates (MD&A)
Executive compensation plan disclosure issues	Intellectual Property risk and disclosure issues
Liquidity issues (MD&A)	Loan covenant violations/issues
Market risk disclosures	Oil, Gas and Mining Reserve reporting issues
Results of Operations (MD&A)	US GAAP reconciliation to Foreign GAAP issues
Valuation of assets, liabilities or equity issues	Risk Factors - Anti-takeover issues
Risk Factors - Accounting Policy Change	Risk Factors - Capital adequacy and liquidity restrictions
Risk Factors - Barriers to entry	Risk Factors - Clarify/quantify price volatility risks
Risk Factors - Change in shareholder rights	Risk Factors - Compensation levels and expense
Risk Factors - Climate change matters	Risk Factors - Conflicts of interest/related party issues
Risk Factors - Competition and competitors	Risk Factors - Credit risk for accounts receivable
Risk Factors - Credit restrictions	Risk Factors - Descriptive subheading issues
Risk Factors - Data protection and security breaches	Risk Factors - Dividend payments
Risk Factors - Dissent over merger or offer	Risk Factors - Fluctuations in currency or exchange rates
Risk Factors - Exchange listing issues	Risk Factors - Government regulatory effects/changes
Risk Factors - Going concern	Risk Factors - Ineffective internal or disclosure controls
Risk Factors - Inadequate disclosure issues	Risk Factors - Information technology
Risk Factors - Information about industry	Risk Factors - International operations
Risk Factors - Intellectual property rights	Risk Factors - Legal exposures, reliance, claims etc.
Risk Factors - Investments at risk	Risk Factors - Limited operating history
Risk Factors - Licensing or regulatory agency approvals	Risk Factors - Market for offered securities
Risk Factors - Loss reserves may prove inadequate	Risk Factors - Merging and acquiring risks
Risk Factors - Market for products or services	Risk Factors - Reliance on certain personnel
Risk Factors - Operating losses	Risk Factors - Remove language downplaying or mitigating risk
Risk Factors - Reliance on suppliers, customers, governments	Risk Factors - Revenue sources
Risk Factors - Remove or specify generic risks	Risk Factors - Share dilution issues
Risk Factors - Seasonal fluctuations	Risk Factors - Tax positions and assumptions
Risk Factors - Substantial debt	Risk Factors - Unbundle discrete risks
Risk Factors - Technology reliance, feasibility, etc.	

III. Other

Event Disclosure issues	Registration issues
Federal Securities Laws	Tender Offers issues
Legal Matters and Supreme Court Decisions	Other Disclosure Matters

Appendix C. “Determinants of the CL Review”

In this appendix, we analyze the determinants of receiving a CL related to firms’ 10-K filings using logistic regression estimation. We follow Cassell et al. (2013) and include four sets of determinants: (i) those explicitly mentioned in Section 408 of SOX,⁴² (ii) firm characteristics, (iii) auditor characteristics, and (iv) governance characteristics. The definitions of the variables corresponding to these three sets of determinants are included in Appendix C.1. (except the variables already defined in Appendix A).

We perform the analysis separately for the periods before and after the policy change. Table C.1. below presents the details of the tests and the results. We find weak evidence that reviews are conducted on a selective basis, as the model’s ability to explain SEC firm selection based on specific firm characteristics is moderate in both periods (as the area under the ROC curve of the model is a bit higher than 0.7 in both periods).⁴³ However, the model’s explanatory power is marginally higher for public reviews. Overall, these findings suggest that the selectivity of firms subject to a CL review increases (although only marginally) over the sample period.

⁴² While the SEC already aimed to review each firm at least once every three years before the Sarbanes-Oxley Act of 2002 (OIG 2000), Section 408 of SOX made the three-year frequency a requirement. SOX also mentions the following specific factors the SEC should consider when deciding which firms to review more frequently: “(1) issuers that have issued material restatements of financial results; (2) issuers that experience significant volatility in their stock price as compared to other issuers; (3) issuers with the largest market capitalization; (4) emerging companies with disparities in price to earnings ratios; (5) issuers whose operations significantly affect any material sector of the economy; and (6) any other factors that the Commission may consider relevant.”

⁴³ The ROC curve plots the probability of detecting a true signal (*sensitivity*) and a false signal ($1 - \text{specificity}$) for the entire range of possible cut-off points (Kim and Skinner 2012). The area under the ROC curve (AUC), which ranges from 0 to 1, provides a measure of the model’s ability to discriminate. A value of 0.5 indicates no ability to discriminate, while a value of 1 indicates perfect ability to discriminate. A greater area indicates a better performance of the model. The usual convention is that a model with an area of less than 0.7 is considered to have no discrimination ability, a model with an area between 0.7 and 0.8 is considered to have acceptable discrimination ability, and a model with an area between 0.8 and 0.9 is considered to have excellent discrimination ability.

Appendix C.1. Variable Definitions

The following variables are constructed using data from a proprietary dataset of comment letters obtained through FOIA requests [FOIA], Audit Analytics (Comment Letters, Auditor Changes, Late Filers, Internal Controls, Advanced Restatement Modules) [AA], Compustat [C], CRSP [CRSP], GAO Database (Restatements from 1998 to 2002) [GAO], AGR MSCI (Metrics and Scores Modules) [AGR], and Thomson Reuters and Bushee Investors' Classification [TR+BUSHEE].

Letter Indicator variable that equals 1 if the firm receives a comment letter related to its 10-K filing in that year, and 0 if the company did not receive a comment letter in the current or two previous years. [AA+FOIA]

SOX Section 408 Criteria:

Material Weakness Indicator variable that equals 1 if the firm has disclosed at least a quarterly internal control weakness (Section 302) in the current or previous two years, and 0 otherwise. [AA]

Restatement Indicator variable that equals 1 if the firm has restated its financial reports in the current or previous two years, and 0 otherwise. [AA+GAO]

High Volatility Indicator variable set equal to 1 if the volatility of abnormal monthly stock returns (equal to the monthly return [RET] minus the value weighted return [VWRTD]) is in the highest quartile in a given fiscal year, and 0 otherwise. [CRSP]

Other Firm Characteristics:

Sales Growth Change in annual sales from year $t-1$ to year t . [C]

Bankruptcy Rank Decile rank of the company's Altman's Z-score. Companies in the decile having the poorest financial health are assigned a value of 10 and so on down to 1 for the highest financial health. [C]

Segments Number of non-empty and unique segment industry codes reported in the Compustat Segments database. [C]

M&A Indicator variable that equals 1 if the company has performed an M&A corporate transaction during the previous two years, and 0 otherwise. [AGR]

Restructuring Indicator variable that equals 1 if the company has experienced restructuring or reorganization in the previous year, and 0 otherwise. [AGR]

External Financing Sum of equity and debt financing scaled by total assets. [C]

Litigation Indicator variable set equal to 1 if the company is in a highly litigious industry (four-digit SIC industry codes 2833–2836, 3570–3577, 3600–3674, 5200–5961, or 7370–7374), and 0 otherwise. [C]

Auditor Characteristics:

Big4 Indicator variable that equals 1 if the company has been audited by a Big Four accounting firm, and 0 otherwise. [C]

Second Tier Indicator variable that equals 1 if the company has been audited by BDO Seidman, Crowe Horwath, Grant Thornton, or McGladrey & Pullen, and 0 otherwise. [AA]

Auditor Tenure Number of years (through year t) during which the auditor has audited the company. [AA]

Auditor Resignation Indicator variable that equals 1 if the auditor resigned in the previous year, and 0 otherwise. [AA]

Auditor Dismissal Indicator variable that equals 1 if the auditor was dismissed in the previous year, and 0 otherwise. [AA]

Governance Characteristics:

% Institutional Non-Transient Ownership Total institutional holdings minus institutional holdings held by institutions categorized as "transient" in the quarter immediately preceding fiscal year-end divided by the total shares outstanding as of fiscal year-end. We identify transient institutions using data from <http://acct3.wharton.upenn.edu/faculty/bushee/IIclass.html>. [TR+BUSHEE]

Table C.1. Determinants of Receiving a Comment Letter

This table presents results of a multivariate logistic analysis of the annual determinants of receiving an SEC comment letter. *Pre-Policy Change* refers to the period prior to the SEC's 2004 policy change regarding the public disclosure of comment letters (i.e., 1998-2004). *Post-Policy Change* refers to the period after the SEC's 2004 policy change (i.e., 2005-2013). *Letter* equals 1 if the firm receives a comment letter related to its 10-K filing in that year, and 0 if the company did not receive a comment letter in the current or two previous years. The *p*-value at the bottom corresponds to testing whether the areas under the ROC curves (AUC) in the two subsamples (columns (1) and (2)) differ. The area under the ROC curve provides a measure of the model's ability to discriminate. A greater area indicates a better performance of the model (a value of 0.5 indicates no ability to discriminate, while a value of 1 indicates perfect ability to discriminate). All variables are defined as in Appendix A and C.1. Standard errors are clustered by year. *, **, and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Independent variables:	Dependent variable: <i>Letter</i>	
	<i>Pre-Policy Change</i> (1998-2004) (N=10,322) (1)	<i>Post-Policy Change</i> (2005-2013) (N=13,487) (2)
<i>SOX Section 408 Criteria:</i>		
<i>Material Weakness</i>	-0.360*** (-3.11)	-0.031 (-0.47)
<i>Restatement</i>	0.166*** (3.43)	0.159*** (4.12)
<i>High Volatility</i>	-0.043 (-0.45)	0.103 (1.19)
<i>Size</i>	0.215*** (3.51)	0.355*** (8.23)
<i>Other Firm Characteristics:</i>		
<i>Firm Age</i>	0.008** (2.26)	0.005** (2.29)
<i>Loss</i>	0.344*** (5.55)	0.318*** (7.12)
<i>Bankruptcy Rank</i>	0.046** (2.54)	0.051*** (5.47)
<i>Sales Growth</i>	0.107*** (3.55)	0.090 (1.40)
<i>Segments</i>	0.092*** (8.18)	0.006 (0.17)
<i>M&A</i>	0.119** (2.37)	0.168*** (3.16)
<i>Restructuring</i>	0.169* (1.80)	0.025 (0.38)
<i>External Financing</i>	0.262 (1.22)	-0.164 (-1.52)
<i>Litigation</i>	0.100 (1.06)	-0.064 (-0.74)
<i>Auditor Characteristics:</i>		
<i>Big 4</i>	0.068 (0.36)	-0.174* (-1.73)
<i>Second Tier</i>	0.190	0.026

	(0.71)	(0.25)
<i>Auditor Tenure</i>	0.018**	0.007**
	(2.18)	(2.06)
<i>Auditor Resignation</i>	-0.002	-0.062
	(-0.01)	(-0.42)
<i>Auditor Dismissal</i>	0.015	0.046
	(0.10)	(0.60)
<i>Governance Characteristics:</i>		
<i>% Institutional Non-Transient Ownership</i>	0.257*	0.603***
	(1.80)	(3.96)
<i>Year Fixed Effects</i>	YES	YES
<i>Industry Fixed Effects</i>	YES	YES
Pseudo-R ²	0.114	0.143
Area under ROC Curve (AUC)	0.722	0.749
Ho: AUC (1) = AUC (2)		<i>p</i> -value <0.001

Figure 1. Research Design

This figure illustrates the research design of our tests. The research design distinguishes between quarterly earnings announcements around reviews that were not publicly disclosed by the SEC (“Private Reviews”) and quarterly earnings announcements around reviews that were publicly disclosed by the SEC (“Public Reviews”). Private reviews are CLs related to 10-Ks filed before August 1, 2004 and public reviews are CLs related to 10-Ks filed after August 1, 2004. For each CL review of a firm’s 10-K filing, the treatment (control) period is defined as the 360 days following (prior to) the start of the CL review.

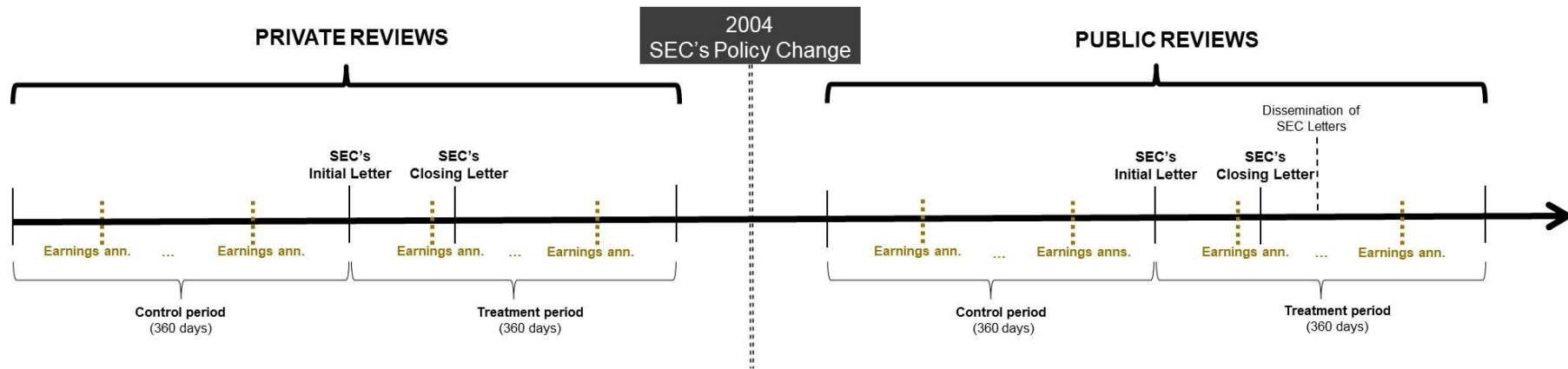


Table 1. Descriptive Statistics

This table presents descriptive statistics for our sample of quarterly earnings announcements around comment-letter (CL) reviews of 10-K filings. For each CL review, the sample includes the quarterly earnings announcements in the 360 days following the date of the first CL and in the 360 days immediately prior to the first CL. The subsample “Private” reviews includes quarterly earnings announcements around 3,292 reviews that were not publicly disclosed by the SEC. The subsample “Public” reviews includes quarterly earnings announcements around 7,923 reviews that were publicly disclosed by the SEC. The table also displays the differences between the means of the variables for Private and Public reviews. *, **, *** represent significance at the 10, 5, and 1 percent level, respectively. Variables are defined in Appendix A.

Variables:	<i>Private reviews</i> (Reviews are NOT disclosed) (N = 20,922)			<i>Public reviews</i> (Reviews are disclosed) (N = 58,563)			Difference (1) – (2)
	Mean (1)	Median	Std.	Mean (2)	Median	Std.	
<i>CAR</i>	0.003	0.003	0.099	0.002	–0.000	0.093	0.001
<i>UE</i>	–0.002	0.000	0.036	–0.002	0.001	0.035	–0.000
<i>Size</i>	6.835	6.674	1.870	7.214	7.150	1.768	–0.379***
<i>BM</i>	0.502	0.395	0.841	0.521	0.429	0.619	–0.019***
<i>Leverage</i>	0.242	0.216	0.218	0.224	0.192	0.222	0.018***
<i>Past>Returns</i>	0.203	0.034	1.045	0.095	0.004	0.639	0.108***
<i>Beta</i>	1.451	1.304	0.845	1.288	1.248	0.534	0.163***
<i>Persistence</i>	0.140	0.101	0.677	0.138	0.093	0.718	0.002
<i>Loss</i>	0.304	0.000	0.460	0.236	0.000	0.425	0.068***

**Table 2. Stock Price Reaction to Earnings Announcements
around SEC Comment Letters**

This table reports the results of estimating the stock price reaction to quarterly earnings announcements around SEC comment-letter (CL) reviews of 10-K filings. “Private” reviews refers to CL reviews that were not publicly disclosed by the SEC. “Public” reviews refers to CL reviews that were publicly disclosed by the SEC. For each CL review, the sample includes the quarterly earnings announcements in the 360 days following the date of the first CL (the “treatment” period) and in the 360 days immediately prior to the first CL (the “control” period). Panel A pools private and public reviews and tests for differences between the two subsamples of reviews. Panel B presents results separately for earnings announcements around private reviews (columns 1 and 2) and for earnings announcements around public reviews (columns 3 and 4). *CAR* is the market-adjusted compounded stock return over the (-1, +1) day window around the earnings announcement. *UE* is the unexpected EPS divided by price. *Treatment_Period* is an indicator variable that equals 1 if quarterly earnings are announced in the 360 days following the date of the initial SEC comment letter, and 0 otherwise. *Public_Review* is an indicator variable that equals 1 if the CL review is public, and 0 otherwise. Detailed definitions of these variables and definitions of the rest of the variables are in Appendix A. The results are based on a sample of 79,485 observations. Standard errors are clustered by quarter-year. *, **, and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Panel A. Pooled sample

Independent variables:	Dependent variable: <i>CAR</i>	
	(1)	(2)
<i>UE*Treatment_Period*Public_Review</i>		0.088*** (2.93)
<i>UE*Treatment_Period</i>		-0.037 (-1.32)
<i>Treatment_Period*Public_Review</i>		-0.001 (-0.67)
<i>UE*Public_Review</i>		-0.034 (1.37)
<i>Treatment_Period</i>		-0.001 (-0.32)
<i>UE</i>	0.808** (2.42)	0.803** (2.35)
<i>Size</i>	-0.013*** (-7.15)	-0.013*** (-7.17)
<i>BM</i>	-0.003* (-1.74)	-0.003* (-1.75)
<i>Leverage</i>	0.002 (0.40)	0.003 (0.42)
<i>Past>Returns</i>	-0.001* (-1.69)	-0.001* (-1.64)
<i>Beta</i>	-0.001 (-0.70)	-0.001 (-0.63)
<i>Persistence</i>	0.005*** (5.91)	0.005*** (5.85)
<i>Loss</i>	-0.015*** (-9.24)	-0.015*** (-9.31)
<i>UE*Size</i>	0.033*** (2.95)	0.032*** (2.95)
<i>UE*BM</i>	-0.007 (-1.50)	-0.008 (-1.37)

<i>UE*Leverage</i>	-0.139*** (-3.84)	-0.149*** (-4.22)
<i>UE*Past_Returns</i>	0.010 (0.49)	0.015 (0.67)
<i>UE*Beta</i>	-0.014 (-1.08)	0.002 (0.22)
<i>UE*Persistence</i>	-0.025** (-2.26)	-0.022 (-1.43)
<i>UE*Loss</i>	-0.862** (-2.43)	-0.868** (-2.48)
<i>UE*SEC_Budget</i>	-0.057 (-1.15)	-0.045 (-0.73)
<i>Year Fixed Effects</i>	YES	YES
<i>Review Fixed Effects</i>	YES	YES
Adjusted R ²	0.036	0.036

Panel B. Separating “private” and “public” reviews

Independent variables:	Dependent variable: <i>CAR</i>			
	<i>Private Reviews</i> (N = 20,922)		<i>Public Reviews</i> (N = 58,563)	
	(1)	(2)	(3)	(4)
<i>UE*Treatment_Period</i>	0.006 (0.38)	-0.009 (-0.40)	0.112*** (2.83)	0.131*** (3.17)
<i>Main Effects</i>	YES	YES	YES	YES
<i>Controls</i>	YES	YES	YES	YES
<i>UE*Controls</i>	YES	YES	YES	YES
<i>Year Fixed Effects</i>		YES		YES
<i>Review Fixed Effects</i>		YES		YES
Adjusted R ²	0.021	0.015	0.067	0.063

Table 3. Timing and Persistence of the Effect of SEC Comment Letters on ERCs

This table reports the timing and persistence of the stock price reaction to quarterly earnings announcements around SEC comment letters for the subset of public reviews. Panel A tests for the timing of the ERC effect in the subset of public reviews ($N = 58,563$). In the model presented, UE is interacted with separate indicator variables for each quarter around the date of the first comment letter. For example, $Control_Period_Q-3$ is the third quarter prior to the receipt of the first comment letter, and $Treatment_Period_Q+1$ is the first quarter following the receipt of the comment letter. The baseline quarter is $Q-4$, i.e., the fourth quarter before the receipt of the first comment letter. Panel B tests for the persistence of the ERC effect in the subset of public reviews. In the models presented in columns 1-3, the control period is defined as the four quarters preceding the date of the first comment letter. In each of the models the length of the treatment period varies. Specifically, the treatment period ranges from 540 days (or 6 quarters, i.e., column 1) to 900 days (or 10 quarters, i.e., column 3) following the date of the first CL. Accordingly, the sample sizes differ across columns. Specifically, the results presented in column 1 are based on a sample of 70,698 observations, and increase to a sample of 92,687 observations in column 3. All variables are defined in Appendix A. Standard errors are clustered by quarter. *, **, and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Panel A. Timing of the effect for “public” reviews

Independent variables:	Dependent variable: CAR
	(1)
$UE*Control_Period_Q-3$	0.010 (0.15)
$UE*Control_Period_Q-2$	0.015 (0.52)
$UE*Control_Period_Q-1$	0.016 (0.15)
$UE*Treatment_Period_Q+1$	0.11*** (3.43)
$UE*Treatment_Period_Q+2$	0.067*** (2.88)
$UE*Treatment_Period_Q+3$	0.094** (2.14)
$UE*Treatment_Period_Q+4$	0.070* (1.87)
<i>Main Effects</i>	YES
<i>Controls</i>	YES
$UE*Controls$	YES
<i>Year Fixed Effects</i>	YES
<i>Review Fixed Effects</i>	YES
Adjusted R^2	0.064

Panel B. Persistence of the effect for “public” reviews

Independent variables:	Dependent variable: CAR		
	Treatment_Period = 540 days after first letter	Treatment_Period = 720 days after first letter	Treatment_Period = 900 days after first letter
	(1)	(2)	(3)
$UE*Treatment_Period$	0.119*** (3.28)	0.076* (1.90)	0.053 (1.15)
<i>Main Effects</i>	YES	YES	YES
<i>Controls</i>	YES	YES	YES
$UE*Controls$	YES	YES	YES
<i>Year Fixed Effects</i>	YES	YES	YES
<i>Review Fixed Effects</i>	YES	YES	YES
Adjusted R^2	0.071	0.065	0.080

Table 4. Cross-Sectional Partitions

This table analyzes cross-sectional variation in the results of Table 2, Panel A (i.e., the stock price reaction to quarterly earnings announcements around SEC comment letters). The sample is partitioned based on two metrics. First, *%Dedicated_Investors* is computed as the percentage of shares owned by “dedicated” institutional investors as defined by Bushee (1998). Second, *Review_Length* is computed as the number of days from the first to the last comment letter. *High (Low)* refers to observations with above (below) median values of the previous two metrics. *Controls* includes the same variables as in Table 2. The results are based on a sample of 79,485 observations. All variables are defined in Appendix A. Standard errors are clustered by quarter-year. *p*-values at the bottom correspond to testing the hypothesis of equality of coefficients across subsamples. *, **, and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

		Dependent variable: <i>CAR</i>			
		<i>% Dedicated Investors</i>		<i>Review Length</i>	
Independent variables		<i>High</i>	<i>Low</i>	<i>High</i>	<i>Low</i>
		(1)	(2)	(3)	(4)
<i>UE*Treatment_Period*Public_Review</i>	α	0.326*** (3.00)	0.054* (1.93)	0.133*** (3.64)	-0.001 (-0.01)
<i>Main Effects</i>		YES	YES	YES	YES
<i>Double Interactions</i>		YES	YES	YES	YES
<i>Controls</i>		YES	YES	YES	YES
<i>UE*Controls</i>		YES	YES	YES	YES
<i>Year Fixed Effects</i>		YES	YES	YES	YES
<i>Review Fixed Effects</i>		YES	YES	YES	YES
Adjusted R ²		0.051	0.054	0.043	0.048
Ho: $\alpha_{High} = \alpha_{Low}$ (<i>p</i> -value)		0.004		0.003	

Table 5. Characteristics of Firms' CL Reviews

This table presents average characteristics of comment letters from 1998 to 2013. *Private reviews* refers to CL reviews that were not publicly disclosed by the SEC. *Public reviews* refers to CL reviews that were publicly disclosed by the SEC. The subsample of private reviews includes 217 reviews corresponding to 217 randomly selected firms for which we obtained comment letters through a FOIA request. For the remaining observations in the subsample of private reviews, we only have access to the dates of the first and last letter of each review. In Panel A, we compare the characteristics of the random subsample of private reviews to three sets of observations in the population of public reviews. First, we compare the 217 random private reviews to all public reviews of the same firms. Second, we compare the 217 random private reviews to public reviews of firms from the same industry and closest in size. Third, we compare the random 217 private reviews to the entire population of public reviews. In Panel B, we run regression analyses on comment letter characteristics. These tests are based on a sample of 7,591 observations, i.e., all private and public letters with data to compute all control variables. Following Cassell et al. (2013) we include three sets of *Controls*: (i) those explicitly mentioned in Section 408 of the Sarbanes-Oxley Act of 2002 (SOX), (ii) firm characteristics, and (iii) monitoring characteristics. The definitions of these *Controls* are described in detail in Appendix C.1. All other variables are defined in Appendix A.

Panel A. Descriptives

	<i>Private reviews</i>		<i>Public reviews</i>			Difference (<i>p</i> -value)		
	Random reviews (N=217) (1)	Entire population (N=3,292) (2)	Random reviews (N=724) (3)	Matched pairs (N=217) (4)	Entire population (N=7,923) (5)	(1)-(3)	(1)-(4)	(1)-(5)
<i>Variables:</i>								
<i>Review Length (Days)</i>	126.83	130.71	84.29	85.54	83.48	<.0001	<.0001	<.0001
<i>Time from Filing Date (Days)</i>	150.89	154.69	117.26	136.57	142.69	<.0001	0.104	0.202
<i>Comments:</i>								
<i>Total</i>	15.35	n.a.	8.72	11.45	9.02	<.0001	<.0001	<.0001
<i>Accounting</i>	10.38	n.a.	4.38	6.42	4.30	<.0001	<.0001	<.0001
<i>Core</i>	2.91	n.a.	1.06	1.83	1.12	<.0001	<.0001	<.0001
<i>Non-Core</i>	7.47	n.a.	3.32	4.59	3.18	<.0001	<.0001	<.0001
<i>Operational, Control and Risk</i>	2.51	n.a.	2.17	2.19	2.53	0.004	0.130	0.928
<i>Other</i>	2.46	n.a.	2.17	2.83	2.20	0.210	0.250	0.140
<i>Number of Rounds</i>	2.95	n.a.	2.76	2.71	2.78	0.033	0.039	0.020
<i>Unresolved Comments</i>	0.000	n.a.	0.001	0.005	0.003	0.584	0.312	0.417
<i>Confidentiality Requests</i>	0.12	n.a.	0.22	0.18	0.20	0.002	0.064	0.002

<i>Extension Requests</i>	0.04	n.a.	0.20	0.20	0.25	<.0001	<.0001	<.0001
<i>Involvement of a Law Firm</i>	0.23	n.a.	0.22	0.25	0.39	0.813	0.635	<.0001

Panel B. Regression Analysis

Dependent Variable:

Variables:	Review Length (1)	Time from Filing Date (2)	Total Comments (3)	Accounting Comments (4)	Core Accounting Comments (5)	Non-Core Accounting Comments (6)	Operational Comments (7)	Other Comments (8)	Rounds (9)	Unresolved Comments (10)	Confidentiality Requests (11)	Extension Requests (12)	Law Firm (13)
<i>Public_Review</i>	-35.306*** (-6.59)	-7.867** (-2.04)	-4.509*** (-6.14)	-4.941*** (-11.79)	-1.553*** (-11.19)	-3.388*** (-10.71)	0.283 (1.38)	0.149 (0.50)	-0.124 (-1.20)	-0.001 (-0.58)	0.186*** (6.71)	0.168*** (6.57)	0.037 (0.97)
<i>Controls</i>	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
<i>Quarter Fixed Effects</i>	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
<i>Firm Fixed Effects</i>	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Adjusted R ²	0.089	0.083	0.144	0.147	0.120	0.155	0.111	0.094	0.067	0.012	0.093	0.205	0.522

Table 6. Quarterly Financial Reporting Information around Comment Letters

This table reports the results of OLS regressions analyzing key characteristics of financial reports around SEC comment-letter (CL) reviews of 10-K filings. For each CL review, the sample includes the financial reports issued in the 360 days following the date of the first CL (the “treatment” period) and in the 360 days immediately prior to the first CL (the “control” period). In column 1 the dependent variable is *Abnormal_Accruals*, defined as the absolute value of abnormal accruals in the financial reporting information corresponding to the earnings announcement (see Appendix A for a detailed description of the computation of abnormal accruals). In column 2 the dependent variable is *Text_Length*, defined as the number of words (in thousands) in the filing (10-K or 10-Q) corresponding to the earnings announcement. In column 3 the dependent variable is *Restatements*, defined as the number of restatements within 365 calendar days after the date of the earnings announcement. *Treatment_Period* is an indicator variable that equals 1 if the quarterly earnings are announced in the 360 days following the date of the initial SEC comment letter, and 0 otherwise. *Public_Review* is an indicator variable that equals 1 if the CL review is public, and 0 otherwise. The tests are based on a sample of 79,485 observations. All variables are defined in Appendix A. Standard errors are clustered by quarter-year. *, **, and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Independent variables:	Dependent variable:		
	<i>Abnormal_Accruals</i> (1)	<i>Text_Length</i> (2)	<i>Restatements</i> (3)
<i>Treatment_Period*Public_Review</i>	-0.003*** (-2.94)	2.642*** (4.44)	-0.024* (-1.74)
<i>Treatment_Period</i>	0.002*** (2.83)	1.449*** (2.63)	0.018 (1.36)
<i>Size</i>	-0.004*** (-3.07)	-1.323*** (-3.17)	0.020** (2.60)
<i>BM</i>	-0.002** (-2.31)	-0.797 (-1.32)	0.001 (0.05)
<i>Leverage</i>	-0.003 (-0.45)	-8.615*** (-4.93)	-0.015 (-0.32)
<i>Past>Returns</i>	0.001 (0.89)	0.278 (1.16)	-0.005 (-0.91)
<i>ROA</i>	-0.038*** (-3.23)	-16.915*** (-5.17)	0.022 (0.33)
<i>Firm_Age</i>	0.007*** (10.43)	30.025*** (71.23)	-0.014** (2.17)
<i>CEO_Chair</i>	0.000 (0.22)	-1.779*** (-4.34)	-0.070*** (-5.22)
<i>%Independent_Directors</i>	-0.004 (-0.95)	0.006 (0.01)	0.048 (1.03)
<i>Year Fixed Effects</i>	YES	YES	YES
<i>Review Fixed Effects</i>	YES	YES	YES
Adjusted R ²	0.261	0.322	0.412

Table 7. Falsification Tests

This table presents falsification tests on the stock price reaction to quarterly earnings announcements around SEC comment letters. The table reports distributional characteristics of the coefficients α_l obtained from three randomization procedures based on the specification in Table 2, Panel A (i.e., equation 1):

$$\begin{aligned}
 CAR_{it} = & \alpha_0 + \alpha_1 * UE_{it} * Treatment_Period_{it} * Public_Review_{it} + \\
 & \alpha_2 * UE_{it} * Treatment_Period_{it} + \alpha_3 * Treatment_Period_{it} * Public_Review_{it} + \alpha_4 * UE_{it} * Public_Review_{it} + \\
 & \alpha_5 * Treatment_Period_{it} + \alpha_6 * UE_{it} + \alpha_7 * Public_Review_{it} + \\
 & + \phi_1 * Controls + \phi_2 * UE_{it} * Controls + Fixed\ Effects + \varepsilon
 \end{aligned}$$

i and t refer to firms and quarterly announcement dates, respectively. All variables are as in Table 2, Panel A. The three randomization procedures are as follows. Row (1) presents results from randomizing the date of the start of the treatment period (i.e., the start of the first letter). This procedure keeps the actual date of the policy change, and the actual treatment firms. Row (2) presents results from randomizing the firms that receive comment letters. This procedure keeps the actual date of the policy change and the actual dates of the treatment periods, but treats firms not receiving a CL as if they had received a CL. Row (3) presents results from randomizing the firms that receive comment letters. This procedure keeps the actual date of the policy change and the actual dates of the treatment periods, but treats firms not receiving a CL as if they had received a CL. In contrast to the results presented in row (2), in this procedure only firms that did not receive a CL within three years are randomly selected. Row (4) presents results from randomizing the date of the SEC policy change to publicly disclose comment letters. This procedure keeps the actual dates of the treatment periods and the actual treatment firms, but shifts around the date of the policy change. Each randomization procedure takes 100 random draws of the randomized element. p -values (in brackets) reflect the probability that the coefficient estimated using the randomized data (α_l) is equal to the coefficient estimated using the actual data ($\widehat{\alpha}_l=0.088$). *Controls* includes the same variables as in Table 2. We also include review and year fixed effects. Variables are defined in Appendix A.

	$\widehat{\alpha}_1$ <i>Actual data</i>	α_1 <i>Randomized data</i>	$H_0: \alpha_1 = \widehat{\alpha}_1$ [p -value]
(1) Randomizing the treatment period	0.088	-0.006	[<0.001]
(2) Randomizing the treatment firms – universe of control firms	0.088	-0.013	[<0.001]
(3) Randomizing the treatment firms – restricting to “no deficiency” control firms	0.088	-0.011	[<0.001]
(4) Randomizing the date of the policy change	0.088	0.053	[<0.001]

Table 8. Short Window around the SEC’s Policy Change

This table repeats the analysis in Table 2, Panel A (i.e., the stock price reaction to earnings announcements around CL reviews) restricting the analysis to reviews initiated in 2004 and 2005 (column 1), reviews initiated within nine months before and after the date of the policy change, i.e., August 1, 2004 (column 2), and reviews initiated in 2004 and 2005 for non-accelerated filers (i.e., market capitalization smaller than \$75 million). *Controls* includes the same variables as in Table 2. All variables are defined in Appendix A. Standard errors are clustered by quarter-year. *, **, and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Independent variables:	Dependent variable: <i>CAR</i>		
	<i>2004 and 2005</i> (N= 7,379) (1)	<i>9 months around</i> <i>8/1/2004</i> (N= 6,328) (2)	<i>2004 and 2005 non-</i> <i>accelerated filers</i> (N= 519) (3)
<i>UE*Treatment_Period*Public_Review</i>	0.333*** (3.25)	0.291** (2.27)	0.636* (1.70)
<i>Main effects</i>	YES	YES	YES
<i>Double interactions</i>	YES	YES	YES
<i>Controls</i>	YES	YES	YES
<i>UE*Controls</i>	YES	YES	YES
<i>Year Fixed Effects</i>	YES	YES	YES
<i>Review Fixed Effects</i>	YES	YES	YES
Adjusted R ²	0.087	0.103	0.168

Table 9. Alternative Specifications

This table repeats the analysis in Table 2, Panel A (i.e., the stock price reaction to earnings announcements around CL reviews) introducing three variations in the fixed effects structure. Column 1 presents results including the interaction between year fixed effects and *UE*. Column 2 presents results including the interaction between quarter-year fixed effects and *UE*. Column 3 presents results including the triple interaction of *UE*, *Controls*, and *Treatment_Period*. The results are based on a sample of 79,485 observations. All variables are defined in Appendix A. Standard errors are clustered by quarter-year. *, **, and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Independent variables:	Dependent variable: <i>CAR</i>		
	(1)	(2)	(3)
<i>UE*Treatment_Period*Public_Review</i>	0.119*** (2.64)	0.172*** (2.88)	0.098*** (3.07)
<i>Main Effects</i>	YES	YES	YES
<i>Double Interactions</i>	YES	YES	YES
<i>Controls</i>	YES	YES	YES
<i>UE*Controls</i>	YES	YES	YES
<i>Review Fixed Effects</i>	YES	YES	YES
<i>Year Fixed Effects</i>	YES		
<i>UE*Year Fixed Effects</i>	YES		
<i>Quarter-Year Fixed Effects</i>		YES	
<i>UE*Quarter-Year Fixed Effects</i>		YES	
<i>Controls*Treatment_Period</i>			YES
<i>UE*Controls*Treatment_Period</i>			YES
Adjusted R ²	0.060	0.050	0.063

Table 10. Trading Volume around Earnings Announcements

This table reports the results of estimating changes in abnormal trading volume at quarterly earnings announcements around SEC comment-letter (CL) reviews of 10-K filings. “Private” reviews refers to CL reviews that were not publicly disclosed by the SEC. “Public” reviews refers to CL reviews that were publicly disclosed by the SEC. For each CL review, the sample includes the quarterly earnings announcements in the 360 days following the date of the first CL (the “treatment” period) and in the 360 days immediately prior to the first CL (the “control” period). The measure of abnormal trading volume, *Abn_Trade_Vol*, is defined in detail in Appendix A. *Treatment_Period* is an indicator variable that equals 1 if quarterly earnings are announced in the 360 days following the date of the initial SEC comment letter, and 0 otherwise. *Public_Review* is an indicator variable that equals 1 if the CL review is public, and 0 otherwise. *Controls* includes the same variables as in Table 2. Column 1 pools private and public reviews and tests for differences between the two subsamples. Columns 2 and 3 present results separately for earnings announcements around private and public reviews. All variables are defined in Appendix A. Standard errors are clustered by announcement date. *, **, and *** denote statistical significance at the 10%, 5%, and 1% (two-tail) levels, respectively.

Independent variables:	Dependent variable: <i>Abn_Trade_Vol</i>		
	<i>Pooled</i> (N= 79,485) (1)	<i>Private Reviews</i> (N= 20,922) (2)	<i>Public Reviews</i> (N= 58,563) (3)
<i>Treatment_Period*Public_Review</i>	0.240*** (2.68)		
<i>Treatment_Period</i>	-0.026 (-0.38)	-0.038 (-0.54)	0.221*** (3.90)
<i>Main Effects</i>	YES	YES	YES
<i>Controls</i>	YES	YES	YES
<i>Year Fixed Effects</i>	YES	YES	YES
<i>Review Fixed Effects</i>	YES	YES	YES
Adjusted R ²	0.125	0.112	0.126