VOLUNTARY AUDIT COMMITTEE DISCLOSURES AND CREDIBILITY OF

FINANCIAL REPORTING

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XIAOLI GUO

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ADVISERS: PERVIN SHROFF
IVY ZHANG

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Dedication
This dissertation is dedicated to my family.

Abstract

This paper examines whether the voluntary disclosure of audit committee activities in proxy statements increases market participants' perception about the firm's reporting credibility. In recent years, various stakeholders have expressed concern about the lack of transparency in how audit committees execute their responsibilities. To enhance investor confidence in financial reporting, companies have started to voluntarily provide additional task-oriented information about the audit committee oversight process beyond the limited regulatory requirement. Using textual content analysis techniques, I test whether these narrative disclosures improve market participants' perception of the quality of reported earnings, captured by the earnings response coefficient (ERC) and analysts' forecast dispersion (DISP). I find that, relative to a matched control sample of non-disclosing firms, the ERC of disclosing firms is significantly higher and their analysts' forecast dispersion is significantly lower after the voluntary disclosure of audit committee activities and these effects increase with the number of dimensions of audit committee tasks disclosed. Further, cross-sectional analysis shows that the effects on ERC and DISP after the disclosure are incrementally greater for firms with a weak information environment. In light of the SEC's renewed interest in improving transparency of the audit committee process, I provide timely evidence of the usefulness of narrative audit committee disclosures in enhancing the credibility of financial reporting.

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1. Introduction

Strong internal monitoring enhances investor confidence in the information disclosed by a firm. The principal objective of the Sarbanes-Oxley Act (2002) (SOX) was to restore investor confidence in the capital market following numerous accounting scandals and audit failures. In addition to provisions aimed at enhancing board and auditor independence, the Act strengthened the audit committee's oversight of the financial reporting process and external audit. That audit committees play a significant role in improving financial reporting quality and internal control effectiveness is shown by prior empirical studies (e.g. Krishnan, 2005; Abbott et al., 2004; Klein, 2002; Beasley et al., 2009). However, as perceived by some institutional investors and corporate governance activists, there is a lack of transparency about how audit committees execute their responsibilities.[1] To mitigate the potential effect of this lack of transparency on financial reporting credibility, companies have started to voluntarily provide additional information about the audit committee's work beyond the limited requirements of Item 407 of Regulation S-K (Blue Ribbon Committee 1999).[2] This paper examines whether the voluntary disclosure of audit committee activities improves investors' perception of the credibility of a firm's financial reporting.

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[1] See, for example, reports issued by the Center for Audit Quality (CAQ) 2013: Enhancing the Audit Committee Report (2013), available at https://www.thecaq.org/enhancing-audit-committee-report-call-action/. Council of Institutional Investors (CII), Policies on Corporate Governance, Section 2.13 (updated Sept. 27, 2013), available at http://www.cii.org/corp_gov_policies#BOD . Ernst & Young (EY) (Feb. 2013), Audit Committee Reporting to Shareholders: Going Beyond the Minimum, available at:https://www.ey.com/Publication/vwLUAssets/Audit_committee_reporting_to_shareholders:_going_beyond_the_minimum/$FILE/Audit_committee_reporting_CF0039.pdf; National Association of Corporate Directors (NACD) Summary of Proceedings, Audit Committee Chair Advisory Council (June 19, 2013), available at http://www.nacdonline.org/Resources/Article.cfm?ItemNumber=7284.

[2] Center for Audit Quality (CAQ), Audit Committee Transparency Barometer (2014, 2015, 2016), available at https://www.thecaq.org/resources.

At the time of enactment of SOX, the SEC expressed its belief that "disclosures about a company's audit committee and its interaction with the company's auditors and management will promote investors' confidence in the integrity of the financial reporting process."[3] The rationale behind this argument is that, when investors learn more about the oversight process, it helps them gain useful context for the audit committee's decisions. This enables them to better understand the quality of board monitoring in general and audit committee oversight in particular. In addition, the audit committee is likely to follow the specified process more strictly, because its public disclosure will make any deviation costly. Thus, investors will have more confidence in the audit committee's monitoring role and as a result will place greater credence in the financial information disclosed by the firm.

The concern expressed by the SEC and investor groups stems from the belief that simply knowing that a firm has an audit committee is not enough to convince investors that there is strong internal monitoring. This could be because investors perceive that all audit committees are not equally effective. This is in fact borne out by prior empirical research that provides evidence of variation in monitoring effectiveness of audit committees (e.g., Beasley et al. 2009; Cohen et al. 2010; Lisic et al. 2016). Thus, to differentiate themselves, effective audit committees may voluntarily disclose specific task-oriented information about their operations to signal their quality to investors. However, given the non-observability of the audit committee's effort, investors may still not be able to distinguish between effective and ineffective audit committees. In this case, audit committee disclosures will not improve investors' perception of the quality of the firm's financial information. To the extent specified audit committee tasks are ex post verifiable (e.g.,

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[3] SEC Release No. 34-42266: Audit committee disclosure (Jan 2010), available at:
https://www.sec.gov/rules/final/34-42266.htm

selection criteria used for hiring external auditors), it will be costly for ineffective audit committees to disclose, so that disclosures of effective audit committees will be credible.[4] Ultimately, whether audit committee disclosures enhance investors' confidence in the firm's financial reporting is an empirical question that I address.

Companies voluntarily disclose specific tasks undertaken by the audit committee that bear upon the effectiveness of the committee's oversight of financial reporting and external audit. I categorize the disclosure into three dimensions based on reported trends (CAQ reports 2014–2016), SEC's conceptual release (2015)[5], and the literature about the audit committee oversight process (Beasley et al. 2009). The three dimensions include: annual review and evaluation of auditors, factors considered for the selection of auditors including the tenure of the engagement partner, and audit committee's involvement in the selection of the engagement partner. I then obtain information about the three dimensions by electronically processing audit committees' textual disclosures in proxy statements included in the SEC's Edgar DEF 14 filings.

For a sample of U.S. public companies over the period 2003-2015, I assess the impact of disclosure of audit committee activities on financial reporting credibility. I use two measures to capture market participants' perception of financial reporting credibility – the earnings response coefficient (ERC) as a measure of investors' perception and analysts' forecast dispersion (DISP) as a measure of analysts' perception of the firm's financial reporting quality. I employ a difference-in-differences research design to evaluate the change in ERC and DISP in the post period. I use three years preceding the first year

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[4] The ex post verifiability of disclosures may lead to scrutiny by various interest groups, e.g., investors, the SEC, and litigators, thus imposing costs on ineffective audit committees for false disclosures.
[5] SEC Release No. 33-9862; 34-75344, Possible Revisions to Audit Committee Disclosures (July 2015), available at: https://www.sec.gov/rules/concept/2015/33-9862.pdf.

of disclosure as the pre-disclosure period and years following the initial disclosure year as the post-disclosure period. The post-period does not include years in which the firm discontinues disclosure. Since initiating voluntary disclosure of audit committee activities is a firm's choice, I model the determinants of the disclosure decision, based on firm size, market-to-book ratio, leverage, earnings persistence, market beta and accounting quality in the initial disclosure year. I use an entropy balancing technique to obtain a balanced control sample of non-disclosing firms. I find that the distributional properties of the treatment and control samples are virtually identical.

I estimate a regression of 3-day cumulative abnormal returns (CAR) around annual earnings announcements on earnings surprise (relative to the prevailing analyst consensus) using the treatment sample of disclosers and the control sample of non-disclosers. I find that, relative to the control sample, the ERC of the sample of disclosers is significantly higher after the voluntary disclosure of audit committee activities. Similarly, I find that analysts' forecast dispersion of the sample of disclosers is significantly lower after the voluntary disclosure of audit committee activities. In addition to the disclose/not disclose decision, I also construct a variable that scores the number of dimensions of audit committee activities disclosed by a firm on a scale of 1 to 3. My results show that the incremental effects of audit committee disclosure on ERC and DISP are increasing in the number of dimensions disclosed. Further, I find that among all disclosure dimensions, the one that specifies the process of review and evaluation of the auditor's work has the greatest incremental effect on ERC and DISP. Overall, these results suggest that task-oriented audit committee disclosures enhance investors' and analysts' confidence in the firm's reported earnings.

I conduct cross-sectional analyses to explore settings that are likely to be associated with greater improvement in investor or analyst perceptions of financial reporting quality in response to audit committee disclosures. Since investors are likely to have lower confidence in the financial reports of firms with a weak information environment, I expect a greater increase in the credibility of financial information for these firms after the disclosure of audit committee activities. Consistent with this expectation, I find that the increase in ERC is incrementally greater for firms covered by fewer financial analysts and firms with higher return volatility in the disclosure year. Similarly, I find a greater decrease in DISP for firms with higher return volatility in the disclosure year.

My interpretation of the ERC finding assumes that the disclosure change is only intended to provide information about audit committee oversight to enhance investors' perception about earnings quality and does not result from an actual improvement in the quality of the audit committee. If this assumption does not hold, the increase in ERC after the disclosure could potentially be driven by an increase in earnings quality due to an improvement in audit committee monitoring. I examine whether the higher ERC in the post-disclosure period is due to an increase in investors' perception of earnings quality or an increase in earnings quality itself. First, I test whether the earnings quality of the disclosing firms relative to non-disclosing control firms increases after the voluntary disclosure. Using measures of earnings quality developed by Kothari et al. (2005) and McNichols (2002), I find no significant change in earnings quality for the disclosing firms relative to the control firms in the post-disclosure period. Second, I estimate regressions for two subsamples, above-median and below-median change in earnings quality, and obtain the incremental change in ERC for the two groups in the post-disclosure period. I

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find no significant difference in the change in ERC of the two earnings quality subsamples, suggesting that the incremental increase in ERC in the post-disclosure period is not due to a change in earnings quality but rather due to a change in investors' perception about earnings quality. I also conduct a similar analysis on DISP and find no significant difference in the decrease in DISP of the two earnings quality subsamples. Collectively, my evidence suggests that audit committee disclosures provide information about the company's internal monitoring efficiency and thus enhance investors' confidence in the company's financial reporting.

I also examine if there is a decrease in ERC when a disclosing firm later discontinues the voluntary disclosure of audit committee information. I find that ERC decreases significantly after the firm stops disclosing information about the audit committee's oversight role and this decrease is not due to a change in accounting quality. Similarly, I find an increase in DISP after a firm discontinues audit committee disclosures (although the significance is weak).

This study contributes to the literature on voluntary accounting disclosures. Many prior disclosure studies provide evidence on the economic consequences of voluntary disclosures about the firm's performance (Healy and Palepu, 2001; Beyer et al. 2010). My paper adds to the recent literature that focuses on disclosures about the internal working of the company. Studies in this research area examine the effect of disclosure of personal information of boards and executives (e.g., Gow, Wahid and Yu 2016). I examine disclosures that inform investors about the responsibilities and activities of the company's audit committee and find that these content disclosures help to improve investors' and analysts' confidence in financial reporting.

This study also contributes to the line of research on the effectiveness of audit committees. Early studies have shown that the existence of an audit committee and its composition affect the quality of financial reporting (Carcello and Neal 2000; McDaniel et al. 2002; Cohen et al. 2004). In particular, several studies have focused on the effects of audit committee financial expertise mandated by SOX. Evidence suggests that audit committee financial expertise mitigates internal control weaknesses (Krishnan 2005), reduces the likelihood of restatements (Abbott et al. 2004), increases the accuracy of management forecasts (Krishnan and Visvanathan 2008), improves accruals quality (Dhaliwal et al. 2010), and improves the broader information environment (Farber et al. 2018). In contrast with this line of inquiry, I focus on the textual content of disclosures about audit committee activities that are not as yet mandated by the SEC. There is limited research on how such additional information impacts investors' decisions. It is important to shed light on this issue in face of the expressed demand for such disclosures from various stakeholders. In response, the SEC has issued a conceptual release on "Possible Revisions to Audit Committee Disclosures" with respect to the audit committee's oversight of the independent auditor and has sought comments from the public about the need for greater transparency about the audit committee's oversight process (July 2015). This paper provides timely evidence suggesting that narrative disclosures about audit committee activities are useful in building investor confidence in financial reporting.

Section 2 provides background information about the current disclosure requirements relating to audit committees. Section 3 explains the hypothesis development. Section 4 discusses the research design, sample selection and results and section 5 concludes.

2. Audit Committee disclosures

2.1 Current regulations about audit committee disclosures

The existing regulations about audit committee disclosures evolved over two stages – the SEC's adoption of the Blue Ribbon Committee's recommendations in 1999, and the enactment of the Sarbanes-Oxley Act in 2002. In 1999, the SEC issued new rules to improve disclosures relating to the functioning, governance and independence of audit committees and to enhance the credibility of financial statements of public companies. Item 407 of Regulation S-K requires companies' proxy statements to include certain statements about the audit committee's responsibilities for overseeing financial reporting, internal control and external audit. These statements must specify that the audit committee has: 1) reviewed and discussed the audited financial statements with management; 2) discussed with the auditor the matters required to be communicated to the audit committee; 3) received the required written communication from the external auditor concerning independence and discussed his or her independence; 4) recommended to the board of directors that audited financial statements be included in the company's annual report.

In addition to the contents of the audit committee report, Item 407 requires disclosures about the characteristics and regular activities of the audit committee, including: 1) the name of each member of the audit committee and whether the committee has at least one member with financial expertise; 2) whether audit committee members are independent and cases of audit committee appointments of directors who are not independent; 3) the number of meetings held and information about member attendance at meetings; 4) whether or not the audit committee has a charter; and 5) whether there is a separately-

designated standing audit committee or a committee performing similar functions, and the identity of each member.

In 2002, the enactment of SOX enhanced the ability of audit committees to achieve auditor independence. In addition to the pre-approval of services provided by independent auditors and audit fees, SOX requires an issuer to disclose the following: 1) audit committee's pre-approval policies and procedures; 2) all fees paid to independent auditors in the two most recent fiscal years. Further, if an issuer solicits approval from shareholders about the appointment of auditors, shareholders must receive information about the following: 1) name of the auditor selected; 2) the most recent auditor if different from the new one; 3) auditor's attendance at the meeting and details about dismissed auditors.

To summarize, the existing regulation emphasizes the role of the audit committee with respect to its oversight of the auditor, but it does not require any disclosures about how the audit committee executes its responsibilities. In other words, the existing rules do not require disclosures describing the audit committee's process and reasons for selecting an independent auditor. These are the focus of the voluntary disclosures that I am examining in this paper.

2.2 SEC's conceptual release and related debates

There appears to be a market demand for audit committee information based on the fact that a significant number of companies voluntarily provide information beyond the current rules. In response, the SEC sent out a Conceptual Release in 2015 to seek input on whether and how additional reporting may be useful to investors. The commission categorized its interest in receiving comments into three groups: the audit committee's oversight of the auditor, the audit committee's process for selecting the auditor, and the

audit committee's consideration of the qualifications of the audit firm and certain members of the engagement team when selecting the audit firm (SEC Conceptual release No. 33-9862).

However, the response from interested parties is mixed. Some respondents believe in encouraging a voluntary, market-driven approach rather than mandating additional prescriptive disclosures (e.g., CAQ comment letter 2015)[6], whereas some are supportive of mandating firms to make audit committee disclosures in the aforementioned categories (as discussed in the conceptual release) and believe that rules should be principles-based (e.g., PwC's comment letter issued in 2015). Overall, while the SEC is considering requiring new disclosures, so far there have been no changes to audit committee disclosure requirements since the enactment of SOX in 2002.

3. Hypothesis development

There are two strands of literature that relate to my main hypothesis. First, the body of research on audit committees examines the role of audit committees in overseeing financial reporting. Early studies have documented evidence on the association between audit committee presence, audit committee effectiveness and incidence of financial misstatements (Beasley, 1996; Dechow et al. 1996, McMullen et al. 1996, Abbott et al. 2000). Research after the enactment of SOX shows that independence and expertise of audit committees are associated with fewer restatements, smaller discretionary abnormal accruals, fewer cases of internal control material weakness and timely resolution of such

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[6] Center for Audit Quality, SEC: Concept Release on Possible Revisions to Audit Committee Disclosures (Sep. 2015), available at: https://www.thecaq.org/sec-concept-release-possible-revisions-audit-committee-disclosures/.

weakness (Abbott et al., 2004, Klein, 2002, Xie et al., 2003, Krishnan, 2005, Goh, 2009). Further, audit committee financial expertise is shown to be associated with more conservatism, higher accruals quality, and positive price reactions (e.g. Defond et al., 2005; Krishnan, 2005; Krishnan and Visvanathan, 2008; Dhaliwal et al. 2010). The collective evidence suggests that effective audit committee oversight is essential for investor protection and the functioning of capital markets.

A second line of research relates to the transparency of audit committees. As discussed earlier, mandatory disclosure about audit committees is limited. As the SEC Chairman Jay Clayton states "…it is important to evaluate whether investors have the information they need to make informed decisions."[7] Based on the dramatic increase in supplemental disclosures, there seems to be an "expectation gap" about audit committee transparency between the company and its investors. Roundtable meetings (CAQ 2013) and comments to Conceptual release (SEC 2015) show a consistent demand from market participants for revised regulations to improve transparency. Opponents among board members, corporate management and auditors consider such a revision unnecessary and believe that voluntary rather than mandatory disclosures are more meaningful. Proponents including a majority of investors support mandatory disclosure. They believe that the current disclosure regime already allows voluntary disclosure and more required disclosure would improve comparability among companies (EY 2016)[8]. While there is no consensus on this issue, investors are seeking greater disclosure on audit committees. Many

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[7] "A Conversation with SEC Chairman Jay Clayton", Interview, September 28, 2017 at the Brookings Institution. The remarks can be found at: https://www.brookings.edu/events/perspectives-on-securities-regulation/.

[8] . Ernst & Young (EY) (September 2016). EY Center for Board Matters, Audit Committee Reporting to Shareholders in 2016, available at https://www.ey.com/Publication/vwLUAssets/ey-audit-committee-reporting-to-shareholders-in-2016/$FILE/ey-audit-committee-reporting-to-shareholders-in-2016.pdf.

companies seem to acknowledge such a need and respond positively by providing more information related to audit committee work.

However, empirical evidence on the effect of audit committee disclosures is limited. DeFond, Hann and Hu (2005) provide evidence that investors respond favorably to the information about audit committee's expertise. Carcello et al. (2000) examine the disclosures in audit committee charters and reports and find that voluntary disclosure of audit committee activities is more common for depository institutions, larger companies, NYSE-listed companies and companies with more independent audit committees. Rezaee et al. (2003) examine audit reports and audit committee charters of Fortune 100 companies and find that all companies follow the SEC requirements.

A recent working paper by Reid et al. (2018) examines the effect of the regulatory changes on auditor and audit committee reporting in the UK. The Financial Reporting Council's (FRC) new policies instruct audit committees to discuss significant issues considered by the committee, how they address these issues and how they evaluate the external auditor. The paper shows that the new reporting regime is associated with decreased earnings management and thus improved audit quality, proxied by significant decreases in absolute abnormal accruals and the propensity to just meet or beat analyst forecasts.

Given the role of audit committees in enhancing information quality and the expressed demand from various stakeholders for more audit committee information, the SEC release 34-42266 states, "…disclosures about companies' audit committee and its interaction with the company's auditors and management will promote investors' confidence in the integrity of the financial reporting process." Given that one of the

purposes for audit committee disclosures is to enhance investors' confidence in financial reporting, it is reasonable to predict that the supplemental disclosure about audit committee's activities will help investors better understand the audit committee's oversight role and thus increase their confidence in the companies' financial information.

On the other hand, there may be a concern that the supplemental audit committee disclosures may be simply boiler-plate or may not reflect the audit committee process accurately. However, the ex post verifiability of certain audit committee tasks makes it less likely that boards will approve disclosures of inaccurate information. Such disclosures will impose significant costs on companies as well as boards, particularly given the recent evidence of increased litigation against board members about their monitoring effectiveness and increased scrutiny of such information by the SEC communicated via comment letters. Overall, litigation threat and regulatory scrutiny will encourage effective audit committees to disclose credible supplemental disclosures of their activities. Since these disclosures are voluntary, ineffective audit committees will be less likely to disclose. Thus, I expect that stock market participants' perception of the quality of accounting information will be enhanced by the voluntary disclosure of the audit committee's work. This leads to the main hypothesis (stated in the alternative form):

Hypothesis 1: *The voluntary disclosure of audit committee's oversight role enhances investors' confidence in the firm's financial reporting.*

Lang and Lundholm (1996) reason that, if more analysts use private information in the forecasting process, belief dispersion among analysts will increase. Based on this argument, DeHaan et al. (2013) examine the setting of executive compensation clawback

provisions to test whether the adoption of clawbacks improves analysts' perception of the firm's financial reporting credibility as reflected in their forecast dispersion. Following the reasoning in DeHaan et al. (2013), if information about audit committee activities improves market participants' beliefs about the firm's financial reporting credibility, then I expect that analysts will make better use of this common information source in making their forecasts. As a result, I expect that analysts' forecast dispersion (DISP) will decrease following the initiation of voluntary disclosure about audit committee activities.

Hypothesis 2: *The voluntary disclosure of audit committee's oversight role enhances analysts' confidence in the firm's financial reporting.*

4. Research design

4.1 Variable measurement

4.1.1 Credibility of financial reporting

To measure investors' perception of the quality of accounting information, I test the effect of disclosure on the ERC. I reason that investors' response to an earnings surprise will depend on the perceived credibility of the earnings report. I assess investor credibility by measuring the 3-day announcement-period market response to annual earnings surprises. Investors are likely to respond more strongly to a given level of earnings surprise, if they have more confidence in the accuracy of the reported earnings.

In the theoretical literature, Holthausen and Verrecchia (1988) show that, under fairly general conditions, the price reaction to an earnings release is increasing in the signal-to-noise ratio of the earnings surprise. According to Kim and Verrecchia (1991), an increase in credibility is similar to an increase in the signal-to-noise ratio because it

captures investors' assessment of the accuracy of the earnings news. Relying on these arguments, there is widespread usage of ERCs as a proxy for investors' assessment of reporting credibility (e.g., Kothari 2001, Dechow et al. 2010, Wilson, 2008; Chen et al. 2014; Gipper et al. 2015; Reid et al. 2015; Stein et al. 2016; Ferri et al. 2017). I follow the prior empirical literature and interpret an increase in the ERC as evidence of an increase in the perceived credibility of reported earnings. I control for known determinants of the ERC such as risk, growth, earnings persistence and other factors (Wilson 2008).

To measure analysts' perception of the quality of accounting information, I test the effect of disclosure on DISP. Lang and Lundholm (1996) reason that reliance on individual analyst's private information in the forecasting process will result in greater belief dispersion among analysts; thus, more reliance on high quality common information in publicly available financial reports will result in lower dispersion among analysts. I assess analysts' perceived credibility by measuring analysts' forecast dispersion, measured as the standard deviation of analyst forecasts of annual earnings divided by end of year stock price. I expect that analyst forecast dispersion (DISP) will decrease once they have more public information about audit committee activities.

4.1.2 Voluntary disclosure of audit committee activities

To capture the voluntary disclosure about the audit committee's work, the first step is to identify the change in disclosure relative to the disclosure regulation regime. As discussed earlier, the current regulatory requirements of the audit committee's disclosure are documented in Item 407 of Regulation S-K and SOX 2002. The disclosure requirement has four parts, including certain statements about the audit committee's responsibilities, the characteristics and structure of the audit committee, contents regarding pre-approval of

services and audit fees, and contents regarding the proposal to ratify selection of independent auditors.

Based on the published trends in voluntary disclosure (CAQ reports 2014–2016), the SEC's conceptual release (2015), and the literature on the audit committee oversight process (Beasley et al. 2009), I categorize the voluntary disclosure into three dimensions of audit committee activities, namely, (i) annual review and evaluation of auditors, (ii) factors considered for the selection of auditors, including the tenure of the engagement partner, and (iii) the audit committee's involvement in the selection of the engagement partner.

I create lists of words that refer to these dimensions of disclosure. After reading numerous proxy statements, I compile three lists of keywords that most commonly appear in proxy statements for each dimension of audit committee activities as follows: (i) "Audit committee," "Annual," "Review," "Performance," "Responsibility," "Appoint," "Independent," "Auditor,"; (ii) "Audit committee," "consider," "Factors," "Capability," "Knowledge," "Expertise," "Quality," "Independence," "Appoint,"; (iii) "Audit committee," "Engagement partner," "Appoint," "Change," "Rotate". I also include common variations of these words as keywords, e.g., "independence" in place of "independent." For the keywords "Review", "Appoint" and "Auditor" in the list, I use multiple substitutes that have similar meaning. "Discuss" and "Assess" are used as substitutes for "Review," if "Review" is not found. "Engage," "Retain," and "Select" are used as substitutes for "Appoint," if "Appoint" is not found. "Accounting firm" is used as a substitute for "Auditor". I report the complete list of keywords for each dimension in Appendix 1.

I electronically process audit committees' textual disclosures in proxy statements included in the SEC's Edgar DEF 14 filings. For each firm-year, I use textual analysis technique to search the proxy statement for keywords listed under each dimension of audit committee activities as explained above. If the search reveals that all keywords (or their variations and substitutes) listed under a particular dimension are included in a block of ten consecutive sentences of the proxy statement, I classify the observation as disclosing that dimension. I exclude keywords if they appear in conjunction with the keyword "charter" because these disclosures are required by the audit committee's charter. I then assign a value of one to an indicator variable for the disclosure of dimension (i) if there is a sentence that is extracted as above, zero otherwise. I verify the accuracy of this procedure by physically reading through a set of randomly selected proxy statements, revealing an accuracy rate of above 80%. In Appendix 2, I provide a specific example of voluntary disclosure of audit committee activities included in the 2014 proxy statement of Lam Research Corp.

The primary measure of disclosure used in my analyses is an indicator variable (*Disclose1*) that equals one if any of the three dimensions is disclosed by the firm, and zero otherwise. To further explore the link between the contents of the disclosure and the ERC, I test the effect of each dimension of disclosure on the ERC separately. In addition to the disclosure/non-disclosure decision, I also construct a variable that scores the number of dimensions of audit committee activities disclosed by a firm on a scale of 1 to 3, to capture the magnitude of the disclosure.

4.2 Sample and descriptive statistics

The sample selection procedure is detailed in Table 1, Panel A. My initial sample includes all U.S. public companies with the required data available on Compustat, CRSP and I/B/E/S, from fiscal years 2003 to 2015. The audit committee disclosures in DEF 14A proxy statements are downloaded from EDGAR SEC filings. Board characteristics are obtained from Execucomp. Data about Audit committee financial expertise is hand collected. I exclude utilities (SIC code from 4000 to 4999), financial services (SIC code 6000 to 6999), and public administration (SIC code equal to or larger than 9000) industries because these industries are subject to different regulatory disclosure requirements. After applying these filters, the final sample of disclosers includes 8,976 firm-years representing 1,019 distinct firms.

Table 1, Panel B, presents the descriptive statistics of all main variables for the full sample. All continuous variables are winsorized at 1% and 99% of their distributions. Appendix 1 describes variable definitions. Panel B shows that 5.6% of firm-years disclose information about audit committee activities. The table also shows that 81.7% percent of firms are Big 4 clients. There might be a concern about the audit quality variation across Big 4 and non-Big 4 auditors. However, it is not obvious from theory or intuition that Big 4 firms should be superior to non-Big 4 firms in terms of audit quality. For example, Lawrence et al. (2011) find that the effect of Big 4 auditors on audit quality is insignificantly different from that of non-Big 4 firms after controlling for the characteristics of audit clients.

I use an entropy balancing technique to obtain a matched control sample of non-disclosing firms based on a model of the determinants of the disclosure decision. Entropy balancing is a quasi-matching approach that weights each observation such that post-

weighting distributional properties of treatment and control observations are virtually identical, thus ensuring covariate balance (Hainmueller 2012; Mcmullin and Schonberger 2015). The weights assigned to each control observation at the end of the iteration procedure are then used in the regression process. There are some advantages to using entropy balancing rather than the commonly-used propensity-matching approach. First, since different firms begin to disclose audit committee activities in different years and then stop disclosing at some point of time, the assumption of a "parallel trend" is most likely not satisfied. Second, entropy balancing mitigates sample attrition that may occur when using propensity-matching. However, to rule out the concern regarding the comparability of the treatment and control samples that may arise from entropy balancing, I also analyze the sample matched by propensity-matching as a robustness check.

I model the disclosure decision on the basis of several factors that capture information demand and corporate governance. In order to determine what factors affect firms' disclosure decision, I conduct an analysis of the determinants of the disclosure decision. I estimate a probit regression of *Disclose1* on potential variables that may influence firms' disclosure decision. I expect large firms and growth stocks to be more likely to disclose because of the greater information demand from market participants. I also expect more risky firms to disclose in order to inform equity and debtholders about the effectiveness of their corporate governance. In order to isolate the effect of audit committee disclosure on perceived versus actual improvement in accounting quality, I include a measure of accounting quality. I include institutional ownership as a factor since anecdotal evidence suggests that institutional investors demand more information on audit committee activities. I include Big4 because firms audited by big four accounting firms

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may be more likely to disclose since they arguably have higher accounting quality. Relatedly, I also expect that firms may change the level of disclosure when they change accounting firms. Thus, I include auditor change as a factor. I expect firms with larger board size as more likely to disclose since previous results show that board size has a positive effect on voluntary disclosure. I also include CEO age and CEO tenure as factors because research suggests a strong relationship between CEO characteristics and firms' disclosure behavior. As the results show in Table 2, size, institutional ownership, board size, auditor change, and loss significantly affect firms' disclosure decision. I then include all these variables plus other control variables that affect ERC in the entropy balancing procedure.

I analyze the distributional properties (mean and variance) for the disclosing sample and the control sample in Table 3. Panel A shows the distributional properties of disclosers and non-disclosers before the entropy balancing process. There are significant differences in the mean and variance of some of the characteristics before entropy balancing, such as Size, MTB, leverage and loss. After entropy balancing, as shown in Panel B, the differences of means and variances between disclosers and non-disclosers are trivial and insignificant. The weights assigned to each control observation at the end of the iteration process in entropy balancing are then used in the subsequent regression analysis.

4.3 Voluntary disclosure and perceived credibility of financial reporting

4.3.1 Research design

In this section, I discuss the empirical approach to examine the effect of voluntary disclosure of the audit committee's activities on the credibility of financial reporting. I use

two proxies for perceived credibility of financial reporting, ERC and analysts' forecast dispersion (DISP). I employ a difference-in-differences research design to evaluate the change in ERC and DISP in the post-disclosure period. I use the three years preceding the initial disclosure year as the pre-disclosure period and the years following the initial disclosure year as the post-disclosure period. The post-disclosure period does not include the year in which the firm discontinues disclosure and years thereafter. I compare the sample of disclosers with the entropy-balanced matched control sample of non-disclosers. To test the effect of audit committee disclosure on ERC, I estimate a regression of 3-day cumulative market-adjusted returns (CAR) on earnings surprise (relative to the prevailing analyst consensus) using the treatment sample of disclosers and the matched control sample of non-disclosers. The regression model is as follows:

$$CAR_{it} = \beta_0 + \beta_1 * UE_{it} * Disclose_{it} * Post_{it} + \beta_2 * UE_{it} + \beta_3 * UE_{it} * Disclose_{it} +$$

$$\beta_4 * UE_{it} * Post_{it} + \beta_5 * Disclose_{it} * Post_{it} + \beta_6 * Disclose_{it} +$$

$$\beta_7 * Post_{it} + \beta_m * Controls_{it} + FE + \mathcal{E}_{it} \qquad (1)$$

CAR_{it} is the 3-day cumulative market-adjusted stock return around the date of the annual earnings announcement. UE_{it} is the unexpected earnings, calculated as the difference between the I/B/E/S actual annual EPS and the most recent median consensus I/B/E/S forecast in a window beginning 95 days and ending three days prior to the earnings announcement, scaled by the price two days prior to the earnings announcement (Gipper et al. 2015). $Disclose_{it}$ is an indicator variable which equals one if a firm belongs to the sample of disclosers and zero if a firm belongs to the control sample. $Post_{it}$ is an indicator variable which equals one for year t, the disclosure initiation year, and the following years until the disclosure is discontinued. The same indicator variable, $Post_{it}$, is assigned to

control firms that are matched with a disclosing firm (i.e., pseudo-post years are assigned to control firms). The main variable of interest is β_1, the coefficient on $UE_{it} * Disclose_{it} * Post_{it}$, which captures the change in ERC for disclosing firms relative to non-disclosing firms, from the pre-disclosure to the post-disclosure period. If the audit committee disclosure improves the credibility of reported earnings, β_1 should be significantly positive.

Following the literature on ERC, I include several control variables and their interaction with UE (e.g., Wilson 2008, and Gipper et al. 2015). Consistent with prior research, ERC is expected to be positively associated with earnings persistence and negatively associated with risk (e.g., Easton and Zmijewski 1989, and Collins and Kothari 1989). Thus, I include earnings persistence (Persistence), firm size (Size), market beta (Beta), and leverage (Leverage) as control variables. I also include a loss indicator (Loss), following Hayn (1995) and Basu (1997), and the market-to-book ratio (MTB) following Easton and Zmijewski (1989). I include Big4 (Big4) as a control variable because Big 4 audit firms are arguably perceived as providing higher quality audits and enhanced assurance on financial statements relative to non-big 4 audit firms (e.g., Teoh and Wong 1993, and Lawrence et al. 2011). Relatedly, I expect that firms' perceived accounting quality may change when they change audit firms. Thus I include auditor change (Auditor change) as a control variable. I include financial expertise (Financial expertise) as a control variable because prior research suggests that audit committee financial expertise improves oversight of the financial reporting process and is negatively associated with indicators of poor financial reporting (e.g., Abbott et al. 2004, Dhaliwal et al. 2010, and Cohen et al. 2014). To isolate the effect of audit committee disclosures on the perceived versus actual improvement in accounting quality, I include a measure of accounting quality (AQ) as a

control variable. I include board size (Board size), CEO age and CEO tenure as proxies for board quality to control for their effect on the credibility of financial reporting. This is consistent with prior research that shows that board and CEO characteristics affect the financial accounting process and earnings quality (e.g., Klein 2002b, Anderson et al. 2003, and Ali and Zhang 2014). In addition, to show that the increase in ERC is due to the disclosure content about audit committee activities rather than the length of the proxy statement, I include the number of words in the proxy statement (Length) as a control variable. The regression is estimated with industry and year fixed effects and standard errors are clustered by year.[9]

To test the effect of audit committee disclosure on DISP, I estimate a regression of DISP on a set of control variables using the treatment sample of disclosers and the matched control sample of non-disclosers. For consistency, I use the same controls as in the ERC model. The regression model is as follows:

$$DISP_{it} = \beta_0 + \beta_1 * Disclose_{it} * Post_{it} + \beta_2 * Disclose_{it} + \beta_3 * Post_{it} +$$

$$\beta_m * Controls_{it} + FE + \mathcal{E}_{it} \qquad (2)$$

4.3.2 Results of the effect of voluntary disclosure on ERC

Table 4 reports the results of regression (1) with alternative measures of *Disclose*. In column (1), *Disclose* is an indicator variable that equals one if a firm discloses any of the three dimensions of audit committee activities mentioned in section 2, otherwise zero. In column (2), *Disclose* is an indicator variable that captures the most important oversight task of the audit committee and equals one if firms disclose information about the first dimension, i.e., whether the audit committee performs an annual review and evaluation of

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[9] The results are robust to the inclusion of firm and year fixed effects.

the auditor's work, otherwise zero. In column (3), *Disclose* is an indicator variable that equals one if firms disclose information about the second dimension, i.e., whether the audit committee considers multiple factors for auditor ratification process, otherwise zero. In column (4), *Disclose* is the number of dimensions that a firm discloses ranging from 1 to 3 and represents the magnitude of disclosure.

In column (1), β_1, the difference-in-differences coefficient on *UE*Disclose*Post,* is positive at 0.395 and significant at the 1% level. Consistent with my hypothesis, this result suggests that, relative to non-disclosers, the ERC of disclosers is significantly higher after the initiation of voluntary audit committee disclosure. To assess the economic magnitude of the coefficients, I follow Kothari (2001) and other studies about reporting credibility (e.g. Gipper et al. 2015) and calculate the change in a firm's cost of equity capital leading to an equivalent change in firm value as the change in the ERC. I use 10% as a benchmark cost of capital and assume that the earnings surprise is a shock to future cash flows that persists in perpetuity. Using this approach, the coefficient in column (1) is as large as a change in firm value due to a decline in the cost of capital by about 38 basis points.[10] As a comparison, Wilson (2008) and Chen et al. (2014) document a decline in ERC following restatements, which implies a 32-70 basis points change in firm value due to a change in the cost of capital. Thus, the magnitude of my estimates is meaningful and comparable with other studies about financial reporting credibility. As expected, the coefficient on *UE, β_2*, is positive and significant. In columns (2) and (3), β_1 is positive and significant at 0.386 and 0.375, respectively, suggesting that the ERC increases with the

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[10] I calculate the change in cost of capital as follows: Assuming a cost of capital of 10%, the benchmark ERC is 11 (1/.10+1) (e.g., Kothari, 2001). Thus, the 38-basis point decline in cost of capital is calculated as 0.1000 – 0.0962, where 0.0962 is the cost of capital implied by an increase in the ERC of 0.395 (1/r+1=11 + 0.395).

disclosure of the first dimension of audit committee activities (i.e., annual review and evaluation of the auditor's work) and with the disclosure of the second dimension of audit committee activities (i.e., factors considered in auditor selection). In column (4), β_1 is positive at 0.411 and significant at the 1% level, suggesting that the ERC increases with the number of dimensions of disclosure. In terms of the average economic magnitude, the coefficients in column (1) to column (4) are as large as a change in firm value due to a decline in the cost of capital by about 38 basis points.[11] Thus, Table 4 shows that the ERC increases significantly after the initiation of voluntary disclosure of audit committee activities and this increase is robust across all four measures of disclosure. In all columns, most control variables interacted with *UE* have the expected signs based on prior research. The coefficients on the interacted control variables indicate that size, persistence and beta are positively associated and loss is negatively associated with ERC. Collectively, these results suggest that the voluntary disclosure of audit committee activities improves the credibility of financial reporting and enhances investor confidence.

4.3.3   Cross-sectional analyses of the impact on ERC

In order to explore settings that are likely to be associated with higher investor credibility in response to audit committee disclosures, I conduct two sets of cross-sectional analyses. I predict that the effect of disclosure on financial reporting credibility will be more pronounced when a firm's information environment is weak in general. Since, investors have lower credibility in the financial reporting of firms with a weaker information environment, the greatest impact of additional disclosures will accrue to these

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[11] I also test the effect on ERC of the disclosure of the third dimension of audit committee activities (i.e., selection criteria for the engagement partner); however the results are insignificant, likely due to the small number of firms disclosing the third dimension of audit committee activities.

investors. I use two proxies to measure information environment -- analyst coverage and return volatility. A growing literature cites analyst coverage as an important indicator of the information environment (e.g., Harford et al. 2016). Thus, I expect to find that ERC of disclosers is incrementally greater for firms covered by fewer financial analysts. Volatile stock returns are an indicator of higher uncertainty in the information environment (Barry 1978, Brown 1979, and Billings et al. 2015). Thus, I expect an incrementally higher ERC for disclosers with higher return volatility.

Analyst coverage is measured by the number of analysts following a firm, specifically, the number of unique analysts who issue at least one forecast on I/B/E/S in the window beginning 360 days and ending 3 days prior to an earnings announcement. When no forecasts are observed, the count is set to zero. The variable $Coverage_{it}$ is an indicator variable that equals one if the firm has above-median analyst following in the disclosure year, and zero otherwise. The variable $Volatility_{it}$ is also an indicator variable which equals one if the firm has return volatility above the sample median in the disclosure year, and zero otherwise.

Table 5 presents the results of cross-sectional analysis based on return volatility and analyst following, using *Disclose1* as the variable of interest. Columns (1) to (3), report the regression results for the subsamples of below-median and above-median analyst following. β_1, the coefficient estimate on the interaction variable *UE*Disclose*Post*, is 0.568 for firms with low analyst following and 0.320 for firms with higher analyst following. Moreover, the difference in β_1 of the two subsamples is 0.248, significant at the 1% level, indicating that firms with fewer analysts experience an incrementally higher increase in ERC after the initiation of voluntary disclosure of audit committee activities. In

terms of the economic magnitude, the difference in the decline in cost of capital is 22 basis points. Columns (4) to (6), present the results for the subsamples of below-median and above-median return volatility. Again, β_1, the coefficient of interest, is 0.172 and 0.395 for firms with low return volatility and high volatility, respectively. Further, the difference in β_1 of the two subsamples is 0.223, and significant at the 1% level, suggesting that firms with high return volatility experience an incrementally higher increase in ERC after the initiation of voluntary disclosure.

To summarize, the ERC of disclosers is incrementally greater for firms with lower analyst following and more volatile stock returns, suggesting that firms with a weaker information environment experience a greater increase in ERC when they disclose information about their audit committee's oversight activities.

4.3.4 Results of the effect of voluntary disclosure on DISP

Table 6 reports the results of regression (1) with alternative measures of *Disclose* consistent with those reported in Table 4. In column (1), β_1, the difference-in-differences coefficient on *Disclose*Post,* is negative at -0.001 and significant at the 1% level. Consistent with my hypothesis, this result suggests that, relative to non-disclosers, analysts' dispersion of disclosers is significantly lower after the initiation of voluntary audit committee disclosure and the dispersion declines by 1%. In columns (2) and (3), β_1 is negative and significant at -0.001 and -0.003, respectively, suggesting that DISP decreases with the disclosure of the first dimension of audit committee activities (i.e., annual review and evaluation of the auditor's work) and with the disclosure of the second dimension of audit committee activities (i.e., factors considered in auditor selection). In columns (4), β_1 is negative at -0.003 and significant at the 1% level, suggesting that DISP decreases with

the number of dimensions of disclosure. Thus, Table 6 shows that DISP decreases significantly after the initiation of voluntary disclosure and this decrease is robust to all four measures of voluntary disclosure. In all columns, most control variables have the expected signs based on prior research. Collectively, these results suggest that the voluntary disclosure of audit committee activities enhances analysts' perceived credibility of financial reporting.

4.3.5 Cross-sectional analyses of the impact on DISP

Similar to the cross sectional analysis on the impact of disclosure on ERC, I test the impact of the information environment on the incremental change in DISP after the disclosure. I expect an incrementally lower DISP for disclosers with higher return volatility and low analyst coverage.

Table 7 presents the results of cross-sectional analysis based on return volatility and analyst following, using *Disclose1* as the variable of interest. Columns (1) to (3) report the regression results for the subsamples of below-median and above-median analyst following. β_1, the coefficient estimate on the interaction variable *Disclose*Post*, is -0.003 for firms with lower analyst following and -0.001 for firms with greater analyst following. Moreover, the difference in β_1 of the two subsamples is -0.002, significant at the 1% level, indicating that firms with fewer analysts experience an incrementally higher decrease in DISP after the initiation of voluntary disclosure of audit committee's activities. Columns (4) to (6) present the results for the subsamples of below-median and above-median return volatility. Again, β_1, the coefficient of interest, is -0.000 and -0.002 for firms with low return volatility and high return volatility, respectively. Further, the difference in β_1 of the two subsamples is -0.002, significant at the 1% level, suggesting that firms with high return

volatility experience an incrementally higher decrease in DISP after the initiation of voluntary disclosure.

To summarize, analysts' dispersion of disclosers is incrementally lower for firms with lower analyst following and more volatile stock returns, suggesting that firms with weaker information environment experience a higher decrease in dispersion when they disclose information about their audit committee's oversight activities.

4.4 Impact of accounting quality change on ERC and DISP

Based on the results thus far, I interpret the increase in post-disclosure ERC and decrease in post-disclosure DISP as the effect of audit committee disclosures enhancing the credibility of financial reporting as perceived by investors and analysts. It is also possible that when the firm decides to disclose audit committee activities, it simultaneously improves the audit committee's oversight role which in turn improves the actual quality of financial reporting, not just the investors' perception of quality. Thus, the observed increase in ERC and decrease in DISP after the disclosure could potentially be driven by an increase in earnings quality due to an improvement in audit committee monitoring. I examine whether the higher ERC (or lower DISP) in the post-disclosure period is due to an increase in investor credibility or an improvement in earnings quality. I construct two sets of tests. First I examine whether the actual earnings quality changed from the pre- to the post-disclosure period. I estimate the following regression:

$$AQ_{it} = \beta_0 + \beta_1 * Disclose_{it} * Post_{it} + \beta_2 * Disclose_{it} + \beta_3 * Post_{it}$$
$$+ \beta_m * Controls_{it} + FE + \mathcal{E}_{it} \qquad (3)$$

I use two measures of accounting quality, AQ_{it}, (i) performance-matched

discretionary accruals used by Kothari et al. (2005), and (ii) accruals quality measured as a combination of the residual from the accruals model in Dechow and Dichev (2002) and abnormal accruals from the modified Jones model (McNichols 2002). The details of these measures are provided in Appendix 1. The independent variable of interest in regression (3) is *Disclose*Post*, using *Disclose1* as the disclosure variable. If the change in ERC and DISP are not due to a change in accounting quality, then β_1 should be insignificant. Table 8, Panel A, column (1), reports results of change in AQ around the initial disclosure using performance-matched discretionary accruals by Kothari et al. (2005) and column (2) reports results of change in accrual quality using the measure in McNichols (2002). The results show that the coefficients on the interaction term *Disclose*Post* are not significant in both columns, which suggests that there is no significant change in accounting quality in the post disclosure period for disclosing firms relative to non-disclosing firms.[12]

In addition to the test in equation (3), I also estimate regressions (1) and (2) using sub-samples based on change in accounting quality. First, I calculate the change in accounting quality around the initiation of disclosure (from year -1 to +1). Second, I rank the change in accounting quality - Kothari et al. (2005) and change in accounting quality - McNichols (2002) and classify firms into two groups – high versus low change in accounting quality. I then run regressions (1) and (2) separately for these groups and test for the difference in β_1 between the two groups. If accounting quality change is not the

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[12] I also examine the robustness of my results with respect to alternative measures of accounting quality. I examine the change in accounting quality based on abnormal accruals from the modified Jones model (Dechow, Sloan and Sweeney 1995) and growth-adjusted discretionary accruals (Collins, Pungaliya and Vijh 2017). The coefficients of the interaction term *Disclose*Post* using these alternative measures of accounting quality are insignificant, consistent with the results in Panel A of Table 8.

driver of the ERC change and DISP change, I expect to find an insignificant difference between the two β_1s.

Table 8, Panel B, presents the ERC results for the subsamples of change in the two accounting quality measures (ΔAQ). Columns (1) and (4) report results for the sample with below-median ΔAQ and columns (2) and (5) report results for the sample with above-median ΔAQ. In both columns, the coefficient estimates on *UE*Disclose*Post*, β_1, are positive and significant. Column (3) presents results of the test of difference in coefficients reported in columns (1) and (2), and column (6) presents results of the test of difference in coefficients reported in columns (4) and (5). From the *t*-value results reported columns (3) and (6), the difference in β_1 between columns (1) and (2) and that between columns (4) and (5) are insignificant, suggesting that change in accounting quality does not impact the increase in ERC. Thus, the incremental increase in ERC in the post disclosure period is more likely due to enhanced credibility rather than an improvement in accounting quality. Combining this with the results in Table 4, I conclude that the voluntary disclosure of audit committee oversight activities improves investors' confidence in financial reporting and thus enhances the credibility of accounting information.

Table 8, Panel C, presents the DISP results for the subsamples of change in the two accounting quality measures (ΔAQ). Columns (1) and (4) report results for the sample with below-median ΔAQ and columns (2) and (5) report results for the sample with above-median ΔAQ. In both columns, the coefficient estimates on *Disclose*Post*, β_1, are negative and significant. Similar to Panel B, from the *t*-value results reported columns (3) and (6), the difference in β_1 between columns (1) and (2) is insignificant and the difference in β_1 between columns (4) and (5) is insignificant, suggesting that change in accounting quality

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does not impact the decrease in DISP. Thus, the incremental decrease in DISP in the post disclosure period is more likely due to enhanced credibility rather than an improvement in accounting quality. Combining this with the results in Table 6, I conclude that the voluntary disclosure of audit committee oversight activities provides more information to analysts and enhances their perceived credibility of financial reporting.

4.5   Impact of discontinuance of voluntary disclosure on ERC

The results thus far show that ERC is higher after the initiation of voluntary disclosure about audit committee activities. In this section, I examine whether ERC decreases when a firm discontinues voluntary disclosure. I consider a firm to have discontinued disclosure when there is no disclosure about any of the three dimensions of audit committee activities. Using a sample that includes three years prior to the discontinuance of disclosure (pre-period) and all years thereafter (*POST*), I estimate the following regression:

$$
\begin{aligned}
CAR_{it} = \beta_0 &+ \beta_1 * UE_{it} * Discontinue_{it} * Post_{it} + \beta_2 * UE_{it} \\
&+ \beta_3 * UE_{it} * Discontinue_{it} + \beta_4 * UE_{it} * Post_{it} \\
&+ \beta_5 * Discontinue_{it} * Post_{it} + \beta_6 * Discontinue_{it} + \beta_7 * Post_{it} \\
&+ \beta_m * Controls_{it} + UE_{it} * Controls_{it} + FE + \mathcal{E}_{it} \quad\quad (4)
\end{aligned}
$$

The variable *Discontinue* is an indicator variable that equals one for the treatment sample of disclosers and zero for non-disclosers. Consistent with my expectation, Table 9, column (1), shows that the coefficient estimate on the interaction variable *UE*Discontinue*Post* is -0.285 significant at the 10% level. Thus, the ERC incrementally decreases after the firm discontinues voluntary disclosure about audit committee activities. This result adds

corroborating support for the effect of voluntary disclosure of audit committee activities on the ERC.[13]

Similar to the analysis in section 4.3.3, I also conduct a cross-sectional analysis on the change in ERC after the discontinuance of voluntary disclosure by examining subsamples based on return volatility. Table 9, columns (2) to (4), report the regression results for the subsamples of above-median and below-median return volatility. β_1, the coefficient estimate on the interaction variable *UE*Discontinue*Post*, is -0.353 for firms with high return volatility, which is significant at the 5% level, and -0.240 for firms with low return volatility. Moreover, the difference in β_1 of the two subsamples is 0.113, significant at the 5% level, indicating that firms with high return volatility experience an incrementally higher decrease in ERC after the discontinuance of voluntary disclosure of audit committee's activities. [14] Thus, firms with a weaker information environment experience a greater decrease in ERC when they discontinue disclosure about their audit committee's oversight activities.

Similar to the analysis in section 4.4, I examine whether the decrease in ERC is due to a decrease in accounting quality due to the discontinuance of voluntary disclosure. To examine whether accounting quality decreases after the discontinuance of the voluntary disclosure, I estimate the following regression:

$$AQ_{it} = \beta_0 + \beta_1 * Discontinue_{it} * Post_{it} + \beta_2 * Discontinue_{it} + \beta_3 * Post_{it}$$
$$+ \beta_m * Controls_{it} + FE + \mathcal{E}_{it} \qquad (5)$$

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[13] I also examine the impact of discontinuance of voluntary disclosure on analysts' forecast dispersion (DISP). However, in the regression of DISP on $Discontinue_{it} * Post_{it}$ and other variables, the coefficient, β_1, on $Discontinue_{it} * Post_{it}$ is positive as expected but insignificant (t value=1.17).
[14] I obtain similar (albeit weaker) results when the subsamples are based on analyst following as a proxy for the information environment (untabulated). The difference in β_1 of the subsamples of low versus high analyst following is 0.135 (p-value=0.128).

Table 10, Panel A, reports results using performance-matched discretionary accruals measure by Kothari et al. (2005) in column (1) and accrual quality by McNichols (2002) in column (2). The coefficient estimates on the interaction variable *Discontinue*Post* are insignificant in both columns, suggesting that there is no significant change in accounting quality around the time of discontinuance of disclosure.

To examine whether the decrease in ERC post discontinuance of disclosure is driven by a decrease in accounting quality and not simply a decrease in credibility, I estimate regression (4) for subsamples based on change in accounting quality (ΔAQ). Table 10, Panel B, column (1) reports results for the sample with below-median ΔAQ and column (2) reports results for the sample with above-median ΔAQ. In both columns, β_1, the coefficient estimate on *UE*Discontinue*Post*, is negative and significant. From the *t*-value results reported in column (3), the difference in β_1 between columns (1) and (2) is insignificant (t=-0.76), suggesting that the change in accounting quality does not impact the decrease in ERC. Thus, the decrease in ERC in the post discontinuance period is more likely due to decreased credibility rather than a decrease in accounting quality. Combined with the results in Table 9, my results suggest that the discontinuance of voluntary disclosure of audit committee oversight activities decreases investors' confidence in the firm's financial reporting and reduces the credibility of their accounting information.

4.6   Sensitivity analyses

4.6.1 Results from propensity score-matching method

First, in addition to using entropy-balancing techniques to obtain a control sample of non-disclosers matched on observable characteristics, I conduct the same analysis on

disclosers and non-disclosers matched using the propensity score-matching process (PSM). The matched sample is obtained using PSM over a panel of pre-disclosure firm-years. I perform PSM without replacement and allow for up to three matches per discloser. From Table 11, column *Diff* shows that, for most variables, there is no significant difference between the treatment and control samples before the disclosure initiation year.

I estimate regressions (1) and (2) on the sample based on PSM. Table 12 shows the results of the impact of voluntary disclosure on ERC and DISP. Table 12, Panel A, shows that, β_1, the difference-in-differences coefficient on *UE*Disclose*Post,* is positive and significant at the 1% level in all columns. Consistent with my hypothesis, this result suggests that, relative to non-disclosers, the ERC of disclosers is significantly higher after the initiation of voluntary audit committee disclosure. As expected, the coefficient on *UE,* β_2, are all positive and significant. These results are consistent with the results from entropy balancing, and suggest that the ERC increases with the disclosure of audit committee activities.

Table 12, Panel B, shows that, β_1, the difference-in-differences coefficient on *Disclose*Post,* is negative and significant in all columns. Consistent with my hypothesis and the results from entropy-balancing (reported in Table 6), this result suggests that analysts' dispersion decreases with the disclosure of audit committee activities.

4.6.2 Other robustness tests

While my main analyses includes change in auditors as an independent variable to control for its impact on ERC and DISP, I conduct an alternative test by excluding observations in auditor change years from the sample. I drop 140 firm-years that experienced an auditor change. Un-tabulated results show that the coefficient on

UE*Disclose*Post continues to remain positive and significant (at the 1% level) in tests of the impact of voluntary disclosure on ERC, and the coefficient on *Disclose*Post* continues to remain negative and significant (at the 1% level) in tests of the impact of voluntary disclosure on DISP.

5. Conclusion

In recent years, various stakeholders have expressed concern about the lack of transparency in how audit committees execute their responsibilities. To enhance investor confidence in financial reporting, companies have started voluntarily providing additional task-oriented information about the audit committee oversight process, beyond the limited regulatory requirement. Using textual analysis technique to capture disclosure strength, I test whether these narrative disclosures improve investors' perceived credibility in firms' reported earnings, captured by the earnings response coefficient (ERC). I test whether these narrative disclosures improve analysts' perceived credibility in firms' reported earnings, captured by the analyst forecast dispersion (DISP). I predict that voluntary disclosure of audit committee oversight activities will increase ERC and decrease DISP.

I find that, relative to a matched control sample of non-disclosing firms, the ERC of the sample of disclosers is significantly higher after the voluntary disclosure of audit committee activities and this effect increases with the number of dimensions of audit committee tasks disclosed. Further, cross-sectional analysis shows that the increase in ERC after the disclosure is incrementally greater for firms with a weaker information environment, captured by financial analysts' coverage and return volatility in the disclosure year. I also find that, relative to a matched control sample of non-disclosing firms, the DISP

of the sample of disclosers is significantly lower after the voluntary disclosure of audit committee activities and this effect increases with the number of dimensions of audit committee tasks disclosed, and is incrementally greater for firms with a weaker information environment, captured by analysts' coverage and return volatility in the disclosure year.

This paper sheds light on the effect of transparent disclosures about the audit committee on market participants' perception about financial reporting. It provides timely evidence that could be of interest to the SEC in view of its expressed intent to revisit the mandating of audit committee disclosures.

Table 1   Sample selection and descriptive statistics

Panel A: Sample selection procedure

Sample selection procedure	Time range	N
Firm-year observations with Compustat data	1992-2016	242,562
Exclude observations with SIC codes 4000-4999, 6000-6999, ≥9000	1992-2016	184,381
Exclude missing values of key fundamentals	1992-2016	153,960
Missing earnings persistence measure (requires 10 years of data to calculate)	2002-2016	60,112
Missing earnings surprise, dispersion, volatility calculated by using data from I/B/E/S and CRSP	2003-2016	27,251
Missing audit committee disclosure data from SEC's Edgar DEF 14 filings	2003-2015	21,323
Missing data for accounting quality calculation and institutional ownership from Thomson Reuters	2003-2015	15,860
Missing audit committee financial expertise and board variables restricted to Execucomp firms	2003-2015	10,270
Final sample:	2003-2015	
Sample of disclosers and matched control sample of non-disclosers		8,976

Panel B: Descriptive statistics

Variable	N	Mean	Std. Dev	P25	Median	P75
CAR	8,976	0.007	0.090	-0.040	0.006	0.056
UE	8,976	-0.002	0.032	-0.001	0.001	0.003
DISP	8,976	0.011	0.055	0.001	0.003	0.008
Disclose	8,976	0.037	0.190	0.000	0.000	0.000
Size	8,976	6.915	1.512	5.845	6.829	7.884
Market-to-Book	8,976	3.515	6.012	1.404	2.185	3.578
Loss	8,976	0.205	0.404	0.000	0.000	0.000
Leverage	8,976	0.646	2.035	0.000	0.237	0.675
Beta	8,976	1.243	0.416	0.973	1.227	1.502
Persistence	8,976	0.357	0.405	0.079	0.356	0.615
Big4	8,976	0.817	0.385	1.000	1.000	1.000
Auditor change	8,976	0.127	0.333	0.000	0.000	0.000
Nonlinear	8,976	-0.001	0.100	0.000	0.000	0.000
Institutional ownership	8,976	0.786	0.241	0.667	0.845	0.951
Financial expertise	8,976	0.598	0.293	0.333	0.600	1.000
Board size	8,976	8.641	2.780	7.000	8.000	10.000
CEO age	8,976	55.819	6.959	47.000	56.000	60.000
CEO Tenure	8,976	4.953	8.201	1.000	3.000	9.000
Length	8,976	9.965	0.632	9.548	10.017	10.377
AQ	8,976	0.065	0.154	0.015	0.036	0.072

Table 1 presents summary statistics for the variables used in the main analyses. The sample covers the period 2003-2015. The descriptive statistics relate to disclosing and non-disclosing matched control firms over the sample period beginning three years before the disclosing firm's initial disclosure until the discontinuance of disclosure or the end of 2015 whichever is earlier. Variables are defined in Appendix 1.

Table 2 Determinants of voluntary disclosure

Dependent variable: Disclose

	Probit	Linear
	(1)	(2)
Size	0.309***	0.180***
	(<0.0001)	(<0.0001)
MTB	-0.004	-0.000
	(0.818)	(0.813)
Loss	-0.019	-0.046**
	(0.11)	(0.038)
Leverage	0.001	0.000
	(0.824)	(0.658)
Beta	-0.050	-0.016
	(0.625)	(0.387)
Persistence	0.069	0.019
	(0.425)	(0.311)
Big4	0.018	0.019
	(0.955)	(0.276)
Auditor change	0.497**	0.050**
	(0.024)	(0.024)
Institutional ownership	0.698***	0.216**
	(0.001)	(0.023)
Financial expertise	0.016	0.009
	(0.290)	(0.301)
Board size	0.106***	0.025***
	(0.000)	(<0.0001)
CEO age	-0.016**	-0.002*
	(0.014)	(0.099)
CEO tenure	-0.013**	-0.001
	(0.039)	(0.1185)
AQ	0.098	0.202
	(0.214)	(0.118)
N	8,976	8,976
Industry Fixed Effects	-	Yes

| Year Fixed Effects | - | Yes |
| (Pseudo)R-Squared | 0.150 | 0.171 |

Table 2 presents the results of the determinants of the disclosure decision based on firm fundamentals. Disclose is an indicator variable that equals one if a firm has voluntarily disclosed any of the three dimensions of audit committee disclosures. Column (1) shows the coefficients and p-values from a probit regression, column (2) shows the coefficients and p-values from a linear regression including industry and year fixed effects. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix 1.

Table 3   Pre and post-entropy balancing sample distributions

Panel A: Original sample

	Mean			Variance		
	Dis closing	Non-disclosing	Diff	Dis closing	Non-disclosing	Diff
Size	7.833	6.84	0.993***	3.715	2.101	1.614***
MTB	3.083	3.28	-0.197**	5.623	5.101	0.522**
Loss	0.153	0.209	-0.055**	0.13	0.165	-0.035*
Leverage	0.608	0.613	-0.005**	0.54	1.600	-1.060**
Beta	1.18	1.247	-0.067	0.188	0.172	0.016
Persistence	0.389	0.355	0.034	0.168	0.164	0.004
Big4	0.93	0.813	0.118**	0.065	0.152	-0.087*
Auditor change	0.104	0.128	-0.025	0.093	0.112	-0.019
Institutional ownershp	0.775	0.786	-0.011**	0.046	0.059	-0.013*
Financial expertise	0.579	0.579	0.000	0.086	0.086	0.000
Board size	9.1	7.425	1.675**	5.792	4.136	1.655**
CEO age	50.377	52.082	-1.706**	5.148	5.427	-0.279*
CEO tenure	3.494	5.404	-1.910**	6.698	7.567	-0.869*
Length	9.974	9.963	0.011	0.429	0.395	0.034
AQ	0.043	0.066	-0.023**	0.0032	0.025	-0.022**
N	510	8,466				

Panel B: Post entropy balancing

	Mean			Variance		
	Disclosing	Non-disclosing	Diff	Disclosing	Non-disclosing	Diff
Size	7.833	7.831	0.002	3.715	3.712	0.003
MTB	3.083	3.083	0.000	5.623	5.604	0.019
Loss	0.153	0.153	0.000	0.13	0.13	0.000
Leverage	0.608	0.608	0.000	0.54	0.538	0.002
Beta	1.18	1.18	0.000	0.188	0.188	0.000
Persistence	0.389	0.389	0.000	0.168	0.168	0.000
Big4	0.93	0.929	0.001	0.065	0.065	0.000
Auditor change	0.104	0.104	0.000	0.093	0.093	0.000
Institutional ownership	0.775	0.774	0.001	0.046	0.044	0.002
Financial expertise	0.579	0.579	0.000	0.086	0.086	0.000
Board size	9.100	9.100	0.000	5.792	5.792	0.000
CEO age	50.377	50.375	0.002	5.148	5.148	0.000
CEO tenure	3.494	3.494	0.000	6.698	6.698	0.000
Length	9.974	9.974	0.000	0.429	0.429	0.000
AQ	0.043	0.043	0.000	0.0032	0.0032	0.000
N	510	8,466				

Table 3 presents distributional properties (mean and variance) for the disclosing and non-disclosing firms for the original sample (Panel A) and the entropy balanced sample (Panel B). Differences between the means and variances are presented in the columns labeled "Diff". ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively. Significance levels are calculated using a t-test for the difference in means and F-test for the difference in variances.

Table 4　Impact of voluntary disclosure on ERC

Dependent variable: CAR

	Disclose 1	Disclose 2	Disclose 3	Disclose 4
	(1)	(2)	(3)	(4)
UE*Disclose*Post	0.395***	0.386***	0.375***	0.411***
	(2.78)	（2.89）	（2.64）	（3.06）
UE	0.210***	0.209***	0.226***	0.347***
	(3.04)	（3.20）	（3.05）	（3.10）
UE*Disclose	0.120	0.117	0.098	0.059
	(1.20)	（1.18）	（1.01）	（1.35）
UE*Post	0.194	0.202	0.197	0.148
	(0.49)	（0.55）	（0.61）	（0.51）
UE*Size	0.169**	0.233**	0.233**	0.237**
	(2.01)	（1.97）	（2.07）	（1.97）
UE*MTB	0.050**	0.051**	0.055**	0.053**
	(2.23)	（1.97）	（2.57）	（2.24）
UE*Loss	-0.817**	-0.743*	-0.837*	-0.746*
	(-1.96)	（-1.72）	（-1.67）	（-1.71）
UE*Leverage	-0.023	-0.020	-0.021	-0.019
	(-1.05)	（-1.04）	（-1.20）	（-1.04）
UE*Beta	0.718***	0.669**	0.589	0.683*
	(3.22)	（1.89）	（1.35）	（1.91）
UE*Persistence	0.542*	0.577*	0.461*	0.567*
	(1.90)	（1.80）	（1.69）	（1.82）
UE*Big4	0.541	0.493	0.477	0.428
	(1.24)	（1.20）	（1.04）	（0.99）
UE*Auditor change	0.226	0.243	0.266	0.249
	(0.74)	(0.77)	(0.82)	(0.79)
UE* Institutional ownership	0.419	0.365	0.197	0.344
	(1.27)	（1.35）	（1.02）	（0.73）
UE*Financial expertise	0.013	0.010	0.015	0.010
	(0.77)	(0.82)	(0.90)	(1.01)
UE*Board size	-0.084	-0.071	-0.066	-0.072
	(-1.44)	(-1.04)	(-0.96)	(-1.11)
UE*CEO age	-0.005	-0.007	-0.008	-0.008
	(-0.21)	(-0.28)	(-0.42)	(-0.33)

UE*CEO tenure	-0.025	-0.023	-0.022	-0.023
	(-1.39)	(-1.25)	(-1.21)	(-1.24)
UE*Length	0.444**	0.436**	0.405*	0.432**
	(2.29)	(2.03)	(1.74)	(2.06)
UE*AQ	0.465	0.352	0.431	0.409
	(0.98)	（0.82）	（0.69）	（0.69）
Nonlinear (=UE*|UE|)	0.143**	0.156**	0.143**	0.143**
	(2.16)	（2.10）	（2.19）	（1.98）
Size	0.000	0.001	0.001	0.001
	(0.97)	（0.99）	（0.72）	（0.25）
MTB	0.000	0.001	0.000	0.000
	(1.22)	(1.21)	(1.19)	(1.22)
Loss	-0.013*	-0.014**	-0.015**	-0.014**
	(-1.91)	(-2.09)	(-2.07)	(-2.07)
Leverage	-0.000	-0.000	-0.000	-0.000
	(-1.44)	(-1.57)	(-0.69)	(-0.66)
Beta	0.003	0.003	0.003	0.003
	(0.62)	(0.64)	(0.50)	(0.66)
Persistence	0.007*	0.008*	0.008*	0.008*
	(1.73)	(1.75)	(1.79)	(1.72)
Big4	0.006	0.006	0.007	0.006
	(0.87)	(0.87)	(0.99)	(0.86)
Auditor change	0.006	0.006	0.004	0.005
	(0.11)	(0.09)	(0.08)	(0.09)
Institutional ownership	0.030**	0.026**	0.023*	0.020*
	(2.03)	(2.31)	(1.90)	(2.02)
Financial expertise	0.380	0.391	0.375	0.382
	(1.01)	(0.99)	(0.94)	(1.10)
Board size	0.001	0.001	0.001	0.001
	(1.15)	(1.04)	(1.06)	(1.09)
CEO age	-0.006*	-0.004*	-0.001*	-0.001*
	(-1.85)	(-1.66)	(-1.73)	(-1.70)
CEO tenure	-0.002	-0.000	-0.000	-0.000
	(-0.52)	(-0.565)	(-0.61)	(-0.55)
Length	0.003	0.003	0.003	0.003
	(1.01)	(0.94)	(0.81)	(0.93)
AQ	0.089**	0.093**	0.091**	0.092**
	(2.34)	(2.45)	(2.38)	(2.40)
Treatment indicators	Yes	Yes	Yes	Yes
N	8,976	7,920	5,840	8,976
Industry Fixed Effects	Yes	Yes	Yes	Yes

Year Fixed Effects	Yes	Yes	Yes	Yes
Adj. R-Squared	0.091	0.087	0.089	0.087

Table 4 presents the results from the estimation of regression (1). I regress 3-day cumulative abnormal returns around the annual earnings announcement (CAR) on unexpected earnings (UE), treatment indicators (Disclose, Post, Disclose*Post), control variables (firm characteristics), the interactions between UE and control variables, nonlinear, year fixed effects and industry fixed effects. The variable *Disclose* has different definitions in three columns. In column (1), *Disclose* is an indicator variable that equals one if a firm discloses any of the three dimensions of disclosure mentioned in Section 2, zero otherwise. In column (2), *Disclose* is an indicator variable which equals one if a firm discloses the first dimension of audit committee activities (i.e., annual review and evaluation of auditor's work), zero otherwise. In column (3), *Disclose* is an indicator variable that equals one if a firm discloses the second dimension of audit committee activities (i.e., criteria for auditor selection), zero otherwise. In Column (4), *Disclose* is the number of dimensions that a firm discloses and represents the magnitude of disclosure. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 5   Cross-sectional analysis of the impact of voluntary disclosure on ERC

Dependent variable: CAR	Analyst following			Return Volatility		
	Low	High	Diff	Low	High	Diff
	(1)	(2)	(3)	(4)	(5)	(6)
UE*Disclose*Post	0.568***	0.320**	-0.248***	0.172**	0.395***	0.223***
	(2.68)	（2.89）	(-3.21)	(2.75)	(4.36)	(3.18)
UE	0.239***	0.198***	-0.041***	0.189**	0.302**	0.053*
	(3.11)	（2.89）	(-2.96)	(1.99)	(2.51)	(1.90)
UE*Disclose	0.145	0.122	-0.023	0.353	0.630	0.125
	(1.25)	（1.16）	(-0.07)	(0.04)	(0.55)	(0.85)
UE*Post	0.203	0.186	-0.017	0.469	0.753	0.134
	(0.64)	（0.50）	(-0.81)	(1.44)	(0.92)	(1.09)
UE*Firm Characteristics	Yes	Yes	-	Yes	Yes	-
Firm Characteristics	Yes	Yes	-	Yes	Yes	-
Treatment indicators	Yes	Yes	-	Yes	Yes	-
N	4,488	4,488	-	4,488	4,488	-
Industry Fixed Effects	Yes	Yes	-	Yes	Yes	-
Year Fixed Effects	Yes	Yes	-	Yes	Yes	-
Adj R-Squared	0.143	0.120	-	0.090	0.118	-

Table 5 presents the results of the cross sectional analysis of effect of disclosure on ERC based on the information environment. Columns (1)-(3) show the effect of the level of analyst coverage, while columns (4)-(6) show the effect of return volatility. The columns titled "Low" represent the sample with analyst following or return volatility below the median, while the columns titled "High" represent the sample with analyst following or return volatility above the median. The column titled "Diff" tests the difference in coefficients between the two subsamples of analyst following or return volatility. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 6 Impact of voluntary disclosure on DISP

Dependent variable: DISP				
	Disclose 1	Disclose 2	Disclose 3	Disclose 4
	(1)	(2)	(3)	(4)
Disclose*Post	**-0.001****	**-0.001****	**-0.003***	**-0.003****
	(-2.50)	**(-2.50)**	**(-1.93)**	**(-2.27)**
Disclose	-0.000*	-0.000*	-0.002**	-0.004***
	(-1.66)	(-1.67)	(-2.41)	(-2.62)
Post	0.003	0.003	0.002	0.002
	(0.29)	(0.29)	(1.28)	(1.22)
Size	-0.003***	-0.003***	-0.003***	-0.003***
	(-3.58)	(-3.57)	(-3.84)	(-3.55)
MTB	-0.001***	-0.001***	-0.000***	-0.001***
	(-2.92)	(-2.89)	(-3.01)	(-2.88)
Loss	0.020***	0.020***	0.020***	0.019***
	(6.67)	(6.65)	(7.30)	(7.00)
Leverage	0.000***	0.000***	0.000***	0.000***
	(3.03)	(3.02)	(3.12)	(3.03)
Beta	-0.001	-0.001	-0.003	-0.000
	(-0.99)	(-0.97)	(-0.83)	(-0.99)
Persistence	-0.045**	-0.045**	-0.045**	-0.046**
	(-2.05)	(-2.05)	(-2.05)	(-2.06)
Big4	-0.005***	-0.005***	-0.005***	-0.005***
	(-2.59)	(-2.59)	(-2.68)	(-2.59)
Auditor change	0.005	0.005	0.005	0.005
	(1.61)	(1.60)	(1.61)	(1.62)
Institutional ownership	-0.001**	-0.001**	-0.001**	-0.001**
	(-2.26)	(-2.54)	(-2.45)	(-2.53)
Financial expertise	-0.020*	-0.020*	-0.020*	-0.018*
	(-1.68)	(-1.68)	(-1.67)	(-1.54)
Board size	0.000***	0.000***	0.000***	0.000***
	(2.62)	(2.49)	(2.64)	(2.67)
CEO age	0.000	0.000	0.000	0.000
	(0.44)	(0.43)	(0.42)	(0.43)
CEO tenure	-0.002*	-0.002*	-0.001*	-0.001*
	(-3.50)	(-3.54)	(-3.58)	(-3.51)
Length	0.000	0.000	0.000	0.000
	(0.79)	(0.81)	(0.73)	(0.81)

AQ	-0.051**	-0.050**	-0.050**	-0.051**
	(-2.35)	(-2.33)	(-2.33)	(-2.34)
N	8,976	7,920	5,840	8,976
Industry Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Adj. R-Squared	0.129	0.129	0.127	0.126

Table 6 presents the results from the estimation of regression (2). I regress analyst forecast dispersion (DISP) on treatment indicators (Disclose, Post, Disclose*Post), control variables (firm characteristics), year fixed effects and industry fixed effects. The variable *Disclose* has different definitions in three columns. In column (1), *Disclose* is an indicator variable that equals one if a firm discloses any of the three dimensions of disclosure mentioned in Section 2, zero otherwise. In column (2), *Disclose* is an indicator variable which equals one if a firm discloses the first dimension of audit committee activities (i.e., annual review and evaluation of auditor's work), zero otherwise. In column (3), *Disclose* is an indicator variable that equals one if a firm discloses the second dimension of audit committee activities (i.e., criteria for auditor selection), zero otherwise. In Column (4), *Disclose* is the number of dimensions that a firm discloses and represents the magnitude of disclosure. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 7   Cross-sectional analysis of the impact of voluntary disclosure on DISP

Dependent variable: DISP						
	Analyst coverage			Return Volatility		
	Low	High	Diff	Low	High	Diff
	(1)	(2)	(3)	(4)	(5)	(6)
Disclose*Post	-0.003**	-0.001**	-0.002**	-0.000**	-0.002***	-0.002**
	(-2.49)	(-2.35)	(-2.88)	(-2.45)	(-3.01)	(-3.44)
Disclose	-0.000*	-0.000	-0.000*	-0.001	-0.001	0.000
	(-1.66)	(-1.41)	(-1.87)	(-0.65)	(-0.53)	(0.48)
Post	0.002	0.003	-0.001	0.001	0.004	0.003
	(0.29)	(0.13)	(-1.20)	(1.52)	(0.65)	(1.01)
Firm Characteristics	Yes	Yes	-	Yes	Yes	-
N	4,488	4,488	-	4,487	4,489	-
Industry Fixed Effects	Yes	Yes	-	Yes	Yes	-
Year Fixed Effects	Yes	Yes	-	Yes	Yes	-
Adj R-Squared	0.207	0.088	-	0.013	0.207	-

Table 7 presents results of the cross sectional analysis of effect of disclosure on DISP based on the information environment. Columns (1)-(3) show the effect of the level of analyst coverage, while columns (4)-(6) show the effect of return volatility. The columns titled "Low" represent the sample with analyst following or return volatility below the median, while the columns titled "High" represent the sample with analyst following or return volatility above the median. The column titled "Diff" tests the difference in coefficients between the two subsamples of analyst following or return volatility. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 8   Impact of accounting quality (AQ) change on ERC and DISP

Panel A: AQ change around the initiation of voluntary disclosure

Dependent variable: AQ

	Performance matched (Kothari et al. 2005)	McNichols DDJ (McNichols 2002)
	(1)	(2)
Disclose*Post	0.011	0.009
	(1.05)	(1.33)
Disclose	-0.003	-0.005
	(-0.61)	(-0.97)
Post	-0.001	-0.003
	(-0.48)	(-0.93)
Size	-0.014***	-0.014***
	(-5.79)	(-5.83)
MTB	0.000	0.0000
	(0.22)	(0.20)
Loss	0.019***	0.019***
	(3.79)	(3.98)
Leverage	0.000	0.001
	(0.17)	(0.25)
Beta	0.003	0.002
	(0.67)	(0.75)
Persistence	0.008***	0.009**
	(2.84)	(2.87)
Big4	0.023***	0.025***
	(4.90)	(4.83)
Auditor change	-0.008**	0.008**
	(-2.09)	(2.05)
Institutional Ownership	0.021***	0.029***
	(2.97)	(2.94)
Financial expertise	0.023*	0.020*
	(1.94)	(1.86)
Board size	0.002***	0.003***
	(3.69)	(3.71)
CEO age	-0.001***	-0.001***
	(-5.11)	(-5.17)
CEO tenure	0.000*	0.000*
	(1.92)	(1.91)
Length	0.001	0.000
	(0.30)	(0.48)

	N	8,976	8,976
	Industry fixed effects	Yes	Yes
	Year fixed effects	Yes	Yes
	Adj R-Squared	0.196	0.187

Panel B: Impact of voluntary disclosure on ERC for ΔAQ subsamples

Dependent variable: CAR

	AQ Performance matched (Kothari et al. 2005)			AQ McNichols DDJ (McNichols 2002)		
	Subsample of Low ΔAQ1	Subsample of High ΔAQ1	Difference in coefficients	Subsample of Low ΔAQ2	Subsample of High ΔAQ2	Difference in coefficients
	(1)	(2)	(3)	(4)	(5)	(6)
UE*Disclose* Post	**0.399***	**0.405***	**0.005**	**0.385***	**0.397***	**-0.012**
	(3.01)	**(3.38)**	**(0.65)**	**(4.01)**	**(3.64)**	**(-0.74)**
UE	0.400**	0.404**	0.004	0.372*	0.361**	-0.011
	(2.18)	(2.24)	(0.90)	(1.89)	(2.24)	(-1.36)
UE*Disclose	0.143	0.135	0.008	0.127	0.122	-0.005
	(0.54)	(0.78)	(0.39)	(0.48)	(0.62)	(-0.86)
UE*Post	0.231	0.192	0.039	0.245	0.242	-0.003
	(0.66)	(0.49)	(0.33)	(0.96)	(0.77)	(-1.13)
UE*Size	0.238*	0.249**	0.011	0.313*	0.320**	0.007
	(2.18)	(2.23)	(0.25)	(2.29)	(2.56)	(0.46)
UE*MTB	0.045**	0.048**	0.003	0.052***	0.052***	0.000
	(2.30)	(2.35)	(0.47)	(3.13)	(3.16)	(0.01)
UE*Loss	-1.04**	-1.04***	0.01	-1.050***	-1.046***	0.004
	(-1.88)	(-1.81)	(0.50)	(-2.87)	(-3.02)	(-1.28)
UE*Leverage	-0.023	-0.022*	-0.001	-0.032	-0.029*	0.003
	(-1.05)	(-1.20)	(-0.78)	(-1.39)	(-1.20)	(0.11)
UE*Beta	0.562***	0.564***	0.002	0.541***	0.549***	0.008
	(2.94)	(2.79)	(0.68)	(2.91)	(3.11)	(0.39)
UE*Persistence	0.964***	0.970***	0.006	1.103***	1.105***	0.002
	(2.65)	(0.78)	(1.03)	(3.28)	(3.30)	(0.57)
UE*Big4	0.667	0.670	0.003	0.770	0.770	-0.002
	(1.60)	(2.52)	(0.14)	(1.49)	(1.45)	(0.72)
UE*Auditor change	0.591	0.594	0.003	0.564	0.564	0.000
	(0.62)	(0.89)	(0.12)	(0.70)	(0.70)	(0.55)

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UE* Institutional ownership	1.550	1.553	0.003	1.602	1.605**	0.003
	(0.94)	(0.90)	(0.13)	(0.86)	(0.90)	(0.33)
UE*Financial expertise	0.313	0.310	-0.003	0.346	0.346	0.000
	(1.27)	(1.36)	(0.22)	(1.35)	(1.40)	(0.17)
UE*Board size	-0.473***	-0.473***	0.000	-0.507***	-0.507***	0.000
	(-2.66)	(-2.59)	(0.01)	(-2.81)	(-3.03)	(0.45)
UE*CEO age	-0.033	-0.035	-0.002	-0.041	-0.043	-0.002
	(-1.54)	(-1.58)	(0.87)	(-1.52)	(-1.62)	(0.49)
UE*CEO tenure	-0.116	-0.119	-0.003	-0.139	-0.150	-0.011
	(-1.60)	(-1.63)	(0.66)	(-1.47)	(-1.55)	(1.28)
UE*Length	0.835***	0.820***	-0.015	0.865***	0.864***	-0.001
	(2.85)	(2.66)	(0.07)	(2.92)	(2.92)	(0.57)
Firm Characteristics	Yes	Yes	-	Yes	Yes	-
Treatment indicators	Yes	Yes	-	Yes	Yes	-
Industry fixed effects	Yes	Yes	-	Yes	Yes	-
Year fixed effects	Yes	Yes	-	Yes	Yes	-
N	4,487	4,489	-	4,486	4,490	-
Adj R-Squared	0.112	0.117	-	0.153	0.158	-

Panel C: Impact of voluntary disclosure on DISP for ΔAQ subsamples

Dependent variable: DISP

	AQ Performance matched (Kothari et al. 2005)			AQ McNichols DDJ (McNichols 2002)		
	Subsample of Low ΔAQ1	Subsample of High ΔAQ1	Difference in coefficients	Subsample of Low ΔAQ2	Subsample of High ΔAQ2	Difference in coefficients
	(1)	(2)	(3)	(4)	(5)	(6)
Disclose*Post	-0.002**	-0.001***	-0.001	-0.002**	-0.002**	0.000
	(2.09)	(-2.27)	(-0.85)	(-2.52)	(-2.58)	(0.84)
Disclose	-0.000	-0.003	-0.003	-0.002	-0.001	0.001
	(-0.87)	(-0.61)	(1.26)	(-0.93)	(-0.89)	(1.36)
Post	0.000	0.004	0.003*	0.001	0.003	0.002
	(0.72)	(1.26)	(1.68)	(0.66)	(0.81)	(1.12)
Size	-0.001***	-0.002***	-0.001	-0.003***	-0.004***	-0.001*
	(-3.10)	(-2.98)	(0.90)	(-2.59)	(-2.97)	(1.65)
MTB	-0.000***	-0.000***	0.000	-0.000***	-0.000**	0.000
	(-2.84)	(-3.01)	(-1.29)	(-2.61)	(-2.19)	(-1.33)
Loss	0.013***	0.023***	0.010*	0.017***	0.021***	0.004
	(4.49)	(4.99)	(1.81)	(5.77)	(5.24)	(1.46)
Leverage	0.000**	0.000**	0.000	0.000**	0.000**	0.000
	(2.15)	(1.98)	(0.41)	(2.12)	(1.98)	(0.40)
Beta	-0.002	-0.001	0.000	-0.003	-0.004	-0.001
	(-1.33)	(-1.41)	(0.45)	(-0.90)	(-1.11)	(-0.83)
Persistence	-0.052**	-0.047***	0.005	-0.048**	-0.048**	0.000
	(-2.15)	(-4.15)	(0.90)	(-2.32)	(-3.12)	(0.67)
Big4	-0.005***	-0.005**	0.000	-0.004**	-0.004**	0.000
	(-2.43)	(-2.30)	(0.45)	(-2.22)	(-2.10)	(0.27)
Auditor change	0.004	0.004	0.000	0.003	0.003	0.000
	(1.32)	(1.47)	(0.61)	(0.93)	(0.1.01)	(0.78)
Institutional ownership	-0.008*	-0.008*	0.000	-0.008*	-0.009**	-0.001
	(-1.92)	(-2.03)	(-0.71)	(-1.83)	(-2.02)	(-1.30)
Financial expertise	-0.020*	-0.020*	0.000	-0.030*	-0.030*	0.000
	(-1.87)	(-1.68)	(0.67)	(-1.83)	(-1.79)	(0.54)
Board size	0.000**	0.000**	0.000	0.001**	0.001**	0.000
	(2.42)	(2.49)	(0.05)	(2.48)	(2.41)	(0.03)
CEO age	0.000	0.000	0.000	0.000*	0.000*	0.000

	(1)	(2)	(3)	(4)	(5)	(6)
	(1.51)	(1.45)	(0.42)	(1.77)	(1.67)	(0.30)
CEO tenure	-0.000*	-0.000**	0.000	-0.002***	-0.002***	0.000
	(-2.21)	(-2.48)	(1.00)	(-3.90)	(-4.04)	(0.46)
Length	0.000	0.001	0.001	0.000	0.001	0.001
	(0.89)	(1.17)	(0.88)	(0.62)	(0.49)	(0.64)
Industry fixed effects	Yes	Yes	-	Yes	Yes	-
Year fixed effects	Yes	Yes	-	Yes	Yes	-
N	4,487	4,489	-	4,486	4,490	-
Adj R-Squared	0.126	0.147	-	0.135	0.137	-

Table 8 presents results of the tests of change of Accounting Quality (AQ). AQ is quality of accruals measured by Kothari et al. (2005) and McNichols (2002). Panel A demonstrates AQ change around the time of initial disclosure. *Disclose* has the same definition as in Table 3. *Post* is an indicator variable that equals one in the year of initiating disclosure and years thereafter until the disclosure discontinues, zero otherwise. Panel B presents the results of the impact of disclosure on the ERC for the subsamples ranked by ΔAQ. Panel C presents the results of the impact of disclosure on DISP for the subsamples ranked by ΔAQ. In both panels, AQ1 is the quality of accruals measured by Kothari et al. (2005) and AQ2 is the quality of accruals measured by McNichols (2002). Columns (1) and (4) report results for the sample with below-median ΔAQ, columns (2) and (5) report results for the sample with ΔAQ above the median, and columns (3) and (6) presents results of tests of differences in coefficients between columns (1) and (2) and coefficients between columns (4) and (5). ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 9   Impact of discontinuance of voluntary disclosure on ERC

Dependent variable: CAR				
	Full sample	Subsample of return volatility		
		High	Low	Difference
	(1)	(2)	(3)	(4)
UE*Discontinue*Post	-0.285*	-0.353**	-0.240	0.113**
	(-1.89)	(-2.17)	(-1.52)	(2.40)
UE	0.396***	0.405***	0.400***	0.005*
	(2.75)	(2.89)	(2.67)	(1.69)
UE*Discontinue	-0.019	-0.014	-0.010	-0.004
	(-0.51)	(-0.75)	(-0.66)	(-0.30)
UE*Post	-0.010	-0.010*	-0.008*	-0.002
	(-1.46)	(-1.73)	(-1.89)	(-0.40)
UE*Size	0.032	0.041	0.039	0.002
	(1.28)	(1.49)	(1.16)	(0.59)
UE*MTB	-0.027**	-0.030**	-0.031***	0.001
	(-2.30)	(-2.16)	(-3.23)	(0.44)
UE*Loss	-0.062	-0.057	-0.052	-0.005
	(-1.57)	(-1.30)	(-1.16)	(-0.51)
UE*Leverage	0.002	0.001	0.002	-0.001
	(1.11)	(1.01)	(1.17)	(0.77)
UE*Beta	-0.454**	-0.482**	-0.466***	-0.016
	(-1.99)	(-2.17)	(-2.89)	(-0.67)
UE*Persistence	-0.030	-0.032	-0.046	0.014
	(-0.84)	(-0.43)	(-0.69)	(0.30)
UE*Big4	-0.069	-0.067	-0.070	0.003
	(-1.18)	(-1.04)	(-1.21)	(1.01)
UE*Auditor change	0.431	0.399	0.410	-0.001
	(0.32)	(1.01)	(1.09)	(0.22)
UE* Institutional ownership	0.029*	0.032*	0.020*	0.012
	(1.80)	(1.73)	(1.89)	(0.67)
UE*Financial expertise	0.080	0.093	0.075	0.018
	(0.52)	(0.66)	(0.86)	(0.21)
UE*Board size	-0.011	-0.014	-0.010	-0.004
	(-0.34)	(-0.44)	(-0.52)	(-0.33)
UE*CEO age	0.001	0.001	0.001	0.000

	(0.10)	(0.37)	(0.41)	(0.48)
UE*CEO tenure	-0.02*	-0.010*	-0.030*	0.02
	(-1.90)	(-2.11)	(-1.70)	(1.46)
UE*Length	0.084	0.095	0.076	0.019
	(0.52)	(0.48)	(0.46)	(0.49)
UE*AQ	2.474***	2.510***	2.200***	0.310
	(4.30)	(3.99)	(3.30)	(1.27)
Treatment indicators	Yes	Yes	Yes	-
Firm Characteristics	Yes	Yes	Yes	-
N	2,008	1,004	1,004	-
Adj R-Squared	0.061	0.064	0.062	-
Industry fixed effects	Yes	Yes	Yes	-
Year fixed Effects	Yes	Yes	Yes	-

Table 9 reports the results of the impact of discontinuance of voluntary disclosure on ERC and cross sectional analysis on subsamples of information environment (return volatility). *Discontinue* is an indicator variable that equals one if firms disclose any of the three dimensions of audit committee disclosures, zero otherwise. *Post* is an indicator variable that equals one for the year in which a firm stops disclosing and years thereafter, zero otherwise. Column (1) reports results of the impact on ERC of the discontinuance of voluntary disclosure for the full sample. Columns (2) and (3) report results of the impact of discontinuance on ERC for the subsamples based on return volatility, where column (2) represents the subsample with return volatility above the median and column (3) represents the subsample with return volatility below the median. Column (4) tests the difference in coefficients between the two subsamples. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 10 Impact of accounting quality change (AQ) on ERC decrease

Panel A: AQ change around the discontinuance of disclosure

Dependent variable: AQ

Dependent variable	Performance matched (Kothari et al. 2005)	McNichols DDJ (McNichols 2002)
	(1)	(2)
Discontinue*Post	-0.003	-0.005
	(-0.43)	(-0.62)
Discontinue	0.041	0.042
	(1.02)	(0.99)
Post	-0.000	-0.002
	(-0.99)	(-0.86)
Size	-0.001	-0.001
	(-0.58)	(-0.76)
MTB	-0.045***	-0.050***
	(-3.98)	(-3.42)
Loss	0.007**	0.005**
	(2.17)	(1.98)
Leverage	0.018**	0.020**
	(2.32)	(2.24)
Beta	-0.016***	-0.014***
	(-3.19)	(-3.00)
Persistence	0.006	0.009
	(0.42)	(0.64)
Big4	0.054**	0.061*
	(2.00)	(2.01)
Auditor change	-0.02*	-0.000
	(-1.80)	(-1.20)
Institutional ownership	0.026	0.019
	(0.23)	(0.38)
Financial expertise	0.030	0.034
	(1.02)	(0.99)
Board size	0.000	0.000
	(0.72)	(0.57)
CEO age	-0.002***	-0.001***
	(-2.91)	(-3.03)
CEO tenure	-0.001	0.000
	(1.19)	(1.41)
Length	-0.001	-0.001
	(-0.49)	(-0.76)
N	2,008	2,008
Industry fixed effects	Yes	Yes
Year fixed effects	Yes	Yes

Adj R-Squared	0.252	0.254

Panel B: Impact of voluntary disclosure on ERC for subsamples of ΔAQ

Dependent variable: CAR

	Subsample of Low ΔAQ	Subsample of High ΔAQ	Difference in coefficients
	(1)	(2)	(3)
UE*Discontinue*Post	-0.182*	-0.290*	-0.008
	(-1.78)	(-1.84)	(-0.76)
UE	0.306**	0.320**	0.014
	(1.99)	(2.54)	(1.01)
UE*Discontinue	-0.014	-0.013	0.001
	(-0.54)	(-0.59)	(0.52)
UE*Post	-0.010	-0.019	0.009
	(-1.46)	(-1.44)	(0.48)
UE*Size	0.032	0.035	0.003
	(1.28)	(1.44)	(0.60)
UE*MTB	-0.027**	-0.030**	-0.003
	(-2.30)	(-2.13)	(-1.38)
UE*Loss	-0.060	-0.057	0.003
	(-1.57)	(-1.48)	(1.15)
UE*Leverage	0.002	0.002	0.000
	(1.15)	(0.96)	(0.30)
UE*Beta	-0.350**	-0.338**	-0.012
	(-2.29)	(-2.41)	(-1.25)
UE*Persistence	-0.020	-0.020	0.000
	(-0.64)	(-0.60)	(0.71)
UE*Big4	-0.043	-0.043	0.000
	(-1.01)	(-1.38)	(0.86)
UE*Auditor change	0.338	0.338	0.000
	(0.400)	(0.411)	(0.53)
UE* Institutional ownership	0.021*	0.034*	0.012
	(1.74)	(1.71)	(0.75)
UE*Financial expertise	0.076	0.084	0.008
	(0.83)	(1.00)	(0.93)
UE*Board size	-0.009	-0.008	0.001
	(-0.50)	(-0.80)	(0.15)

UE*CEO age	0.001	0.003	0.002
	(0.31)	(0.66)	(0.05)
UE*CEO tenure	-0.014**	-0.020**	-0.006
	(2.43)	(2.01)	(-1.43)
UE*Length	0.068	0.058	-0.010
	(0.56)	(0.60)	(0.93)
Firm Characteristics	Yes	Yes	-
Treatment indicators	Yes	Yes	-
Industry fixed effects	Yes	Yes	-
Year fixed effects	Yes	Yes	-
N	1,004	1,004	-
Adj R-Squared	0.084	0.101	-

Panel A of Table 10 analyzes the change in accounting quality before and after the discontinuance of disclosure. *Discontinue* is an indicator variable that equals one if the firm discloses any of the three dimensions of audit committee disclosures, zero otherwise. *Post* is an indicator variable that equals one for the year in which a firm stops disclosing and years thereafter, zero otherwise. Column (1) presents results with accruals quality based on performance matched discretionary accruals from Kothari et al. (2005), and column (2) with accruals quality based on (McNichols 2002). Panel B reports the results of the impact on ERC of the discontinuance of voluntary disclosure of audit committee activities by subsamples of change in accounting quality (ΔAQ). Column (1) reports results of the subsample of low ΔAQ, and column (2) reports results of the subsample with high ΔAQ. Column (3) reports tests of differences in coefficients between low and high ΔAQ. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 11   Summary statistics for samples matched by propensity score

	Mean			Median		
	Treated	Control	Diff	Treated	Control	Diff
CAR	0.005	0.012	-0.007	0.004	0.007	-0.003
UE	-0.004	0.000	-0.004**	0.000	0.001	0.000
Size	8.051	8.04	0.011	8.037	8.227	-0.19
MTB	2.401	3.433	-1.031	2.536	2.442	0.094
Loss	0.152	0.14	0.011	0.000	0.000	0.000
Leverage	0.976	0.284	0.692**	0.439	0.459	-0.021
Beta	1.245	1.188	0.058	1.152	1.237	-0.085
Persistence	0.41	0.339	0.07	0.309	0.401	-0.093
Big4	0.946	0.929	0.017	1.000	1.000	00.000
Au-change	0.13	0.079	0.051	0.000	0.000	0.000
Institutional ownership	0.802	0.864	-0.062	0.836	0.907	-0.813
Financial expertise	8.680	7.984	0.696	8.000	9.000	-1.000
Board size	49.271	51.843	-2.572	52.000	49.000	3.000
CEO age	1.805	4.061	-2.256	2.000	0.000	2.000
CEO tenure	9.948	10.037	-0.09	10.087	10.017	0.070
Length	0.044	0.041	0.003	0.027	0.030	-0.003
AQ	0.005	0.012	-0.007	0.004	0.007	-0.003
N	207	706				

Table 11 reports distributional properties (mean, median) for treatment and (propensity score-matched) control samples. The propensity score-matching procedure uses a panel of pre-disclosure firm-years and is performed without replacement, allowing for up to three matches per treated firm. Differences between the means are medians are presented in the columns labeled "Diff". ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively. Significance levels are calculated using a t-test for the difference in means and F-test for the difference in variances.

Table 12 Impact of voluntary disclosure on ERC and DISP under propensity score matching method

Panel A: The impact of voluntary disclosure on ERC

Dependent variable: CAR				
	Disclose 1	Disclose 2	Disclose 3	Disclose 4
	(1)	(2)	(3)	(4)
UE*Disclose*Post	0.314***	0.309***	0.327***	0.322***
	(2.65)	（2.89）	（2.82）	（3.86）
UE	0.570**	0.568**	0.473**	0.529***
	(2.55)	（2.34）	（2.07）	（2.64）
UE*Disclose	0.208*	0.211*	0.206	0.213*
	(1.71)	（1.80）	（1.43）	（1.80）
UE*Post	0.337	0.337	0.242	0.325
	(1.49)	（1.30）	（0.61）	（1.34）
UE*Size	0.503**	0.500**	0.434**	0.516***
	(2.36)	（2.56）	（2.07）	（2.65）
UE*MTB	0.049*	0.051**	0.055***	0.053**
	(1.92)	（1.97）	（2.82）	（2.36）
UE*Loss	-0.425**	-0.434**	-0.426**	-0.445**
	(-2.53)	（-2.34）	（-2.01）	（-1.90）
UE*Leverage	-0.073	-0.074	-0.068	-0.087
	(-1.06)	（-1.04）	（-1.20）	（-1.16）
UE*Beta	0.846**	0.847**	0.785*	0.821**
	(2.28)	（2.31）	（1.91）	（2.36）
UE*Persistence	0.873**	0.792**	0.695**	0.804**
	(2.36)	（1.98）	（2.15）	（2.34）
UE*Big4	1.340	1.283	1.172	1.372
	(0.80)	（1.42）	（1.04）	（1.29）
UE*Auditor change	-0.209**	-0.243**	-0.198**	-0.216**
	(-2.33)	(-2.21)	(-1.99)	(-2.10)
UE* Institutional ownership	0.761	0.691	0.597	0.752
	(0.53)	（0.81）	（1.02）	（0.48）
UE*Financial expertise	0.023	0.023	0.019	0.020
	(0.98)	(0.82)	(0.80)	(1.05)
UE*Board size	-0.384	-0.401	-0.348	-0.502
	(-1.15)	(-1.28)	(-0.96)	(-1.48)
UE*CEO age	-0.044	-0.052	-0.062	-0.078

	(1)	(2)	(3)	(4)
	(-0.73)	(-0.63)	(-0.91)	(-0.79)
UE*CEO tenure	-0.012	-0.020	-0.020	-0.016
	(-0.12)	(-0.31)	(-1.09)	(-0.90)
UE*Length	0.980***	0.894**	0.739**	0.896**
	(2.60)	(2.01)	(2.13)	(2.18)
UE*AQ	0.627**	0.701**	0.498*	0.840**
	(1.98)	（2.31）	（1.89）	（2.16）
Treatment indicators	Yes	Yes	Yes	Yes
Firm characteristics	Yes	Yes	Yes	Yes
N	913	870	899	913
Industry Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Adj. R-Squared	0.169	0.169	0.169	0.159

Panel B: The impact of voluntary disclosure on DISP

Dependent variable: DISP				
	Disclose 1	Disclose 2	Disclose 3	Disclose 4
	(1)	(2)	(3)	(4)
Disclose*Post	-0.002**	-0.002**	-0.001*	-0.002**
	(-2.27)	(-2.23)	(-1.87)	(-2.31)
Disclose	-0.001*	-0.001*	-0.001	-0.001
	(-1.67)	(-1.70)	(-1.49)	(-2.01)
Post	0.003	0.002	0.002	0.003
	(1.23)	(1.28)	(0.99)	(1.12)
Size	-0.003**	-0.003**	-0.003**	-0.003**
	(-2.27)	(-2.48)	(-2.24)	(-2.40)
MTB	-0.001*	-0.001*	-0.000	-0.001*
	(-1.65)	(-1.66)	(-1.27)	(-1.75)
Loss	0.010***	0.010***	0.010***	0.009***
	(2.86)	(3.01)	(3.59)	(3.49)
Leverage	0.000	0.000*	0.000***	0.000***
	(1.41)	(1.30)	(1.11)	(1.31)
Beta	-0.001	-0.001	-0.000	-0.000
	(-0.64)	(-0.56)	(-0.25)	(-0.51)
Persistence	-0.007**	-0.007**	-0.005*	-0.006**
	(-2.05)	(-2.27)	(-1.69)	(-2.25)
Big4	-0.005*	-0.005*	-0.004	-0.005*
	(-1.67)	(-1.65)	(-1.29)	(-1.72)

Auditor change	0.001	0.001	0.000	0.001
	(1.46)	(1.52)	(1.11)	(1.03)
Institutional ownership	-0.001**	-0.001**	-0.001**	-0.001**
	(-2.34)	(-2.54)	(-2.22)	(-2.41)
Financial expertise	-0.020	-0.020	-0.018	-0.021
	(-1.32)	(-1.31)	(-0.71)	(-1.50)
Board size	0.001**	0.001**	0.000*	0.001**
	(2.11)	(1.98)	(1.87)	(2.41)
CEO age	-0.000	-0.000	-0.000	-0.000
	(-1.61)	(-1.35)	(-0.42)	(-1.33)
CEO tenure	-0.001	-0.001	-0.001*	-0.001*
	(-1.40)	(-1.42)	(-1.44)	(-3.51)
Length	0.001	0.001	0.000	0.000
	(0.91)	(0.84)	(0.76)	(0.81)
AQ	-0.071**	-0.070**	-0.067*	-0.071**
	(-2.01)	(-2.23)	(-1.84)	(-2.38)
N	913	870	899	913
Industry Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Adj. R-Squared	0.254	0.254	0.253	0.254

Table 12 reports the results of the impact of initiation of disclosure on ERC and DISP for a sample of disclosing firms and a sample of control firms using a propensity-matching method. In column (1), *Disclose* is an indicator variable that equals one if a firm discloses any of the three dimensions of disclosure mentioned in Section 2, zero otherwise. In column (2), *Disclose* is an indicator variable which equals one if a firm discloses the first dimension of audit committee activities (i.e., annual review and evaluation of auditor's work), zero otherwise. In column (3), *Disclose* is an indicator variable that equals one if a firm discloses the second dimension of audit committee activities (i.e., criteria for auditor selection), zero otherwise. In column (4), *Disclose* is the number of dimensions that a firm discloses and represents the magnitude of disclosure. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

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Appendix 1 Variable definitions

Variable Name	Description
CAR	Cumulative abnormal return. A firm's 3-day return, centered on the annual earnings announcement date, less the CRSP market return over the same period. The earnings announcement date is defined as the earliest date available on Compustat or I/B/E/S. If the earnings announcement date is taken from I/B/E/S, the announcement date is the same (next) trading day if the announcement time is earlier (later) than 4pm EST.
DISP	Analyst forecast dispersion measured as the standard deviation of annual analyst forecasts, scaled by end of year stock price.
UE	Earnings surprise. The difference between the I/B/E/S actual and the median I/B/E/S forecast of annual EPS (using the most recent forecast of an analyst) over a window beginning 95 calendar days prior to the earnings announcement and ending three days prior to the earnings announcement scaled by the CRSP price two days prior to the earnings announcement.
Disclose	Indicator variable that equals one if a firm voluntarily discloses audit committee activities over the period 2003-2015, otherwise zero. I use four alternative measures of *Disclose*: *Disclose1* is an indicator variable that equals one if a firm discloses any of the three dimensions of disclosure mentioned in section 2, otherwise zero. *Disclose2* is an indicator variable which equals one if a firm discloses the first dimension of disclosure mentioned in section 2, otherwise zero. *Disclose3* is an indicator variable that equals one if a firm discloses information about the second dimension of disclosure mentioned in section 2, otherwise zero. *Disclose4* is the number of dimensions of audit committee activities disclosed by a firm on a scale of 1 to 3.

Discontinue	Indicator variable that equals one for the treatment sample of disclosers and zero for non-disclosers for the tests of change in ERC in the post-discontinuance period.

Appendix 1: Variable definitions (continued)

Variable Name	Description
Post	(i) When examining the impact of disclosure on ERC in the post-disclosure period, *Post* is an indicator variable which equals one for year t, the disclosure initiation year and the following years until the disclosure is discontinued, otherwise zero. (ii) When evaluating in the impact of discontinuance of disclosure on ERC in the post-discontinuance period, *Post* is an indicator variable which equals one for year t, the disclosure discontinuance year and all years thereafter, otherwise zero.
Beta	The coefficient from regressing excess daily returns on excess market returns over one calendar year, ending on the fiscal year-end date. The risk-free rate is from Ken French's data library.
Leverage	Financial leverage is the ratio of total liabilities (debt in current liabilities + long term debt) to total equity, measured at the fiscal-year-end, from Compustat.
Loss	Accounting loss indicator. An indicator variable coded as one when basic earnings per share excluding extraordinary items (Compustat epspx) is less than zero, and zero otherwise.
MTB	Market to book ratio. The ratio of the market value of equity to the book value of equity, measured at the fiscal-year-end, from Compustat.
Persistence	Earnings persistence. The coefficient from regressing basic EPS excluding extraordinary items (epspx) from Compustat on lagged EPS using (where available) up to 10 years of data.
Size	Firm's size. The log of market value of equity, measured at fiscal-year-end, from Compustat.

Auditor change	An indicator variable which equals one for year t, the year of auditor change and the following years, zero otherwise.

Appendix 1: Variable definitions (continued)

Variable Name	Description
AQ	Accounting Quality. Performance-matched discretionary accruals from Kothari, Leone and Wasley (2005). Each firm-year observation is matched with a firm-year from the same industry with the closest beginning-of-year ROA. AQ is the absolute value of the difference between the discretionary accruals of the treatment firm-year and the matched firm-year. Discretionary accruals are based on the modified Jones model.
Auditor change	An indicator variable which equals one for year t, the year of auditor change and the following years, zero otherwise.
Analyst coverage	Number of analysts following a firm in a given fiscal year. The count is based on the number of unique analysts who issue at least one forecast on I/B/E/S in a window beginning 360 days prior to the earnings announcement and ending three days prior to the earnings announcement. When no forecasts are observed, I set this count to zero.
Institutional ownership	The end-of-year total institutional stock-holding divided by the number of common shares outstanding, from Thomson Reuters.
Big4	An indicator variable which equals one if the firm's financial statements are audited by one of the Big 4 accounting firms in that fiscal year, zero otherwise.
Volatility	Stock return volatility. The stock-return volatility in the prior year before the earnings announcement date.

Financial expertise	The percentage of audit committee members who have financial expertise.
Board size	The size of the board, which is the number of directors on the board.

Appendix 1: Variable definitions (continued)

Variable Name	Description
Alternative measure of AQ	Accruals Quality calculated using McNichols (2002) from the regression of working capital accruals on current, lagged, and leading operating cash flows, gross PPE and change in sales. Working capital accruals are calculated as $\Delta AR + \Delta Inventory - \Delta AP - \Delta TP + \Delta Other\ Assets\ (net)$, where AR is accounts receivable, AP is accounts payable, and TP is taxes payable.
CEO age	The age of the CEO in a given fiscal year.
CEO tenure	The tenure years of the CEO in a given fiscal year

Appendix 2: Keywords lists for audit committee voluntary disclosure

Dimension of disclosure	Keywords for capturing the dimension of disclosure
Annual evaluation and review	Audit committee, Annual, Review, Performance, Responsibility, Appoint, Independent, Auditor.
Auditor selection criteria	Audit committee, Consider, Factors, Capability, Knowledge, Expertise, Qualifications, Appoint, Independence,
Engagement partner	Audit committee, Engagement partner, Appoint, Change, Rotate

I categorize the disclosure into three dimensions based on reported trends (CAQ reports 2014–2016), SEC's conceptual release (2015), and the literature about the audit committee oversight process (Beasley, Carcello, Hermanson and Neal, 2009). I create lists of words that refer to these dimensions of disclosure. After reading numerous proxy statements, I compile three lists of keywords that most commonly appear in proxy statements for each dimension of audit committee activities as follows: (i) "Audit committee," "Annual," "Review," "Performance," "Responsibility," "Appoint," "Independent," "Auditor,"; (ii) "Audit committee," "consider," "Factors," "Capability," "Knowledge," "Expertise," "Quality," "Independence," "Appoint,"; (iii) "Audit committee," "Engagement partner," "Appoint," "Change," "Rotate". I also include common variations of these words as keywords, e.g., "independence" in place of "independent." For the keywords "Review", "Appoint" and "Auditor" in the list, I use multiple substitutes that have similar meaning. "Discuss" and "Assess" are used as substitutes for "Review," if "Review" is not found. "Engage," "Retain," and "Select" are used as substitutes for "Appoint," if "Appoint" is not found. "Accounting firm" is used as a substitute for "Auditor".

Appendix 3: Example of voluntary disclosure about audit committee activity

The excerpts reported below are from the disclosure about audit committee activities in the proxy statement of Lam Research Group in 2015. The objective of the disclosure is to make investors aware of how the company's audit committee executes its responsibilities in the auditor ratification process. I provide the excerpts to show that there are firms who disclose detailed information about audit committee's oversight activities, over and above the disclosures required by existing rules on audit committee disclosures.

"*Annual Evaluation and Selection of Independent Registered Public Accounting Firm*

The audit committee annually evaluates the performance of the Company's independent registered public accounting firm, including the senior audit engagement team, and determines whether to reengage the current accounting firm or consider other audit firms. Factors considered by the audit committee in deciding whether to retain [Audit Firm] include:
(i) [Audit Firm]'s global capabilities to handle the breadth and complexity of the Company's global operations;

(ii) [Audit Firm]'s technical expertise and knowledge of the Company's industry and global operations;

(iii) the quality and candor of [Audit Firm]'s communications with the audit committee and management;

(iv) [Audit Firm]'s independence;

(v) the quality and efficiency of the services provided by [Audit Firm], including input from management on [Audit Firm]'s performance and how effectively [Audit Firm] demonstrated its independent judgment, objectivity and professional skepticism;

(vi) the appropriateness of [Audit Firm]'s fees; and

(vii) [Audit Firm]'s tenure as our independent auditor, including the benefits of that tenure, and the controls and processes in place (such as rotation of key partners) that help ensure [Audit Firm]'s continued independence in the face of such tenure."