

# Do Reviews Improve Interim Financial Reporting Quality?

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**ABSTRACT:** We investigate whether timely auditor reviews improve the quality of interim financial reporting. First, we provide descriptive evidence that interim reviews result in more conservative financial reporting, based on actual accounting adjustments. Second, we exploit a quasi-natural experiment arising from an SEC mandate that required interim reviews for all public companies. Before the rule, Big 5 auditors typically conducted such reviews voluntarily, while non-Big 5 auditors generally did not. This setting enables a difference-in-differences design, with clients of non-Big 5 auditors serving as the treated group. Our evidence suggests the quality of interim financial reporting significantly improved after the introduction of mandatory interim reviews. Additional analysis shows that the effects persist in the post-Sarbanes-Oxley period. Overall, our study provides the first comprehensive U.S.-based evidence that auditor reviews enhance the quality of interim financial reporting.

**Data availability:** Data are available from the public sources cited in the text.

**Keywords:** Audit; Quarterly Review; Reporting Quality; Adjustments.

**JEL Codes:** M49

## 1. INTRODUCTION

In 2000, the U.S. Securities and Exchange Commission (SEC) mandated timely auditor reviews of interim financial statements, citing the need for more reliable information and noting that such reviews can help detect material issues early and deter earnings management (SEC 1999).<sup>1</sup> Since then, audit firms have consistently argued that interim reviews enhance the quality of interim reporting (Deloitte 2019; KPMG 2019; PWC 2019; EY 2019). Despite the importance of timely and credible interim financial information for capital markets and the longstanding U.S. requirement for such reviews, empirical evidence on the effectiveness of reviews remains limited and inconclusive. This study addresses a simple but important question: Do auditors' interim reviews improve the quality of interim financial statements?

Examining the effect of auditor reviews on interim financial statement quality is important for at least two reasons. First, although there is a consensus on the need for auditor involvement in the examination (reasonable assurance) of *annual* financial statements, no such agreement exists for the review (limited assurance) of *interim* financial statements, as reflected in the varying regulations on interim reviews across different jurisdictions (e.g., interim reviews are mandatory for all public firms in the United States and Australia but remain optional in the United Kingdom and Canada). Such diversity necessitates and seeks more evidence about how interim reviews impact the quality of interim financial statements.

Second, auditor involvement in the interim period should, theoretically, improve reporting quality by reducing both earnings management and unintentional errors (Jensen and Meckling

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<sup>1</sup> We use the term interim reviews to refer to a *timely* review which differs from a retrospective review performed at year-end in conjunction with the audit of annual statements. It is also important to distinguish between an *audit* and a *review*. An audit is performed on annual statements and provides *reasonable assurance* whereas a review is conducted on interim statements and provides only *limited assurance*, primarily through inquiry and analytical procedures rather than substantive testing.

1976; SEC 1999). Despite this clear theoretical relation, empirical evidence on the impact of interim reviews on interim reporting quality remains limited and inconclusive. Existing U.S.-based studies often rely on small sample survey data, are subject to endogeneity concerns, or focus primarily on capital market-based effects, with most analyses based on data from the 1970s to 1990s (Ettredge, Simon, Smith, and Stone 2000a, 2000b; Manry, Tiras, and Wheatley 2003). Evidence from non-U.S. settings is mixed. While Mangena and Taurigana (2008) find evidence that interim reviews are associated with improved reporting quality in the U.K., Bédard and Courteau (2015) and Kajüter, Klassmann, and Nienhaus (2016) report no significant improvement in reporting quality for Canadian and German firms, respectively, that purchase interim reviews.

With the SEC mandating interim reviews for all publicly listed firms beginning in 2000, we adopt two complementary empirical approaches to investigate the effect of auditor reviews on the quality of interim financial statements. First, we hand-collect a unique sample of firms that initially file unreviewed 10-Qs but subsequently amend them following completion of the interim review. This setting allows us to compare pre- and post-review financial statements for the same quarter. Analyzing 258 matched filings, we find that interim reviews often lead to economically and statistically significant adjustments to key accounts, particularly liability, equity, income, and accruals. These adjustments tend to make the financial statements more conservative, suggesting that auditor involvement helps correct managerial overconfidence or manipulation. This descriptive evidence offers a unique glimpse into the actual changes triggered by interim reviews and suggests that reviews may play an important role in enhancing the reliability of interim financial reporting.

Second, we exploit a quasi-natural experiment stemming from the SEC's 2000 rule that mandated all public companies to file quarterly financial statements subject to timely reviews,

rather than reviews conducted retroactively at year end as part of the annual audit. Prior to March 15, 2000, while all firms were required to file Form 10-Q, timely auditor reviews of those filings were voluntary. Firms filing *timely* reviewed 10-Qs engaged their auditors to complete the review before filing, whereas firms filing *retrospectively* reviewed 10-Qs delayed auditor review until year-end—meaning the quarterly reports were filed without auditor oversight. The SEC’s *Final Rule on Audit Committee Disclosure* (herein, Final Rule) eliminated the option for retrospective reviews, and mandated concurrent reviews effective March 15, 2000 (SEC 1999). Importantly, this change mainly affected non-Big 5 clients, as the SEC (1999) noted “the five largest U.S. accounting firms...require that their clients have reviews of quarterly financial statements as a condition to acceptance of the audit”.<sup>2</sup> As a result, non-Big 5 clients that previously filed unreviewed 10-Qs were exogenously required to begin filing reviewed 10-Qs, providing plausibly exogenous variation in the presence of auditor interim reviews.

We use firm-quarter observations with fiscal quarter-end dates falling within one year before or after the effective date of the Final Rule, allowing for a difference-in-differences (DID) design that compares pre- and post-rule periods. The treatment group includes clients of non-Big 5 auditors who were unlikely to receive auditor reviews of their 10-Qs prior to the rule and were subsequently required to adopt them. The control group consists of clients of Big 5 auditors who were already engaging their auditor to conduct interim reviews. We measure reporting quality using current quarterly abnormal accruals (based on both two-stage and single-stage models) and subsequent restatements (Jones 1991; Dechow, Sloan, and Sweeney 1995; Kothari, Leone, and

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<sup>2</sup> We acknowledge potential classification errors as the SEC (1999) highlighted that some other audit firms (unspecified) also required timely reviews for their clients. Any such misclassification should bias against finding significant effects, making our estimates conservative. Appendix A includes excerpts from comment letters by PricewaterhouseCoopers, Arthur Andersen, and Deloitte & Touche indicating that Big 5 auditors already required timely quarterly reviews. Ernst & Young’s letter did not state this explicitly, and KPMG did not submit a letter. Neither BDO nor Grant Thornton (two largest non-Big 5 auditors) submitted comment letters.

Wasley 2005; Bédard and Courteau 2015). We use current accruals because they are more likely than long-term accruals to be used to manage earnings across quarters and use subsequent quarterly restatements as they represent a more egregious form of low-quality reporting (DeFond and Zhang 2014; Bédard and Courteau 2015; Christensen, Glover, Omer, and Shelley 2016). Our DID analysis indicates that, relative to control firms, treated firms experience a reduction in current quarterly abnormal and total accruals and a lower likelihood of subsequent quarterly restatements following the implementation of the rule. Our main findings support the notion that auditors' interim reviews enhance the quality of interim reports.

We conduct several robustness tests to validate our DID analyses. A concern is that firms may self-select into Big 5 versus non-Big 5 auditors in ways that bias our estimates. Although we have no ex-ante reason to expect differential improvements in interim reporting quality around the SEC's mandate, we perform four additional tests. First, we confirm the parallel trends assumption, alleviating concerns about pre-existing differences. Second, using the Oster (2019) approach, we find evidence that reduces concerns about correlated, omitted variables. Third, we show that our results are not driven by contemporaneous regulatory changes, including new audit committee disclosure requirements and SAB 101. Finally, Monte Carlo simulations indicate that our findings are unlikely to be due to chance.

Next, we conduct several additional analyses. First, our main analyses use the sample that predates the Sarbanes-Oxley Act (SOX). Although SOX did not directly alter the nature of the interim review process, it strengthened internal control requirements and expanded auditor oversight and disclosure regulations, potentially reducing the incremental value of interim

reviews.<sup>3</sup> We find that the benefits of reviews persist in the post-SOX period. Second, we find that the benefits of interim reviews extend to debt markets, as treatment firms experience a larger decline in the cost of debt from the pre- to post-period relative to control firms. Third, we document some evidence that the market appears to value the assurance provided by the review process, as we find a marginally stronger reaction to unexpected earnings for reviewed quarterly reports. Finally, we find no evidence that reviews impact filing delays and limited evidence that reviews improve annual reporting quality.

We provide several contributions. First, we provide the first comprehensive U.S.-based descriptive and empirical evidence that interim reviews enhance the quality of interim financial reports for publicly traded firms. Prior U.S.-based studies primarily rely on survey responses, are subject to endogeneity concerns, and do not directly examine the impact of reviews on the quality of interim reports (Ettredge et al. 2000a, 2000b; Manry et al. 2003). While Badertscher, Kim, Kinney Jr, and Owens (2023) offer related evidence that both reviews and audits are associated with higher reporting quality than compilations, their analyses are limited to private firms. Relatedly, we also respond to the call for research by Kajüter, Lessenich, Nienhaus and van Gemmern's (2022) that exploits exogenous variation to assess the effect of auditor reviews on financial reporting.

Second, we provide novel descriptive evidence that interim reviews lead to actual changes in clients' interim financial statements. This contribution is distinct from prior research, which has largely examined auditor-induced adjustments during the audit process. Such studies are limited, as they generally rely on audit firm work papers (Kinney 1979; Hylas and Ashton 1982; Kinney

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<sup>3</sup> SOX did not amend the SEC's 2000 rule requiring interim reviews of quarterly filings, nor did it prescribe new procedures for such reviews. Interim reviews continue to be conducted under the same applicable standards (AICPA SAS 71, later codified as AU 722, and subsequently PCAOB AS 4105).

and Martin 1994) or, more recently, disclosures of audit adjustments in China (Lennox, Wu, and Zhang 2016; Lennox, Wang, and Wu 2018). Importantly, while these prior studies focus on adjustments arising from the audit process, our evidence pertains specifically to the review process.

Our study has practical implications for the SEC, the PCAOB, and international regulators. In 2018, the SEC issued a Request for Comment on whether existing quarterly reporting requirements—including auditor reviews in Form 10-Q filings—offer meaningful benefits relative to their compliance costs.<sup>4</sup> Market participants and practitioners expressed concerns about the recurring burdens of preparing reviewed interim statements, questioning whether the assurance justifies the costs (Nasdaq 2019; Financial Executives International 2019). Similarly, in 2014, the PCAOB included “Interim Financial Information Reviews” in its ongoing Interim Standards project to assess whether updates to interim reviews standards are warranted.<sup>5</sup> More recently, the Long-Term Stock Exchange has announced plans to submit a proposal to the SEC advocating for a shift from quarterly to semiannual reporting (Driebusch 2025). Our findings contribute to this issue by documenting the benefits of interim reviews in enhancing reporting quality. Even if the SEC were to adopt a six-month reporting system, our evidence suggests that requiring auditor reviews could play a critical role in maintaining reporting reliability and investor protection. These findings also offer timely evidence for jurisdictions where such reviews remain voluntary, and their role is under review (Filip 2016).<sup>6</sup>

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<sup>4</sup> *Request for Comment on Earnings Releases and Quarterly Reports*. Release No. 33-10588; 34-84842; File No. S7-26-18. Amongst issues that the SEC requested for comment, the SEC asked, “What is the impact of the auditor review requirement of quarterly financial information on investors, companies, and other market participants?”. Available at: <https://www.sec.gov/rules/other/2018/33-10588.pdf>

<sup>5</sup> Available at: <https://pcaobus.org/oversight/standards/standard-setting-research-projects>

<sup>6</sup> For example, in Canada, interim reviews remain voluntary, but policymakers have considered mandating them. The Auditing and Assurance Standards Board (AASB) placed revisions to its standard on interim reviews on its agenda in 2013, reflecting ongoing debate about their regulatory value (Bédard and Courteau 2015). In the UK, the Financial Reporting Council (FRC) issued a public consultation in 2020 on ISRE 2410, explicitly inviting feedback on technical revisions and the broader role of interim reviews in enhancing financial reporting quality (FRC 2020).

## 2. BACKGROUND, LITERATURE REVIEW, AND HYPOTHESIS DEVELOPMENT

### 2.1 Institutional Background

The objective of a review is to provide the auditor “with a basis for communicating whether he or she is aware of any material modifications that should be made to the interim financial information for it to conform with the applicable financial reporting framework” (AICPA AU Section 722). The rationale for interim reviews is to involve auditors year-round to enhance the reliability and credibility of interim reports. The objective of a review differs significantly from that of an audit, which serves to obtain *reasonable* assurance that the annual financial statements are free from material misstatement. Reviews only provide *limited* assurance on the interim financial statements. The differing objectives drive the differences in the procedures that auditors are expected to perform for reviews versus audits. Both audits and reviews involve performing analytical procedures and making inquiries of personnel responsible for financial and accounting matters, but audits extend well beyond these types of tests. More specifically, audits also include: (1) the observation, inspection, or confirmation of accounting records; (2) testing the effectiveness of internal controls; (3) obtaining corroborating evidence for inquiry responses; or (4) other substantive procedures typically performed in an audit (AICPA AU Section 722).

In 1989, the SEC issued *Request for Comment on Increasing the Level of Involvement of the Independent Accountant with Interim Financial Information (Request)* to receive feedback on (1) whether companies should be permitted to continue selecting between timely and retrospective reviews of quarterly financials and (2) the expected incremental costs and benefits of requiring reviews prior to the filing of Form 10-Q. The SEC received 164 comment letters in response, with a general consensus supporting continued flexibility, particularly due to concerns about costs for smaller firms (Ettredge, Simon, Smith, and Stone 1994). A decade later, on December 22, 1999,

the SEC released its Final Rule. Among other things, the Final Rule requires SEC-registered companies to obtain independent reviews of their quarterly financial statements prior to the 10-Q's filing with the SEC. This change effectively eliminated the option of retrospective review and significantly increased regulatory expectations for timely audit involvement during the fiscal year.<sup>7</sup>

Importantly, the regulatory shift resulted in heterogeneous effects across firms. Prior to the Final Rule, Big 5 auditors had already implemented policies requiring most of their clients to have timely quarterly reviews as a condition to acceptance of the audit (SEC 1999). In contrast, non-Big 5 auditors, largely due to cost concerns and limited internal resources, generally did not perform timely interim reviews for their clients prior to the Final Rule. As such, the rule change primarily affected non-Big 5 clients as opposed to Big 5 clients. This pre-existing variation forms the foundation of our identification strategy.

## **2.2 Literature on Interim Reviews**

Prior evidence on the costs and benefits of quarterly reviews for U.S. public companies is limited. Early studies using data from the 1970s generally find no evidence that interim assurance improves interim earnings quality, as measured by earnings smoothing or the ability of interim earnings to predict annual earnings (Givoly, Ronen, and Schiff 1978; Alford and Edmonds 1981; and Edmonds 1983). Follow-up studies find some benefits and costs of interim reviews. While Ettredge et al. (2000a) find that timely reviews increase interim accounting adjustments, measured by the proportion of non-routine elements of interim earnings, and reduce earnings adjustments in the fourth quarter, Ettredge et al. (2000b) find that timely reviews are also associated with an

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<sup>7</sup> In addition to the timely review requirement, the rule (1) extended the quarterly reporting requirements to all SEC registrants having securities registered under Sections 12(b) or 12(g) of the Exchange Act, (2) required the disclosure of audit committee reports detailing committee discussions with management and auditors of financial statement and auditor independence, and (3) required the disclosure of the audit committee charter (should one exist) and the independence of the audit committee members in the company's annual proxy statement.

increase in earnings release lag. Manry et al. (2003) document that interim reviews increase the relevance and reliability of interim earnings by showing that the association between quarterly cumulated stock returns and interim earnings is stronger for timely reviewed reports compared to retrospectively reviewed reports. Furthermore, Pany and Smith (1982), based on an experiment with financial analysts, find that analysts perceive interim reports subject to a full audit or a timely review as more reliable than unassured or retrospectively reviewed interim reports. While prior studies highlight certain benefits and costs of interim reviews in the U.S., their evidence is based largely on survey responses, is subject to endogeneity concerns, and does not directly assess the quality of interim reports.<sup>8</sup>

There are other studies based on non-U.S. settings where assurance for interim reports is voluntary. Based on U.K. listed firms, Mangena and Taurinana (2008) find that interim reviews are associated with a higher degree of compliance with the best practices statement on interim reports. Using a Canadian sample, Bédard and Courteau (2015) find that total audit fees are 18 percent higher for firms choosing to have quarterly reviews but fail to find evidence that the reviews improve interim reporting quality. Kajüter et al. (2016) examine German firms and find that reviewed interim reports elicit stronger market reactions at the time of disclosure, primarily due to the signaling effect of the review rather than improvements in earnings quality. Lin and Yen (2023), using Chinese listed firms, show that interim audits reduce both the annual audit time lag and a risk of restating annual reports.<sup>9</sup>

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<sup>8</sup> Several prior studies examine the choice, benefits, and costs associated with different levels of assurance (i.e., audits, reviews, or compilations), in the context of private firms (Blackwell, Noland, and Winters 1998; Allee and Yohn 2009; Minnis 2011; Lisowsky and Minnis 2020; Badertscher et al. 2023).

<sup>9</sup> A relevant study, Grosse and Scott (2022), examine the information content of interim review assurance in Australia, where interim assurance is mandatory, and document that going concern opinions in interim reports provide investors with new and relevant information.

In sum, existing evidence is generally mixed and subject to endogeneity issues. In contrast, our study provides more recent evidence on the impact of interim reviews and employs a novel identification strategy to better identify the impact of interim reviews on the quality of interim reports.

### **2.3 Hypothesis Development**

Firm managers have both the incentive and the ability to manage earnings (Healy 1985; Mendenhall and Nichols 1988; Burgstahler and Dichev 1997; Jeter and Shivakumar 1999; Matsunaga and Park 2001; Roychowdhury 2006). Prior to the SEC's mandate requiring timely auditor reviews of interim financial statements, managers who opted out of such reviews faced relatively limited external oversight during the quarterly reporting process. This lack of timely monitoring may have given managers greater room to manipulate interim financial results, particularly given the considerable discretion afforded in preparing quarterly reports. Consistent with this notion, prior research documents widespread earnings management in interim periods (Mendenhall and Nichols 1988; Jeter and Shivakumar 1999; Bartov, Givoly, and Hayn 2002; Brown and Pinello 2007; Das, Shroff, and Zhang 2009). Auditor involvement with each quarterly report should instill discipline and rigor in the reporting process. The SEC originally justified the requirement of interim reviews in part to counteract pressures on managers to manage quarterly earnings. Knowing that auditors will review the quarterly figures imposes "more discipline on the process", making it harder for management to engage in inappropriate earnings manipulations.<sup>10</sup> Ceteris paribus, auditor reviews during the interim period increase the level of monitoring, which should constrain managerial opportunism and reduce earnings manipulation (Jensen and Meckling 1976).

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<sup>10</sup> See Exchange Act Release No. 34-42266.

In addition to deterring intentional misreporting, interim reviews can enhance reporting quality by reducing unintentional errors. Given that interim reporting often involves complex assumptions and estimates, auditor involvement at this stage enables timely consultation, error correction, and early resolution of material accounting issues. Auditors also play an advisory role by offering technical guidance and detecting mistakes before they flow into financial disclosures. Thus, beyond curbing opportunism and earnings manipulation, interim reviews are expected to improve the accuracy and reliability of financial reporting by minimizing unintentional errors.

Taken together, these two channels—reduced opportunism/earnings manipulation and reduced reporting errors—suggest that auditor reviews during interim periods improve interim reporting quality. Accordingly, we state our hypothesis in the alternative form:

***H1.** Interim reviews improve the quality of interim financial reporting.*

Our hypothesis is not without tension. First, interim reviews offer only limited oversight, potentially resulting in no discernible improvement in reporting quality. Second, as firms rarely include auditor review reports in their interim financial statements and the level of assurance is lower than an audit, auditor litigation risk is arguably lower for interim reviews (Krishnan and Zhang 2005). To the extent auditor litigation risk drives auditor effort (Simunic 1980), reviews could have no meaningful effect on interim financial reporting quality. Third, managerial anticipation of year-end audits may deter opportunistic behavior in interim periods, thereby diminishing the incremental value of interim reviews (Schneider and Wilner 1990). Overall, it remains an open empirical question whether interim reviews improve the quality of interim financial reporting.

### **3. PRELIMINARY EVIDENCE ON ACTUAL REVIEW ADJUSTMENTS**

Before we begin our primary analysis, we provide descriptive evidence on the changes made to 10-Qs during the review process. While the Securities Exchange Act of 1934 §210.10-01(d) mandates concurrent reviews for interim financial statements, it is possible a firm is unable to acquire a review prior to filing its 10-Q. In these instances, the SEC requires that the firm (1) identifies the report as deficient, (2) labels the columns in the financial statements as “not reviewed” (as opposed to the word “unaudited” which typically serves as the header for these columns), (3) describes how the firm will remedy the situation, and (4) files an amended report once the 10-Q is reviewed by an independent audit firm registered with the PCAOB (SEC 2019 Section 4410.3).

To identify unreviewed 10-Qs, we create a Python script that parses 10-Qs and 10-Q/As from 2003 to 2018 by sentence for the words “review,” “independent,” “public,” and at least one term that designates no review was completed (i.e., “prior,” “lack,” “not,” or “without”).<sup>11</sup> We then manually review each financial statement identified by the script for accuracy. Excluding false positives leaves 400 unreviewed firm-quarters. Of 400, we successfully identify the review completion date and the corresponding 10-Q/A filing for 258 firm-quarters and hand-collect data from both the original 10-Q filings and their amended versions in the SEC’s EDGAR database.<sup>12</sup> This process yields 516 firm-quarter observations, capturing pre- and post-review financial numbers, which enable us to document the actual adjustments made to these quarterly reports.<sup>13</sup>

In Table 1, we present descriptive statistics, the results of Wilcoxon (1945) matched-pair signed-rank tests, and the results of sign tests (Snedecor and Cochran 1989; Sprent and Smeeton

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<sup>11</sup> 10-Q/As is filed when a company needs to revise or correct information in a previously filed 10-Qs.

<sup>12</sup> Considering there were approximately 362,691 10-Qs filed with the SEC from 2003 to 2018, the 258 unreviewed 10-Qs represent approximately 0.071 percent of all 10-Q filings.

<sup>13</sup> Among the 258 unreviewed 10-Q filings, 172 explicitly disclose their unreviewed status at the time of filing, while 86 do not. For the latter group, firms take an average of 81 days after the initial filing date to disclose that the 10-Q was unreviewed. Finally, across all 258 cases, firms take an average of 181 days from the original 10-Q filing date to submit a reviewed and updated version.

2007) for the sample of 516 firm-quarter observations. Columns (1) and (2) present the mean values for various line items as originally reported (unreviewed) and subsequently refiled (reviewed).<sup>14</sup> Column (3) presents the results of the Wilcoxon matched-pair signed-rank tests and should be interpreted as evidence of reviews having a material effect on a specific line item or combination of line items. Columns (4) and (5) show the percentage of the changes (from the unreviewed numbers to the reviewed numbers) that result in an increase or decrease in the given account. Column (6) presents the results of sign tests, which determine if one member of the pair (i.e., unreviewed or reviewed financial statement line item) tends to be greater than (or less than) the other member of the pair. The final three columns show the proportions of line items increasing or decreasing by more than 5 percent of the originally reported net income.

Focusing on Columns (1) to (3), the average firm has an asset value of \$841 million pre-review, which increases slightly to \$845 million post-review. Column (3) indicates that this difference is not statistically significant. However, Column (3) shows that several other items change following the review, including long-term debt (*DLTTQ*), total liabilities (*LTQ*), common equity (*CEQQ*), income before extraordinary items (*IBQ*), net income (*NIQ*), operating cash flow (*OANCF*), and both total and current accruals (*TAC*, *TCAC*).

The proportions of positive and negative adjustments to specific line items and the associated sign tests in Columns (4) to (6) help determine the tendency of firms to under- or over-report specific line items or combinations of line items. For example, total liabilities increase 34.5 percent of the time while decreasing 16.7 percent of the time once the review work is completed. The sign test suggests firms are more likely to initially under-report, as opposed to over-report, their total liabilities. This underreporting of liabilities appears to be matched with initial

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<sup>14</sup> There are 500, 476, and 476 firm-quarter observations for *INV\_REC*, *TAC*, and *TCAC*, respectively, due to missing data in the 10-Q.

overreporting of equity, as reviews tend to result in significantly more frequent decreases in equity values than increases. Interim reviews also result in more decreases to the income before extraordinary items, as well as total and current accruals. These results suggest reviews may curb managerial opportunism or overconfidence.

Columns (7) to (9) highlight the frequency with which reviews result in changes to line items with an effect being greater than 5% of original net income reported. The account least corrected during the review process is the preferred stock account (*PSTKQ*), with 99.2 percent of the originally reported preferred stock amounts being materially correct. On the other hand, firms struggle with liabilities (*LTQ*), assets (*ASSETS*), common equity (*CEQQ*), income line items *IBQ* and *NIQ*, as reviews result in changes to these accounts exceed 5% in a large number of cases.<sup>15</sup> Column (9) suggests that significant changes are made to these accounts between 30.2 and 45 percent of the time. Overall, interim reviews appear to result in significant adjustments to many items in the interim financial statements.

## 4. RESEARCH DESIGN AND DESCRIPTIVE STATISTICS

### 4.1 Multiple Regression Model

To identify the effect of reviews on financial reporting quality, we use the following DID regressions exploiting the timing of the Final Rule with firm and year fixed effects, clustering standard errors at the client level:

$$ACA = \alpha_0 + \alpha_1 POST + \alpha_2 TREAT*POST + \alpha_3 LNAT + \alpha_4 ROA + \alpha_5 LEV + \alpha_6 CURR + \alpha_7 LOSS + \alpha_j(FE) + \varepsilon \quad (1)$$

$$TCAC = \beta_0 + \beta_1 POST + \beta_2 TREAT*POST + \beta_3 LNAT + \beta_4 ROA + \beta_5 LEV + \beta_6 CURR + \beta_7 LOSS + \beta_8 FQYI + \beta_9 INV\_AT\_L + \beta_{10} DREV + \beta_{11} ROA\_L + \beta_{12} INV\_AT\_L * FQYI + \beta_{13} DREV * FQYI + \beta_{14} ROA\_L * FQYI + \beta_j(FE) + \varepsilon \quad (2)$$

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<sup>15</sup> We exclude total accruals and total current accruals from our discussion because these measures are not line items reported on the financial statements and are, instead, a combination of several financial statement line items. *LOSS* is not tabulated because it is an indicator variable, and changes to its value are not scalable by net income.

$$RESTQ = \gamma_0 + \gamma_1 POST + \gamma_2 TREAT*POST + \gamma_3 RESTQ\_L + \gamma_4 LNAT + \gamma_5 INV\_REC + \gamma_6 MERGER + \gamma_7 SALEGR + \gamma_8 LOSS + \gamma_9 LEV + \gamma_{10} BM + \gamma_j(FE) + \varepsilon \quad (3)$$

The variable of interest across all three specifications is the interaction between *TREAT* and *POST*. *POST* is an indicator for quarterly reports filed on or after March 15, 2000.<sup>16</sup> *TREAT* is an indicator equal to one for clients with non-Big 5 auditors because the SEC mandate primarily affected the clients of non-Big 5 auditors (SEC 1999). Therefore, the coefficients on *TREAT\*POST* represent changes in interim reporting quality for treated firms from the pre- to post-Final Rule period, after accounting for changes over the same interval for firms in the control group. Consistent with our hypothesis, we expect a significantly negative coefficient on *TREAT\*POST* in all specifications.

We use three variants to capture interim reporting quality. First, following Bédard and Courteau (2015), we use *ACA* as it focuses on current accruals which are arguably more likely to be used to manage earnings across quarters. We calculate *ACA* as the residual from the following regression grouped by fiscal year, quarter, and two-digit SIC:

$$TCAC = \alpha_0 + \alpha_1(1/AT_{q-4}) + \alpha_2 DREV_q + \alpha_3 ROA_{q-4} + \varepsilon \quad (4)$$

Second, given that the use of the residual as a measure of financial reporting quality can lead to biased coefficients (Chen, Hribar, and Melessa 2018), we follow Chen et al.'s (2018) suggestion. Specifically, we replace the dependent variable in Equation (1) with *TCAC* and include the independent variables included in Equation (4) and their interactions with a fiscal-quarter-year-industry indicator (*FQYI*) as control variables. Finally, because accruals can be a noisy measure of financial reporting quality, we use a less ambiguous measure, i.e., subsequent restatement of the quarterly financial statement (*RESTQ*) as our final measure of financial reporting quality.

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<sup>16</sup> We include *POST* despite the year fixed effect because the SEC mandate became effective during the first quarter of 2000. The year fixed effect is, therefore, not perfectly linear with *POST*. However, we exclude *TREAT* from the regressions because of its collinearity with firm fixed effects.

For the *ACA* and *TCAC* specifications, we control for company size (*LNAT*) as it is expected to be negatively related to discretionary accruals because larger companies have better internal control systems (Dechow, Ge, and Schrand 2010). Following Lawrence, Minutti-Meza, and Zhang (2011) and Butler, Leone, and Willenborg (2004), we include controls for firm-specific performance (*ROA*) – because firm profitability may affect accruals – and financial risk (*LEV*, *CURR*). We also include a loss indicator (*LOSS*) as loss firms are likely to receive more outside scrutiny and are less likely to manage accruals.

For the *RESTQ* specification, we control for whether the prior year 10-Q is subsequently restated (*RESTQ\_L*), firm size (*LNAT*), inventory and receivables to assets (*INV\_REC*), an indicator equal to one for firm-quarters with mergers (*MERGER*), sales growth (*SALEGR*), a loss indicator (*LOSS*), leverage (*LEV*), and book-to-market (*BM*). We winsorize all continuous variables at the 1st and 99th percentiles to minimize the potential influence of outliers. We define all variables in Appendix B.

## 4.2 Sample Selection

Table 2, Panel A specifies our sample selection process. We begin with all observations in Compustat’s ‘Snapshot – Point in Time – Quarterly’ database (herein referred to as PITQ) from within one year of the SEC’s Final Rule (March 15, 1999 to March 15, 2001).<sup>17</sup> PITQ tracks firm line items over time, with preliminary values (update code equals 2) coming from earnings announcements and finalized values (update code equals 3) added when the 10-Q is filed. Multiple observations with the same code for the same data date may reflect restatements, amendments,

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<sup>17</sup> We use a one-year window, as opposed to a multiyear window for several reasons. First, because auditors were already performing review procedures for clients at year-end, the regulatory change simply shifts the timing of this work to before the 10-Q filing. As no new procedures needed to be developed or adopted, we expect the treatment effect to occur immediately, with timelier reviews directly influencing financial reporting quality. Second, our observations occur at the firm-quarter, which results in approximately 3 observations per firm in both the pre and post period. Last, extending the window introduces the possibility of including observations impacted by SOX.

reclassifications, data corrections, or Compustat’s periodic re-standardization of historical data (Lyle, Siano, and Yohn 2024). To capture the originally reported interim financial statement line items, we retain only the first firm-quarter observation where the update code is equal to 3. This data collection approach allows us to obtain reviewed interim financial statement line items for the control group and unreviewed (reviewed) interim financial statement line items in the pre-period (post-period) for treatment firms.<sup>18</sup> We then remove all Q4 observations because Q4 financial statements receive audits. Lastly, we remove observations lacking control variables. These restrictions result in a final *ACA* and *TCAC* (*RESTQ*) sample composed of 24,393 (21,330) firm-quarters.

Unless stated otherwise, we obtain the variables necessary to estimate Equations (1) to (3) from the PITQ database. We obtain stock price, auditor, and industry information from Compustat Fundamental Annual and Quarterly databases. We collect additional auditor data from Audit Analytics’ Audit Opinions database to avoid coding errors in Compustat (Utke 2018).<sup>19</sup> When available, we use the auditor information provided by Audit Analytics, otherwise we use Compustat provided auditor information. *RESTQ* is calculated using Audit Analytics’ Non-Reliance database.

### 4.3 Descriptive Statistics

Table 2, Panel B presents descriptive statistics for the *ACA* and *TCAC* sample where we decompose the sample into control (*TREAT*=0) and treatment (*TREAT*=1) firm-quarter observations and further divide into pre- and post-periods. Clients of non-Big 5 auditors (the treated group) do not have statistically different *ACA* or *TCAC* when comparing the pre- and post-

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<sup>18</sup> PITQ is based on the as-reported numbers from the original 10-Q filings, which are reviewed in the “timely” group (i.e., contemporaneously reviewed) but unreviewed in “retrospective” group (i.e. year-end review). Accordingly, the dataset enables a direct comparison of financial reporting quality between reviewed and unreviewed 10-Qs.

<sup>19</sup> We update the auditor in Compustat based on those recommendations provided in Utke (2018).

periods while clients of Big 5 auditors (the control group) exhibit some significant changes in accruals quality over the same period. The difference-in-differences comparison between the two groups, Column (7), is statistically insignificant.

Table 2, Panel C reports descriptive statistics for the *RESTQ* sample. Non-Big 5 clients show no significant change in *RESTQ* between the pre- and post-periods, whereas Big 5 clients exhibit a higher likelihood of *RESTQ* post-period. The difference-in-differences test in Column (7) is statistically significant, indicating that interim reporting quality remained stable for non-Big 5 clients but declined for Big 5 clients. Overall, interim report quality appears to decrease from pre- to post-period, but the timely review requirement may have helped non-Big 5 clients avoid this decline, unlike Big 5 clients whose review practices did not change.<sup>20</sup>

## 5. PRIMARY RESULTS

Table 3 presents the results of the DID regressions. Note that we use one-tailed tests when evaluating hypotheses with a predicted sign on the coefficient estimates. Consistent with H1, the coefficients on *TREAT\*POST* in Columns (1), (2) and (3) are significantly negative.<sup>21</sup> These results suggest that firms that are exogenously required to receive contemporaneous auditor interim reviews experience a greater reduction in abnormal accruals, total current accruals, and their likelihood to subsequently restate their interim reports after the Final Rule when compared to control firms. Economically, the negative coefficient on *TREAT\*POST* in the *RESTQ* specification represents a 19 percent reduction in a firm's likelihood of restating its interim

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<sup>20</sup> There appears to be a general decline in interim reporting quality during our sample period, which coincides with the wave of accounting scandals and misconducts that ultimately led to the passage of SOX.

<sup>21</sup> We re-run our analyses reported in Table 3 with firm and quarter-year fixed effects in lieu of firm and year fixed effects. This specification absorbs time-invariant firm characteristics as well as common quarterly shocks. We find that the results remain unchanged.

reports.<sup>22</sup> Overall, the results in Table 3 support the notion that interim reviews improve interim financial reporting quality.

The results in Table 3 are similar to findings from prior studies using U.S. data from the late 1980s through early 1990s (Ettredge et al. 2000a, 2000b; Manry et al. 2003), but are inconsistent with the more recent work utilizing non-U.S. firms (Bédard and Courteau 2015; Kajüter et al. 2016). We suspect there are several reasons for the inconsistent results. First, the reporting regime in the U.S. differs from that of Canada and Germany. As Bédard and Courteau (2015) discuss, their lack of results could be driven by insufficient minimum standards for interim review procedures required under Canadian standards. Second, both Bédard and Courteau (2015) and Kajüter et al. (2016) employ propensity score matching (PSM) by modeling the decision to purchase a review. PSM is inherently sensitive to sampling methods and only resolves functional form issues as it does not accommodate the choice itself (Shipman, Swanquist, and Whited 2017). Last, because firms purchasing reviews likely have strong financial reporting controls in place, the matched sample firms likely have similar commitments to high financial reporting quality. To the extent strong controls weaken the marginal benefit of interim reviews, PSM could obscure review benefits for the firms lacking such alternative controls as these firms would not be included in the matched sample.

## 6. ROBUSTNESS ANALYSES

### 6.1 Test of Parallel Trends

One concern with an event-based research design is that an unidentified, preexisting trend drives the results. To address this concern, we decompose the sample period into four pre-implementation periods ( $PREPERIOD_{t-4}$ ,  $PREPERIOD_{t-3}$ ,  $PREPERIOD_{t-2}$ ,  $PREPERIOD_{t-1}$ ) and four

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<sup>22</sup> We do not calculate the economic significance for *ACA* and *TCAC* due to their small mean values. In addition, these measures generally have means at or near zero, limiting meaningful interpretation.

post-implementation periods ( $POSTPERIOD_{t+1}$ ,  $POSTPERIOD_{t+2}$ ,  $POSTPERIOD_{t+3}$ ,  $POSTPERIOD_{t+4}$ ). If our results capture some preexisting trend unrelated to the Final Rule, we may observe that treated firms exhibit differential reporting quality even in the pre-period. The results in Table 4 show no such trend. Specifically, we see that the pre-period interaction terms are all insignificant across all columns, suggesting that financial reporting quality in the pre-period is similar across treatment and control firms. While parallel trends cannot be directly observed, this analysis provides some relief that our primary findings are not merely an artifact of a preexisting, unidentified trend.

## 6.2 Omitted Variable Bias

While our model includes firm and year fixed effects along with various control variables, it is still possible that an omitted correlated variable is driving our results. We follow the procedure in Oster (2019) to assess the potential bias from correlated, omitted variables that could drive our results (Call, Martin, Sharp, and Wilde 2018; Green, Jame, and Lock 2019; Jha, Kulchania, and Smith 2021; Cowle, Kleppe, Moon Jr, and Shipman 2022; Bourveau, Brochet, Ferri, and Sun 2024). The test (untabulated) suggests that omitted variables would need to be between 1.05 and 1.58 times more important than the combined effects of all included controls for there to be no relation between reviews and our accruals and restatement measures. Because omitted variables likely have a relative importance less than one, our results suggest that omitted variables are unlikely to explain our primary findings (Altonji, Elder, and Taber 2005; Oster 2019).

## 6.3 Confounding Events

We consider whether our findings are driven by confounding events that disproportionately affected clients of non-Big 5 auditors in ways that would improve interim reporting quality around 2000. While we are not aware of any such events, two developments occurred around 2000: (1)

the new audit committee disclosure requirements included in the Final Rule and (2) the adoption of SAB 101 (Revenue Recognition).<sup>23</sup> We run additional analyses to mitigate the concerns that our results are somehow driven by these events.

First, beyond the timely review requirement, the Final Rule also mandates several audit committee-related disclosures in proxy statements. Most relevant to our setting is the disclosure of the independence of members of the audit committee. A concern is that this requirement may have prompted firms to alter the audit committee composition to report a higher share of independent members. If clients of non-Big 5 auditors had weaker audit committees before the Final Rule, they may have responded by increasing independence. Prior studies document that audit committee independence is associated with higher reporting quality (Klein 2002; Krishnan 2005), so our findings could partly reflect this disclosure change rather than the review requirement.

We mitigate this concern in two ways. First, we re-estimate Equation (1) by replacing our dependent variable with a continuous measure of audit committee independence (*AC\_IND*), defined as the ratio of independent audit committee members to total number of audit committee members. We obtain audit committee member independence from the ISS ESG Directors U.S. Legacy database. Our DID estimator, *TREAT\*POST*, is insignificant (untabulated), suggesting that changes in audit committee independence are similar across treatment and control firms from the pre- to post-period. Second, we re-estimate our *ACA*, *TCAC*, and *RESTQ* models, including *AC\_IND* as an additional control. To preserve sample size, we set *AC\_IND* equal to zero when missing and include an indicator variable to flag such cases. The results remain robust to these specifications (untabulated).

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<sup>23</sup> Available at: <https://www.sec.gov/news/speech/spch495.htm> and <https://www.sec.gov/rules-regulations/1999/12/audit-committee-disclosure>

Next, in December 1999 the SEC issued SAB 101 to clarify the application of GAAP to revenue recognition, addressing widespread problems in financial reporting and restatements. Given that SAB 101 primarily affected manufacturing firms, we re-estimate our main analyses after excluding firms classified as manufacturing under Fama and French's 12-industry definition (Turner 2001).<sup>24</sup> Our main results (untabulated) remain unchanged, reinforcing the inference that the documented improvements stem from the interim review mandate.

#### **6.4 Monte Carlo Falsification Test**

Another issue with our findings is that they could be the result of chance. To address this concern, we replicate our primary analyses using Monte Carlo simulation. We randomly assign *TREAT* at the firm level to ensure that all firm-quarter observations receive a consistent treatment status. We repeat this process 1,000 times and examine the coefficients on *TREAT\*POST*. In untabulated analyses, we find that none of the 1,000 placebo coefficients for *ACA*, only three for *TCAC*, and 36 for *RESTQ* are more negative than the corresponding coefficients reported in Table 3. Using the averages and standard deviations of the 1,000 placebo tests, we also find insignificant placebo treatment effects for the *ACA* ( $t = -0.019$ ), *TCAC* ( $t = 0.118$ ) and *RESTQ* ( $t = -0.619$ ) specifications. The insignificant coefficients in the Monte Carlo simulations alleviate concerns that our results are attributable to chance.

#### **6.5 Restricted Sample Analyses**

We conduct two restricted sample analyses to address concerns about treatment and control group composition. First, our results could be disproportionately influenced by Arthur Andersen's clients. Even prior to Enron and Andersen's collapse, its clients were suspected of lower reporting quality. Since Andersen's clients fall into the control group, observed improvements among non-

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<sup>24</sup> Available at: [https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data\\_library/det\\_12\\_ind\\_port.html](https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library/det_12_ind_port.html)

Big 5 clients might simply reflect Andersen-specific issues. To address this possibility, we exclude Andersen's clients and re-estimate our models. Second, the SEC noted that both Big 5 and other large auditors had adopted timely interim review policies. If large non-Big 5 firms (e.g., Grant Thornton and BDO) were more likely than smaller firms to do so, their inclusion could bias comparisons. We therefore exclude Grant Thornton and BDO clients and re-estimate our models. In untabulated analyses, our results remain largely consistent across restricted samples.<sup>25</sup>

## 7. ADDITIONAL ANALYSES

### 7.1 Interim Reviews Post-SOX

While our DID analyses allow for the clean identification of the relation between interim reviews and financial reporting quality, the sample predates SOX. The extent to which our findings generalize in more recent time periods remains unclear because SOX introduced a multitude of regulations seeking to improve financial reporting quality. These regulations include CEO/CFO certification of financial statements (Section 302), managerial discussion/assessment and auditor attestation of internal controls (Section 404), and criminal penalties for intentional misstatement or fraud (Section 906). Overall, SOX should discourage managerial manipulation of earnings and improve financial reporting quality through its internal control requirements. As such, it could be the case that the post-SOX reporting environment reduces the benefits of reviews.

To test whether reviews continue to improve interim reporting quality after the implementation of SOX, we restrict our sample to Q1, Q2, and Q3 reports with quarter-end dates from 2003 to 2018. We utilize the following ordinary least square regression:

$$FRQ = \alpha_0 + \alpha_1 NO\_REVIEW + \sum \alpha_i (CONTROLS) + \alpha_j (FE) + \varepsilon \quad (5)$$

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<sup>25</sup> Exceptions arise when our DID estimator for the *RESTQ* specification becomes insignificant after excluding clients of Arthur Andersen ( $p = 0.140$ ) or clients of Grant Thornton and BDO ( $p = 0.132$ ) from the sample.

where *FRQ* is *ACA*, *TCAC*, and *RESTQ*. *NO\_REVIEW* is an indicator equal to one if the firm discloses that its 10-Q is not reviewed. Linking *NO\_REVIEW* to the other databases results in a final *ACA/TCAC* (*RESTQ*) sample with 79 (69) unreviewed firm-quarters. *CONTROLS* are the same as in Equations (1) to (3).

Table 5 presents the results. We do not find any association using *ACA* and *TCAC* (in Columns (1) and (2)), but the results in Column (3) suggest that financial statements lacking auditor reviews are 18.2 percent more likely to be restated. As the number of firms filing unreviewed financial statements is small, we test the robustness of this result by performing a falsification test using Monte Carlo simulations. We randomly change *NO\_REVIEW* across observations 1,000 times. These simulations (untabulated) fail to produce a single *NO\_REVIEW* coefficient larger than the 0.182 coefficient reported in Table 5. Further, using the averages and standard deviations of the 1,000 placebo tests, we fail to find a significant placebo treatment effect for the *RESTQ* specification ( $t = -0.479$ ). Overall, the evidence in Table 5 provides some evidence that reviews improve the quality of interim financial statements in the post-SOX period.

## 7.2 Cost of Debt

Prior research on auditor reviews and the cost of debt provides mixed evidence. Badertscher et al. (2023) find that reviewed financial statements are associated with a lower cost of debt in the subsequent year than financial statements that are merely compiled by the auditor. Conversely, Minnis (2011) fails to find a significant difference in the cost of debt in the subsequent year for private companies that elect to have their financial statements reviewed versus compiled. Importantly, both of these studies utilize *private* firm data and compare reviewed versus compiled financial data. The findings in these studies do not necessarily generalize to *public* firms that are subject to a multitude of regulatory constraints.

To examine whether reviews are associated with the cost of debt using our research design, we modify Equation (1) to control for additional variables used in Minnis (2011) and Badertscher et al. (2023):

$$COD_{q+4} = \alpha_0 + \alpha_1 POST + \alpha_2 TREAT*POST + \alpha_3 LNAT + \alpha_4 ROA + \alpha_5 LEV + \alpha_6 CURR + \alpha_7 LOSS + \alpha_8 SALEGR + \alpha_9 PPE + \alpha_{10} INTCOV + \alpha_{11} NEGEQUITY + \alpha_j(FE) + \varepsilon \quad (6)$$

where  $COD_{q+4}$  is equal to the quarterly interest expense for quarter  $q+4$ , divided by the average debt outstanding for quarter  $q+4$ . All other variables are defined in Appendix B.

Table 6 presents the results. Similar to Badertscher et al. (2023), the negative coefficient on  $TREAT*POST$  suggests that reviews are associated with a lower cost of debt. More specifically, the -0.002 coefficient on  $TREAT*POST$  implies that reviews are associated with a 20 basis point interest rate decrease. Overall, the results in Table 6 suggest that reviews reduce the cost of debt for treated firms.

### 7.3 Market Reaction

Our main results suggest that interim reviews improve the financial reporting quality of interim reports. Further, prior research finds that analysts and investors perceive interim reports as more reliable when reviewed by external auditors (Pany and Smith 1982; Manry et al. 2003). As such, we expect that interim reviews are associated with stronger market reactions to surprise earnings announcements.

To test this possibility, we use the following DID regression, clustering standard errors at the client level:

$$LNCAR = \alpha_0 + \alpha_1 UNEX + \alpha_2 POST + \alpha_3 TREAT*POST + \alpha_4 UNEX*POST + \alpha_5 UNEX*TREAT + \alpha_6 UNEX*TREAT*POST + \alpha_7 LNPRESANNRET + \alpha_8 BM + \alpha_9 NUMEST + \alpha_{10} LNAT + \alpha_j(FE) + \varepsilon \quad (7)$$

where  $LNCAR$  is the natural logarithm of cumulative 3-day abnormal return for a firm around the 10-Q file date.  $UNEX$  is a measure of earnings surprise. A significantly positive interaction on

*UNEX\*TREAT\*POST* would provide evidence that investors react more strongly to reviewed versus unreviewed financial statements. Similar to Teoh and Wong (1993), we control for firm growth and persistence (*BM*), noise in the pre-filing environment (*NUMEST*), and firm size (*LNAT*). We also control for *LNPREANNRET*, which captures stock returns from the forecast date to two days before the earnings announcement, as a proxy for new information incorporated into prices after the forecast was issued. *FE* includes firm and year fixed effects.

We report the results in Table 7. Column (1) pools the entire sample together and utilizes a triple-interaction term to determine if the market reacts more strongly to unexpected earnings surprises of treated firms in the post-period. While the coefficient on *UNEX\*TREAT\*POST* is positive, it is not significant. In Columns (2) and (3), we split the sample into treatment and control firms to avoid the triple interaction. The significantly positive coefficient for *UNEX\*POST* in Column (2) shows that the market more strongly reacts to unexpected earnings in the post-period for treatment firms. Conversely, in Column (3), we fail to find a significant change in the market's reaction to unexpected earnings in the post-period for control firms. Despite the difference in significance, the results of Fisher permutation tests fail to find significant differences between the *UNEX\*POST* coefficients across the treatment and control subsamples. Overall, the results in Table 7 provide limited evidence that the market reacts more strongly to reviewed financial statements.

## 7.4 Filing Delay

SEC (1999) discusses concerns relating to the possible filing delay associated with interim reviews, highlighting this delay may be a particular issue for smaller filers. This concern is particularly salient considering the SEC's continual emphasis on investors' need for timely disclosures (e.g., Glassman 2002; Clayton 2018; SEC 2020a, 2020b).. To test the possibility that

reviews slow down the filing of interim financial statements, we re-estimate Equation (1), replacing the dependent variable with the log transformation of the number of days between the quarter period end date and the date the 10-Q is filed with the SEC ( $LN\_DELAY$ ). To determine the 10-Q filing date, we create a Python script that collects the period ended date for all 10-Qs filed with the SEC. In untabulated analyses, we fail to find a significant relationship between  $TREAT*POST$  and filing delay. Overall, we find no evidence supporting critics' concerns that quarterly reviews result in filing delays for firms regardless of firm size.<sup>26</sup>

## 7.5 Benefits Accruing to 10-Ks

Finally, we test whether interim reviews improve year-end financial reporting quality. We include this analysis as an additional test because our main analysis focuses on the direct benefits of reviews. Two important changes occur in the fourth quarter for treated firms following the rule change. First, the quarterly reports are now being reviewed during the interim period. Second, the retrospective review no longer occurs at the end of the year and auditors are no longer burdened with the associated retrospective review work while conducting the audit. For these reasons, an analysis of any changes during the fourth quarter for treated versus control firms in the pre-SOX period is ultimately capturing the difference between a timely and a retrospective review.

Whether reviews improve year-end financial reporting quality is an empirical question. On the one hand, the shift of work from year-end to the interim period could allow the auditor to identify misstatements earlier in the year, thereby preventing those errors from persisting until year-end (SEC 1999). On the other hand, annual financial statements are audited. As a result, the

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<sup>26</sup> We examine whether interim reviews reduce annual filing delays. To test this possibility, we re-run the filing delay analysis but restrict the sample to Q4 observations only. In untabulated analyses, we fail to find a significant relationship between  $TREAT*POST$  and filing delay.

benefits provided by the review process may not significantly affect the quality of the annual financial statements due to the scrutiny they already receive.

To test whether reviews improve year-end financial reporting quality, we re-run our *ACA*, *TCAC*, and *RESTQ* analyses but restrict our sample to Q4 observations only. The results in Table 8 suggest that interim reviews are only negatively associated with abnormal current accruals. Overall, Table 8 provides limited evidence that shifting review work to the interim period improves the financial reporting quality of annual financial statements. This limited evidence may suggest that auditors already conduct extensive year-end audit procedures, leaving little room for additional improvements attributable to interim reviews.

## **8. CONCLUSION**

While the value of timely and credible interim financial information is well recognized by market participants and regulators, debate continues over whether the quarterly reporting system justifies its costs, particularly in light of concerns about imposing unnecessary regulatory burdens on firms. Recently, the U.S. President renewed calls to end quarterly reporting, arguing that “this will save money, and allow managers to focus on properly running their companies” (Cherian, Krauskopf, and Gillison 2025). An important component of these costs involves the requirement for auditors to conduct timely reviews of interim financial statements. Policymakers and regulators must weigh these costs against the potential benefits. Our study contributes to this debate by providing evidence on whether timely auditor reviews enhance the quality of interim financial statements, offering insights for stakeholders engaged in reassessing the reporting system and, more broadly, for policymakers, auditors, and audit firms.

Two key findings emerge. First, we document descriptive evidence on the impact of auditor reviews on interim financial statements by hand-collecting a unique sample of firms that initially

file unreviewed 10-Qs but subsequently amend them following completion of the interim review. The evidence suggests that timely reviews may play an important role in enhancing the reliability of interim financial reporting by correcting managerial overconfidence or manipulation. Second, we exploit a quasi-natural experiment and provide empirical evidence that reviews improve quarterly financial reporting quality using a DID research design.

Several caveats are in order. First, although our DID design exploits the plausibly exogenous expansion of timely reviews to non-Big 5 clients, auditor choice is endogenous. Despite firm and year fixed effects, rich controls, and multiple robustness checks, correlated, omitted variables could still bias our estimates. Second, while our results show that timely interim reviews improve reporting quality, they do not reveal why. The observed improvements may stem from a deterrence effect, where managers curb opportunism in anticipation of quarterly oversight, or from an error-correction effect, where auditors detect and adjust misstatements during the review. Third, our core identification window in the DID design centers on the 2000 rule change and precedes SOX, PCAOB oversight and the collapse of Andersen. While our post-SOX tests are suggestive, the small number of unreviewed filings limits statistical power and external validity in later regimes, private firms, or jurisdictions with voluntary (or semiannual) reporting. Finally, our analysis focuses exclusively on the benefits of timely reviews, by examining their effect on interim reporting quality, but does not address potential costs. Because audit fee data around 2000 are sparse and inconsistent, we cannot evaluate whether improvements in reporting quality came at the expense of higher audit fees or resource reallocations.

Finally, our findings suggest avenues for future research. Future work could disentangle whether interim reviews enhance reporting quality primarily by deterring opportunism, correcting errors, or redistributing audit effort, as each has distinct implications for policy. Studies could also

examine how reviews interact with other monitoring mechanisms or vary across jurisdictions where such reviews are voluntary. Moreover, as audit firms adopt advanced analytics and continuous assurance technologies, research could assess whether these innovations complement or substitute for traditional interim reviews in promoting reliable financial reporting.

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## **APPENDIX A: Excerpts from Comment Letters**

### **PricewaterhouseCoopers LLP:**

The Release requests comment on the need for independent accountants to review interim financial statements before they are filed with the Commission, as the Proposed Rule would require. As noted in the Release, *the major accounting firms recognize the value of timely reviews and generally require them as a condition of their engagement as auditors.* We believe the benefits of performing preissuance reviews include the following.

### **Arthur Andersen LLP:**

*Need for Reviews:* We agree with the Commission’s proposal to require reviews of interim financial statements prior to the filing of a Form 10-Q or 10-QSB. Under current professional auditing standards, that review would be performed in accordance with Statement on Auditing Standards No. 71 (SAS 71). As mentioned in the proposal, *all “Big 5” auditing firms currently require timely quarterly reviews as a part of their client acceptance criteria.* Arthur Andersen implemented this policy for a variety of reasons, including many of the benefits identified by the Commission in its proposal.

### **Deloitte & Touche LLP:**

We endorse the Commission’s proposed requirement for all companies to have timely (“pre-filing”) reviews of interim financial statements by independent auditors. *Since 1993, we have required such reviews as a condition of performing annual audits for our SEC registrant clients.* Our experience with timely quarterly reviews has been good. Generally, timely quarterly reviews are a “win-win” situation for companies and their auditors as they minimize year-end problems that are interim period related.

## APPENDIX B: Variable Definitions

### Dependent Variables: Definition:

*ACA* Bédard and Courteau (2015) model discretionary accruals calculated on a fiscal year-quarter basis by two-digit SIC. Each fiscal-year-quarter-industry must have at least 15 observations. The measure is the residual from the following regression:

$$TCAC = \alpha_0 + \alpha_1 \left( \frac{1}{AT_{q-4}} \right) + \alpha_2 (\Delta REV_q) + \alpha_3 (ROA_{q-4})$$

*TCAC* Total current accruals [(IBQ-OANCFQ+DPQ)/ATQ<sub>q-4</sub>].

*RESTQ* An indicator variable coded one if the interim financial statement is subsequently restated.

*AC\_IND* The number of independent audit committee members divided by the total number of audit committee members.

*COD* Cost of debt [XINTQ/(DLCQ+LLTQ)].

*LNCAR* The natural logarithm of the client's cumulative abnormal return for the 3-day window around the earnings announcement date.

*RESTK* An indicator variable coded one if the annual financial statement is subsequently restated.

### Variables of Interests:

*POST* An indicator variable coded one if the financial report's period end date is on or after March 15, 2000.

*TREAT* An indicator variable coded one if the firm is audited by a non-Big 5 auditor.

*TREAT\*POST* An indicator variable coded one if the financial report's period end date is on or after March 15, 2000 and the firm is audited by a non-Big 5 auditor. This term is the product of *POST* and *TREAT*.

*PREPERIOD<sub>t-#</sub>* An indicator variable coded one if the datadate falls on or between:

- t-4: March 15, 1999 and June 14, 1999
- t-3: June 15, 1999 and September 14, 1999
- t-2: September 15, 1999 and December 14, 1999
- t-1: December 15, 1999 and March 14, 2000

*POSTPERIOD<sub>t+#</sub>* An indicator variable coded one if the datadate falls on or between:

- t+1: March 15, 2000 and June 14, 2000
- t+2: June 15, 2000 and September 14, 2000
- t+3: September 15, 2000 and December 14, 2000
- t+4: December 15, 2000 and March 15, 2001

*NO\_REVIEW* An indicator variable coded one if the financial statement is not reviewed by an independent public accountant registered with the PCAOB when initially filed with the SEC.

### Control Variables:

*LNAT* The natural logarithm of the client's total assets reported on form 10-Q (ATQ).

<i>ROA</i>	The ratio of income before extraordinary items to total assets [IBQ/(ATQ)].
<i>LEV</i>	The ratio of debt to total assets [(DLTTQ+DLCQ)/ATQ].
<i>CURR</i>	The ratio of current assets to current liabilities (ACTQ/LCTQ).
<i>LOSS</i>	An indicator variable coded one if the client reported net income less than 0 (NIQ < 0).
<i>BM</i>	The ratio of common equity to the client's market value of equity [CEQQ/(PRCCQ*CSHOQ)]
<i>SALEGR</i>	Year-over-year sales growth [(SALEQ <sub>q</sub> -SALEQ <sub>q-4</sub> )/(SALEQ <sub>q-4</sub> )]
<i>RESTQ_L</i>	An indicator variable coded one if the same quarter, prior year interim financial statement is subsequently restated.
<i>INV_REC</i>	The sum of inventory plus receivables divided by total assets [(INVTQ+RECTQ)/ATQ].
<i>MERGER</i>	An indicator variable coded one if the client is involved in a merger or acquisition during the fiscal year (non-missing, non-zero AQPQ or AQCQ).
<i>PPE</i>	Property, plant and equipment [PPEGTQ/ATQ <sub>q-4</sub> ].
<i>INTCOV</i>	Earnings before interest, taxes, depreciation, and amortization expenses divided by interest expense [SALEQ-COGSQ-XSGAQ)/XINTQ].
<i>NEGEQUITY</i>	An indicator variable coded one if the client reported negative equity [LTTQ>ATQ].
<i>UNEX</i>	Earnings surprise [MEANEST- INT0A)/PRCCF; Source: IBES Statistics Summary and Actuals, Pricing and Ancillary].
<i>LNPREANNRET</i>	A measure of new information reflected in the stock price that is not reflected in the analyst forecast. Measured as a firm's compound stock market return for the period between the IBES forecast date and the two days before the earnings announcement.
<i>NUMEST</i>	Number of forecasts comprising the EPS estimate [NUMEST; Source: IBES Statistics Summary].

**Hand Collected  
Variables (Table 1)**

<i>CASH</i>	Client cash and cash equivalents as reported on the financial statements.
<i>INV_REC</i>	As defined in Control Variables of Appendix B.
<i>PPENT</i>	Net property, plant, and equipment as reported on the financial statements.
<i>ASSETS</i>	Total assets as reported on the financial statements.
<i>DLCQ</i>	Current portion of long-term debt as reported on the financial statements.
<i>DLTTQ</i>	Long-term portion of long-term debt as reported on the financial statements.
<i>LTQ</i>	Total liabilities as reported on the financial statements.
<i>PSTKQ</i>	Value of preferred stock as reported on the financial statements.
<i>CEQQ</i>	Common equity as reported on the financial statements. includes common stock, additional paid in capital, retained earnings/deficit,

	cumulative other comprehensive income/loss, treasury stock. Excludes preferred stock and unearned shares.
<i>SALEQ</i>	Sales/revenues as reported on the financial statements.
<i>IBQ</i>	Income before extraordinary items as reported on the financial statements.
<i>NIQ</i>	Net income as reported on the financial statements.
<i>DPQ</i>	Depreciation and amortization expense as reported on the financial statements.
<i>OANCF</i>	Net cash provided by (used in) operating activities. Generally equal to the total found at the bottom of the operating activities section of the statement of cash flows.
<i>CAPX</i>	Funds used for additions to property, plants, and equipment, excluding amounts arising from acquisitions (e.g., fixed assets of purchases companies). Found on the statement of cash flows.
<i>ROA</i>	As defined in Control Variables of Appendix B.
<i>TAC</i>	Total accruals [(IBQ-OANCFQ)/ATQ <sub>q-4</sub> ].
<i>TCAC</i>	As defined in Dependent Variables of Appendix B.
<i>SALEGR</i>	As defined in Control Variables of Appendix B.
<i>LOSS</i>	As defined in Control Variables of Appendix B.

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**Table 1: Descriptive Evidence on Actual Changes Made During Interim Reviews**

	Comparisons Between Unreviewed and Reviewed			Changes Once Reviewed		Changes Greater than 5% of Net Income			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>VARIABLE</i>	Unreviewed	Reviewed	WSR Test	Increase	Decrease	Sign Test	Increase	Decrease	No Change
<i>CASH</i>	46.597	46.378		0.089	0.054		0.027	0.031	0.942
<i>INV_REC</i>	0.174	0.171		0.151	0.229		0.023	0.109	0.868
<i>PPENT</i>	184.627	187.052		0.116	0.078		0.089	0.047	0.864
<i>ASSETS</i>	841.141	845.754		0.233	0.194		0.167	0.136	0.698
<i>DLCQ</i>	8.590	9.533		0.066	0.047		0.047	0.031	0.922
<i>DLTTQ</i>	124.132	125.321	*	0.070	0.039		0.062	0.023	0.915
<i>LTQ</i>	697.149	703.912	***	0.345	0.167	***	0.283	0.132	0.585
<i>PSTKQ</i>	0.897	0.901		0.016	0.023		0.004	0.004	0.992
<i>CEQQ</i>	106.425	98.513	***	0.186	0.376	***	0.132	0.318	0.550
<i>SALEQ</i>	118.304	118.817		0.058	0.089		0.035	0.043	0.922
<i>IBQ</i>	3.885	3.015	**	0.202	0.291	*	0.120	0.217	0.663
<i>NIQ</i>	3.923	3.053	*	0.217	0.279		0.147	0.205	0.647
<i>DPY</i>	8.967	8.793		0.143	0.097		0.066	0.023	0.911
<i>OANCF</i>	11.239	11.332	*	0.240	0.171	*	0.151	0.116	0.733
<i>CAPX</i>	27.289	25.132		0.054	0.089		0.039	0.047	0.915
<i>TAC</i>	-27.732	-3.640	**	0.217	0.388	**	0.109	0.236	0.655
<i>TCAC</i>	-27.203	-3.544	**	0.213	0.399	***	0.101	0.240	0.659
<i>LOSS</i>	0.686	0.702		0.035	0.019		-	-	-

Table 1 presents descriptive statistics on firm-quarters that are initially filed with the SEC without review and are subsequently amended once the auditor completes the review. We present mean values of firm-quarter variables as originally reported (Column (1)) and as amended once reviewed (Column (2)). Column (3) presents the results of Wilcoxon signed-rank tests where \*, \*\*, and \*\*\* indicate two-tailed statistical significance at  $p < 0.10$ ,  $0.05$ , and  $0.01$ , respectively. Columns (4) and (5) present the proportion of firm-quarters reporting increases or decreases in a variable value as a result of the review. Column (6) presents the result sign tests on the differences between unreviewed and reviewed values where \*, \*\*, and \*\*\* indicate two-tailed statistical significance at  $p < 0.10$ ,  $0.05$ , and  $0.01$ , respectively. Columns (7) – (8) are similar to Columns (4) and (5) except these columns provide the proportion of firm-quarters adjusting the variable by an amount that is 5 percent larger than the originally reported net income amount. Column (9) is the portion of firm-quarters that remain within 5 percent of the originally reported net income amount. All variables are defined in Appendix B.

**Table 2: Sample Selection and Descriptive Statistics****Panel A: Sample Selection**

Client-quarter-year observations with quarterly year-ends from March 15, 1999 – March 15, 2001, in Compustat Snapshot – Point in Time – Quarterly database	743,647
Less:	
• Client-quarter-year observations where update code is not equal to 3	(68,455)
• Client-quarter-year observations where an earlier datapoint for the client-datadate exists	(579,701)
• Q4 client-quarter-year observations	(22,999)
Subtotal	72,492
• Less: Client-quarter-year observations missing <i>ACA/TCAC</i> control variables	(48,099)
<b>Total <i>ACA</i> and <i>TCAC</i> Sample Size</b>	<b>24,393</b>
• Subtotal Less: Client-quarter-year observations missing <i>RESTQ</i> control variables	(51,162)
<b>Total <i>RESTQ</i> Sample Size</b>	<b>21,330</b>

**Panel B: Descriptive Statistics for *ACA* and *TCAC* Samples**

	TREAT = 1			TREAT = 0			
	PRE	POST	(3) (2)-(1)	PRE	POST	(6) (5)-(4)	
	(1) Mean	(2) Mean		(4) Mean	(5) Mean		
<i>ACA</i>	0.010	0.009	-0.001	0.000	0.004	0.004***	-0.005
<i>TCAC</i>	-0.029	-0.041	-0.012	0.002	-0.002	-0.004*	-0.009
<i>LNAT</i>	2.337	2.427	0.090*	5.205	5.419	0.214***	-0.125**
<i>ROA</i>	-0.112	-0.111	0.001	-0.020	-0.020	0.000	0.001
<i>LEV</i>	0.432	0.415	-0.017	0.290	0.269	-0.021***	0.004
<i>CURR</i>	2.888	3.431	0.543***	2.802	3.101	0.299***	0.244
<i>LOSS</i>	0.536	0.550	0.014	0.355	0.381	0.026***	-0.012
<i>INV_AT_L</i>	0.685	0.786	0.100	0.061	0.052	-0.009	0.109
<i>DREV</i>	0.018	0.010	-0.008	0.021	0.024	0.003**	-0.011**
<i>ROA_L</i>	-0.095	-0.103	-0.008	-0.019	-0.024	-0.005***	-0.003
N	2,549	2,154		10,188	9,502		

**Panel C: Descriptive Statistics for *RESTQ* Sample**

	TREAT = 1			TREAT = 0			
	PRE	POST	(3) (2)-(1)	PRE	POST	(6) (5)-(4)	
	(1) Mean	(2) Mean		(4) Mean	(5) Mean		
<i>RESTQ</i>	0.068	0.077	0.009	0.095	0.128	0.033***	-0.024**
<i>RESTQ_L</i>	0.052	0.061	0.009	0.066	0.094	0.028***	-0.019**
<i>LNAT</i>	2.587	2.646	0.059	5.304	5.508	0.204***	-0.145**
<i>INV_REC</i>	0.373	0.351	-0.022***	0.313	0.304	-0.009***	-0.014
<i>MERGER</i>	0.077	0.079	0.002	0.217	0.212	-0.005	0.007
<i>SALEGR</i>	0.281	0.238	-0.043	0.256	0.294	0.038***	-0.080*
<i>LOSS</i>	0.485	0.501	0.016	0.322	0.335	0.013*	0.003
<i>LEV</i>	0.393	0.393	0.000	0.278	0.272	-0.006	0.006
<i>BM</i>	0.332	0.454	0.123*	0.539	0.631	0.092***	0.031
N	2,023	1,819		8,871	8,617		

Table 2 presents the sample selection process in Panel A and descriptive statistics in Panels B and C. The last two columns in Panels B and C present the results for tests of differences in means (t-tests) and medians (Wilcoxon rank-sum tests) where \*, \*\*, and \*\*\* indicate two-tailed statistical significance at  $p < 0.10$ , 0.05, and 0.01, respectively. All variables are defined in Appendix B.

**TABLE 3: DID Results**

<i>VARIABLES</i>	(1) <i>ACA</i>	(2) <i>TCAC</i>	(3) <i>RESTQ</i>
<i>POST</i>	0.009 (1.41)	0.002 (0.25)	0.026*** (3.94)
<b><i>TREAT*POST</i></b>	<b>-0.012<sup>††</sup></b> <b>(-2.09)</b>	<b>-0.010<sup>††</sup></b> <b>(-1.71)</b>	<b>-0.020<sup>††</sup></b> <b>(-1.69)</b>
<i>LNAT</i>	-0.041*** (-5.95)	-0.069*** (-6.79)	0.022** (2.40)
<i>ROA</i>	0.238*** (8.35)	0.443*** (8.26)	
<i>LEV</i>	0.070*** (4.34)	0.105*** (4.91)	0.015 (1.48)
<i>CURR</i>	0.002** (2.38)	0.002** (1.99)	
<i>LOSS</i>	-0.026*** (-9.05)	-0.024*** (-7.15)	0.005 (0.94)
<i>RESTQ_L</i>			-0.202*** (-6.39)
<i>INV_REC</i>			0.019 (0.53)
<i>MERGER</i>			0.005 (0.80)
<i>SALEGR</i>			-0.004** (-1.99)
<i>BM</i>			0.002 (0.82)
First-Stage IVs* <i>FQYI</i>	NO	YES	NO
Firm FE	YES	YES	YES
Year FE	YES	YES	YES
Observations	24,393	24,393	21,330
adj-R2	0.237	0.647	0.773

Table 3 presents the results of DID regressions for *ACA*, *TCAC*, and *RESTQ* in Columns 1, 2, and 3, respectively with firm and year fixed effects. \*, \*\*, and \*\*\* indicate two-tailed statistical significance at  $p < 0.10$ , 0.05, and 0.01, respectively, while <sup>†</sup>, <sup>††</sup>, and <sup>†††</sup> indicate one-tailed statistical significance at  $p < 0.10$ , 0.05, and 0.01, respectively.  $t$ -statistics are calculated based on robust standard errors clustered at the client level. All variables are defined in Appendix B.

**TABLE 4: Testing the Parallel Trends Assumption**

<i>VARIABLES</i>	(1) <i>ACA</i>	(2) <i>TCAC</i>	(3) <i>RESTQ</i>
<i>TREAT*PREPERIOD<sub>t-4</sub></i>	0.006 (0.44)	0.002 (0.17)	-0.008 (-0.60)
<i>TREAT*PREPERIOD<sub>t-3</sub></i>	0.004 (0.35)	-0.004 (-0.29)	-0.004 (-0.40)
<i>TREAT*PREPERIOD<sub>t-2</sub></i>	0.010 (0.91)	0.008 (0.69)	-0.006 (-0.69)
<b><i>TREAT*POSTPERIOD<sub>t+1</sub></i></b>	<b>-0.001</b> <b>(-0.13)</b>	<b>-0.008</b> <b>(-0.67)</b>	<b>-0.020<sup>††</sup></b> <b>(-2.22)</b>
<b><i>TREAT* POSTPERIOD<sub>t+2</sub></i></b>	<b>-0.004</b> <b>(-0.36)</b>	<b>0.002</b> <b>(0.16)</b>	<b>-0.019<sup>††</sup></b> <b>(-1.96)</b>
<b><i>TREAT* POSTPERIOD<sub>t+3</sub></i></b>	<b>-0.012</b> <b>(-1.07)</b>	<b>-0.018<sup>†</sup></b> <b>(-1.32)</b>	<b>-0.022<sup>††</sup></b> <b>(-2.18)</b>
<b><i>TREAT* POSTPERIOD<sub>t+4</sub></i></b>	<b>-0.006</b> <b>(-0.40)</b>	<b>-0.012</b> <b>(-0.76)</b>	<b>-0.039<sup>††</sup></b> <b>(-2.00)</b>
Accruals Controls	YES	YES	NO
Restatement Controls	NO	NO	YES
First-Stage IVs* <i>FQYI</i>	NO	YES	NO
Firm FE	YES	YES	YES
Year FE	YES	YES	YES
Observations	24,393	24,393	21,330
adj-R2	0.237	0.647	0.773

Table 4 presents the results of dynamic DID regressions for *ACA*, *TCAC*, and *RESTQ* in Columns 1, 2, and 3, respectively with firm and year fixed effects. \*, \*\*, and \*\*\* indicate two-tailed statistical significance at  $p < 0.10$ , 0.05, and 0.01, respectively, while †, ††, and ††† indicate one-tailed statistical significance at  $p < 0.10$ , 0.05, and 0.01, respectively.  $t$ -statistics are calculated based on robust standard errors clustered at the client level. All variables are defined in Appendix B.

**TABLE 5: Interim Reviews in Post-SOX Era**

<i>VARIABLES</i>	(1) <i>ACA</i>	(2) <i>TCAC</i>	(3) <i>RESTQ</i>
<b><i>NO_REVIEW</i></b>	<b>0.027</b> <b>(1.16)</b>	<b>-0.005</b> <b>(-0.09)</b>	<b>0.182**</b> <b>(2.32)</b>
Accruals Controls	YES	YES	NO
Restatement Controls	NO	NO	YES
First-Stage IVs * <i>FQYI</i>	NO	YES	NO
Year FE	YES	YES	YES
Firm FE	YES	YES	YES
Observations	106,257	106,257	102,863
adj-R2	0.257	0.740	0.368

Table 5 presents the results of OLS regressions for *ACA*, *TCAC*, and *RESTQ* in Columns 1, 2, and 3, respectively with firm and year fixed effects. \*, \*\*, and \*\*\* indicate two-tailed statistical significance at  $p < 0.10$ , 0.05, and 0.01, respectively.  $t$ -statistics are calculated based on robust standard errors clustered at the client level. All variables are defined in Appendix B.

**Table 6: Reviews and Cost of Debt**

<i>VARIABLES</i>	(1) <i>COD</i>
<i>POST</i>	-0.002** (-2.11)
<b><i>TREAT*POST</i></b>	<b>-0.002** (-2.07)</b>
<i>LNAT</i>	-0.006*** (-4.22)
<i>ROA</i>	-0.008 (-1.26)
<i>LEV</i>	-0.010*** (-4.00)
<i>CURR</i>	-0.000 (-0.71)
<i>LOSS</i>	0.000 (0.01)
<i>SALEGR</i>	0.000 (0.38)
<i>PPE</i>	-0.003** (-2.47)
<i>INTCOV</i>	-0.000 (-0.77)
<i>NEGEQUITY</i>	-0.004* (-1.69)
Firm FE	YES
Year FE	YES
Observations	9,514
adj-R2	0.664

Table 6 presents the results of DID regressions for *COD* with firm and year fixed effects. \*, \*\*, and \*\*\* indicate two-tailed statistical significance at  $p < 0.10$ , 0.05, and 0.01, respectively. *t*-statistics are calculated based on robust standard errors clustered at the client level. All variables are defined in Appendix B.

**TABLE 7: Reviews and ERCs**

<i>VARIABLES</i>	<i>LNCAR</i>		
	(1) Full Sample	(2) <i>TREAT</i> =1	(3) <i>TREAT</i> =0
<i>UNEX</i>	0.684*** (4.78)	0.457 (1.27)	0.748*** (8.38)
<i>POST</i>	-0.019** (-2.15)	-0.027 (-0.85)	-0.021*** (-2.97)
<i>TREAT*POST</i>	0.005 (0.36)		
<b><i>UNEX*POST</i></b>	0.030 (0.17)	<b>0.874*</b> <b>(1.71)</b>	<b>0.007</b> <b>(0.06)</b>
<i>UNEX*TREAT</i>	-0.395 (-0.85)		
<b><i>UNEX*TREAT*POST</i></b>	<b>1.002</b> <b>(1.54)</b>		
<i>LNPRESSRET</i>	-0.082*** (-7.41)	-0.064 (-1.47)	-0.075*** (-8.65)
<i>BM</i>	0.019*** (4.86)	0.009 (0.89)	0.007*** (4.44)
<i>NUMEST</i>	-0.003*** (-3.81)	0.000 (0.05)	-0.000 (-0.97)
<i>LNAT</i>	-0.023*** (-4.19)		
Firm FE	YES	YES	YES
Year FE	YES	YES	YES
Observations	12,891	527	12,364
adj-R2	0.0858	0.0420	0.0277

Table 7 presents the results of DID regressions for *LN\_ERC* with firm and year fixed effects. \*, \*\*, and \*\*\* indicate two-tailed statistical significance at  $p < 0.10$ , 0.05, and 0.01, respectively. *t*-statistics are calculated based on robust standard errors clustered at the client level. All variables are defined in Appendix B.

**TABLE 8: Annual FRQ**

<i>VARIABLES</i>	(1) <i>ACA</i>	(2) <i>TCAC</i>	(3) <i>RESTK</i>
<b><i>TREAT*POST</i></b>	<b>-0.032*</b> <b>(-1.66)</b>	<b>-0.012</b> <b>(-0.66)</b>	<b>0.000</b> <b>(0.02)</b>
Accruals Controls	YES	YES	NO
Restatement Controls	NO	NO	YES
First-Stage IVs* <i>FQYI</i>	NO	YES	NO
Firm FE	YES	YES	YES
Year FE	YES	YES	YES
Observations	9,848	9,848	9,270
adj-R2	0.325	0.625	0.600

Table 8 presents the results of DID regressions for *ACA*, *TCAC*, and *RESTQ* in Columns 1, 2, and 3, respectively with firm and year fixed effects. \*, \*\*, and \*\*\* indicate two-tailed statistical significance at  $p < 0.10$ , 0.05, and 0.01, respectively.  $t$ -statistics are calculated based on robust standard errors clustered at the client level. All variables are defined in Appendix B.