Investor Response to Tax Related SEC Comment Letters

Alexander Edwards
Rotman School of Management
University of Toronto
alex.edwards@rotman.utoronto.ca

Kenneth J. Klassen
KPMG Professor of Taxation
School of Accounting and Finance
University of Waterloo
kklassen@uwaterloo.ca

Karen Pinto
School of Accounting and Finance
University of Waterloo
k2pinto@uwaterloo.ca

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Abstract

We examine if and when investors systematically respond to SEC comment letters focusing on comment letters that contain tax-related issues. Using a sample of more than 10,000 comment letters from the Audit Analytics' SEC Comment Letter Database, we identify comment letters related to tax issues. Prior research has documented that the receipt of a comment letter can be important to future accounting disclosures but has generally failed to document investor responses. We focus on tax issues as prior research has documented changes in tax paying behavior following the receipt of comment letters by firms. Because of this change in future cash flows, we expect investors to revise their valuations of firms receiving tax related comment letters. We hypothesize, and find evidence consistent with more negative responses to tax related comment letters for tax aggressive firms. Our findings shed light on the role of comment letters in the capital markets and also contribute to the literature on the role of taxes in valuation.

Investor Response to Tax Related SEC Comment Letters

1. INTRODUCTION

An important enforcement tool of the financial reporting process for public companies is comment letters issued by the U.S. Securities and Exchange Commission (SEC). These letters solicit additional information and disclosures from companies, and thus should be an important event for investors. While extant research has demonstrated that the receipt of a comment letter can be important to future disclosure (Robinson, Xue and Yu, 2011; Johnston and Petachhi, 2017) or other decisions, such as tax planning aggressiveness (Kubick Lynch, Mayberry, and Omer, 2016), documenting reliable investor reactions has been rare (Dechow, Lawrence, and Ryans, 2016, is a notable exception).

We examine if and when investors systematically respond to SEC comment letters by examining those letters that contain tax-related issues. We refer to these letters as Tax Comment Letters even though they usually contain comments that are both tax related and related to other issues. We focus on tax issues because Kubick et al. (2016) document that Tax Comment Letters are more likely to be received by firms that are more aggressive for tax purposes and the receipt of a Tax Comment Letter is correlated with less future tax aggressiveness. Therefore, unlike other accounting-related issues where recipients may change (usually future) disclosure, Tax Comment Letters can induce future cash flow changes through higher tax payments. By examining Tax Comment Letters, we are focusing on the letter issues that may have the strongest effect on investors' stock valuation revisions.

We use the Audit Analytics' SEC Comment Letter Database for comment letter data to identify more than 10,000 observations of the public revelation of SEC comment letters between

2005 and 2016. Because SEC regulation requires the SEC to disclose all the correspondence in the conversation that is prompted by the initial comment letter, we can examine investor reaction around the public release date. The entire conversation is generally released at the same time. Audit Analytics classifies the issues within the letter and we use these issues to identify Tax Comment Letters, and also the other two most common accounting issues letters, Revenue Recognition Comment Letters (analyzed in relation to insider stock sales by Dechow et al., 2016), and Fair Value Comment Letters. We combine the Audit Analytics SEC Comment Letter data with Compustat financial statement data and CRSP stock price data to perform our analyses.

Our first tests estimate the market reaction to the public release for each of the three types of comment letters. We estimate three-day cumulative returns, from the day before to the day after the release. This test fails to document a statistically significant return associated with any of the letter types. In additional analyses, we examine fifty-day cumulative returns, beginning on the day of the SEC comment letter's release. In this test, we observe a negative and significant investor reaction to Tax Comment Letters. The reactions to both Revenue Recognition and Fair Value Comment Letters continue to fail to yield coefficients that are different from zero at traditional significance levels.

To further understand the dynamics of investor reactions, we posit that the reaction may differ depending on whether the firm is tax aggressive, and whether the firm has a strong internal information environment. The tax aggressiveness tests are motivated by extant research, described in greater detail below, that tax aggressive firms respond more strongly to the receipt of a Tax Comment Letter, and that firms' tax aggressiveness is sensitive to public attention from the IRS, the SEC, or the public at large. Internal information quality tests are motivated by extant literature that demonstrates that firms with higher quality information systems are less likely be

in error, and therefore less likely to need to alter their future disclosure and tax planning activities as a result of the receipt of a comment letter from the SEC.

In cross-sectional tests based on the level of tax aggressiveness of the firm, we observe reliable differences across these subsamples. We capture higher levels of tax aggressiveness using an indicator variable coded as one for firms with cash effective tax rates (Cash ETRs) below the sample median. For tax aggressive firms, investor reaction to Tax Comment Letters is more negative than for less tax aggressive firms. Coefficient estimates reveal a difference in returns of –0.6% for the three-day reaction window. In supplemental analyses, we document that this negative return is concentrated in firms that have taken more risky tax positions (i.e., firms that have FIN 48 unrecognized tax benefit reserves that are above the sample median) and firms that are better governed (i.e., firms that have institutional ownership that is above the sample median).

With regard to internal information quality classifications, we capture firms with weaker internal information quality using an indicator variable coded as one for firms with financial reporting lags (i.e., the number of days from the end of the fiscal period until the public release of earnings for the year) above the sample median. For these firms with weaker information environments we fail to find a significantly more negative reaction over the three day announcement period in the main sample. In supplemental analyses, we document that firms with a weak internal information environment that have taken more risky tax positions (i.e., firms that have FIN 48 unrecognized tax benefit reserves that are above the sample median) exhibit a negative announcement return. Returns when partitioning the sample by the level of institutional ownership are not significantly different from zero.

In our final set of analyses, we delve deeper into the cross-sectional results. We assume investor foresight in terms of which firms adjust their tax planning behavior following the receipt of a Tax Comment Letter. In these tests we examine differences in market reaction based on the change in cash ETR from the period before the SEC Comment Letter is release to the following period (i.e., the first fiscal year-end after the public revelation of the SEC Comment Letter). If investors correctly anticipate which firms will have the largest increases in cash ETRs, that is, the biggest increases in future cash outflows for tax payments, then the negative three-day market reactions for those firms should be stronger. Relatedly, firms that increase their tax aggressiveness following a Tax Comment Letter could be more prone to IRS investigation and could also have stronger negative three-day market reactions to the release of the SEC Comment Letters. As a result, we separately examine firms in the top and bottom quartiles of change in cash ETR pre/post SEC comment letter. Using the tax aggressiveness cross-sectional cut, we observe results that are generally consistent with the notion that larger changes in cash ETR experience more negative announcement returns. The coefficient on the interaction of our tax aggressiveness indicator and the Tax Comment Letter variable is negative for both the top and bottom quartile of change in cash ETR, but only the bottom quartile is significant at traditional levels.

The findings of this study contribute to our understanding of the role of SEC comment letters in the capital markets, particularly investors' responses to those letters. We add to the extant research that has to date focused on the determinants of which firms receive comment letters (see for example, Ettredge, Johnstone, Stone, and Wang, 2011; Cassell, Dreher, and Myers, 2013) and the consequences of receiving a comment letter within the firm (see for example, Robinson, Xue, and Yu, 2011; Bozanic, Dietrich, and Johnson, 2015; Brown, Tian, and

Tucker, 2015; Johnston and Petacchi, 2015). By examining the three common types of accounting-related comment letters together, we are able to document evidence that the response differs across the types of disclosure issues being identified. In particular, for accounting issues that are more likely to alter financial reporting disclosure only, those relating to revenue and fair value, we are unable to document a reaction, consistent with much of the extant research. However, for Tax Comment Letters, and particularly for those where there is most likely to be a future cash flow reduction through increased future tax payments, we are able to show reliably negative investor reaction.

Second, we also contribute to the literature on regulatory scrutiny. Prior research in this area has primarily focused on SEC scrutiny and financial accounting earnings attributes (see Leuz and Wysocki, 2016 for a comprehensive review). Recent studies have begun examining the role of tax enforcement agency's scrutiny on the tax, and associated financial reporting, behavior of firms (Hanlon, Hoopes, and Shroff, 2014). Most closely related with this study, Kubick et al. (2016) examine the role of SEC scrutiny, via tax related comment letters, in the tax avoidance behavior of firms. We extend this study by examining investor reaction to SEC tax related comment letters.

Finally, our findings contribute to the debate about the valuation of tax planning aggressiveness. Identifying clean events to test whether aggressive tax planning adds to the firm's market value has been elusive. Extant research has used tax shelter participation, but cannot use event study methods because the shelter participation is not publicly disclosed except through court records, press releases relating to IRS disputes, or mergers and acquisitions pricing (Graham and Tucker, 2006, Wilson, 2009, Brown, 2011, and Hanlon and Slemrod, 2009, Chow, Klassen, and Lui, 2016).

The remainder of this paper proceeds as follows. Section 2 provides institutional details related to SEC comment letters and develops our hypotheses. Section 3 describes the research design. Section 4 presents our main findings. Section 5 presents additional analyses. Finally, section 6 concludes.

2. INSTITUTIONAL DETAILS AND HYPOTHESIS DEVELOPMENT

Background on SEC 10-K Comment Letters

The mission of the SEC is to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation (SEC 2017a). As part of this mission, the SEC regularly reviews the filings of many public companies, examining filings from approximately 50% of companies each year (SEC 2016). While the proportion of companies reviewed has been fairly consistent over time, the number of reviews that result in formal correspondence between the SEC and filers (i.e., comment letters) has declined from about 70% in the early 2000s to about 35% in 2015. Recently, each SEC review results in approximately 1.5 comment letters (Deloitte 2016b).

The SEC review process is costly and represents a substantial investment on the part of the regulator. Approximately 80 percent of the 275 to 385 staff members in the SEC's Division of Corporate Finance from 11 branches are involved in the review and comment letter writing process.[1] Part of the Sarbanes-Oxley Act of 2002 mandates that the SEC review a firm's filings at least once every three years.

[1] Figures from the SEC website, accessed on March 16, 2018. Available at https://www.sec.gov/divisions/corpfin/cffilingreview.htm

Upon review of a firm's disclosures, the SEC Divisions of Corporate Finance and Investment Management staff may prepare a comment letter to the firm in order to request that the firm provide additional information. The purpose of this correspondence is so the SEC staff can better understand the firm's disclosure, so the firm can revise or provide additional disclosures in a document on file with the SEC, or so that the firm can provide additional or different disclosures in future filings with the SEC. The correspondence between the SEC and responses from the firm may include several rounds of letters that will continue until the issues identified in the review are resolved. The mean (median) number of letters (including those from and replies to the SEC) in a correspondence, in our sample, is 4 (5). The SEC notes that these letters lay out staff positions and but do not constitute an official expression of the SEC's views or apply to other filings (SEC 2017b).

Deloitte (2016b) categorize SEC Comment Letters for years 2016 and 2015 according to the topics addressed in each. The five most frequent topics over these two years are the MD&A discussion of the results of operations, found in 25% of comment letters, non-GAAP measures, in 19% of comment letters, fair value, in 19%, revenue recognition, in 14%, and income taxes, in 13%. Letters usually contain more than one topic, with 93% of letters in our sample involving at least two issues (untabulated).

Deloitte (2016b) also summarizes the key issues that are the subject of the SEC Comment Letters. With regard to fair value estimates, disclosures of interest include the following: "(1) valuation techniques and inputs used to determine fair value, (2) sensitivity of Level 3 measurements, (3) categorization of assets and liabilities in the fair value hierarchy, and (4) the use of third-party pricing services." (Deloitte, 2016b, 5). Revenue recognition issues include the description of revenue recognition policies and specific issues such as the accounting for

multiple element arrangements. Letters that include tax topics request further disclosure on repatriation of foreign earnings, valuation allowances, the rate reconciliation, and uncertain tax benefits.

Comment letters will sometimes result in the company filing an amended 10-K, but more typically, the company responses are sufficient, with the commitment to future improvements in disclosure. We reviewed a sample of comment letters that included SEC requests related to tax information, which we refer to as "Tax Comment Letters".[2] These letters illustrate that the SEC desired additional information because it believes the disclosures are inadequate, or it does not fully understand the tax structures underlying the disclosures, consistent with the findings reported by Kubick, Lynch, Mayberry, and Omer (2016).

For example, in our sample of Tax Comment Letters, we found the following types of issues. First, the SEC frequently requested more information about the valuation allowances taken, or why such allowances were not taken in the face of losses. Firms often responded with an explanation but no change in the allowance or future disclosures. Sometimes, the SEC wanted more information disclosed about various tax items, possibly to allow readers to better understand the tax planning activities of the firm. However, companies in this situation often maintained that their disclosures were adequate according to GAAP and offered no additional information or a change in future disclosures.

Further, the SEC might request additional breakdown on the tax rate reconciliation in the footnotes to the financial statements. Depending on the types of items, the company may commit

[2] This naming convention is consistent with Revenue Recognition Comment Letters in Dechow et al. (2016). It is important to note that Tax Comment Letters usually involve non-tax issues as well. Using a similar naming approach, we also identify Fair Value Comment Letters.

to better disclosure in the future, or maintain that the current disclosure is sufficient. In other cases the SEC requested jurisdiction-level data on valuation allowances or the repatriation taxes that would be due on cash in foreign jurisdictions. In such cases, the company declined to offer the requested details.[3]

Investor Response to Comment Letters

Extant research has examined the relation between SEC comment letters and financial reporting disclosure quality. Robinson, Xue and Yu (2011) examine the causes of noncompliance with mandatory compensation disclosures and the effect of a SEC comment letter on compliance. The authors find that compensation disclosure defects are positively associated with excess CEO compensation and media criticism of CEO compensation but fail to find evidence that the level of disclosure defects identified by the SEC is associated with a reduction in excess CEO compensation in the subsequent year. Their study also examines the market reactions to the comment letters but find no significant association between abnormal returns and the number of defects disclosed in the letters.

Johnston and Petachhi (2017) examine comment letters broadly (i.e., not a specific issue like compensation or a form like the 10-K) and document that approximately half of all comments involve accounting issues, approximately a fifth of letters result in immediate amended filings, and that financial statements and/or footnotes are frequently revised as a result of the comment letters. The authors fail to find a significant market reaction to the release of the comment letters but do find the adverse selection component of the bid-ask spread declines and earnings response coefficients (ERCs) increase. Johnston and Petachhi (2017) interpret their

[3] For additional examples of the types of issues discussed in Tax Comment Letters see Kubick et al. (2016) and Deloitte (2016a).

evidence as failing to support the notion that companies that receive comment letters have poor financial reporting quality.

Several other recent studies examine comment letters and either do not perform returns tests or also fail to document a significant market reaction to their releases (see for example, Cassel, Dreher, and Myers, 2013, and Bens, Cheng, and Neamtiu, 2016). In general, prior research has found that the release of comments letters is not an important event to investors in their determination of share prices. This general absence of evidence of significant announcement returns could be attributable to several factors. Investors could view comments letters as a non-event. It is also possible that investors are not aware of the release of comment letters as the release of comment letters is not announced in advance and may not be publicised by the firm even after their release.

Dechow, Lawrence, and Ryans (2016) is a notable exception to the failure to document significant abnormal returns to the public release of SEC comment letters. The authors explore insider trading around accounting disclosures and examine market reactions to Revenue Recognition Comment Letters for 10-K filings. They find a statistically significant –0.3 percent cumulative abnormal return (CAR) at the release of SEC comment letters, but a cumulative –1 percent reaction over days 0 to 50. The reaction is strongest amongst the subset of firms with significant short selling, consistent with stronger downward price pressure in general for those firms.

In a related study, Ryans (2016) focuses on identifying so-called “important” comment letters using textual analysis. In a broad sample, he finds no market reaction at the public disclosure for either important or unimportant letters, but a –1.3% cumulative abnormal return

for important letters when the comment letter conversation is downloaded from EDGAR at least three times in the days following its release. Over a 90-day window, the results are insignificant and –6%, respectively, for all letters classified as important and when the sample is restricted to letters downloaded at least three times.[4]

The general failure to document significant returns around the public release of comment letters is somewhat surprising given prior research documents negative returns to the revelation of other news of potential reporting issues. For example, Hammersley, Myers, and Shakespeare (2008) find a –1% market reaction to the disclosure of material internal control weaknesses, particularly for more severe internal control weaknesses (increasing to almost –3%). Similarly, Beneish, Billings, and Hodder (2008) report three-day cumulative abnormal returns of between –2% and –3% for the disclosure of material weaknesses under Sarbanes Oxley Section 302, but no reliable reaction to disclosures under Section 404.

SEC Tax Comment Letters

Specific to the tax setting, prior research documents changes in tax behavior in response to Tax Comment Letters but has not examined the market response to their release (Kubick, Lynch, Mayberry, and Omer 2016). Kubick et al. (2016) document that the receipt of a tax comment letter is both correlated with greater past tax avoidance, measured using the lagged GAAP effective tax rate (ETR) and the cash ETR, and leads to higher future ETRs for the firm. These findings are consistent with the expectation that additional scrutiny by the SEC raises the costs of engaging in more aggressive tax planning.

[4] More closely related to this study, we note that Ryans (2016) identifies "effective tax" as one of the terms that the text analysis reveals as important, although it is only the 26th most important term.

The results of Kubick et al. (2016) are consistent with a broader literature that explores firms' tax planning responses to additional scrutiny on the financial accounting for income taxes. For example, Gupta, Mills, and Towery (2014) document that following the implementation of the financial accounting standard FIN 48, there was an increase in both reported state-level tax expense and an increase in state level tax collections. In a similar vein, Blouin, Gleason, Mills, and Sikes (2010) find that firms anticipate the new disclosures in FIN 48 and reduce their tax reserves before its implementation.

If firms respond to Tax Comment Letters by altering their tax planning behavior, as Kubick et al. (2016) document, then future cash flows will be affected. Following the Tax Comment Letter, firms will incur additional future tax payments as a result of the decrease in their tax planning activities. With the changes in future cash flows, we expect investors to revise their views on firm value at the release date of a comment letter to account for the lower expected stream of future cash flows. Accordingly we make our first hypothesis:

H1: Firms that receive a Tax Comment Letter experience abnormal announcement returns at and following the public release date.

Relation Between SEC Comment Letters and Tax Planning Aggressiveness

As discussed above, Kubick et al. (2016) document increases in both GAAP and cash ETRs by firms following the receipt of an SEC Tax Comment Letter. This is a rational firm response because the IRS appears to use tax information made available through financial accounting disclosures in their audit process (Bozanic, Hoopes, Thornock, and Williams, 2016). Bozanic et al. (2016) document that following the implementation of the FIN 48 disclosure requirements, the IRS increased its use of public information. However, with the implementation

of a new filing requirement at the IRS, Schedule UTP, firms altered their financial reporting in predicted ways. Overall, greater focus on tax disclosures by either the SEC or the IRS appears to reduce the willingness of firms to engage in aggressive tax behavior.[5]

Thus, to the extent that more tax aggressive firms will alter their behavior to a greater degree, the future cash flow implications of receiving a Tax Comment Letter will be greater. That is, tax aggressive firms have the most to lose from the additional scrutiny of the SEC that is signaled by the release of a comment letter. We therefore hypothesize that prices will decrease (more) for these tax aggressive firms.

H2: Firms that receive a Tax Comment Letter experience abnormal announcement returns that are more negative for firms that tax plan more aggressively than that tax plan less aggressively.

Relation Between SEC Comment Letters and Internal Information Quality

Gallemore and Labro (2015) and Bauer (2016) examine the relation between management information systems and tax planning aggressiveness. Gallemore and Labro (2015) document a positive relation between firms' internal information environment and their tax planning success, measured as lower ETRs. Bauer (2016) shows that cash ETRs are lower for firms that do not have material internal control weaknesses within the tax function. The findings of both papers are consistent with strong internal information systems allowing firms to engage in more productive tax planning. SEC Tax Comment Letters for firms with weak internal information environments could be indicative of even greater issues within the tax function. If

[5] These findings are broadly consistent with the studies that examine the reputational effects of aggressive tax planning (e.g., Hanlon and Slemrod, 2009; Gallemore, Maydew, and Thornock, 2014; Dyreng, Hoopes, and Wilde, 2016; and Austin and Wilson, 2017).

this is true, we expect the market reaction to the public release of tax comment letters regarding firms with weak internal information environments to be negative.

Conversely, while the firm may not provide additional disclosures to the SEC, or in future 10-K and 10-Q reports, public scrutiny of the firm's tax activities can cause the firm to become more wary. Hoopes, Mescall, and Pittman (2012) find that IRS enforcement activities result in reduced tax aggressiveness, as one might reasonably expect. However, others extend this analysis and explore the effect of IRS enforcement activities on firms' financial reporting quality (Hanlon et al., 2014) and their cost of equity capital (El Ghoul, Guedhami, and Pittman, 2011). The effects prior research observes are strongest for firms whose other monitoring mechanisms are weak. These relations are consistent with stockholders benefiting from the IRS monitoring the tax-related activities of the firm. If SEC Tax Comment Letters act as a similar monitoring mechanism to IRS enforcement activities on the tax related accounts, investors in firms that have weak monitoring mechanisms, or weak internal information systems, will benefit from this additional attention. As a result of the opposing predictions, we make the following non-directional hypothesis:

H3: Firms that receive a Tax Comment Letter experience abnormal announcement returns that are different for firms that have weak internal information environments than have strong internal information environments.

3. RESEARCH DESIGN

Data and Sample

Consistent with prior literature, we rely on the Audit Analytics' SEC Comment Letter Database for comment letter data. We restrict our sample to firms receiving comment letters that are related to their 10-K filings. This sample is further reduced to a sample of firms that have Compustat data available to calculate cash ETR, sales, and have assets greater than a thousand dollars, and that have returns available on CRSP.[6] We also exclude firms from our sample that are in the financial and utility industries (Fama-French 48 codes 31, 44-47) because of their different regulatory environments and institutional settings. Although SEC comment letters issued beginning in 2004 are publicly available on EDGAR, our sample includes comment letters released during the years 2005 to 2016, given the time lag between the SEC issuing a comment letter and the public release of the comment letter. To avoid capturing investor reactions to concurrent events, we exclude observations where comment letters are released two days prior to, or two days after, an earnings announcement or 10-K release. Our final sample consists of 10,453 observations or comment letter sets (i.e., a set of letters received by a given firm and released on the same day). The sample spans 3,605 firms and 10,115 firm-years.

Regulations around the public release of comment letters require the SEC to release comment letters on the EDGAR website when the entire "conversation" is complete; that is, all the issues have been resolved to the satisfaction of the SEC. At release, the public has access to the full set of letters from the SEC and responses from the company. Audit Analytics codes comment letters by conversation and it is possible for more than one conversation, related to a

[6] Note, we winsorize Cash ETRs at 0 and 1.

single firm, to be released on the same day.[7] Since we are interested in the market's reaction to comment letters on the day of their release, an observation in our sample captures the information for the full set of comment letters received by a given firm and released on the same date.

We determine the market's reaction to the SEC comment letters based on the content of the letters. In order to identify the content of the comment letters we use the information compiled by Audit Analytics following the method of Dechow et al. (2016). The Audit Analytics' SEC Comment Letter Database uses phrases to categorize issues addressed in each comment letter. Consistent with Dechow et al. (2016), we classify the issues that are present in the comment letter based on Audit Analytics' variable *list_cl_issue_phrase*. Specifically, we identify tax-related, revenue recognition-related, and fair value-related letters using this method.

To identify tax-related phrases, we search Audit Analytics' list of issues, *list_cl_issue_phrase*, for search terms from Kubick et al. (2016): "tax", "FIN 48", "FAS 109", "ASC 740" and variations of these phrases. An observation, or comment letter set for a given firm released on the same day, is categorized as a Tax Comment Letter if a tax-related issue appears at least once. Following Dechow et al. (2016), we categorize observations as a Revenue Recognition Comment Letter if *list_cl_issue_phrase* is "revenue recognition". Fair value related letters are identified by searching for the phrase "fair value" in *list_cl_issue_phrase*. A list of the specific phrases that the Audit Analytics' SEC Comment Letter Database uses for tax, revenue recognition, and fair values are provided in Appendix A.

[7] It is also possible that a single conversation (i.e., correspondence back and forth between the SEC and a firm) be released on multiple dates. When this occurs each set is measured as a separate event based on the release date. We expect our results to be downward biased for cases where the second set of letters does not provide any new information, for example, if the second set includes only a conclusion letter from the SEC. Our sample has 48 observations where the second set in a conversation includes a single letter from the SEC that ends the conversation. Eliminating these observations does not change inferences from our results.

In our tests of a firm's information environment, hypothesis H3, we use the earnings announcement speed as a proxy for the quality of a firm's internal information quality (IIQ), following Gallemore and Labro (2015). Specifically, we calculate the number of days between the fiscal period year-end and the earnings announcement date. Firms with weaker (stronger) internal information quality will process and compile information slower (faster) in order to determine and announce the fiscal period's results. Earnings announcement dates, used to calculate this speed, come from Compustat.

Estimation Equations

Hypothesis 1

We begin our analysis by estimating the following regression model to test our first hypothesis:

$$CAR = \beta_0 + \beta_1 TaxComment + \beta_2 RevenueComment + \beta_3 FairValueComment + \Sigma\gamma_k FF4Controls + \varepsilon \quad (1)$$

where *CAR* is the three-day cumulative abnormal return for a given observation for days -1, 0, and 1, where a comment letter is released on day 0. Abnormal returns are measured using a market model (i.e., regressing firm-level returns on returns from the market portfolio). We estimate the "normal" return over a 200-day window, ending 50 days before the event date.

The primary variable of interest, *TaxComment*, is an indicator variables equal to one if an SEC comment letter set contains a tax comment, and zero otherwise. In addition to including the indicator variable for tax comments, we also separately include two other indicator variables to control for common subjects discussed in SEC comment letters. Our hypotheses relate to the

SEC comment letters that identify tax issues in a firm's filings. Letters that comment on revenue recognition and fair value are also very common, and the former has been explicitly considered in extant research (Dechow et al., 2016). As a result, we include indicator variables that identify all three types of comment letters. Specifically, *RevenueComment* is an indicator variable coded as one if the comment letter set contains a revenue recognition comment, and zero otherwise. Finally, *FairValueComment* is an indicator variable coded as one if the comment letter set contains a fair value related comment, and zero otherwise.

The model includes controls for market level influences captured by daily values of Fama French 4 Factors: *SizeFactor*, *GrowthFactor*, *MarketRiskFactor*, and *Momentum*.[8] Detailed variable definitions, construction, and data sources for each of these variables are provided in Appendix B.

Hypothesis 2

Next, we investigate hypothesis 2, related to the role of tax aggressiveness, by augmenting equation (1) as follows:

$$CAR = \beta_0 + \beta_1 TaxComment + \beta_2 RevenueComment + \beta_3 FairValueComment + \beta_4 TaxAgg + \beta_5 TaxAgg*TaxComment + \Sigma\gamma_k FF4Controls + \varepsilon \quad (2)$$

where *CAR, TaxComment, RevenueComment,* and *FairValueComment* are defined as above. We add both a main effect, and an interaction term with the tax comment letter indicator variable, for

[8] We note that we include a different set of control variables then Dechow et al. (2016). Our model differs for two primary reasons. First, our focus is on much shorter-window returns where a number of Dechow et al. (2016) variables would be less relevant. For example, Dechow et al. (2016) control for change in short interest and change in analyst forecast during the returns window, because of our short window the change in the disclosed value of these variables is likely zero for the vast majority of observations. Second, the focus of Dechow et al. (2016) is on insider sales, where we are interested in the public market reaction. These are fundamentally different groups (i.e., insiders and outsiders), and accordingly have different sets of relevant controls.

the firm's level of tax aggressiveness to the model. We capture a firm's tax aggressiveness using *TaxAgg*, an indicator variable that is equal to one if cash ETR is below the sample median, and zero otherwise. Again, the model includes controls for market level influences captured by daily values of Fama French 4 Factors: *SizeFactor*, *GrowthFactor*, *MarketRiskFactor*, and *Momentum*. Detailed variable definitions, construction, and data sources for each of these variables are provided in Appendix B.

Hypothesis 3

Finally, we investigate hypothesis 3, related to the role of a firm's internal information quality, by augmenting equation (1) as follows:

$$CAR = \beta_0 + \beta_1 TaxComment + \beta_2 RevenueComment + \beta_3 FairValueComment + \beta_4 WeakIIQ + \beta_5 WeakIIQ*TaxComment + \Sigma\gamma_k FF4Controls + \varepsilon \quad (3)$$

where *CAR, TaxComment, RevenueComment,* and *FairValueComment* are defined as above. We add both a main effect, and an interaction term with the tax comment letter indicator variable, for the (lack of) strength of the firm's internal information environment. We capture when a firm has a weak internal information environment using *WeakIIQ*, which is an indicator variable set equal to one for firm-years where the number of days to announce earnings (i.e., the number of days between the fiscal period end date and the public release of earnings for the period) is above the sample median, and zero otherwise. Again, the model includes controls for market level influences captured by daily values of Fama French 4 Factors: *SizeFactor*, *GrowthFactor*, *MarketRiskFactor*, and *Momentum*. Detailed variable definitions, construction, and data sources for each of these variables are provided in Appendix B.

Descriptive Statistics

Table 1 presents the descriptive statistics for the variables included in the regression models. Panel A presents the descriptive statistics on the complete pooled sample. The average (median) reaction to the event is a 0.1% (0.1%) decrease in three-day returns. Cumulative abnormal returns on the days surrounding comment letter releases range from approximately –80% to +100%. Tax issues appear in a non-trivial portion of comment letters, with approximately 18% of our observations including tax-related comments. Revenue recognition and fair value issues are also frequently mentioned by the SEC in the comment letters with each category appearing in approximately 26% of observations in our sample. By design, approximately half of the sample observations are coded as being tax aggressive and half the sample observations are coded as having weak internal information quality.

[Insert Table 1 here]

Panel B of Table 1 presents distributional characteristics of variables for firms with cash ETRs below the sample median (*TaxAgg* = 1) and for firms with cash ETRs equal to or above the sample median (*TaxAgg* = 0). The summary statistics for tax-related comment letters are consistent with the fuller model of Kubick et al. (2016). Firms in our sample that are more tax aggressive are also more likely to receive not only Tax Comment Letters, but also revenue recognition and/or fair value related comment letters, as compared to their less aggressive counterparts. The univariate evidence is consistent with the findings of Frank, Lynch, and Rego (2009) who document a positive relation between tax aggressiveness and aggressiveness in financial reporting. The mean *CAR* and the control variables generally do not differ significantly across the *TaxAgg* classifications.

Panel C of Table 1 presents distributional characteristics of variables for firms with earnings announcement speeds slower than the sample median (*WeakIIQ* = 1) and for firms with faster earnings announcement speeds. Firms with stronger internal information environments are more likely to receive Tax Comments Letters than firms with poor internal information quality. In contrast, firms with weaker internal information environments are more likely to receive Revenue Recognition or Fair Value Comment Letters, than firms with high internal information quality.

Table 2 displays the correlations across the test and control variables. Most of the correlations are relatively low (below 0.1 in absolute value). The three SEC comment letter type indicators we examine are positively correlated with each other at levels between 0.08 and 0.18. The Fama French 4 factor model control variables, size, growth, market risk, and momentum, are pairwise correlated with each other at values between –0.17, for market risk and momentum, and 0.33, for market risk and size. The low univariate correlations do not create estimation issues.

[Insert Table 2 here]

Table 3 presents additional descriptive statistics about the sample composition of the three types of comment letter issues we examine. Panel A present the overlap between the three comments types (i.e., the number of SEC comment letters in our sample that include one or multiple issues of interest). Most frequently, the three issue types do not overlap with each other in letters, with 856, 1,360, and 1,284 comment letters including tax, revenue recognition, or fair value related issues respectively. The highest level of overlap between the three categories is between revenue recognition and fair value estimates, which both occur in 744 SEC Comment Letters. 328 letters contain discussion of issues related to all three categories.

Panel B of Table 3 presents the sample breakdown, for the three topic categories, by year. In general the relative frequencies of the issues appear to be somewhat stable. That being said, there appears to be a higher frequency of revenue recognition comment letters in the early part of the sample period, a higher frequency of fair value related issues in letters shortly after the financial crisis in 2009 and 2010, and a higher frequency of tax related comment letters in 2011 and 2012.

[Insert Table 3 here]

4. RESULTS—SHORT WINDOW TESTS

Investor response to tax comment letters

Table 4 provides the results for estimating equation (1). We first estimate a baseline regression in which the comment letter events' cumulative abnormal returns are regressed on the control variables, without the *LetterType* variables included. The coefficients on size, growth and momentum are each significantly different from zero at the 1% level. The coefficient on the market factor is not statistically different from zero. The intercept is –0.001, and not statistically different from zero at traditional levels. The very small estimate and lack of statistical significance is consistent with extant research on SEC comment letters more generally, as described in detail above.

[Insert Table 4 here]

Inclusion of the three SEC comment type indicator variables, *TaxComment, RevenueComment,* and *FairValueComment,* does not reveal a systematic market price reaction at the times of the letters' releases. The coefficients on all three variables are small in magnitude and nowhere near traditional levels of statistical significance. These results are consistent with

extant literature (e.g., Dechow et al., 2016). We note that the tabulated test use indicator variables to capture tax comments, revenue recognition related comments, and fair value accounting related comments. In untabulated tests we repeat our analysis using the proportion of these types of comments in relation to all comments from the SEC in a comment letter release (e.g., for *TaxComment* the number of tax related comments divided by the total comments in the conversation) and inferences remain unchanged.

Hypothesis H1 predicts abnormal returns for firms that receive tax related comments in their correspondence with the SEC, which we would see as a non-zero coefficient on the coefficient on *TaxLetter*. The results of the estimation fail to support H1 at anything even close to approaching traditional statistical significance levels. While, technically, our tests fail to reject the null hypothesis, the extremely small coefficient estimates suggest that there is no overall short-window market reaction to specific comment letter types, consistent with the lack of overall market reactions to SEC comment letters in general.

Investor response to tax comment letters for tax aggressive firms

Results from estimating equation (2) to test H2 are presented in Table 5. Again, we estimate equation (2) using the three SEC comment type indicator variables, *TaxComment, RevenueComment,* and *FairValueComment* (tabulated), and proportion variables (untabulated). Our baseline regression for this set of estimations is the main equation used to test H1 along with an indicator for firms' tax aggressiveness, *TaxAgg*, measured by whether firm cash ETRs are below the sample median (i.e., firms pay less in taxes compared to their level of pretax income,

relative to the sample mean).[9] The coefficient on *TaxAgg* in this baseline equation, reported in columns (1) and (2), is near zero and not significantly different from zero, suggesting that the market's reaction to firms receiving a comment letter, unconditional on the contents of that comment letter, does not depend on whether the firm is tax aggressive.

[Insert Table 5 here]

Hypothesis H2 predicts that the market reacts more strongly to firms receiving tax related comment letters when these firms are more tax aggressive. This hypothesis is tested with the coefficient on the interaction *TaxAgg*TaxComment*. This coefficient is –0.006 and significant at the 5% level, consistent with the hypothesis. The combined coefficient on *TaxAgg* and *TaxAgg*TaxComment* is also negative and significant, consistent with the notion that investors perceive the release of a tax comment letter as bad news for more tax aggressive firms.

Although we do not make a direct prediction on the coefficient on the main effect of *TaxComment* we note that this coefficient is positive and significant at the 5% level. This coefficient represents the market reaction for less aggressive firms who receive a Tax Comment Letter. These coefficients suggest that the market's reaction to SEC inquiry regarding tax issues depends greatly on the tax aggressiveness of the firm prior to the public release of the comment letters. Event announcement window returns for firms receiving letters that include the other issues we examine, revenue recognition or fair value, remain not statistically significantly different than zero.

Investor response to tax comment letters for firms with weak internal information quality

[9] Cash ETRs are calculated as cash taxes paid (Compustat dataitem TXPD) divided by pretax income (Compustat dataitem PI) and are winsorized at 0 and 1.

Hypothesis 3 predicts that firms with weak internal information environments that receive Tax Comment Letters will experience different abnormal returns than firms with stronger internal information environments that receive tax comment letters. Table 6 presents the results from estimating equation (3). The hypothesis predicts that the coefficient on *WeakIIQ*TaxLetter* is non-zero. The regression results reveal that firms with weak internal information environments experience 0.3% lower cumulative abnormal returns around the date they receive tax comment letters. The estimate is not significantly different than zero at traditional levels (p-value = 0.21). The coefficient on the main effect of the weak internal information quality indicator, *WeakIIQ,* and on the three indicator variables for the comment types, *TaxComment, RevenueComment,* and *FairValueComment* all remain not statistically significantly different from zero.

[Insert Table 6 here]

5. ADDITIONAL ANALYSES

Long-Window Returns Tests

As an additional analysis to supplement our short-window announcement returns tests, we examine investor reactions to comment letters using a 50 day long-window cumulative abnormal return. Previous work by Dechow et al. (2016) and Ryans (2016) both demonstrate that there is little attention paid to revenue recognition related comment letters at their release and so the market impounds the information they contain slowly into stock price. Following Dechow et al. (2016), the cumulative abnormal returns for these tests are measured beginning on the day the SEC releases the comment letter (i.e., day 0) and ending 50 trading days thereafter (i.e., day

50).[10] We require observations to have at least 25 days of non-missing returns over the event period.

Results from these long window tests using equation (1) are reported in Table 7. In contrast with the short-window announcement returns test discussed above, the coefficient on the *TaxComment* indicator is significantly negative, at the 10% level, consistent with a slow but negative response by investors. As in the short-window returns tests, the coefficient on revenue recognition related, and fair value related comment letters are not different from zero at traditional significance levels.

[Insert Table 7 here]

In untabulated analyses we estimate equations (2) and (3) using these long-window cumulative abnormal returns. While the coefficients on the interactions between *TaxAgg* and *TaxComment*, and *WeakIIQ* and *TaxComment* are directionally consistent with our predictions, they are not different from zero at traditional significance levels, possibly due to the larger standard errors obtained when estimating returns over a longer window.

Unrecognized Tax Benefits

In our next set of analyses, we examine the role of the past tax positions a firm has taken in the market reaction to the public release of tax related SEC comment letters. FASB Interpretation 48 (FIN 48) requires that firms record a provision for uncertain tax positions. FIN 48 requires firms to follow a two-step process in determining the reserve. A firm must first determine whether an uncertain tax position has a more-likely-than-not probability of being

[10] In untabulated tests, for consistency with our main analyses, we being the returns accumulation period the day before the SEC Comment Letter is released (i.e., day -1). Results from this specification are qualitatively and quantitatively similar to those reported in Table 7.

sustained upon audit. Positions that meet this threshold do not require a financial statement reserve. For riskier tax positions, which do not meet this threshold, firms must record a tax reserve equal to "the largest amount of tax benefit that is greater than 50 percent likely of being realized upon settlement with a taxing authority." We use the balance of the FIN 48 reserve, the unrecognized tax benefits (UTBs), as a measure of the riskiness of firms tax positions.

In Table 8, we repeat our analyses splitting the sample above and below the median UTB balance. In Panel A we observe the negative reaction to SEC tax comment letters for tax aggressive firms is concentrated in firms with riskier tax positions (i.e., those with UTB balances above the sample median). In Panel B we observe a negative reaction to SEC tax comment letters for firms with weak internal information environments for the firms with the riskier tax positions.

[Insert Table 8 here]

Institutional Ownership

In our next set of analyses, we examine the role of external monitoring in the market reaction to the public release of tax related SEC comment letters. Prior research argues that tax avoidance can be value decreasing in poorly governed firms as managers could use tax avoidance to obfuscate rent extraction (Desia and Dharmapala 2006). As a result, we conjecture that the negative market reaction to tax comment letters in tax aggressive firms could be concentrated in firms with strong governance. We split our sample at the median level of institutional ownership where firms with above median institutional ownership are subject to

greater external monitoring and should be better governed.[11] We repeat our analyses splitting the sample above and below the median level of institutional ownership. In untabulated results, we observe the negative reaction to SEC tax comment letters for tax aggressive firms is concentrated in firms with lower external monitoring (i.e., those with institutional ownership below the sample median).[12]

EDGAR Downloads of Comment Letters

In our primary analyses, we include all observations of SEC comment letters that meet our data requirements. It is possible that a comment letter is released by the SEC but it is not downloaded and read by investors. If investors are not aware of a comment letter then a market reaction to that comment letter is not plausible. To address this concern, as a supplemental test we repeat our main analysis after requiring that a comment letter is downloaded from the SEC EDGAR at least twice during the three days following the comment letters' release. Results from these untabulated tests are qualitatively and quantitatively similar to those reported in the main analysis.

Firm Visibility or Repeat Offenders

As an additional supplemental test, we investigate firms that receive multiple comment letters during our sample period. Firms could receive comment letters more frequently for several reasons. These firms could provide particularly poor disclosure or they could be targeted by the SEC because they are more visible and attract greater scrutiny. In these untabulated tests, we restrict our sample to firms that receive comment letters from the SEC more than twice

[11] Institutional ownership data is provided by Factset's Stock Ownership Summary developed by Ferreira and Matos. To measure institutional ownership, we use (i) the number of institutional owners and (ii) the total institutional ownership ratio in percentage of market capitalization.

[12] Also in untabulated analysis, we fail to observe a significant market reaction to tax comment letters for firms with weak information environments.

during the sample period. Results from this sub-sample are also quantitatively and qualitatively similar to the results from the main tests.

Changes in Cash ETRs

In our final set of analyses, we perform some additional tests related to the potential change in future cash flows as a result of reduced tax aggressiveness by firms receiving Tax Comment Letters. In these tests, we assume foresight on the part of investors in terms of which firms adjust their tax planning behavior to a greater extent following the receipt of a Tax Comment Letter. Specifically, we examine differences in market reaction to the public release of SEC comment letters based on the change in cash ETR from the period before the comment letter is released to the following period (i.e., the first fiscal year-end after the public revelation of the SEC comment letter).[13] If investors correctly anticipate which firms will have the largest increases in cash ETRs, alternatively stated as the biggest increases in future cash outflows for tax payments, then the three-day market reaction should be most negative for those firms. Relatedly, firms that increase their tax aggressiveness following a tax comment letter could be more prone to IRS investigation and could also have stronger negative three-day market reactions to the release of the SEC Comment Letters. As a result, we separately examine firms in the top and bottom quartiles of change in cash ETR pre/post SEC comment letter.

Table 9 presents the results from this analysis, with the cross-sectional analyses on tax aggressiveness in panel A and the cross-sectional analyses on internal information quality in panel B. We observe results that are generally consistent with the notion that larger changes in ETR will experience more negative announcement returns. In panel A, the coefficient on the

[13] Note we lose a number of observation when calculating change in cash ETR as calculating this measure requires two consecutive years of data.

interaction of our tax aggressiveness indicator and the Tax Comment Letter variable is negative for both the top and bottom quartile of change in cash ETR, although only the bottom quartile is significant at traditional levels. In panel B, the coefficient on the interaction of our internal information quality indicator and the Tax Comment Letter variable is negative for both the top and bottom quartile of change in cash ETR, although only the top quartile is significant at traditional levels.

[Insert Table 9 here]

6. CONCLUSION

We examine investor reactions to the receipt of an SEC Tax Comment Letter. In our sample of 10-K comment letters, we also identify Revenue Recognition and Fair Value Comment Letters. Like others, we fail to find any overall market reaction to the receipt of comment letters in general, or to each of these three types of letters specifically. The coefficient estimates are consistently smaller than 1%. In further tests, we find support for our cross sectional hypotheses.

We posit, and find evidence consistent with, the market reaction to Tax Comment Letters differing depending on whether the firm is tax aggressive or not, and whether the firm has a strong or weak internal information environment. The findings from the tax aggressiveness tests are consistent with the previously documented reduction in tax planning activities, by tax aggressive firms, following the receipt of a Tax Comment Letter (Kubick et al., 2016). We observe significantly more negative abnormal returns to the public release of Tax Comment letters for tax aggressive firms, consistent with investors including the information regarding

lower future cash flows (i.e., higher future tax payments) into the stock price. Coefficient estimates reveal a difference of –0.6% for a three-day reaction window.

The findings from the internal information quality tests are consistent with the notion that firms with higher quality information systems are less likely be in error, and therefore less likely to need to alter their future disclosure and tax planning activities. We find that tax aggressive firms with weaker internal information quality experience stronger negative reactions, than stronger firms, to the public release of Tax Comment letters.

This study contributes to three streams of prior research. First, the findings of this study contribute to our understanding of the role of SEC comment letters in the capital markets, particularly investors' responses to those letters. Second, we contribute to the literature on regulatory scrutiny, firm behavior, and the effects of stock price. Finally, our findings contribute to the debate about the valuation of tax planning aggressiveness.

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Appendix A

The following is a list of Audit Analytics' tax related issue keys and phrases that were identified from the SEC Comment Letter Database taxonomy list using the Kubick et al. (2016) search terms:

214 Tax expense/benefit/deferral/other (FAS 109) issues
897 Tax rate disclosure issues
213 FIN 48 issues
560 FSP FAS 109-1 issues
561 FSP FAS 109-2 issues
595 FSP FIN 48-1 issues
596 FSP FIN 48-2 issues
275 SFAS 109 issues
397 SFAS 109, paragraph(s) 17 issues
398 SFAS 109, paragraph(s) 18 issues
403 SFAS 109, paragraph(s) 20-25 issues
399 SFAS 109, paragraph(s) 21 issues
400 SFAS 109, paragraph(s) 23 issues
401 SFAS 109, paragraph(s) 24 issues
402 SFAS 109, paragraph(s) 25 issues
404 SFAS 109, paragraph(s) 30 issues
405 SFAS 109, paragraph(s) 36 issues
406 SFAS 109, paragraph(s) 41-42 issues
407 SFAS 109, paragraph(s) 43-49 issues
1475 Partnership disclosure issues--tax consequences
1206 Tax consequences of the offering, disclosure issues
893 Tax opinion issues or requirements
1398 Tax receivable agreement.
1229 Tax sharing agreement issues
921 Risk Factors - Tax positions and assumptions

The issue key and phrase that resulted from a search for "revenue recognition", following Dechow et al. (2016) is:

212 Revenue recognition (incl deferred revenue) issues

The issue key and phrase that resulted from a search for "fair value" is:

935 Fair value measurement, estimates, use (incl. VSOE)

On closer examination of the data, we identified observations that had missing phrases in the issues list variable (*list_cl_issues_phrase*) while having corresponding issue keys. We broadened our search to include observations with the relevant issue keys.

Appendix B

Variable name	Definition and Construction	Database
CAR	Three day (-1, 1) cumulative abnormal return around comment letter release dates. Abnormal returns are estimated over a 250 day estimation period using the Market Model	CRSP
TaxComment	Coded as 1 if comment letters to a given firm released on the same date contain a tax phrase, 0 otherwise. Tax phrases are identified using Kubick et al.'s (2016) search terms. Search terms include variations of "Tax", "FAS 109", "FIN 48" and "ASC 740"	Audit Analytics
RevenueComment	Coded as 1 if comment letters to a given firm released on the same date contain the phrase "revenue recognition", 0 otherwise.	Audit Analytics
FairValueComment	Coded as 1 if comment letters to a given firm released on the same date contain the phrase "fair value", 0 otherwise.	Audit Analytics
TaxAgg	Coded as 1 if the firm's Cash ETR is below the median Cash ETR in the sample of firms, 0 otherwise. Cash ETR is calculated as cash taxes paid divided by pre-tax income adjusted for special items.	Compustat
WeakIIQ	Internal information quality measured using earnings announcement speed, which is the difference between the earnings announcement date and fiscal year end date. *WeakIIQ* is coded as 1 if the number of days to announce earnings following year end is above the sample median (i.e., the firm is slow in announcing earnings), 0 otherwise	Compustat
SizeFactor	Fama and French's Small Minus Big (SMB), which they calculate as the average return on the three small (value, neutral, and growth) portfolios minus the average return on the three big (value, neutral, and growth) portfolios. (Daily values)	Fama French Factors

GrowthFactor	Fama and French's High Minus Low (HML), which they calculate as the average return on the small and big value portfolios minus the average return on the small and big growth portfolios. (Daily values)	Fama French Factors
MarketRiskFactor	Fama and French's excess return on the market (MKTRF), which they calculate as the value-weighted return on all NYSE, NASDAQ, and AMEX stocks minus the one-month Treasury bill rate. (Daily values)	Fama French Factors
Momentum	Fama and French's Momentum (UMD), which they calculate as the average return on the small and big high prior return portfolios minus the average return on the small and big low prior return portfolios. (Daily values)	Fama French Factors

Table 1
Descriptive Statistics

Panel A: Descriptive Statistics of Regression Variables

	N	Mean	Std. Dev.	Min.	Q1	Median	Q3	Max.
CAR (3 day window)	10453	-0.001	0.054	-0.803	-0.021	-0.001	0.019	1.006
CAR (50 day window)	10421	-0.002	0.241	-1.379	-0.110	-0.005	0.100	3.069
TaxComment	10453	0.176	0.381	0.000	0.000	0.000	0.000	1.000
WeakIIQ	10452	0.488	0.500	0.000	0.000	0.000	1.000	1.000
TaxAgg	9800	0.499	0.500	0.000	0.000	0.000	1.000	1.000
RevenueComment	10453	0.260	0.439	0.000	0.000	0.000	1.000	1.000
FairValueComment	10453	0.260	0.439	0.000	0.000	0.000	1.000	1.000
SizeFactor	10453	0.000	0.006	-0.037	-0.003	0.000	0.003	0.039
GrowthFactor	10453	0.000	0.007	-0.042	-0.003	0.000	0.003	0.048
Market RiskFactor	10453	0.000	0.013	-0.090	-0.005	0.001	0.006	0.069
Momentum	10453	0.000	0.011	-0.082	-0.004	0.000	0.004	0.071

Panel B: Univariate comparisons of subsamples by TaxAgg

	TaxAgg = 0	*TaxAgg* = 1	Mean Test	*TaxAgg* = 0	*TaxAgg* = 1			Rank-sum Test
	Mean	Mean		Median	Median	Std. Dev.	Std. Dev.	
CAR (3 day window)	0.000	-0.001		-0.001	0.041	-0.002	0.062	
CAR (50 day window)	-0.002	-0.002		-0.003	0.191	-0.008	0.271	
TaxComment	0.167	0.197	***	0.000	0.373	0.000	0.397	***
RevenueComment	0.229	0.282	***	0.000	0.420	0.000	0.450	***
FairValueComment	0.249	0.274	***	0.000	0.433	0.000	0.446	***
SizeFactor	0.000	0.000		0.000	0.006	0.000	0.006	
GrowthFactor	0.000	0.000		0.000	0.008	0.000	0.007	
Market RiskFactor	0.000	0.000		0.001	0.014	0.001	0.012	
Momentum	0.001	0.000	**	0.001	0.012	0.000	0.011	*

Panel C: Univariate comparisons of subsamples by WeakIIQ

	WeakIIQ = 0	*WeakIIQ* = 1	Mean Test	*WeakIIQ* = 0	*WeakIIQ* = 1	*WeakIIQ* = 0	*WeakIIQ* = 1	Rank-sum Test
	Mean	Mean		Median	Median	Std. Dev.	Std. Dev.	
CAR (3 day window)	0.000	-0.001		-0.001	0.041	-0.002	0.065	*
CAR (50 day window)	-0.003	-0.001		-0.004	0.189	-0.008	0.286	
TaxComment	0.191	0.160	***	0.000	0.393	0.000	0.367	***
RevenueComment	0.245	0.277	***	0.000	0.430	0.000	0.447	***
FairValueComment	0.247	0.275	***	0.000	0.431	0.000	0.446	***
SizeFactor	0.000	0.000		0.000	0.006	0.000	0.006	
GrowthFactor	0.000	0.000		0.000	0.007	0.000	0.007	
Market RiskFactor	0.000	0.000		0.001	0.013	0.001	0.013	
Momentum	0.000	0.000		0.001	0.011	0.000	0.011	

This table reports summary statistics for the full sample of 10,453 observations. *, **, and *** indicate significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.

Table 2
Correlation Matrix

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1)	*CAR (3 day window)*										
(2)	*CAR (50 day window)*	0.173 ***									
(3)	*TaxComment*	0.006	-0.014								
(4)	*WeakIIQ*	-0.019 *	-0.010	-0.041 ***							
(5)	*TaxAgg*	-0.013	-0.014	0.039 ***	0.129 ***						
(6)	*RevenueComment*	-0.001	-0.008	0.079 ***	0.037 ***	0.060 ***					
(7)	*FairValueComment*	0.004	0.003	0.123 ***	0.032 ***	0.028 ***	0.181 ***				
(8)	*SizeFactor*	0.079 ***	0.009	-0.003	-0.002	0.013	-0.018 *	-0.004			
(9)	*GrowthFactor*	-0.018 *	0.001	-0.005	-0.012	0.010	0.016	0.005	-0.140 ***		
(10)	*Market RiskFactor*	0.030 ***	0.005	0.003	0.003	0.001	0.002	0.011	0.334 ***	0.242 ***	
(11)	*Momentum*	-0.017 *	-0.018 *	-0.002	-0.002	-0.022 **	-0.016	0.009	0.042 ***	-0.345 ***	-0.166 ***

This table reports Spearman correlations. *, **, and *** indicate significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.

Table 3
Comment Letter Topics

Panel A: Observations by Comment Letter Category

	Only	and Tax related	and Revenue related	and Fair Value related	Tax and Revenue and Fair Value related	Total
Tax related	856		289	366	328	1839
Revenue related	1360	289		744	328	2721
Fair Value related	1284	366	744		328	2722

Panel B: Observations by Year and Comment Letter Category

	Tax related	Revenue related	Fair Value related	Other
2005	5	10	7	12
2006	195	505	300	565
2007	134	337	242	367
2008	127	300	285	564
2009	193	286	470	570
2010	179	249	396	683
2011	243	240	264	484
2012	251	239	220	489
2013	194	191	222	500
2014	159	174	150	453
2015	116	136	118	377
2016	43	54	48	162
Total	1839	2721	2722	5226

Table 4
Hypothesis 1

Regressing 3-day CAR on categories of SEC Comment Letters

DV: CAR [-1, 1]	(1)	(2)	(3)	(4)
TaxComment			0.000	0.000
			(0.033)	(0.014)
RevenueComment			-0.001	-0.001
			(-0.792)	(-0.844)
FairValueComment			0.001	0.001
			(1.098)	(0.948)
SizeFactor	0.489***	0.492***	0.489***	0.492***
	(4.505)	(4.516)	(4.506)	(4.512)
GrowthFactor	-0.362***	-0.369***	-0.362***	-0.369***
	(-2.617)	(-2.675)	(-2.616)	(-2.673)
MarketRiskFactor	0.036	0.037	0.036	0.037
	(0.585)	(0.603)	(0.572)	(0.593)
Momentum	-0.318***	-0.322***	-0.319***	-0.323***
	(-3.827)	(-3.888)	(-3.839)	(-3.896)
Constant	-0.001	0.009	-0.001	0.009
	(-1.058)	(1.205)	(-1.017)	(1.187)
Observations	10,453	10,453	10,453	10,453
Adjusted R-squared	0.006	0.007	0.006	0.007
Industry FE	No	Yes	No	Yes

Standard errors are calculated using Huber-White sandwich estimators. t-statistics are reported in parentheses. *, **, and *** indicate significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.

Table 5
Hypothesis 2

Regressing 3-day CAR on categories of SEC Comment Letters and Tax Aggressiveness Groups

DV: CAR	(1)	(2)	(3)	(4)
TaxComment	-0.000	-0.000	0.003**	0.003**
	(-0.123)	(-0.083)	(2.086)	(2.084)
RevenueComment	-0.000	-0.001	-0.000	-0.001
	(-0.376)	(-0.415)	(-0.382)	(-0.424)
FairValueComment	0.001	0.001	0.001	0.001
	(0.988)	(0.893)	(0.961)	(0.865)
TaxAgg	-0.000	-0.000	0.001	0.001
	(-0.330)	(-0.265)	(0.630)	(0.680)
*TaxAgg*TaxComment*			-0.006**	-0.006**
			(-2.381)	(-2.382)
SizeFactor	0.468***	0.476***	0.467***	0.475***
	(4.289)	(4.337)	(4.274)	(4.323)
GrowthFactor	-0.231*	-0.236*	-0.234*	-0.239*
	(-1.737)	(-1.778)	(-1.758)	(-1.797)
MarketRiskFactor	0.046	0.046	0.048	0.048
	(0.738)	(0.734)	(0.765)	(0.761)
Momentum	-0.250***	-0.254***	-0.247***	-0.251***
	(-3.354)	(-3.408)	(-3.325)	(-3.379)
Constant	-0.000	0.001	-0.001	0.001
	(-0.656)	(0.273)	(-1.369)	(0.154)
Observations	9,800	9,800	9,800	9,800
Adjusted R-squared	0.005	0.006	0.005	0.006
Industry FE	No	Yes	No	Yes

Standard errors are calculated using Huber-White sandwich estimators. t-statistics are reported in parentheses. *, **, and *** indicate significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.

Table 6
Hypothesis 3

Regressing 3-day CAR on SEC Comment Letter categories and Internal Information Quality Groups

DV: CAR	(1)	(2)	(3)	(4)
TaxComment	0.000	-0.000	0.001	0.002
	(0.008)	(-0.002)	(0.980)	(1.053)
RevenueComment	-0.001	-0.001	-0.001	-0.001
	(-0.773)	(-0.817)	(-0.753)	(-0.788)
FairValueComment	0.001	0.001	0.002	0.001
	(1.112)	(0.967)	(1.139)	(0.993)
WeakIIQ	-0.000	-0.001	0.000	-0.000
	(-0.462)	(-0.565)	(0.041)	(-0.017)
*WeakIIQ*TaxComment*			-0.003	-0.003
			(-1.159)	(-1.267)
SizeFactor	0.489***	0.492***	0.492***	0.495***
	(4.503)	(4.509)	(4.525)	(4.534)
GrowthFactor	-0.362***	-0.369***	-0.362***	-0.369***
	(-2.618)	(-2.676)	(-2.617)	(-2.675)
MarketRiskFactor	0.036	0.037	0.035	0.036
	(0.580)	(0.603)	(0.557)	(0.578)
Momentum	-0.319***	-0.323***	-0.320***	-0.324***
	(-3.841)	(-3.899)	(-3.844)	(-3.902)
Constant	-0.000	0.001	-0.001	0.001
	(-0.661)	(0.271)	(-1.066)	(0.235)
Observations	10,452	10,452	10,452	10,452
Adjusted R-squared	0.006	0.007	0.006	0.007
Industry FE	No	Yes	No	Yes

Standard errors are calculated using Huber-White sandwich estimators. t-statistics are reported in parentheses. *, **, and *** indicate significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.

Table 7
Long Window Returns

Regressing 50-day CAR on categories of SEC Comment Letters

DV: CAR [0, 50]	(1)	(2)	(3)	(4)
TaxComment			-0.010*	-0.011*
			(-1.667)	(-1.809)
RevenueComment			-0.003	-0.004
			(-0.466)	(-0.628)
FairValueComment			0.008	0.009
			(1.513)	(1.544)
SizeFactor	-0.011	-0.033	-0.010	-0.036
	(-0.022)	(-0.068)	(-0.021)	(-0.074)
GrowthFactor	-0.940*	-0.996*	-0.950*	-1.007*
	(-1.707)	(-1.802)	(-1.727)	(-1.824)
MarketRiskFactor	0.344	0.346	0.343	0.345
	(1.154)	(1.156)	(1.150)	(1.153)
Momentum	-1.059***	-1.061***	-1.064***	-1.066***
	(-3.129)	(-3.134)	(-3.142)	(-3.146)
Constant	-0.002	0.065	-0.002	0.065
	(-0.910)	(1.306)	(-0.632)	(1.299)
Observations	10,421	10,421	10,421	10,421
Adjusted R-squared	0.002	0.001	0.002	0.001
Industry FE	No	Yes	No	Yes

Standard errors are calculated using Huber-White sandwich estimators. t-statistics are reported in parentheses. *, **, and *** indicate significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.

Table 8
The Role of Unrecognized Tax Benefits

Panel A: Regressing 3-day CAR on categories of SEC Comment Letters and UTB levels by Tax Aggressiveness groups

DV: CAR [-1,1]	(1) Above median UTBs	(2) Below median UTBs	(3) Above median UTBs	(4) Below median UTBs	(5) Above median UTBs	(6) Below median UTBs	(7) Above median UTBs	(8) Below median UTBs
TaxComment	-0.001	0.000	-0.001	0.001	0.004**	-0.001	0.004**	-0.000
	(-0.639)	(0.166)	(-0.569)	(0.302)	(2.108)	(-0.193)	(2.206)	(-0.120)
RevenueComment	-0.001	0.000	-0.002	0.001	-0.001	0.000	-0.002	0.001
	(-0.569)	(0.078)	(-0.826)	(0.531)	(-0.592)	(0.075)	(-0.852)	(0.528)
FairValueComment	0.004*	-0.002	0.004*	-0.003	0.004*	-0.002	0.004*	-0.003
	(1.728)	(-0.962)	(1.794)	(-1.062)	(1.715)	(-0.952)	(1.787)	(-1.051)
TaxAgg	-0.001	0.002	-0.001	0.001	0.001	0.001	0.002	0.000
	(-0.645)	(0.784)	(-0.297)	(0.302)	(0.676)	(0.569)	(0.941)	(0.120)
TaxAgg TaxComment*					-0.012***	0.002	-0.012***	0.002
					(-2.950)	(0.363)	(-3.035)	(0.428)
SizeFactor	0.106	0.700***	0.131	0.682***	0.106	0.703***	0.131	0.685***
	(0.621)	(3.214)	(0.775)	(3.073)	(0.623)	(3.227)	(0.776)	(3.085)
GrowthFactor	-0.095	-0.449*	-0.097	-0.487*	-0.098	-0.449*	-0.100	-0.487*
	(-0.458)	(-1.723)	(-0.472)	(-1.864)	(-0.475)	(-1.724)	(-0.489)	(-1.866)
MarketRiskFactor	0.076	0.101	0.072	0.094	0.082	0.101	0.078	0.095
	(0.928)	(0.743)	(0.890)	(0.687)	(1.000)	(0.744)	(0.967)	(0.689)
Momentum	-0.283**	-0.269*	-0.286**	-0.299**	-0.276**	-0.270*	-0.279**	-0.301**
	(-2.548)	(-1.890)	(-2.573)	(-2.119)	(-2.492)	(-1.897)	(-2.516)	(-2.128)
Constant	-0.000	-0.001	-0.010	-0.043***	-0.001	-0.000	-0.011	-0.043***
	(-0.340)	(-0.431)	(-1.142)	(-3.647)	(-1.316)	(-0.314)	(-1.465)	(-3.641)
Observations	3,126	2,976	3,126	2,976	3,126	2,976	3,126	2,976
Adjusted R-squared	0.004	0.008	0.003	0.012	0.007	0.008	0.006	0.012
Industry FE	No	No	Yes	Yes	No	No	Yes	Yes

Standard errors are calculated using Huber-White sandwich estimators. t-statistics are reported in parentheses. *, **, and *** indicate significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.

Table 8
Cont.

Panel B: Regressing 3-day CAR on categories of SEC Comment Letters and UTB levels by Internal Information Quality groups

DV: CAR [-1,1]	(1) Above median UTBs	(2) Below median UTBs	(3) Above median UTBs	(4) Below median UTBs	(5) Above median UTBs	(6) Below median UTBs	(7) Above median UTBs	(8) Below median UTBs
TaxComment	-0.002	-0.000	-0.002	0.000	0.001	0.003	0.001	0.003
	(-0.876)	(-0.054)	(-0.776)	(0.019)	(0.376)	(0.961)	(0.544)	(1.085)
RevenueComment	-0.001	0.000	-0.002	0.002	-0.001	0.000	-0.002	0.002
	(-0.644)	(0.204)	(-0.861)	(0.666)	(-0.575)	(0.206)	(-0.785)	(0.681)
FairValueComment	0.004*	-0.002	0.004*	-0.002	0.004*	-0.002	0.004*	-0.002
	(1.718)	(-0.658)	(1.766)	(-0.801)	(1.727)	(-0.640)	(1.772)	(-0.784)
WeakIIQ	-0.000	-0.004**	-0.001	-0.004*	0.002	-0.003	0.001	-0.003
	(-0.135)	(-1.987)	(-0.520)	(-1.757)	(0.636)	(-1.385)	(0.401)	(-1.162)
WeakIIQ TaxComment*					-0.010*	-0.005	-0.011**	-0.006
					(-1.930)	(-1.063)	(-2.053)	(-1.167)
SizeFactor	0.100	0.791***	0.119	0.777***	0.120	0.792***	0.141	0.779***
	(0.602)	(3.586)	(0.717)	(3.469)	(0.722)	(3.591)	(0.849)	(3.476)
GrowthFactor	-0.097	-0.532**	-0.103	-0.551**	-0.097	-0.530**	-0.104	-0.548**
	(-0.474)	(-2.049)	(-0.508)	(-2.114)	(-0.471)	(-2.043)	(-0.507)	(-2.106)
MarketRiskFactor	0.067	0.040	0.064	0.031	0.062	0.036	0.057	0.026
	(0.824)	(0.299)	(0.800)	(0.225)	(0.756)	(0.271)	(0.716)	(0.194)
Momentum	-0.287***	-0.360**	-0.293***	-0.385***	-0.288***	-0.360**	-0.295***	-0.386***
	(-2.599)	(-2.534)	(-2.654)	(-2.728)	(-2.608)	(-2.537)	(-2.667)	(-2.731)
Constant	-0.001	0.002	-0.009	0.022*	-0.001	0.001	-0.010	0.021
	(-0.718)	(1.330)	(-1.106)	(1.650)	(-1.324)	(0.932)	(-1.281)	(1.573)
Observations	3,187	3,186	3,187	3,186	3,187	3,186	3,187	3,186
Adjusted R-squared	0.004	0.011	0.002	0.013	0.005	0.011	0.004	0.013
Industry FE	No	No	Yes	Yes	No	No	Yes	Yes

Standard errors are calculated using Huber-White sandwich estimators. t-statistics are reported in parentheses. *, **, and *** indicate significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.

Table 9

Post-comment letter release changes in tax aggressiveness

Panel A: Regressing 3-day CAR on categories of SEC Comment Letters and post-comment changes in Tax Aggressiveness

DV: CAR [-1,1]	(1) Top Quartile ΔETR_{t+1}	(2) Bottom Quartile ΔETR_{t+1}	(3) Top Quartile ΔETR_{t+1}	(4) Bottom Quartile ΔETR_{t+1}	(5) Top Quartile ΔETR_{t+1}	(6) Bottom Quartile ΔETR_{t+1}	(7) Top Quartile ΔETR_{t+1}	(8) Bottom Quartile ΔETR_{t+1}
TaxComment	-0.001	-0.000	-0.001	-0.001	0.003	0.003	0.003	0.002
	(-0.571)	(-0.047)	(-0.464)	(-0.253)	(0.978)	(0.963)	(0.976)	(0.775)
RevenueComment	0.001	0.003	0.001	0.002	0.001	0.003	0.001	0.002
	(0.541)	(0.906)	(0.379)	(0.547)	(0.595)	(0.921)	(0.429)	(0.560)
FairValueComment	0.001	0.003	0.002	0.003	0.001	0.003	0.001	0.004
	(0.532)	(1.275)	(0.602)	(1.310)	(0.473)	(1.316)	(0.553)	(1.347)
TaxAgg	-0.002	0.004	-0.002	0.003	-0.001	0.007**	-0.000	0.007**
	(-1.203)	(1.258)	(-0.801)	(1.142)	(-0.529)	(2.149)	(-0.204)	(2.072)
*TaxAgg**					-0.007	-0.019***	-0.007	-0.020***
TaxComment					(-1.497)	(-2.907)	(-1.429)	(-2.963)
SizeFactor	0.517***	0.704***	0.501**	0.707***	0.512***	0.708***	0.497**	0.712***
	(2.642)	(2.972)	(2.551)	(2.981)	(2.620)	(2.980)	(2.532)	(2.995)
GrowthFactor	-0.370	-0.374	-0.416	-0.339	-0.372	-0.372	-0.418	-0.339
	(-1.395)	(-1.347)	(-1.613)	(-1.201)	(-1.403)	(-1.341)	(-1.621)	(-1.201)
MarketRiskFactor	0.019	0.175	0.014	0.163	0.019	0.179	0.015	0.165
	(0.166)	(1.326)	(0.123)	(1.202)	(0.170)	(1.344)	(0.128)	(1.214)
Momentum	-0.320*	-0.088	-0.365**	-0.071	-0.319*	-0.080	-0.365**	-0.063
	(-1.838)	(-0.567)	(-2.089)	(-0.450)	(-1.833)	(-0.511)	(-2.086)	(-0.398)
Constant	-0.000	-0.002*	-0.058	-0.028	-0.001	-0.003**	-0.058	-0.029
	(-0.039)	(-1.671)	(-1.563)	(-1.501)	(-0.424)	(-2.017)	(-1.572)	(-1.521)
Observations	1,979	1,990	1,979	1,990	1,979	1,990	1,979	1,990
Adjusted R-squared	0.006	0.013	0.000	0.005	0.006	0.015	0.001	0.007
Industry FE	No	No	Yes	Yes	No	No	Yes	Yes

Top (bottom) quartiles represent observations with tax increases (decreases) in the top (bottom) quartiles. Tax increases (decreases) are measured as the firm's ETR the first year after comment letter released minus the firm's ETR the year before comment letter is released. Standard errors are calculated using Huber-White sandwich estimators. t-statistics are reported in parentheses. *, **, and *** indicate significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.

Table 9
Cont.

Panel B: Regressing 3-day CAR on categories of SEC Comment Letters and post-comment changes in Tax Aggressiveness by Internal Information Environment groups

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DV: CAR [-1,1]	Top Quartile ΔETR_{t+1}	Bottom Quartile ΔETR_{t+1}	Top Quartile ΔETR_{t+1}	Bottom Quartile ΔETR_{t+1}	Top Quartile ΔETR_{t+1}	Bottom Quartile ΔETR_{t+1}	Top Quartile ΔETR_{t+1}	Bottom Quartile ΔETR_{t+1}
TaxComment	-0.002	-0.000	-0.001	-0.001	0.002	0.002	0.003	0.001
	(-0.622)	(-0.094)	(-0.494)	(-0.263)	(0.685)	(0.661)	(0.870)	(0.443)
RevenueComment	0.001	0.003	0.001	0.002	0.001	0.003	0.001	0.002
	(0.482)	(1.015)	(0.326)	(0.654)	(0.456)	(1.039)	(0.307)	(0.684)
FairValueComment	0.001	0.003	0.001	0.003	0.001	0.003	0.001	0.003
	(0.426)	(1.305)	(0.525)	(1.325)	(0.461)	(1.293)	(0.560)	(1.317)
WeakIIQ	0.002	-0.003	0.002	-0.003	0.003	-0.002	0.003	-0.002
	(0.832)	(-1.400)	(0.699)	(-1.093)	(1.431)	(-0.887)	(1.317)	(-0.653)
*WeakIIQ*TaxComment*					-0.009*	-0.005	-0.009*	-0.005
					(-1.705)	(-0.953)	(-1.801)	(-0.869)
SizeFactor	0.515***	0.716***	0.499**	0.721***	0.525***	0.721***	0.512***	0.725***
	(2.622)	(3.020)	(2.530)	(3.034)	(2.669)	(3.033)	(2.586)	(3.045)
GrowthFactor	-0.370	-0.372	-0.418	-0.337	-0.378	-0.375	-0.425	-0.339
	(-1.396)	(-1.343)	(-1.620)	(-1.195)	(-1.423)	(-1.351)	(-1.644)	(-1.202)
MarketRiskFactor	0.022	0.175	0.017	0.162	0.021	0.172	0.016	0.159
	(0.192)	(1.323)	(0.146)	(1.196)	(0.180)	(1.308)	(0.136)	(1.181)
Momentum	-0.316*	-0.091	-0.364**	-0.075	-0.321*	-0.095	-0.369**	-0.078
	(-1.816)	(-0.587)	(-2.079)	(-0.474)	(-1.842)	(-0.607)	(-2.106)	(-0.494)
Constant	-0.002	-0.000	0.013	-0.026	-0.003*	-0.001	0.013	-0.026
	(-1.472)	(-0.298)	(0.796)	(-1.359)	(-1.938)	(-0.572)	(0.798)	(-1.381)
Observations	1,980	1,990	1,980	1,990	1,980	1,990	1,980	1,990
Adjusted R-squared	0.006	0.013	0.000	0.005	0.007	0.013	0.001	0.004
Industry FE	No	No	Yes	Yes	No	No	Yes	Yes

Top (bottom) quartiles represent observations with tax increases (decreases) in the top (bottom) quartiles. Tax increases (decreases) are measured as the firm's ETR the first year after comment letter released minus the firm's ETR the year before comment letter is released. Standard errors are calculated using Huber-White sandwich estimators. t-statistics are reported in parentheses. *, **, and *** indicate significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix B.