

Double Trouble: An analysis of IRS attention and financial reporting

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Abstract: We examine whether the IRS uses public information to obtain qualitative signals regarding the quality of firms' financial information or the integrity of management. Using the procurement of public information as a proxy for IRS attention, we test whether the IRS's usage of firms' public information increases in the months surrounding the announcement of a restatement or the disclosure of an internal control weakness (ICW). We find IRS attention increases around news of both restatements and ICWs. Next, we examine the nature of the restatement and its association with IRS attention. We find restatements stemming from a fraud investigation generate the greatest amount of scrutiny, but that IRS attention also increases around restatements for accounting misapplications. We also find that IRS attention to restatement announcements is associated with higher levels of future tax settlements. Overall, our findings are consistent with the IRS responding to signals of poor information quality as if financial misreporting and tax reporting are related.

Keywords: restatements, financial misreporting, internal control weaknesses, IRS attention, tax enforcement, political costs, regulatory interaction

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1. Introduction

Existing research provides limited insight into what draws the attention of tax authorities to public information and how that information is used in the process of examining corporate tax positions. For publicly traded firms in the U.S., the Internal Revenue Service (IRS) has access to both public and private information from the publicly mandated disclosures required by the Securities and Exchange Commission (SEC) and their own private disclosures submitted via a corporate tax return. The use of public information provides additional data to the IRS that can be used in the enforcement process to complement private information provided on the corporate tax return.

The IRS, as well as other taxing authorities, face increasing resource constraints. The former commissioner of the IRS, John Koskinen who served from 2013 to 2017, used his resignation to call attention to the dangers of continual budget cuts to the IRS. He stressed to Congress the agency's outdated information technology systems and understaffing that have both surfaced as a direct result of underfunding (Davidson, 2017).¹ Similarly, the Transactional Records Access Clearinghouse (TRAC) publishes data concerning the amount of audits conducted by the IRS relative to corporations filing annual tax returns.² They show that the IRS audit rates for large companies fell by almost 38% in 2017 relative to rates in 2010. In this constrained environment, the need for informative signals to better deploy limited resources is greater than ever. In our study, we investigate whether the IRS uses public information to obtain qualitative signals about the integrity of management or firms' information quality that could have implications for the IRS's risk assessment of firms' tax filings.

¹ For the full article see: https://www.washingtonpost.com/news/powerpost/wp/2017/11/07/irs-chief-departs-blasting-congress-for-budget-cuts-threatening-tax-agency/?noredirect=on&utm_term=.b1c5d8e80968

² TRAC is a unique, independent source for computerized facts and figures on federal law enforcement agencies ranging from the IRS to the Drug Enforcement Administration.

A recent study by Bozanic, Hoopes, Thornock, and Williams (2017) identifies instances of the IRS accessing firms' public disclosures. They find the usage of public information increased following the implementation of Financial Accounting Standards Board (FASB) 2006, ASC 740-10, (FIN 48), requiring firms to disclose tax reserve information. Their study provides the first evidence that the IRS does acquire and use public disclosures. Their results are consistent with the IRS obtaining these public disclosures to scrutinize tax related reserves. We build on their analysis, to test whether the IRS also uses public disclosures to obtain more qualitative signals about the firm to assist in the examining process. Specifically, we examine instances of financial restatements and internal control weaknesses (ICWs) as potentially useful signals to the IRS of an aggressive corporate culture or poor information quality.

The Large Business and International Division of the IRS recently announced the selection of 13 different targeted audits specific to transactions affecting a broad spectrum of firms and industries (Daddino, 2017).³ Consistent with this announcement, much of the IRS's discussion of the examining process places an emphasis on the scrutiny of specific transactions. Presumably, these transactions are identified primarily through an analysis of firms' tax returns and supporting filings. Our paper investigates whether the IRS also utilizes signals that are not necessarily tied directly to specific transactions, but that may be useful in an overall risk assessment process.

Existing research documents serious consequences for firms stemming from restatements (e.g., Karpoff, Lee, & Martin, 2008a; Hribar & Jenkins, 2004; Kravet & Shevlin, 2010). We argue financial restatements are likely to draw the attention of the IRS for the following three reasons that are not necessarily mutually exclusive. First, in some instances restatements can have direct implications for tax returns. In these cases, the inaccurately reported information consists of tax

³ The specific targeted audits are referred to in more detail on the following IRS web page: <https://www.irs.gov/businesses/large-business-and-international-launches-compliance-campaigns>.

conforming restatements that transitions to and directly affects the tax return.⁴ Second, financial misreporting could be viewed as a signal of an aggressive corporate culture that is also associated with aggressive tax reporting. Third, the IRS may observe fraud, a misapplication of GAAP, or an error and start to question the quality of the firm's financial information more generally and whether those quality issues extend to tax filings. The second and third reason, for IRS interest in restatements, fit under the cockroach theory; where one problem surfaces, there follows more problems that have yet to be revealed.

Tax consequences potentially exist as a restatement contains information previously disclosed that could involve data submitted through a corporate tax return. Erickson, Hanlon, and Maydew (2004) focus on firms that have restated their financial statements due to allegations of fraud by the SEC. They find that the managers of some firms are willing to pay taxes on overstated earnings they have misreported. However, a financial restatement does not simultaneously trigger the data within a tax return to update. For the IRS, three scenarios can occur. First, the IRS and the restating firm can do nothing and leave the tax return as previously submitted. Second, the IRS can actively update its information through acquiring the new publicly available financial disclosures or through an audit of their own. Lastly, the firm can amend a prior tax return that is directly affected by a financial restatement and, as a result, provide the IRS with the updated information.

We measure the level of IRS attention by implementing an approach similar to that used in Bozanic et al. (2017). The authors use a novel dataset that identifies a portion of the IRS's acquisition of publicly available financial information. This dataset captures the downloads of

⁴ In most cases, we would expect firms to amend their tax returns after restating tax conforming information. However, Erickson et al. (2004) show that not all firms amend their tax returns that are affected by restatements with tax conforming consequences.

firms' annual financial reports from EDGAR and allows us to observe the timing and frequency with which the IRS accesses financial information. We utilize downloads of all available public information to measure the level of IRS attention for each firm and aggregate the total downloads for a given month during the sample period. Because IRS attention is measured by the number of downloads, we use a negative binomial regression to account for the presence of count data (Hilbe, 2011). We identify the months following a restatement announcement as the restatement window. The windows examined are 1, 2, and 3 months. This approach allows us to include all restatement firms during the sample period and to examine whether IRS attention increases during the restatement window. Consistent with expectations, we find IRS attention is positively impacted by a restatement announcement.

Since IRS attention is likely to vary as a function of specific types of restatements, we next identify the types of restatements most likely to draw increased scrutiny. First, we distinguish between restatements defined as arising from accounting misapplications, errors, and fraud. Hennes, Leone, and Miller (2008) argue and show that disentangling the nature of a restatements is essential for determining their importance. Because the majority of restatements arise from a misapplication of GAAP, we use those restatements as the base group to test the incremental effect of restatements stemming from fraud and errors.⁵ We expect restatements occurring due to errors are likely to be the least informative, and that restatements arising due to fraud, will be the strongest signal of an aggressive culture. We find that IRS attention increases for restatements caused by accounting misapplications in all tests, which supports the argument that restatements signal

⁵ While Hennes et al. (2008) categorize restatements into intentional (fraud) and unintentional (errors) based off of three criteria. We modify this approach by creating three separate categories for restatements as recorded by AuditAnalytics: GAAP violations, clerical errors, and fraud. We argue unintentional restatements from GAAP violations and clerical errors represent potentially different signals for the IRS and should, therefore, be considered individually.

possible tax misreporting and merit additional inspection. A restatement attributable to fraud results in an incremental increase in attention relative to restatements stemming from the misapplication of GAAP. We do not find an increase in IRS attention around restatements stemming from errors.

Next, we investigate whether IRS attention around restatements is driven by an interest in the implications of the restatement for tax returns previously filed. In other words, we test whether IRS attention is exclusively focused on cases where the restatement involves a tax conforming adjustment that will likely result in amended tax returns. For this analysis, we build on Badertscher, Phillips, Pincus, and Rego (2009) who separate restatements into those that have current taxable income consequences as conforming earnings management and those that do not as non-conforming earnings management. Badertscher et al. (2009) find non-conforming earnings management is predominant among restatements suggesting that firms choose earnings management activities that do not affect the tax expense more frequently than earnings management activities that do. Parsing the sample into conforming and non-conforming restatements requires the hand-collection of data. For this reason, we limit this analysis to only include fraud restatements because they are likely the largest restatements with the most serious consequences for all the firm's stakeholders. We find results consistent with the IRS increasing its scrutiny on firms regardless of the presence of tax conforming earnings changes, but that scrutiny is incrementally higher when a fraud restatement has tax conforming implications.

Apart from restatements, there are other public signals about a firm's information quality or managerial integrity that may lead to increased IRS attention. In our next set of tests, we investigate IRS attention following a firm's disclosure of material weaknesses. Gallemore and Labro (2015) and Feng, Li, and McVay (2009) both argue that disclosure of material weaknesses

indicate poor information quality that management are forced to rely upon when making tax planning decisions or management guidance, respectively. To the extent that internal control weaknesses (ICWs) provide a signal about information quality, we investigate whether the IRS attention is increasing subsequent to a firm disclosing ICWs. We find evidence consistent with increased downloads of firms' public information following an ICW disclosure. This result is particularly interesting because, unlike some restatements that involve conforming tax elements, the receipt of an ICW does not have direct implications for previously filed tax returns.

In additional analyses, we consider whether IRS attention to a restatement leads to an increase in future tax settlements. Although it is difficult to attribute an increase in future tax settlements directly to increased scrutiny following a restatement, we find evidence suggesting that as firms' receive more attention from tax authorities, there is a subsequent increase in tax settlements. Finally, we consider whether the need for qualitative signals is related to the decrease in IRS enforcement rates. We find that as enforcement rates decrease, restatements become more relevant in explaining IRS attention.

Our results provide new insights into the finding from Bozanic et al. (2017) that the IRS uses public information in the audit process. In their study, Bozanic et al. (2017) find evidence consistent with the IRS focusing on tax related disclosures in the financial statements. Our results suggest the IRS's focus goes beyond tax disclosures and includes looking for signals related to corporate culture and to information quality that are likely useful in the risk assessment process. Further, we find the IRS appears to rely more on these signals when enforcement rates are lower. Research has identified a number of costs associated with restatements and internal control weaknesses (Ashbaugh-Skaife, Collins, & Kinney, 2007; Cassell, Dreher, & Myers, 2013; Chakravarthy, deHaan, & Rajgopal, 2014; Efendi, Srivastava, & Swanson, 2007; Johnston &

Petacchi, 2017; Karpoff et al., 2008a). By showing IRS attention increases following a restatement, we broaden the implications of financial misreporting to another important stakeholder of the firm, the tax authorities.

This study also adds to the ongoing debate about the connection between aggressive tax and aggressive financial reporting. Wilde and Wilson (2018) note that the existing evidence on the relation between aggressive financial and aggressive tax reporting is mixed. Some evidence indicates a negative association in situations where managers may want to avoid additional scrutiny of financial reports (e.g., Erickson et al., 2004; Lennox, Lisowsky, & Pittman, 2013). Other studies find evidence consistent with an aggressive corporate culture leading to a positive relation between aggressive tax and aggressive financial reporting (Frank, Lynch, & Rego, 2009; Lisowsky, 2010; Wilson, 2008). We contribute to the debate by finding the IRS behaves in a manner consistent with the notion that aggressive tax and financial reporting are linked.

2. Literature Review and Hypothesis Development

2.1 Restatement Implications

A report produced by AuditAnalytics reviewing restatements through 2016 shows that restatements remain prevalent. A total of 615 unique firms committing 671 different restatements took place in 2016 alone. The peak of restatements involved a total of 1,624 firms in 2006.⁶ Not all restatements arise due to managements intentional manipulation of financial reports. Many restatements arise due to poor internal controls and poor information quality within a firm. Kinney and McDaniel (1989) examine the impact of internal controls by analyzing the characteristics of

⁶ The number of restatements has gradually decreased over the years with 615 unique firms committing restatements in 2016 (Bonaldi, 2017). For more information see <http://www.auditanalytics.com/blog/2016-financial-restatements-review/>.

73 firms that correct previously reported quarterly earnings from 1976 to 1985 through a restatement. They conclude that restatements reflect a failure in the firm's internal control system and find that both firm size and firm profitability are negatively associated with restatements. Later, Guo, Huang, Zhang, and Zhou (2016) show that employee-friendly policies, that increase internal control effectiveness, significantly reduce the propensity for employee related material weakness errors that lead to restatements. The restatement literature also includes studies related to: executive compensation and incentives to restate earnings (Armstrong, Jagolinzer, & Larcker, 2010; Burns & Kedia, 2006; Efendi et al., 2007), the impact on auditors associated with a restatement firm (Hennes, Leone, & Miller, 2014; Swanquist & Whited, 2015), and the effect on becoming a takeover target (Amel-Zadeh & Zhang, 2015).

The cost of restatements can vary significantly. Palmrose, Richardson, and Scholz (2004) study the market reaction to earnings restatements and find more negative returns are associated with restatements involving fraud, decreases in reported income, and responsibility by auditors or by management. Wilson (2008) investigates the years surrounding restatements to examine characteristics of the decline in the information content of earnings and finds that the negative impact from restatements on the information content of earnings in subsequent periods is only temporary and is explained by a short-term investor confidence loss. However, the longevity of the negative impact on the market has also been shown to vary depending on the underlying nature of the restatement and can last anywhere from one quarter to three years (Chen, Cheng, & Lo, 2014). In a related study, Badertscher, Hribar, and Jenkins (2011) examine how informed trading activities affect the market reaction to accounting restatements and find less negative reactions to restatements when managers purchase additional stock before a restatement and a more severe reactions when managers sell. Karpoff et al. (2008a) examine the penalties imposed on firms that

were targeted by the SEC for financial misrepresentation and find that there are penalties imposed on firms not just by the legal system but also by the market. They show that \$1 used for inflating earnings gets lost when misconduct is revealed plus an additional \$3.08. The additional \$3.08 is made up of \$0.36 that go to expected legal penalties and \$2.71 that go to lost reputation. This reputation loss is substantial and suggests that misreporting earnings carries heavy adverse consequences.

Additionally, restatements have been linked to increases in the cost of financing. For example, Hribar and Jenkins (2004) show restatements increase the cost of equity and Kravet and Shevlin (2010) show an increase in information risk pricing, that is connected to the cost of equity, resulting from restatements. Moreover, an untrustworthy firm incurs greater monitoring costs, bonding costs, and residual losses in its financial arrangements (Jensen & Meckling, 1976). In an additional paper, Karpoff, Lee, and Martin (2008b) find that managers of firms responsible for financial misrepresentation lose their jobs 93 percent of the time by the end of the regulatory enforcement period for the restatement. Chakravarthy et al. (2014) document the effort that firms put into reputation repair after a restatement from targeting specific stakeholders damaged by the restatement. These efforts receive a positive market response, but come at a cost to the firm in dedicating resources to remedy the negative effects of the restatement.

Erickson et al. (2004) directly analyze a sample of firms accused of overstating earnings in a fraudulent manner and examine the extent to which firms paid additional taxes on the reported fraudulent earnings. They find that many firms chose to include the overstated financial accounting income in their tax returns, thus paying additional taxes in the process of boosting their earnings. They theorize that managers do so to avoid raising the suspicion of savvy investors, the SEC, or the IRS.

2.2 IRS use of public disclosures

Bozanic et al. (2017) use the introduction of FIN 48, which increased public tax disclosure requirements, to examine the IRS's attention to public financial disclosures. They find that IRS attention increased following FIN 48 and the implementation of uncertain tax benefit (UTB) disclosures, indicating the utilization of public information by the IRS to complement their private corporate tax return information. Their findings suggest that the changes made by the SEC for disclosure altered the IRS's behavior with regard to their public disclosure acquisition. In additional analysis, the authors test the impact of the IRS implementing Schedule UTP, which is similar to the requirements of FIN 48, and find that IRS attention decreased following its enactment. However, they also find that firms significantly increased the quantity of content regarding their tax-related disclosures following the implementation of Schedule UTP. This finding suggests that changes made by the IRS altered firms public disclosures.

2.3 Hypothesis Development

Hoopes, Mescall, and Pittman (2012) investigate the relationship between tax avoidance and the role of IRS monitoring. They highlight the decline in audit rates overtime as evidenced by the amount of corporate audits completed each year. They find that closer IRS monitoring limits corporate tax avoidance. TRAC investigates the audit rates for 616 large corporations that reported \$20 billion or more in assets. They show that the amount of time devoted to these companies by the IRS fell by 49% from 2010 to 2017, which they attribute to lack of available staff.⁷ Kubick, Lynch, Mayberry, and Omer (2016, p. 1756) note that:

⁷ For more information on this particular article, see: <http://trac.syr.edu/tracirs/>

“...the IRS, as well as other taxing authorities, faces resource constraints. While taxing authorities likely possess a broad array of tax-related data, such data must be processed into information that allows them to target specific firms, as well as relevant tax issues.”

One potentially useful signal to the IRS in conducting a risk assessment and determining how to deploy limited resources is the issuance of a restatement. Restatements result in updated information of a previously inaccurate disclosure. This new information may lead the IRS to take an additional look at the firm, whether the restatement directly impacts the tax return or not. There are several potential reasons the IRS may increase scrutiny of financial statements following a restatement. These explanations are not mutually exclusive. First, the revised information may contain data that directly affects what was previously submitted to the IRS, via a tax return. This would be the case, for example, if the firm reported fraudulent earnings to the SEC and also reported those earnings on the tax return to avoid scrutiny. Second, financial misreporting may signal an aggressive corporate culture and, therefore, potential tax misreporting. Finally, the IRS may observe a restatement stemming from either fraud or an error and begin to question the general information quality of the firm. Poor information quality could be associated with errors in the tax return.⁸

Despite the arguments for why the IRS may increase the acquisition of public information following a restatement, there are reasons to expect restatements might not draw much notice from the IRS. First, restatements most often arise due to accounting misapplications that are unlikely to have direct implications for taxes (Plumlee & Yohn, 2010). Second, most restatements related to fraud cause firms to restate earnings downward, which potentially reduces the tax owed by the

⁸ We also conducted a search through the Internal Revenue Manual (IRM), an official compendium of internal guidelines for the IRS, for instances of the use of restatements in the “examining process.” The only reference to restatements came from the Compliance Assurance Process (CAP) examinations where restatements are used to help determine a firm’s eligibility to participate.

firm (assuming they reported the inflated earnings on their originally filed tax return). As such, it is not clear how interested the IRS will be if a firm lowers its income, resulting in lost revenue for the IRS as affected tax returns are amended and refunds issued from the overstated earnings. Alternatively, the restatement may carry no tax implications simply because the firm did not report inflated earnings for tax or only used non-tax conforming methods to adjust their earnings. In either case, the IRS does not stand to gain in the form of increased tax payments from the restatement itself. Therefore, whether restatements affect IRS scrutiny is an empirical question. This leads to our first hypothesis:

H1: IRS attention to a firm's public filings will increase in the months following a restatement announcement.

The nature of a financial restatement can vary in severity ranging from fraud to a clerical error and from intentional to unintentional. Specifically, restatements can be classified as involving either clerical errors (i.e., unintentional) or irregularities (i.e., intentional misreporting or fraud) as defined by SAS No. 53 (AICPA, 1988). In addition, some restatements result from an investigation by the SEC while others are self-reported. We expect restatements involving fraud are likely to be of the greatest interest to the IRS because they provide the strongest signal of an aggressive corporate culture and potential tax misreporting. This leads us to our second hypothesis:

H2a: Restatements stemming from fraud will generate a larger increase in attention from the IRS relative to all other restatement types.

It is equally interesting to examine whether IRS downloads of financial statements increase around restatements stemming from reporting clerical errors. While the implications of these restatements are smaller, and less indicative of corporate culture than fraud, they may still raise a red flag for tax authorities. It is possible the IRS will view these restatements as a signal of poor information quality that extends to the firm's corporate tax returns, and choose to reexamine or expend additional effort in examining the restatement firm in hopes of finding similar errors in the firm's tax filings. Nonetheless, we expect restatements resulting from clerical errors will generate the least interest from the IRS because they likely convey little information about the culture of the firm. This leads to our next hypothesis:

H2b: Restatements stemming from an error will generate a smaller increase in attention from the IRS relative to all other restatement types.

As an alternative to restatements, we use disclosures of material weaknesses in a firm's annual 10-K as a signal of poor information quality. Sarbanes-Oxley (SOX) section 404 requires firms to report on the adequacy of internal controls on financial reporting and assesses a firm's overall financial reporting ability. Prior research has used internal controls as proxies of information quality. For example, Gallemore and Labro (2015) use the absence of material weaknesses in internal controls to proxy for high internal information quality and test its association with tax avoidance. The authors find that firms with high information quality have lower effective tax rates, suggesting a firm's ability to avoid taxes is affected by the quality of the information on which tax planning is based. In addition, Feng et al. (2009) examine the relationship between

internal control quality and the accuracy of management guidance. They find that managers of firms with ineffective internal controls release less accurate forecast guidance. This suggests managers are relying on erroneous reports when forming guidance and are therefore subject to poor information environments. Bauer (2016) uses internal control quality to proxy for internal governance and finds that firms with tax related ICWs are less tax avoidant and that those who then remediate the ICWs are subsequently more tax avoidant. Bauer (2016) argues that lower levels of tax avoidance in firms with ineffective tax-related internal controls implies agency costs that result from poor alignment between managers and shareholders. Remediation of the ICWs then leads to shareholder-manager realignment and to improved tax planning. Similar to these existing studies, we view ICWs as informative of firms' internal information quality. We expect, the IRS may be interested in ICWs as a signal of low quality accounting information that could lead to errors in the tax compliance process. This leads to our final hypothesis:

H3: The disclosure of material weaknesses leads to an increase in IRS attention.

3. Research Design

We measure IRS attention by following the approach developed by Bozanic et al. (2017). We utilize a dataset that tracks IRS obtainment of financial filings or forms hosted by the SEC's EDGAR servers. EDGAR provides the public with access to all SEC required filings and forms for all public companies. For those interested in access to the information, a server log file tracks the following important sources: the Central Index Key (CIK) of the company whose information was requested, the IP address of the user accessing the information, the date and time of the request, and a link that contains an accession to the form or filing being requested. Each day during the

year contains a log of all download activity for that day. Using this information, we are able to locate instances of IRS downloads and the filings or forms being requested for download on a daily basis.

Our primary dependent variable of IRS attention is $IRS\ DOWNLOADS_{i,m}$ and is measured as the number of times in month m of year t that the IRS downloaded one of firm i 's public information filings associated with any fiscal year.⁹ Because $IRS\ DOWNLOADS_{i,m}$ is modeled as count data and contains a variance greater than its mean, the appropriate research design calls for a negative binomial regression (Hilbe, 2011). Negative binomial regressions are warranted in the presence of count data when observations are found to not be independent of one another, resulting in over-dispersion.¹⁰ This approach allows for the mean and variance to no longer be identical, as is required by a Poisson regression. Next, because the downloads are recorded on a monthly basis, we utilize windows following a restatement of 1, 2, and 3 months that allow us to monitor IRS attention during those times. The choice of windows represents a trade-off between a desire to identify an increase in attention directly attributable to the restatement, and a recognition that the tax authority does not necessarily have an incentive to process information related to the restatement at the same speed as investors. We estimate the following equation using a negative binomial regression design:

$$\begin{aligned}
 IRS\ DOWNLOADS_{i,m} = & \beta_0 + \beta_1 RESTATE\ WINDOW_{i,m+n} + \beta TAX\ AVOIDANCE_{i,t} + \\
 & \beta FIRM\ CHARACTERISTICS_{i,t} + \varepsilon_{i,t}
 \end{aligned} \tag{1}$$

⁹ We focus on all public information because our construct for IRS attention is based on whether the IRS acquires additional public information on restating firms, beyond what they have privately.

¹⁰ As noted in Hilbe (2011), count data are typically analyzed with Poisson models that require that the observations be independent of each other resulting in equal mean and variance. In the event that the count data are not independent of another, the distributional properties of the Poisson PDF are violated, calling for a negative binomial regression.

Determinants of tax avoidance that may contribute to the IRS's interest in a firm include: GAAP effective tax rate (*GAAP ETR*), cash effective tax rate (*CASH ETR*), book-to-tax differences (*BTD*), change in tax loss carryforwards (*NOL CHANGE*), net deferred tax assets (*DTA*), net deferred tax liabilities (*DTL*), and unrecognized tax benefits (*UTB*). Other potential determinants of IRS interest in a firm include: the size of a firm (*SIZE*), market-to-book ratio (*MTB*), if a firm is multinational (*MNE*), the amount of leverage (*LEV*), intangible asset intensity (*INTANGIBLE INTENSITY*), R&D intensity (*R&D INTENSITY*), inventory intensity (*INVENTORY INTENSITY*), capital intensity (*CAPITAL INTENSITY*), pretax profitability (*ROA*), sales growth (*SALES GROWTH*), and the amount of cash holdings (*CASH*).¹¹ All control variables are measured from fiscal year end data t and subsequently spread to each corresponding month m of the fiscal year. We also include firm and year fixed effects and cluster standard errors by firm.

RESTATE WINDOW $_{i,m+n}$ is an indicator variable equal to one for the months following the disclosure date of a restatement for firm i at time $m+n$ and zero at all other times during the sample period. The window changes from 1, 2, and 3 month periods and is denoted by n for both 2 and 3 month windows. Our main coefficient of interest is β_1 . This test allows us to empirically examine IRS attention following a restatement announcement.

Next, we focus on identifying where IRS attention is strongest conditional on the underlying nature of the restatement. Relying upon restatement classification defined by AuditAnalytics, we run two additional tests and partition restatements attributable to fraud and to errors relative to accounting rule application failures (GAAP violations):

¹¹ All variable measurements are defined in appendix A.

$$\begin{aligned}
\text{IRS DOWNLOADS}_{i,m} = & \beta_0 + \beta_1 \text{RESTATE WINDOW}_{i,m+n} + \beta_2 \text{FRAUD}_{i,m+n} + \\
& \beta \text{TAX AVOIDANCE}_{i,t} + \beta \text{FIRM CHARACTERISTICS}_{i,t} + \varepsilon_{i,t} \quad (2)
\end{aligned}$$

$$\begin{aligned}
\text{IRS DOWNLOADS}_{i,m} = & \beta_0 + \beta_1 \text{RESTATE WINDOW}_{i,m+n} + \beta_2 \text{ERROR}_{i,m+n} + \\
& \beta \text{TAX AVOIDANCE}_{i,t} + \beta \text{FIRM CHARACTERISTICS}_{i,t} + \varepsilon_{i,t} \quad (3)
\end{aligned}$$

We include an indicator variable, $\text{FRAUD}_{i,m+n}$, which equals one for the months following the disclosure date of a restatement if firm i has a restatement due to fraud and zero at all other times. For equation 3, we include an additional indicator variable, $\text{ERROR}_{i,m+n}$, which equals one for the months following the disclosure date of a restatement if firm i has a restatement due to an unintentional clerical error and zero otherwise. The inclusion of both $\text{FRAUD}_{i,m+n}$ and $\text{ERROR}_{i,m+n}$ in equations 2 and 3, respectively, indicate the incremental effect that fraud and clerical errors have with respect to all other restatement types. For this analysis, the main effects of $\text{FRAUD}_{i,m+n}$ and $\text{ERROR}_{i,m+n}$ are equal to their interaction with $\text{RESTATE WINDOW}_{i,m+n}$. Therefore, when analyzing the incremental effect of fraud or clerical errors, the interaction term drops out as there can be no fraud or clerical error without there being a restatement first. Each equation allows us to analyze the incremental effect that the accompanying attribute of the restatement has on IRS attention relative to the base group of accounting misapplications. The coefficient of β_1 for all equations indicates the base effect of restatements on IRS attention with the added incremental effect from β_2 for the fraud and error related restatements.

4. Sample Selection

Using the server logs from EDGAR, we are able to identify IRS activity from the list of downloads that detail the filings being requested for a firm and the date accessed. Although the SEC replaces the final octet of the users' IP address with letters to preserve privacy, we can still determine when the IRS makes a request and for what filing.¹² Due to the removal of the last octet of IP addresses, we are only able to use IP addresses that the entire final octet is solely owned by the IRS. The American Registry for Internet Numbers (ARIN) contains information that allows us to identify who the owner of an IP address is when utilizing the “whois” tool located within the search bar. Within ARIN, we identify IP addresses whose entire octet blocks are solely owned by the IRS, this allows us to ascertain when the IRS has downloaded information with confidence.¹³ The number of downloads of financial statements that is linked to the IRS servers is our proxy for IRS attention. We argue that information acquisition is tied to information usage based on the idea that the IRS would not download the financials without the intention to use them in some fashion for its own examining processes and, therefore, serves as a valid proxy of IRS attention. Returning to the outline of our data procurement, we then identify twelve unique IRS owned IP addresses that we are able to match to the IP addresses listed among the daily logs of downloads kept on the EDGAR servers.¹⁴

After obtaining the distinct IRS IP addresses, we next utilize Python Programming Language and iterate through each daily log file from 2004 to 2016 and extract only those downloads that

¹² A fictitious example of the IP addresses kept on the EDGAR logs is 123.456.789.abc.

¹³ There are several IP addresses linked to the IRS that do not contain the entire block of the final octet of an IP address. Unfortunately, those IP addresses are not included into the sample because of our inability to verify that the download comes from the IRS and not some other user with a similar IP address.

¹⁴ Our finding of twelve IP addresses for the IRS mirrors that of Bozanic et al. (2017) who also find twelve unique IP addresses. These addresses all own the final octet of the IP address meaning that no other user could potentially download within this octet and not be the IRS. An example of a block of IRS IP addresses can be found here: <https://whois.arin.net/rest/net/NET-204-62-146-0-1> (as of August 2017).

match with an IRS IP addresses. This allows us to obtain a single dataset containing all IRS downloads during the time period of 2004 to 2016 resulting in a total of 2,031,290 total downloads.¹⁵ Moreover, each download contains the CIK number of the firm whose information is being accessed. With each download is an accession number that allows us to link to the file being requested through an index provided by EDGAR. We use the indexes for each year of the downloads and attach the correct name of the file or form that was requested for every download made. We then aggregate the daily total of downloads of financials to monthly totals and merge the information to Compustat. Figure 1 presents the total amount of downloads made by the IRS over the sample period of 2004 to 2016. As can be seen from the figure, the amount of downloads acquired begins to increase in the year of 2008 and then spikes in 2009. However, in subsequent years, the amount of downloads exhibits a downward trend consistent with less information acquisition overtime by the IRS.¹⁶

Next, we identify restatement firms using the AuditAnalytics database. Within this database, we can determine when a restatement was filed, which firms have committed a restatement, and the causes behind the restatement. This allows us to identify whether the restatement was due to an error, fraud, or accounting misapplication. AuditAnalytics distinguishes between errors, accounting misapplications, and fraud by identifying restatements that resulted from accounting and clerical application errors, GAAP rule application failures, and financial fraud, irregularities, and misrepresentations, respectively, with an accompanying list for the failures noted. Our sample contains all firms that have restated during the period from 2004 to 2016.

¹⁵ The logs started in 2003, however, the information provided for that year is scarce and incomplete. Therefore, we exclude 2003 from our analysis.

¹⁶ It is also possible IRS agents have shifted how they acquire public filings. For example, they may rely more heavily on the use of Capital IQ or Bloomberg in the later years of the sample.

Finally, we merge the sample of downloads to the sample of restatement firms and include only those firms that have committed a restatement to arrive at our final sample. Each restatement firm remains in the sample period with the month of the restatement being marked by the indicator variable $RESTATE\ WINDOW_{i,m}$, as defined earlier. Table 1 is a description of the process taken to arrive at our selected sample. The final number of firms represents the total number of unique firm-years that have a restatement within the sample period. These firm-year observations are then spread over the calendar year to the month pertaining to the correct fiscal year. As a result, the total number of restatement *firm-month* observations reaches 165,457.¹⁷

5. Results

5.1 IRS Attention and Restatements

Table 2 provides descriptive statistics for the sample related to *IRS DOWNLOADS*, the controls for *TAX AVOIDANCE*, and for *FIRM CHARACTERISTICS*. The average number of monthly downloads for a firm during the period is approximately 2.51, which equates to 30.12 downloads per year. The reported 0 median indicates that most firms do not receive any attention in a given month, with the maximum reaching 338 downloads in a single month. On average, the sample firms have a mean *SIZE* of 6.42, which translates into a mean total assets of \$614 million, and a mean *ROA* of -17%. The average sample firm has a mean of 25% and 22% for *GAAP ETR* and *CASH ETR*, respectively. The total number of restatements occurring during the sample period is 2,068. Of the restatements included, the percentage attributable to errors equals 5%. Instances of

¹⁷ In order to include observations prior to FIN 48, we drop UTB from the analysis and re-estimate our tests on the larger sample. Eliminating this data requirement increases our sample to 308,272 firm-month observations.

fraud represent 3%.¹⁸ The percentage of restatements related to accounting misapplications is 95%.

Figure 2 illustrates graphically an analysis of the mean number of downloads surrounding the month of restatement. The download activity illustrated in Figure 2 appears consistent with IRS attention increasing in the restatement month followed by a lingering, although smaller, amount of attention in the following months.

As discussed in section 3, we estimate a negative binomial regression for equation one with 1, 2, and 3 month windows following a restatement to test the impact of restatements on IRS attention. The sample period covers two significant legislative changes that relate to our analysis. First, the introduction of FIN 48 required firms to publicly disclose information regarding the extent of uncertain current and past tax transactions that are disclosed as uncertain tax benefits (UTBs). Second, the introduction of Schedule UTP required corporations to privately disclose to the IRS tax positions for which there is a UTB reserve recorded on the financial statements. Overall, the information required from the UTB disclosures and that required by Schedule UTP are similar, both disclose information on uncertain tax positions.¹⁹ Bozanic et al. (2017) highlights that both are important for explaining IRS attention. As such, our sample period contains restatements prior to, during, and after both changes. We estimate equation 1 both with the control variable *UTB* on post-FIN 48 sample period, and without *UTB* on the longer sample period. We

¹⁸ The restatement types may not be mutually exclusive. Some restatements stem from a combination of both errors and GAAP violation or fraud. As such, we assign those observations according to severity. If a restatement stems from both an error and fraud, we categorize that restatement as fraud (1 instance). Likewise, if a restatement stems from both a GAAP violation and fraud, we categorize that restatement as fraud (18 instances). Finally, if a restatement stems from both a GAAP violation and an error, we categorize that restatement as a GAAP violation (22 instances). The sample contains no observations where a restatement is a combination of all three restatement types.

¹⁹ A key difference between UTB disclosures and Schedule UTP is that UTBs relate to the aggregate amount of the risky tax positions whereas Schedule UTP requires firms to itemize the different positions that make up the aggregate amount reported by UTB.

also include year fixed effects to account for the impact of the two legislative changes during the sample period.

Table 3 presents the results of estimating equation 1, with and without *UTB*. Columns 1, 3, and 5 report the results from the 1, 2, and 3 month windows, respectively, on the longer sample period without *UTB*. We find the coefficient on *RESTATE WINDOW* is positive and significant in all three of these windows. These results are consistent with IRS scrutiny increasing on the restatement firm during the restatement window relative to other months during the sample period. The interpretation of the negative binomial regression coefficient is as follows: for the occurrence of a restatement, *RESTATE WINDOW*, the difference in the logs of expected counts of *IRS DOWNLOADS* is expected to change by the respective coefficient in each specification, assuming all other variables are held constant. For example, in column 3, the difference in the logs of expected counts would be expected to increase by 0.199 following the occurrence of a restatement. This represents an increase of 48.6% from the mean in expected downloads over the restatement window. Not surprisingly, we also note that the coefficient on *SIZE* is positive and significant in all three tests, indicating that larger firms tend to receive more IRS attention.

Next, we estimate the same regression but include the control variable *UTB*. Columns 2, 4, and 6 report the results from this analysis. We again find that *RESTATE WINDOW* remains positive and significant in the 1, 2, and 3 month windows.²⁰ *UTB* shows significance in all three windows suggesting that the IRS downloads occur more frequently as the amount of disclosed uncertain tax benefits increases, a result consistent with that of Bozanic et al. (2017).

²⁰ In untabulated analysis, we also extend the number of months of *RESTATE WINDOW* beyond 3 months and document a decline in coefficient size and a loss in significance at the 6 month mark, roughly consistent with the pattern observed in figure 2.

Overall, the results in Table 3 suggest that as firms restate financial information, the restatement appears to be noticed by the IRS in the form of increased usage of the firm's public information. The results also suggest that the process of information accumulation by the IRS is concentrated in the months closest to the restatement disclosure.²¹ In summary, restatements appear to impact the data gathering process of the IRS.

5.2 Analysis of IRS Attention and Restatement Causes

Next, we examine how the various causes and attributes of a restatement influence IRS attention. We estimate equations 2 and 3 utilizing the 3 month window and report the results in Table 4.²² In columns 1 and 2 we examine whether restatements stemming from fraud result in incrementally more attention from the IRS. In this analysis, our base group is all other restatement types. The coefficient on *RESTATE WINDOW*, GAAP misapplications and errors, remains positive and significant in columns 1 and 2. The coefficient on *FRAUD* is also positive and significant, indicating IRS attention increases when restatements result from fraud. We also conduct a chi-square test at the bottom of column 2 to assess whether fraud restatements individually attract IRS attention by summing the coefficients on *RESTATE WINDOW* and *FRAUD* and testing the difference from zero. The chi-square test statistic is significant suggesting that fraud restatements alone are a significant factor in attracting IRS attention.

²¹ This analysis is also subject to potential measurement error of *IRS DOWNLOADS* in the month of the restatement. The exact date a restatement is revealed varies within months such that downloads we pick up in the announcement month may potentially occur before the restatement announcement itself. To address this issue, we shift the restatement window to exclude the initial restatement month and continue to find a significant relationship for the second month following a restatement announcement (results not tabulated). This result suggests that the IRS responds relatively quickly to an announcement of a restatement through its information acquisition process and that our measure of *IRS DOWNLOADS* appears to correctly identify the construct of IRS attention.

²² In untabulated analysis, we re-estimate the tests in Table 4 using 1 and 2 month windows. The coefficients on the variables of interest remain consistent in direction and, in some cases, the level of significance increases. However, the coefficient on the variable *ERRORS* remains insignificant.

Columns 3 and 4 present the results of estimating equation 3, the impact of an error on IRS attention. The coefficient on *RESTATE WINDOW* remains significant regardless of the inclusion of *ERRORS* into the regression. *ERRORS*, on the other hand, has a negative and insignificant coefficient in both columns 3 and 4, indicating that IRS attention is not incrementally affected by the presence of a restatement caused from an error relative to all other restatement types. This result is intuitive as it suggests that errors are incidental and do not indicate any pattern of misreporting similar to the results found in Hennes et al. (2008). We also examine the joint significance of the coefficient from *RESTATE WINDOW* plus the coefficient from *ERRORS* and test its difference from zero using a Chi-square test as conducted in column 2. This test allows us to examine whether the restatements stemming from errors alone are significant determinant in explaining IRS attention. The Chi-square test statistic is insignificant suggesting errors are not a contributing factor to IRS attention when considered individually.²³ Finally, column 5 presents the results of estimating the combination of equation 2 and 3 from columns 2 and 4. The results mirror those when each restatement cause is examined individually.

5.3 Conforming Tax Consequences

Next, we examine whether IRS attention is limited to restatements with conforming tax consequences. As argued in Badertscher et al. (2009), firms face a trade-off between tax conforming and nonconforming earnings management strategies. To begin, we restrict our sample to include only those firms that have restated due to fraud. Some firms are likely to have restated more than once during the sample period, therefore, in order to avoid misinterpreting IRS attention, we only keep instances of fraud and eliminate all other firms.²⁴ Focusing on fraud firms also

²³ We also use the Chi-square test for columns 2 and 3, without the control variable *UTB*. The results for these tests produce a chi-square test statistic that is consistent in both direction and level of significance.

²⁴ As part of this process, we eliminate fraud observations that have restated their financial statements from prior to going public, resulting in the inability to verify if any current federal tax expense changes had occurred.

allows us to more easily hand collect data to determine whether the restatements were conforming in nature. This leaves us with a final sample of 50 restating firms from 2007 to 2016.

Next, we hand collect each fraud firm's originally filed 10-K and the restated 10-K to compare the changes among the respective statements. Specifically, we measure the amount of change in the current federal tax expense and create an indicator variable, *CONFORMING*, equal to one if a change has occurred.²⁵ Of the 50 restating firms, we find 27 distinct restatements with a change in the current federal tax expense. For those firms found to have a change in the current federal tax expense, *CONFORMING* set equal to one, we also take the absolute value of restated current federal tax expense over the total restated tax expense and label this variable as *CONFORMING AMOUNT*. We do this in order to capture the total effect of the conforming adjustment and test its impact on IRS attention. We expect tax conforming earnings changes to be of interest due to its potential extension and implications for the firm's previously filed corporate tax returns. On the other hand, we expect that if the restatement of the tax expense relates to either the deferred tax expense and/or the foreign tax expense then it should have no immediate implication for the tax returns that have been filed and, therefore, will only lead to IRS attention if it is viewed as a signal of low information quality in general or a signal of an aggressive corporate culture.

Table 5 reports the results from this analysis. We test whether the amount of IRS attention is impacted by tax conforming earnings changes by including both *CONFORMING* and *CONFORMING AMOUNT* into separate regressions.²⁶ We continue to estimate a negative binomial regression using 1, 2, and 3 month windows. The main effect, *RESTATE WINDOW*,

²⁵ We find four firms that committed fraud during a fiscal year on their quarterly filings. These firms were then able to correct the fraud before the issuance of their 10-K. Therefore, we set *CONFORMING* equal to zero for these firms. In addition, we find the occurrence of fraud for two firms that qualified as REITs for income tax purposes and were not subject to federal income taxation and set *CONFORMING* equal to zero for these firms.

²⁶ Both *CONFORMING* and *CONFORMING AMOUNT* indicate the incremental effect on IRS attention that a restatement carries when tax conforming earnings changes are present. Including only the main effect serves the same role as an interaction effect as both variables are different from zero only during the restatement window.

remains positive and significant in five of the six columns reported. The only exception is column 1, where we use the one month window and include the *CONFORMING* measure. These results suggest increased attention by the IRS increases on firms during periods of fraud restatements even when the restatement is non-conforming. The coefficient on *CONFORMING* is positive in two of the three specifications. Specifically, we find a positive coefficient on *CONFORMING* in columns 3 and 5, where we use 2 and 3 month windows respectively. This result suggests IRS interest is incrementally affected by tax conforming earnings changes. The coefficient on *CONFORMING AMOUNT* is positive and significant only for column 6 using the three-month window.²⁷ In sum, the results of this analysis suggest that an occurrence of fraud, in general, is an important signal to the IRS for its examining processes regardless of whether there are direct tax implications for previously filed returns. In the event that the fraud restatement also includes adjustments that extend to the firm's corporate tax returns, we find mixed evidence that the IRS pays increased attention.

5.4 Analysis of IRS Attention and the Disclosure of Internal Control Weaknesses

As an alternative signal of poor information quality, we extend our analysis to disclosures of a material weakness in annual 10-K filings. This analysis requires us to implement a slightly different approach to our model specification. We first identify firms who disclose a material weakness to internal controls through the AuditAnalytics SOX 404 Internal Controls database. This data source allows us to pinpoint the fiscal years in which firms disclose a material weakness(es) and the origin of the weakness(es).²⁸ We maintain only those firms that have disclosed at least one material weakness during the entire sample period. Next, we modify our

²⁷ We test the robustness of the results through a logistic and an OLS regression. The untabulated results remain consistent in direction and level of significance on the coefficients of interest.

²⁸ The material weakness disclosures all come from a firm's annual filing: 10-K, 10-K/A, 10-KT, 10-KT/A, 10KSB, 10KSB/A, 20-F, 20-F/A, 40-F, and 40-F/A.

sample composition of the IRS downloads data. We first aggregate the number of downloads occurring for each firm in each year of the sample period from 2007 to 2016. This results in a total of 12,540 firm-year observations as our final sample of which all observations have at least one download during the year and one ICW disclosed during the sample period.

We use two alternative variables of interest in this analysis. The first we label $ICW\ TOTAL_{i,t}$, which indicates the total number of material weaknesses disclosed by firm i in year t . The second we create as an indicator variable, $ICW_{i,t}$, that equals one for firm-year observations that contain at least one material weakness disclosed for the associated fiscal year and zero otherwise. Table 6, Panel A shows the descriptive statistics of the sample for the variables $IRS\ DOWNLOADS$, $ICW\ TOTAL$, ICW , and controls. The mean (median) number of firm-year IRS downloads equals 37.69 (11.00). Approximately 6 percent of the firm-year observations disclose at least one material weakness during the sample period that results in 755 unique firms. Of these firms, the mean (median) number of material weaknesses disclosed for each firm-year observation with at least one ICW(s) for the fiscal year equals 2.10 (2.00).

Table 6, Panel B contains the multivariate analysis of IRS attention on firms who disclose a material weakness. We regress $IRS\ DOWNLOADS$ on $ICW\ TOTAL$ and on ICW . We cluster standard errors by firm and include industry and year fixed effects.²⁹ Column 1 presents the results using $ICW\ TOTAL$ as our main independent variable of interest. The coefficient on $ICW\ TOTAL$ equals 0.082 and is significant. This result suggests that a one-unit increase in $ICW\ TOTAL$ results in an 8.2 percent increase in $IRS\ DOWNLOADS$. Column 3 replaces $ICW\ TOTAL$ with ICW and repeats the same analysis as in column 1. The coefficient on ICW is also positive and significant

²⁹ We follow the research design of Bozanic et al. (2017) by implementing an OLS regression and logging the dependent variable to address skewness in the measure.

with a value of 0.27. This result indicates that on average, a firm-year observation that discloses at least one ICW results in an increase in downloads by the IRS of 27 percent. Columns 2 and 4 perform the same regression analyses but with firm fixed effects in the place of industry fixed effects, our inferences remained unchanged. The results in Table 6 suggest the IRS is cognizant of signals of poor information quality and increase scrutiny of firms around these signals.

6. Additional Analyses

6.1 IRS Attention and Future Settlements

To this point, we have worked from the assumption that information accumulation by the IRS is tied to information use. In this section, we investigate whether IRS attention to financial restatements leads to direct firm consequences in the form of future settlements with tax authorities. FIN 48 dictates how firms account for income tax uncertainty, and as part of the requirements of FIN 48, firms must disclose a tabular rollforward of changes in the UTB reserves they establish for uncertain tax positions. Included in this rollforward is any change in UTBs related to settlements with taxing authorities. Robinson, Stomberg, and Towery (2016) note that practitioner guidance instructs firms to record cash payments to tax authorities on the settlement line of the tabular rollforward. We use this line to measure the association between increased IRS scrutiny of firms' financial filings around a restatement and future settlements with tax authorities. To test this association, we estimate the following OLS regression:

$$SETTLE_{t+1, t+n} = \beta_0 + \beta_1 RESTATE_{i,t} + \beta_2 TAX AVOIDANCE_{i,t} + \beta_3 FIRM CHARACTERISTICS_{i,t} + \varepsilon_{i,t} \quad (4)$$

We define *SETTLE* following Robinson, Stomberg, and Towery (2016) as the firm's settlements with tax authorities reported in the post FIN 48 period from $t+1$ through $t+4$ or $t+5$ as a proportion of the firm's total unrecognized tax benefits at year t . *SETTLE* captures the percentage of unrecognized tax benefits in year t that are paid to tax authorities. We measure *RESTATE* as an indicator variable equal to one for year t during which a restatement has occurred for firm i . All other control variables are measured and defined as in table 6.³⁰ In addition, all firms included in this analysis had at least some degree of IRS attention during the sample period (the variable *IRS DOWNLOADS* greater than one for any firm year observation).

We caution that it is difficult to draw inferences about a direct causal relationship between increased scrutiny around restatements and future settlements with the IRS from this test. First, the settlement line item in the tabular rollforward reflects tax settlements with states and foreign governments as well as the IRS. Second, the timing of tax settlements is uncertain and it is not possible to tie settlements directly to the period of increased IRS scrutiny around a given restatement.

Table 7 presents the results from estimating equation 4. We use $SETTLE_{t+1,t+4}$ and $SETTLE_{t+1,t+5}$ as the dependent variables for columns 1 and 2 and columns 3 and 4, respectively. For this analysis, we include control firms that did not experience any restatement during the sample period. Control firms consist of all firms on Compustat with the necessary data during the sample period examined that had any IRS attention as measured in this paper. Columns 1 and 3 report results for only the restating firms and columns 2 and 4 report the results using the combined sample of restatement and control firms. We find a positive and significant coefficient in both columns 1 and 2 on the *RESTATE*. Next, in columns 3 and 4, we use the same approach as in

³⁰ The only control variable missing from previous analyses is *MNE*. This is due to the sample consisting of only multinational firms and ,therefore, *MNE* drops from the analysis.

columns 1 and 2 and continue to find a positive and significant coefficient for *RESTATE*. These results are consistent with IRS attention from restatements resulting in higher future tax settlements.

6.2 IRS Attention and Enforcement Trends

In this section, we examine whether the trend of declining enforcement rates for the IRS, as highlighted previously, has increased the need for informative signals to more efficiently deploy limited IRS resources. Put differently, we test whether higher enforcement rates moderate the relationship between IRS attention and restatements. Following Hoopes et al. (2012), we identify the yearly enforcement rates by the IRS through the number of corporate tax returns filed and those examined. We first use the publicly available enforcement data provided by the IRS that shows IRS examinations of tax returns filed by all U.S. taxpayers.³¹ The data show the amount of tax returns filed and examined for a given calendar year by the size of total assets reported on firms' balance sheets. This partition classifies enforcement rates into 12 different subgroups starting at reported total asset size of under \$250,000 and ending at reported total asset size over \$20 billion. We take the number of returns examined and divide it by the total number of returns filed according to firms' size of total assets and label this variable *ENFORCEMENT RATE*. We then assign the yearly enforcement rate with the corresponding total asset size to each of the observations within our sample. This variable is then included into equation 1 along with an interaction term with *RESTATE WINDOW* to investigate how enforcement rates impact IRS attention following restatements. We expect that, in years of relatively high enforcement rates, the IRS's accumulation of public information will increase as there are likely more examinations occurring. In conjunction, we also expect the need for restatements as informative signals to the IRS will be

³¹ We use public tax statistics available over the years 2007-2016 from section 2 of the Data Book from the IRS. For more information: <https://www.irs.gov/statistics>

lower when enforcement rates are high. However, as enforcement rates decrease, we expect IRS attention to increase following restatements and therefore predict a negative coefficient on the interaction term.

The results of this analysis are found in Table 8. We estimate a negative binomial regression with 1, 2, and 3 month windows following a restatement. The coefficient on the interaction term of interest ($RESTATE\ WINDOW \times ENFORCEMENT\ RATE$) is negative and significant in both the 1 and 2 month windows, but is not significant when we use a 3 month window. A positive and significant coefficient on $ENFORCEMENT\ RATE$ in each column suggests that as enforcement efforts increase, active public information accumulation by the IRS also increases. The negative coefficient on the interaction term of, $RESTATE\ WINDOW \times ENFORCEMENT\ RATE$, suggests that in years of high enforcement rates, the use of restatements in the examining process as informative signals decreases. Therefore, as enforcement rates decline, this then increases the need for restatements as informative signals to more efficiently deploy limited resources.

6.3 Tax Related Restatements and Internal Control Deficiencies

Next, we investigate whether restatements directly related to taxes and disclosures of tax related internal control deficiencies contribute to an increase in IRS attention beyond restatements and internal control weaknesses in general. There are reasons to suspect that tax deficiencies for financial reporting purposes would attract additional IRS scrutiny. For many firms, the tax department plays an important role in decisions related to the accounting for income taxes. Therefore, issues directly related to the tax accounts in the financial statements may be incrementally informative about the quality of tax filings.

We use AuditAnalytics to identify instances of restatements related to accounting for income taxes and label this variable $TAX\ FOOTNOTE$ set equal to one in cases of tax related restatements,

and zero otherwise. Next, we use AuditAnalytics SOX 404 Internal Controls database to identify instances of annually firm disclosed tax related internal control weaknesses. The data allow us to differentiate between all the internal control weaknesses disclosed into account-specific types. Bedard, Hoitash, Hoitash, and Westermann (2012) show that, of all account-specific material weaknesses disclosed, those related to accounting for income taxes are the most frequent type. They also document that tax material control weaknesses are among the most difficult to remediate. We create the variable *TAX CONTROL* and measure it as an indicator variable equal to one for firm-year observations that disclose any material weaknesses related to tax internal controls, and zero otherwise.

Table 9 presents the results of estimating this relationship. Columns 1 and 2 present the results of the incremental effect of restatements with tax deficiencies using *IRS DOWNLOADS* as the dependent variable and estimated through a negative binomial regression as this specification matches that of equation 1. We continue to document a positive and significant coefficient on *RESTATE WINDOW* across both columns 1 and 2. However, the coefficient on *TAX FOOTNOTE*, which represents the incremental effect of tax related restatements, is negative and insignificant. These results suggest the increase in IRS attention following restatements is not attributable to accounting for income tax misreporting. Next, columns 3 and 4 present the results of estimating the incremental effect of tax internal control deficiencies on IRS attention using OLS and the log of the yearly amount of *IRS DOWNLOADS* for firm *i* in year *t* as the dependent variable. Columns 3 and 4 use *ICW TOTAL* and *ICW*, respectively, and are each interacted with *TAX CONTROL*. Both columns continue to show positive and significant attention placed on firms that disclose material weaknesses in general. However, when tax ICWs are considered, the coefficient on the interaction term in both columns is insignificant. The results in Table 9 are not consistent with the

IRS paying incrementally more attention to signals specifically related to issues around accounting for income taxes.

6.4 Partitioning IRS Downloads into Financial and Non-Financial Statement

As supplemental analysis, we partition the downloads into those that pertain to financial and to non-financial statement filings or forms.³² With non-financial filings, it is less clear as to the direct usefulness to the IRS. We find the amount of downloads pertaining to financial and to non-financial statement information for our sample of restating firms is 558,620 and 472,304, respectively. For these tests, we restrict the analysis to only those firms who have had at least one restatement and one download during the sample period. We re-estimate equation 1 by using a negative binomial regression and test if financial or non-financial statement related downloads by the IRS increase in response to a restatement.³³ If downloads are just part of the IRS updating its source of information, we expect the coefficient on *RESTATE WINDOW* from equation 1 to be significant regardless of the information source. However, if the process of accumulating information by the IRS is specific to filings from which the IRS can potentially benefit, we expect a relationship to exist only for financial statement information acquisitions.

Table 10 presents the results of this analysis. We examine the relationship between *IRS DOWNLOADS* and *RESTATE WINDOW* using a 1, 2 and 3 month window specification that includes the control variable *UTB*. In columns 1, 2, and 3, we find the coefficient on *RESTATE WINDOW* to be positive and significant in each test with financial statement downloads as our proxy for IRS attention. This result suggests that IRS scrutiny of public information is directed to

³² The filings we categorize as financial statements are forms: 10-K, 10-K/A, 10-KT, 10-KT/A, 10-Q, 10-Q/A, 10-QT, 10-QT/A, and 10-K405. Some examples of the non-financial statements accessed are Form 1, Form 10-12B, Form 10-12G, 20-F, and 25-NSE. These examples are not exhaustive of all the form types and filings submitted and kept on the EDGAR servers.

³³ In untabulated tests, the results remain consistent in both direction and level of significance for tests conducted without the control variable *UTB* included in the model

disclosures that detail a firm's current financial standing. For the windows of non-financial statement downloads as our proxy of IRS attention, columns 4 through 6, we find no evidence of any statistically significant relationship. This result suggests that as restatements occur, the IRS does not take an increased interest in non-financial filings.

6. Summary and Conclusion

We examine how restatements and internal control weaknesses influence the collection of public information by the IRS. The IRS is likely to be interested in restatements for three reasons. First, restatements of public disclosures can have direct implications for tax return filings. Second, a restatement triggered by financial misreporting could signal potential tax misreporting related to an aggressive corporate culture, which, therefore, warrants the attention of the IRS. Third, the IRS may view a restatement as a signal of generally poor information quality within the firm that could extend to the firm's tax filings. Similarly, the disclosure of an ICW could be viewed as a signal of poor information quality with implications for firms' tax filings.

We use a unique dataset that captures the IRS's acquisition of firms' public financial disclosures, which we use as a proxy of IRS attention. We find an increase in the acquisition of these public filings in the months around restatement announcements. We find that restatements initiated from fraud investigations add incrementally to the amount of attention the IRS gives restatements relative to restatements related to the misapplication of accounting rules. This finding is consistent with fraud cases being viewed as a signal of an aggressive corporate environment that may have important implications for firms' tax filings. In separate analysis, we use the disclosure of ICWs as an additional signal of poor information quality and find a similar increase in IRS attention following the disclosure of an ICW. This result suggests the IRS is interested in signals

related to firms' information quality, even if those signals do not have direct implications for previous tax filings. We also conduct a preliminary investigation of the consequences of the observed increase in IRS attention. We find that IRS attention following restatements is associated with higher future tax settlements. We also show that the IRS appears to pay more attention to restatements when enforcement rates are low.

We provide new insight into the process of acquiring public financial disclosures by the IRS. Our findings are consistent with the IRS utilizing signals about the information quality of the firm or the integrity of management as a part of the risk assessment process. The importance of these signals in helping the IRS deploy limited resources appears to have increased as enforcement rates have declined. Our results also highlight a previously undocumented cost for firms stemming from restatements and ICWs in the form of increased scrutiny from tax authorities.

APPENDIX A

Variable Definitions

<i>ATTENTION</i>	An indicator variable equal to one for all firm-year observations that have any IRS download activity during the year and zero otherwise.
<i>BTD</i>	Pretax income (PI) minus current domestic and foreign tax expense (TXFED + TXFO) grossed up by 35%, scaled by assets (AT).
<i>CAPITAL INTENSITY</i>	Net property, plant, and equipment (PPENT) divided by lagged total assets (AT).
<i>CASH</i>	Cash holdings (CH) scaled by lagged total assets (AT).
<i>CASH ETR</i>	Taxes paid (TXPD) divided by pretax book income net of special items (PI-SPI).
<i>CONFORMING</i>	An indicator variable equal to one if for all firms with a change in their current federal tax expense from the restatement and zero otherwise.
<i>CONFORMING AMOUNT</i>	Measured as the absolute value of the restated current tax expense divided by the restated total tax expense where <i>CONFORMING</i> is equal to one.
<i>DTA</i>	Net deferred tax assets (TXNDBA) scaled by total assets (AT).
<i>DTL</i>	Net deferred tax liabilities (TXNDBL) scaled by total assets (AT).
<i>ENFORCEMENT RATE</i>	Measured as the ratio of corporate tax returns examined by the IRS over the total number of corporate tax returns filed by firms' assets sizes for each year of the sample period 2007-2016.
<i>ERRORS</i>	An indicator variable set equal to one during the restatement windows attributable to an error and zero otherwise.
<i>FRAUD</i>	An indicator variable set equal to one during the restatement windows attributable to fraud and zero otherwise.

<i>GAAP</i>	An indicator variable set equal to one during the restatement windows attributable to an accounting misapplication and zero otherwise.
<i>GAAP ETR</i>	Total tax expense (TXT) divided by pretax book income net of special items (PI-SPI).
<i>ICW</i>	An indicator variable set equal to one for firm-year observations that disclose a material weakness and zero otherwise.
<i>ICW TOTAL</i>	The total number of material weakness disclosed by a firm for a given firm-year observation.
<i>INTANGIBLE INTENSITY</i>	Intangible assets (INTAN) divided by lagged total assets (AT); missing values set equal to zero.
<i>INVENTORY INTENSITY</i>	Inventory (INVT) divided by lagged total assets (AT).
<i>IRS DOWNLOADS</i>	The amount of downloads made by IP addresses belonging to the IRS during month <i>m</i> of year <i>t</i> for firm <i>i</i> . This measure is either financial statement downloads or non-financial statement related downloads.
<i>LEV</i>	Long-term debt (DLTT) divided by lagged total assets (AT).
<i>MTB</i>	Number of shares outstanding at the end of the year multiplied by the price per share at year end divided by book value of equity (PRCC_F*CSHO/CEQ).
<i>MNE</i>	An indicator variable set equal to one if a firm is not missing pre-tax foreign income (PIFO), indicating a multinational firm.
<i>NOL CHANGE</i>	Change in the tax loss carryforward (TLCF) divided by total assets (AT).
<i>R&D INTENSITY</i>	R&D expense (XRD) divided by sales (SALE); missing values set equal to zero.
<i>RESTATE</i>	An indicator variable equal to one for all firm-year observations with a restatement and zero otherwise.

<i>RESTATE WINDOW</i>	An indicator variable equal to one for the month of a restatement and the following months depending the window size.
<i>ROA</i>	Pretax book income (PI) divided by total assets (AT).
<i>SALES GROWTH</i>	The change in sales (SALE) scaled by prior year sales.
<i>SETTLE</i>	Measured as the aggregate amount of settlements made by a firm from years $t+1$ to $t+4$ and to $t+5$ scaled by year end unrecognized tax benefits (TXTUBEN).
<i>SIZE</i>	The log of total assets (AT) as of the end of the year.
<i>TAX CONTROL</i>	An indicator variable equal to one for firm-year observations that disclose internal control deficiencies related to the tax expense and zero otherwise.
<i>TAX FOOTNOTE</i>	An indicator variable equal to one for restatements that involve restating the tax footnote and zero otherwise.
<i>UTB</i>	Year end unrecognized tax benefits (TXTUBEN) divided by total assets (AT).

References

- Amel-Zadeh, A., & Zhang, Y. (2015). The Economic Consequences of Financial Restatements: Evidence from the Market for Corporate Control. *The Accounting Review*, 90(1), 1-29.
- Armstrong, C. S., Jagolinzer, A. D., & Larcker, D. F. (2010). Chief Executive Officer Equity Incentives and Accounting Irregularities. *Journal of Accounting Research*, 48(2), 225-271.
- Ashbaugh-Skaife, H., Collins, D. W., & Kinney, W. R. (2007). The discovery and reporting of internal control deficiencies prior to SOX-mandated audits. *Journal of Accounting and Economics*, 44(1), 166-192.
- Badertscher, B. A., Hribar, S. P., & Jenkins, N. T. (2011). Informed Trading and the Market Reaction to Accounting Restatements. *The Accounting Review*, 86(5), 1519-1547.
- Badertscher, B. A., Phillips, J. D., Pincus, M., & Rego, S. O. (2009). Earnings Management Strategies and the Trade-Off between Tax Benefits and Detection Risk: To Conform or Not to Conform? *The Accounting Review*, 84(1), 63-97.
- Bauer, A. M. (2016). Tax Avoidance and the Implications of Weak Internal Controls. *Contemporary Accounting Research*, 33(2), 449-486.
- Bedard, J. C., Hoitash, R., Hoitash, U., & Westermann, K. (2012). Material Weakness Remediation and Earnings Quality: A Detailed Examination by Type of Control Deficiency. *Auditing: A Journal of Practice & Theory*, 31(1), 57-78.
- Bonaldi, J. (2017). 2016 Financial Restatements Review. Retrieved from <http://www.auditanalytics.com/blog/2016-financial-restatements-review/>
- Bozanic, Z., Hoopes, J. L., Thornock, J. R., & Williams, B. M. (2017). IRS Attention. *Journal of Accounting Research*, 55(1), 79-114.
- Burns, N., & Kedia, S. (2006). The impact of performance-based compensation on misreporting. *Journal of Financial Economics*, 79(1), 35-67.
- Cassell, C. A., Dreher, L. M., & Myers, L. A. (2013). Reviewing the SEC's Review Process: 10-K Comment Letters and the Cost of Remediation. *The Accounting Review*, 88(6), 1875-1908.

- Chakravarthy, J., deHaan, E., & Rajgopal, S. (2014). Reputation Repair After a Serious Restatement. *The Accounting Review*, 89(4), 1329-1363.
- Chen, X., Cheng, Q., & Lo, A. K. (2014). Is the Decline in the Information Content of Earnings Following Restatements Short-Lived? *The Accounting Review*, 89(1), 177-207.
- Daddino, A. P. (2017). IRS Launches New Audit Initiatives Targeting 13 Specific Tax Issues. Retrieved from <http://www.meadowscollier.com/?t=40&an=63275&format=xml&p=7664>
- Davidson, J. (2017). IRS chief departs, blasting Congress for budget cuts threatening tax agency. Retrieved from https://www.washingtonpost.com/news/powerpost/wp/2017/11/07/irs-chief-departs-blasting-congress-for-budget-cuts-threatening-tax-agency/?noredirect=on&utm_term=.ca85a00d9f98
- Efendi, J., Srivastava, A., & Swanson, E. P. (2007). Why do corporate managers misstate financial statements? The role of option compensation and other factors. *Journal of Financial Economics*, 85(3), 667-708.
- Erickson, M., Hanlon, M., & Maydew, E. L. (2004). How Much Will Firms Pay for Earnings That Do Not Exist? Evidence of Taxes Paid on Allegedly Fraudulent Earnings. *The Accounting Review*, 79(2), 387-408.
- Feng, M., Li, C., & McVay, S. (2009). Internal control and management guidance. *Journal of Accounting and Economics*, 48(2), 190-209.
- Frank, M. M., Lynch, L. J., & Rego, S. O. (2009). Tax Reporting Aggressiveness and Its Relation to Aggressive Financial Reporting. *The Accounting Review*, 84(2), 467-496.
- Gallempore, J., & Labro, E. (2015). The importance of the internal information environment for tax avoidance. *Journal of Accounting and Economics*, 60(1), 149-167.
- Guo, J., Huang, P., Zhang, Y., & Zhou, N. (2016). The Effect of Employee Treatment Policies on Internal Control Weaknesses and Financial Restatements. *The Accounting Review*, 91(4), 1167-1194.
- Hennes, K. M., Leone, A. J., & Miller, B. P. (2008). The Importance of Distinguishing Errors from Irregularities in Restatement Research: The Case of Restatements and CEO/CFO Turnover. *The Accounting Review*, 83(6), 1487-1519.

- Hennes, K. M., Leone, A. J., & Miller, B. P. (2014). Determinants and Market Consequences of Auditor Dismissals after Accounting Restatements. *The Accounting Review*, 89(3), 1051-1082.
- Hilbe, J. M. (2011). *Negative Binomial Regression* (2 ed.): Cambridge University Press.
- Hoopes, J. L., Mescall, D., & Pittman, J. A. (2012). Do IRS Audits Deter Corporate Tax Avoidance? *The Accounting Review*, 87(5), 1603-1639.
- Hribar, P., & Jenkins, N. T. (2004). The Effect of Accounting Restatements on Earnings Revisions and the Estimated Cost of Capital. *Review of Accounting Studies*, 9(2), 337-356.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Johnston, R., & Petacchi, R. (2017). Regulatory Oversight of Financial Reporting: Securities and Exchange Commission Comment Letters. *Contemporary Accounting Research*, 34(2), 1128-1155.
- Karpoff, J. M., Lee, D. S., & Martin, G. S. (2008a). The Cost to Firms of Cooking the Books. *Journal of Financial and Quantitative Analysis*, 43(3), 581-611.
- Karpoff, J. M., Lee, D. S., & Martin, G. S. (2008b). The consequences to managers for financial misrepresentation. *Journal of Financial Economics*, 88(2), 193-215.
- Kinney Jr, W. R., & McDaniel, L. S. (1989). Characteristics of firms correcting previously reported quarterly earnings. *Journal of Accounting and Economics*, 11(1), 71-93.
- Kravet, T., & Shevlin, T. (2010). Accounting restatements and information risk. *Review of Accounting Studies*, 15(2), 264-294.
- Kubick, T. R., Lynch, D. P., Mayberry, M. A., & Omer, T. C. (2016). The Effects of Regulatory Scrutiny on Tax Avoidance: An Examination of SEC Comment Letters. *The Accounting Review*, 91(6), 1751-1780.
- Lennox, C., Lisowsky, P., & Pittman, J. (2013). Tax Aggressiveness and Accounting Fraud. *Journal of Accounting Research*, 51(4), 739-778.

- Lisowsky, P. (2010). Seeking Shelter: Empirically Modeling Tax Shelters Using Financial Statement Information. *The Accounting Review*, 85(5), 1693-1720.
- Palmrose, Z.-V., Richardson, V. J., & Scholz, S. (2004). Determinants of market reactions to restatement announcements. *Journal of Accounting and Economics*, 37(1), 59-89.
- Plumlee, M., & Yohn, T. L. (2010). An Analysis of the Underlying Causes Attributed to Restatements. *Accounting Horizons*, 24(1), 41-64.
- Robinson, L. A., Stomberg, B., & Towery, E. M. (2016). One Size Does Not Fit All: How the Uniform rules of FIN 48 Affect the relevance of Income Tax Accounting. *The Accounting Review*, 91(4), 1195-1217.
- Swanquist, Q. T., & Whited, R. L. (2015). Do Clients Avoid “Contaminated” Offices? The Economic Consequences of Low-Quality Audits. *The Accounting Review*, 90(6), 2537-2570.
- Why am I being selected for an audit? Retrieved from <https://www.irs.gov/businesses/small-businesses-self-employed/irs-audits>
- Wilde, J. H., & Wilson, R. J. (2018). Perspectives on Corporate Tax Planning: Observations from the Past Decade. *The Journal of the American Taxation Association*, 40(2), 63-81.
- Wilson, W. M. (2008). An Empirical Analysis of the Decline in the Information Content of Earnings Following Restatements. *The Accounting Review*, 83(2), 519-548.

Figure 1: Total Downloads by the IRS Over the Sample Period of 2004 – 2016

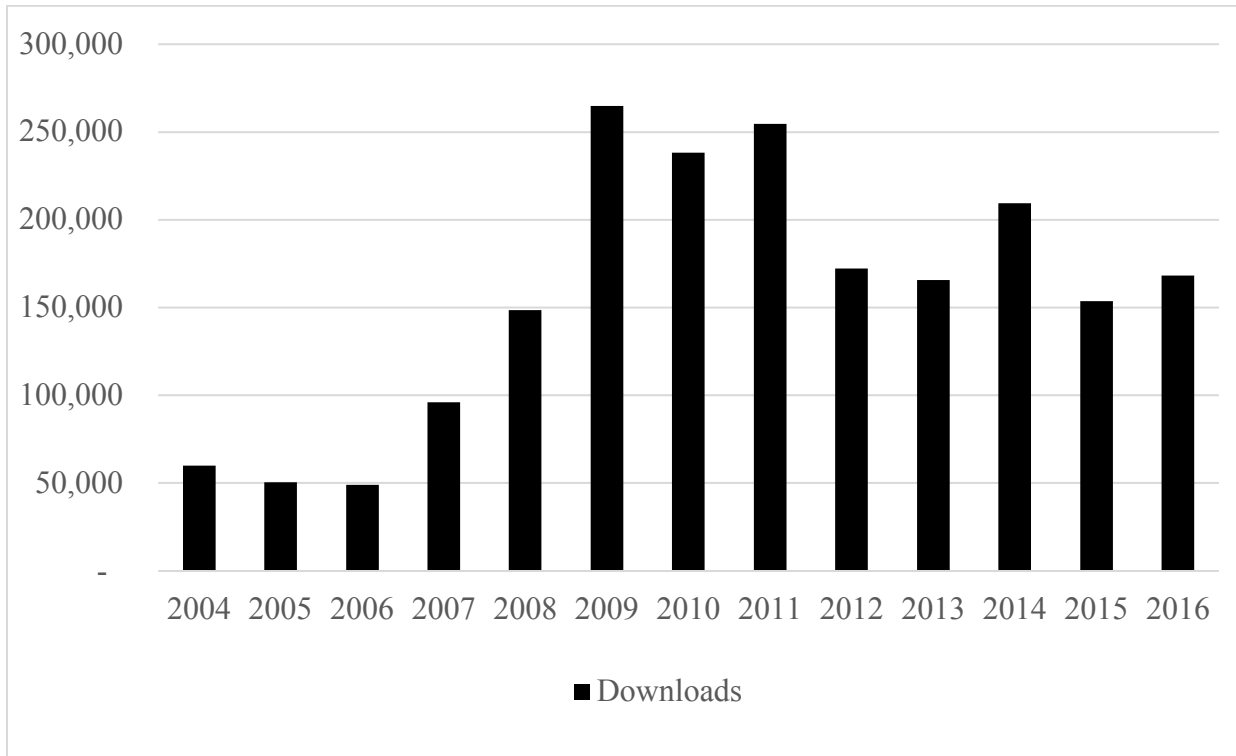


Figure 2: Mean Downloads in the Months Surrounding a Financial Restatement

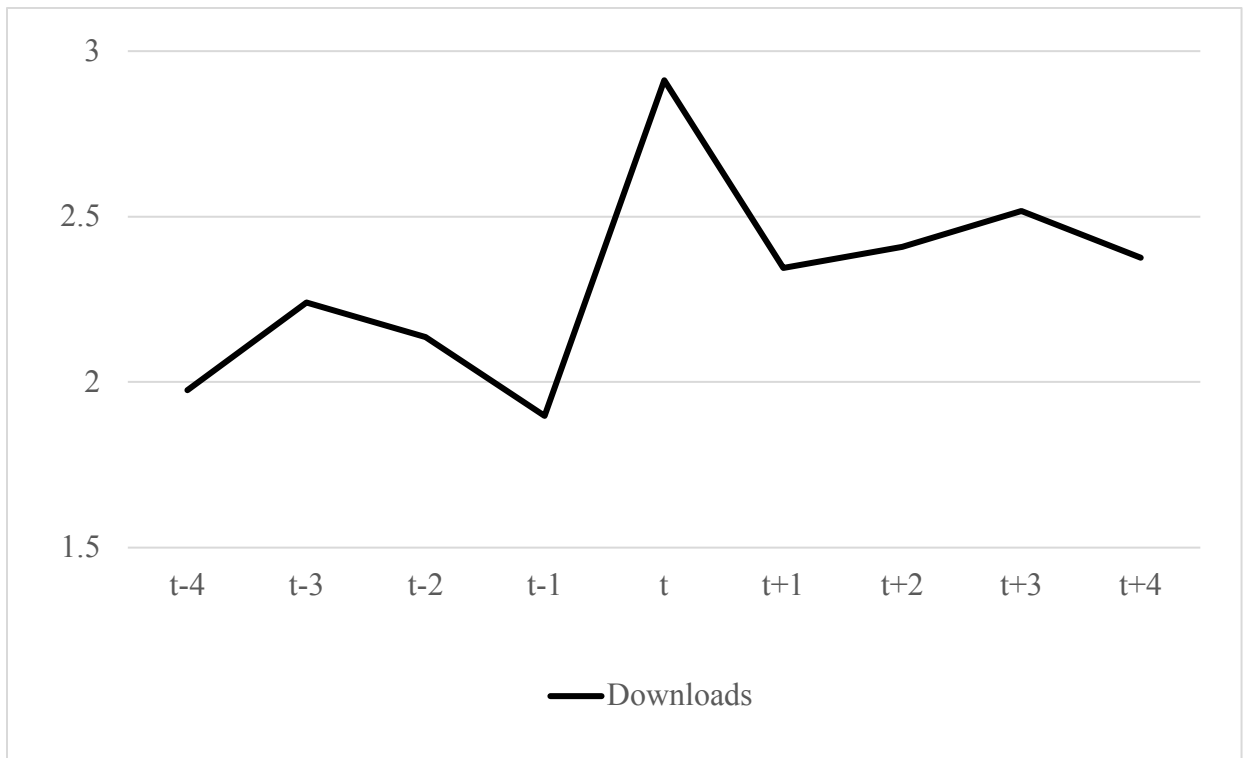


Table 1
Sample Selection

	N
All financial restatement firm-years from 2004-2016	6,925
Add:	
All other firm-years for the sample period of 2004-2016 that pertain to restatement firms.	41,546
Less:	
Firm-years with no IRS attention during the sample period	(4,685)
Firm-years with any missing control variables	(29,811)
Final sample of firm-year observations	13,975 [¥]

¥ The 13,975 firm years are expanded to reach 165,457 firm-months over the sample period. A firm-month contains the applicable fiscal year end data that the month belongs to.

Table 2
Descriptive Statistics

	(1)	(2)	(3)	(4)	(5)	(6)
	N	Mean	S.D.	P25	Median	P75
Dependent Variable						
<i>IRS DOWNLOADS</i>	165,457	2.51	13.62	0	0	1
Descriptive Statistics of Restatements						
<i>ERRORS</i>	2,068	0.04	0.21	0	0	0
<i>FRAUD</i>	2,068	0.03	0.16	0	0	0
<i>GAAP</i>	2,068	0.93	0.23	1	1	1
Tax Avoidance						
<i>GAAP ETR</i>	165,457	0.25	0.30	0.00	0.22	0.35
<i>CASH ETR</i>	165,457	0.22	0.22	0.00	0.17	0.34
<i>BTD</i>	165,457	-0.23	1.78	-0.06	0.00	0.03
<i>UTB</i>	165,457	0.01	0.02	0.00	0.00	0.01
<i>DTA</i>	165,457	0.05	0.05	0.01	0.04	0.07
<i>DTL</i>	165,457	0.05	0.05	0.01	0.03	0.07
<i>NOL CHANGE</i>	165,457	0.15	1.06	0.00	0.00	0.02
Firm Characteristics						
<i>ROA</i>	165,457	-0.17	1.44	-0.05	0.04	0.09
<i>SIZE</i>	165,457	6.42	2.33	5.11	6.60	7.97
<i>MTB</i>	165,457	2.69	10.02	1.01	1.86	3.38
<i>MNE</i>	165,457	0.58	0.49	0.00	1.00	1.00
<i>LEV</i>	165,457	0.01	0.05	0.00	0.00	0.00
<i>INTANGIBLE INTENSITY</i>	165,457	0.22	0.26	0.01	0.13	0.34
<i>R&D INTENSITY</i>	165,457	0.24	1.27	0.00	0.00	0.80
<i>INVENTORY INTENSITY</i>	165,457	0.11	0.15	0.00	0.06	0.17
<i>CAPITAL INTENSITY</i>	165,457	0.24	0.26	0.05	0.15	0.34
<i>SALES GROWTH</i>	165,457	0.14	0.69	-0.05	0.05	0.16
<i>CASH</i>	165,457	0.18	0.28	0.04	0.10	0.22

This Table presents the descriptive statistics for the variables used in this study. The dependent variable, as well as the other control variables, are subject to the data requirements of Table 3 with the use of *UTB* as a control variable. The control variable *UTB* comes from inclusion of the disclosure of uncertain tax benefits. We also provide descriptive statistics of restatements occurring within the sample period. The data cover the sample period of 2007-2016. All continuous variables are winsorized at the 1st and 99th percentiles. All variables are generated from Compustat and the SEC.

Table 3
IRS Attention and Restatements

Dependent Variable:	(1)	(2)	(3)	(4)	(5)	(6)
<i>IRS DOWNLOADS</i>	1 Month		2 Months		3 Months	
<i>RESTATE WINDOW</i>	0.253*** (0.066)	0.351*** (0.081)	0.199*** (0.049)	0.267*** (0.059)	0.100** (0.043)	0.158*** (0.052)
<i>GAAP ETR</i>	0.051 (0.056)	0.019 (0.061)	0.052 (0.056)	0.022 (0.061)	0.051 (0.056)	0.019 (0.061)
<i>CASH ETR</i>	-0.093** (0.044)	-0.059 (0.054)	-0.093** (0.044)	-0.062 (0.055)	-0.093** (0.044)	-0.059 (0.055)
<i>BTD</i>	0.005 (0.020)	-0.001 (0.040)	0.005 (0.020)	-0.001 (0.042)	0.005 (0.020)	-0.002 (0.042)
<i>UTB</i>		3.565*** (0.911)		3.453*** (0.916)		3.535*** (0.913)
<i>DTA</i>	-0.301 (0.329)	-0.252 (0.413)	-0.301 (0.329)	-0.252 (0.413)	-0.308 (0.329)	-0.221 (0.413)
<i>DTL</i>	-0.272 (0.517)	-0.210 (0.589)	-0.283 (0.518)	-0.082 (0.595)	-0.269 (0.517)	-0.208 (0.590)
<i>NOL CHANGE</i>	-0.002 (0.009)	0.007 (0.016)	-0.002 (0.009)	0.008 (0.016)	-0.002 (0.009)	0.007 (0.016)
<i>ROA</i>	-0.027 (0.029)	-0.005 (0.054)	-0.027 (0.029)	-0.003 (0.057)	-0.027 (0.029)	-0.004 (0.054)
<i>SIZE</i>	0.199*** (0.028)	0.209*** (0.038)	0.199*** (0.028)	0.212*** (0.039)	0.199*** (0.028)	0.209*** (0.039)
<i>MTB</i>	-0.001 (0.001)	-0.002 (0.001)	-0.001 (0.001)	-0.002 (0.001)	-0.001 (0.001)	-0.002 (0.001)
<i>MNE</i>	0.103* (0.058)	0.129** (0.064)	0.103* (0.058)	0.118* (0.064)	0.104* (0.058)	0.130** (0.064)
<i>LEV</i>	-2.117*** (0.185)	-2.512*** (0.198)	-2.122*** (0.185)	-2.498*** (0.199)	-2.126*** (0.185)	-2.527*** (0.198)
<i>INTANGIBLE INTENSITY</i>	-0.052 (0.074)	-0.044 (0.089)	-0.051 (0.073)	-0.042 (0.090)	-0.052 (0.074)	-0.043 (0.090)
<i>R&D INTENSITY</i>	-0.035*** (0.011)	-0.020 (0.019)	-0.035*** (0.011)	-0.021 (0.019)	-0.035*** (0.011)	-0.021 (0.019)
<i>INVENTORY INTENSITY</i>	-0.533*** (0.161)	-0.419* (0.237)	-0.533*** (0.161)	-0.424* (0.238)	-0.536*** (0.162)	-0.423* (0.238)
<i>CAPITAL INTENSITY</i>	-0.188** (0.086)	-0.120 (0.123)	-0.188** (0.086)	-0.126 (0.125)	-0.189** (0.086)	-0.120 (0.123)
<i>SALES GROWTH</i>	-0.064*** (0.013)	-0.040** (0.019)	-0.064*** (0.013)	-0.046** (0.019)	-0.064*** (0.013)	-0.040** (0.019)
<i>CASH</i>	-0.198*** (0.043)	-0.194*** (0.074)	-0.197*** (0.043)	-0.200*** (0.075)	-0.197*** (0.043)	-0.193*** (0.074)
<i>INTERCEPT</i>	-1.910*** (0.207)	-1.921 (1.261)	-1.911*** (0.207)	-1.924 (1.262)	-1.907*** (0.207)	-1.914 (1.261)

Observations	308,272	165,457	308,272	165,457	308,272	165,457
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Firm	Firm	Firm	Firm	Firm	Firm

This table presents the results of estimating equation 1 through a negative binomial regression of *IRS DOWNLOADS* on whether a firm has restated and the window following the restatement. In addition, various control variables have been included that control for general IRS attention for tax reasons and for firm characteristics. The dependent variable, *IRS DOWNLOADS*, is measured as the number of times during a month that the IRS acquired a firm's public information through a download for firm *i* in month *m* of year *t*. All regressions contain firm fixed effects and year fixed effects. Standard errors are clustered by firm and presented in parentheses. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 4
Analysis of Restatement Types and IRS Attention

Dependent Variable:	(1)	(2)	(3)	(4)	(5)
<i>IRS DOWNLOADS</i>	<i>FRAUD</i>	<i>FRAUD</i>	<i>ERRORS</i>	<i>ERRORS</i>	All
<i>RESTATE WINDOW</i>	0.099** (0.047)	0.148** (0.058)	0.121** (0.048)	0.183*** (0.059)	0.158*** (0.059)
<i>FRAUD</i>	0.499* (0.281)	0.703** (0.306)			0.695*** (0.306)
<i>ERRORS</i>			-0.224 (0.234)	-0.242 (0.265)	-0.223 (0.266)
<i>GAAP ETR</i>	0.068 (0.062)	0.032 (0.068)	0.068 (0.062)	0.031 (0.068)	-0.032 (0.068)
<i>CASH ETR</i>	-0.052 (0.048)	-0.038 (0.058)	-0.052 (0.048)	-0.039 (0.058)	-0.038 (0.058)
<i>BTD</i>	0.024 (0.021)	0.037 (0.045)	0.024 (0.021)	0.037 (0.044)	0.037 (0.045)
<i>UTB</i>		4.052*** (1.071)		4.045*** (1.072)	4.042*** (1.071)
<i>DTA</i>	-0.595 (0.389)	-0.370 (0.477)	-0.599 (0.390)	-0.377 (0.477)	-0.377 (0.477)
<i>DTL</i>	-0.057 (0.635)	-0.172 (0.756)	-0.053 (0.635)	-0.160 (0.757)	-0.173 (0.757)
<i>NOL CHANGE</i>	0.006 (0.009)	0.017 (0.017)	0.006 (0.009)	0.018 (0.017)	0.017 (0.017)
<i>ROA</i>	-0.051* (0.030)	-0.066 (0.059)	-0.051* (0.030)	-0.065 (0.059)	-0.066 (0.059)
<i>SIZE</i>	0.204*** (0.035)	0.234*** (0.044)	0.204*** (0.035)	0.235*** (0.045)	0.234*** (0.044)
<i>MTB</i>	-0.000 (0.001)	-0.001 (0.001)	-0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)
<i>MNE</i>	0.093 (0.067)	0.091 (0.076)	0.093 (0.067)	0.089 (0.077)	0.091 (0.076)
<i>LEV</i>	-1.791*** (0.209)	-2.048*** (0.245)	-1.789*** (0.208)	-2.049*** (0.245)	-2.048*** (0.245)
<i>INTANGIBLE INTENSITY</i>	0.035 (0.086)	0.032 (0.108)	0.035 (0.086)	0.031 (0.108)	0.033 (0.108)
<i>R&D INTENSITY</i>	-0.019 (0.013)	-0.010** (0.022)	-0.019 (0.013)	-0.010 (0.022)	-0.010 (0.022)
<i>INVENTORY INTENSITY</i>	-0.320 (0.197)	-0.497* (0.269)	-0.320 (0.197)	-0.502* (0.268)	-0.496* (0.269)
<i>CAPITAL INTENSITY</i>	-0.246** (0.100)	-0.129 (0.151)	-0.247** (0.100)	-0.131 (0.151)	-0.130 (0.151)
<i>SALES GROWTH</i>	-0.053*** (0.016)	-0.035 (0.023)	-0.053*** (0.016)	-0.035 (0.023)	-0.035 (0.023)
<i>CASH</i>	-0.188*** (0.053)	-0.210*** (0.075)	-0.188*** (0.053)	-0.210*** (0.075)	-0.211*** (0.075)
<i>INTERCEPT</i>	-1.703*** (0.270)	-1.448*** (0.558)	-1.704*** (0.269)	-1.457*** (0.544)	-1.449*** (0.543)

Observations	308,272	165,457	308,272	165,457	165,457
Firm FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Cluster	Firm	Firm	Firm	Firm	Firm
χ^2 Test: <i>RESTATE WINDOW</i> plus <i>ERRORS/FRAUD</i>					
χ^2 (p-value)		7.85 (0.005)		0.05 (0.821)	

This table presents the results of negative binomial regressions of *IRS DOWNLOADS* on whether a firm has restated and the window following the restatement. Each column presents the result of including or excluding *UTB* and the different restatement types (errors and fraud) into the regression. The base group for this analysis is accounting misapplications (GAAP violations). In addition, various control variables have been included that control for general IRS attention for tax reasons and for firm characteristics. The dependent variable, *IRS DOWNLOADS*, is measured as the number of times during a month m that the IRS acquired a firm's public information through a download for firm i in year t . Standard errors are clustered by firm and presented in parentheses. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 5
Tax Conforming Earnings Changes

Dependent Variable:	(1)	(2)	(3)	(4)	(5)	(6)
<i>IRS DOWNLOADS</i>	1 Month		2 Months		3 Months	
<i>RESTATE WINDOW</i>	0.374 (0.334)	0.513* (0.288)	0.461** (0.191)	0.510*** (0.181)	0.354** (0.162)	0.394** (0.156)
<i>CONFORMING</i>	0.592 (0.416)		0.512* (0.312)		0.620** (0.295)	
<i>CONFORMING AMOUNT</i>		0.482 (0.451)		0.488 (0.371)		0.618* (0.354)
<i>GAAP ETR</i>	0.161 (0.153)	0.162 (0.153)	0.149 (0.153)	0.148 (0.153)	0.150 (0.154)	0.149 (0.154)
<i>CASH ETR</i>	0.093 (0.165)	0.097 (0.165)	0.095 (0.165)	0.099 (0.165)	0.089 (0.167)	0.094 (0.167)
<i>BTD</i>	0.297 (0.197)	0.295 (0.196)	0.330 (0.229)	0.327 (0.228)	0.314 (0.230)	0.311 (0.229)
<i>UTB</i>	15.818*** (3.174)	15.844*** (3.175)	15.603*** (3.178)	15.624*** (3.180)	15.453*** (3.204)	15.474*** (3.206)
<i>DTA</i>	1.782** (0.793)	1.783** (0.793)	1.818** (0.790)	1.817** (0.791)	1.797** (0.793)	1.794** (0.793)
<i>DTL</i>	(1.780) (1.281)	(1.776) (1.281)	(1.561) (1.287)	(1.553) (1.288)	(1.442) (1.295)	(1.428) (1.295)
<i>NOL CHANGE</i>	0.118 (0.132)	0.117 (0.132)	0.109 (0.131)	0.106 (0.132)	0.070 (0.149)	0.066 (0.149)
<i>ROA</i>	-0.500** (0.223)	-0.496** (0.223)	-0.545** (0.253)	-0.542** (0.253)	-0.503** (0.246)	-0.498** (0.245)
<i>SIZE</i>	0.0453* (0.026)	0.0454* (0.026)	0.0461* (0.026)	0.0461* (0.026)	0.0451* (0.027)	0.0451* (0.027)
<i>MTB</i>	0.00828* (0.005)	0.00828* (0.005)	0.00880* (0.005)	0.00877* (0.005)	0.00883* (0.005)	0.009* (0.005)
<i>MNE</i>	0.251*** (0.091)	0.253*** (0.091)	0.236*** (0.091)	0.238*** (0.091)	0.240*** (0.093)	0.242*** (0.093)
<i>LEV</i>	-3.922*** (0.822)	-3.925*** (0.822)	-3.936*** (0.819)	-3.946*** (0.819)	-3.904*** (0.825)	-3.916*** (0.825)
<i>INTANGIBLE INTENSITY</i>	(0.260) (0.177)	(0.262) (0.177)	(0.258) (0.178)	(0.259) (0.178)	(0.252) (0.179)	(0.254) (0.179)
<i>R&D INTENSITY</i>	0.008 (0.219)	0.003 (0.219)	0.002 (0.220)	(0.003) (0.220)	0.107 (0.232)	0.103 (0.232)
<i>INVENTORY INTENSITY</i>	0.524 (0.380)	0.511 (0.380)	0.461 (0.383)	0.448 (0.383)	0.471 (0.387)	0.456 (0.387)
<i>CAPITAL INTENSITY</i>	(0.055) (0.208)	(0.049) (0.208)	(0.034) (0.208)	(0.029) (0.207)	(0.028) (0.211)	(0.022) (0.211)
<i>SALES GROWTH</i>	0.044 (0.042)	0.044 (0.042)	0.043 (0.042)	0.044 (0.042)	0.029 (0.049)	0.029 (0.049)
<i>CASH</i>	(0.082) (0.243)	(0.082) (0.243)	(0.122) (0.245)	(0.121) (0.245)	(0.072) (0.254)	(0.070) (0.254)
<i>INTERCEPT</i>	-3.286*** (0.422)	-3.293*** (0.423)	-3.269*** (0.422)	-3.274*** (0.423)	-3.285*** (0.424)	-3.293*** (0.424)

Observations	4,364	4,364	4,328	4,328	4,244	4,244
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Firm	Firm	Firm	Firm	Firm	Firm

This analysis is conducted on all restatements attributable to fraud. 50 distinct restating firms are included in the regression analysis over a restatement window of 1, 2, and 3 months. In addition, *IRS DOWNLOADS*, is measured as the total number of downloads made by the IRS during month m in year t by firm i over the sample period 2007-2016. *CONFORMING* is an indicator variable equal to one during a restatement window where there is a change in the current federal tax expense and zero otherwise. *CONFORMING AMOUNT* is measured as the absolute value of the restated current tax expense divided by the restated total tax expense for the restatement window. All regressions contain firm fixed effects and year fixed effects. Standard errors are clustered by firm and presented below p-values. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 6
IRS Attention and Internal Control Weaknesses

Panel A: Descriptive Statistics						
	(1)	(2)	(3)	(4)	(5)	(6)
	N	Mean	S.D.	P25	Median	P75
Dependent Variable						
<i>IRS DOWNLOADS</i>	12,540	37.69	83.51	5	11	30
Independent Variables						
<i>ICW</i>	12,540	0.06	0.24	0.00	0.00	0.00
<i>ICW TOTAL</i>	755	2.10	1.59	1.00	2.00	3.00
<i>GAAP ETR</i>	12,540	0.27	0.14	0.18	0.30	0.36
<i>CASH ETR</i>	12,540	0.22	0.16	0.09	0.22	0.32
<i>BTD</i>	12,540	-0.14	1.66	0.00	0.02	0.04
<i>UTB</i>	12,540	0.01	0.02	0.00	0.00	0.01
<i>DTA</i>	12,540	0.05	0.04	0.02	0.04	0.06
<i>DTL</i>	12,540	0.05	0.05	0.01	0.04	0.07
<i>NOL CHANGE</i>	12,540	0.08	0.76	0.00	0.00	0.00
<i>ROA</i>	12,540	-0.05	1.17	0.03	0.08	0.13
<i>SIZE</i>	12,540	7.00	2.26	5.81	7.14	8.42
<i>MTB</i>	12,540	2.78	8.19	1.30	2.16	3.65
<i>MNE</i>	12,540	0.62	0.48	0.00	1.00	1.00
<i>LEV</i>	12,540	0.22	0.26	0.00	0.16	0.32
<i>INTANGIBLE INTENSITY</i>	12,540	0.23	0.25	0.02	0.16	0.38
<i>R&D INTENSITY</i>	12,540	0.13	0.98	0.00	0.00	0.04
<i>INVENTORY INTENSITY</i>	12,540	0.11	0.14	0.00	0.07	0.17
<i>CAPITAL INTENSITY</i>	12,540	0.24	0.25	0.06	0.16	0.34
<i>SALES GROWTH</i>	12,540	0.11	0.43	-0.02	0.06	0.15
<i>CASH</i>	12,540	0.16	0.20	0.04	0.10	0.20

Panel B: Regression Analysis				
Dependent Variable:				
<i>Ln(IRS DOWNLOADS)</i>	(1)	(2)	(3)	(4)
<i>ICW TOTAL</i>	0.082*** (0.017)	0.082*** (0.022)		
<i>ICW</i>			0.274*** (0.049)	0.208*** (0.065)
<i>GAAP ETR</i>	-0.280*** (0.100)	0.097 (0.113)	-0.271*** (0.100)	0.097 (0.113)
<i>CASH ETR</i>	0.181** (0.081)	-0.042 (0.095)	0.184** (0.081)	-0.040 (0.095)
<i>BTD</i>	0.097*** (0.025)	0.094** (0.042)	0.090*** (0.024)	0.094** (0.042)
<i>UTB</i>	6.487*** (0.954)	6.349*** (1.763)	6.540*** (0.952)	6.328*** (1.763)
<i>DTA</i>	0.732** (0.326)	-0.383 (0.591)	0.724** (0.325)	-0.373 (0.591)
<i>DTL</i>	0.250 (0.382)	0.043 (0.798)	0.279 (0.381)	0.056 (0.793)
<i>NOL CHANGE</i>	0.035* (0.018)	-0.027 (0.017)	0.033* (0.017)	-0.028* (0.016)
<i>ROA</i>	-0.250*** (0.039)	-0.151** (0.066)	-0.236*** (0.039)	-0.148** (0.066)
<i>SIZE</i>	0.335*** (0.010)	0.203*** (0.046)	0.337*** (0.010)	0.206*** (0.046)
<i>MTB</i>	-0.001 (0.001)	-0.001 (0.002)	-0.001 (0.001)	-0.001 (0.002)
<i>MNE</i>	0.088** (0.034)	0.131** (0.065)	0.088** (0.034)	0.131** (0.065)
<i>LEV</i>	-0.164*** (0.060)	-0.090 (0.089)	-0.163*** (0.060)	-0.084 (0.089)
<i>INTANGIBLE INTENSITY</i>	-0.007 (0.074)	0.028 (0.116)	-0.010 (0.074)	0.022 (0.116)
<i>R&D INTENSITY</i>	-0.036*** (0.011)	-0.027 (0.021)	-0.036*** (0.011)	-0.027 (0.021)
<i>INVENTORY INTENSITY</i>	-0.159 (0.135)	-0.327 (0.277)	-0.151 (0.135)	-0.326 (0.277)
<i>CAPITAL INTENSITY</i>	-0.199** (0.080)	-0.311** (0.158)	-0.205** (0.080)	-0.319** (0.159)
<i>SALES GROWTH</i>	-0.021 (0.028)	-0.031 (0.035)	-0.020 (0.028)	-0.030 (0.035)
<i>CASH</i>	0.070 (0.066)	-0.126 (0.080)	0.069 (0.066)	-0.126 (0.081)
<i>INTERCEPT</i>	-0.245 (0.295)	0.595* (0.311)	-0.31 (0.306)	0.567* (0.312)

Observations	12,540	12,540	12,540	12,540
R-squared	0.332	0.094	0.333	0.094
Industry FE	Yes	No	Yes	No
Firm FE	No	Yes	No	Yes
Year FE	Yes	Yes	Yes	Yes
Cluster	Firm	Firm	Firm	Firm

Panel A presents the descriptive statistics for *IRS DOWNLOADS*, *ICW TOTAL*, and *ICW* for all firm-year observations for the sample period of 2007 to 2016. All variables are winsorized at the 1st and 99th percentiles and are generated from Compustat, the SEC, or AuditAnalytics. *ICW TOTAL* shows the descriptive statistics of all 755 firm-year observations that disclose at least one material weakness. Panel B presents the results of OLS regressions of *IRS DOWNLOADS* on whether a firm has disclosed a ICWs for a given fiscal year. In addition, various control variables have been included that control for general IRS attention and for firm characteristics. The dependent variable, $\ln(\text{IRS DOWNLOADS})$, is the log of the number of times during a year that the IRS acquired a firms public information through a download for firm i in year t to address skewness in the measure. All regressions contain year and either firm or industry fixed effects. Standard errors are clustered by firm and are presented in parentheses below each coefficient. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 7
Analysis of IRS Attention and Future Settlements

Dependent Variable:	(1) <i>SETTLE</i> (<i>t+1,t+4</i>)	(2) <i>SETTLE</i> (<i>t+1,t+4</i>)	(3) <i>SETTLE</i> (<i>t+1,t+5</i>)	(4) <i>SETTLE</i> (<i>t+1,t+5</i>)
<i>RESTATE</i>	3.249** (1.631)	3.228** (1.349)	4.652* (2.762)	4.695** (2.287)
<i>GAAP ETR</i>	1.686 (2.595)	0.973 (1.779)	5.483 (4.136)	3.230 (2.874)
<i>CASH ETR</i>	2.872 (2.725)	1.875 (1.799)	2.510 (4.362)	1.673 (2.870)
<i>BTD</i>	-9.159 (10.810)	-3.102 (7.193)	-15.640 (17.240)	-5.993 (11.590)
<i>UTB</i>	-164.600*** (58.390)	-145.002*** (39.180)	-384.424*** (100.700)	-309.611*** (66.790)
<i>DTA</i>	-20.950 (20.650)	-10.830 (14.320)	-50.710 (34.320)	-31.230 (23.620)
<i>DTL</i>	5.116 (30.100)	3.504 (20.360)	17.630 (50.360)	11.340 (34.430)
<i>NOL CHANGE</i>	0.004 (0.003)	0.002 (0.002)	0.008 (0.005)	0.004 (0.003)
<i>ROA</i>	11.880 (10.400)	5.220 (6.840)	16.810 (16.900)	7.433 (11.200)
<i>SIZE</i>	-2.143 (2.355)	-2.115 (1.565)	-4.133 (4.218)	-3.915 (2.827)
<i>MTB</i>	0.002 (0.086)	0.004 (0.060)	-0.116 (0.144)	-0.076 (0.104)
<i>LEV</i>	0.264 (4.360)	-2.083 (3.074)	0.102 (7.338)	-3.444 (5.294)
<i>INTANGIBLE INTENSITY</i>	0.743 (4.965)	1.237 (3.301)	2.810 (8.430)	2.833 (5.690)
<i>R&D INTENSITY</i>	-0.135 (4.852)	0.313 (3.833)	-1.807 (7.748)	-0.802 (6.141)
<i>INVENTORY INTENSITY</i>	9.263 (13.180)	1.372 (8.858)	13.530 (21.500)	1.797 (14.330)
<i>CAPITAL INTENSITY</i>	1.549 (7.676)	2.831 (4.925)	-5.772 (12.470)	0.181 (8.043)
<i>SALES GROWTH</i>	-0.625 (1.698)	0.080 (1.148)	-0.509 (2.736)	0.343 (1.860)
<i>CASH</i>	-6.485 (4.137)	-3.688 (2.680)	-10.050 (6.602)	-6.038 (4.515)
<i>INTERCEPT</i>	20.450 (16.810)	20.260* (11.250)	42.000 (30.160)	38.429* (20.380)

Observations	4,409	7,277	3,407	5,589
R-squared	0.011	0.009	0.018	0.014
Sample	Restating Firms	All Firms	Restating Firms	All Firms
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Cluster	Firm	Firm	Firm	Firm

This table presents the analysis for whether IRS attention during restatement years leads to future settlements. The dependent variable, *SETTLE*, is measured as the aggregate amount of settlements made by a firm from years $t+1$ to $t+4$ in columns 1 and 2 and from years $t+1$ to $t+5$ in columns 3 and 4 scaled by Compustat variable *TXTUBEN* in year t . In addition, various control variables have been included that control for general IRS attention for tax reasons and for firm characteristics. *RESTATE* is an indicator variable equal to 1 for all firm years during which the company filed a restatement and 0 otherwise. All regressions contain firm fixed effects and year fixed effects. Standard errors are clustered by firm and presented below p-values. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 8

Analysis of IRS Attention to Restatements and Enforcement Trends

Dependent Variable:	(1)	(2)	(3)
<i>IRS DOWNLOADS</i>	1 Month	2 Months	3 Months
<i>RESTATE WINDOW</i>	0.471*** (0.060)	0.359*** (0.045)	0.191*** (0.039)
<i>ENFORCEMENT RATE</i>	0.008*** (0.000)	0.008*** (0.000)	0.008*** (0.000)
<i>RESTATE WINDOW*ENFORCEMENT RATE</i>	-0.004** (0.002)	-0.003** (0.001)	-0.002 (0.001)
<i>GAAP ETR</i>	-0.003 (0.024)	-0.003 (0.024)	-0.003 (0.024)
<i>CASH ETR</i>	-0.006 (0.020)	-0.006 (0.020)	-0.006 (0.020)
<i>BTD</i>	0.015 (0.022)	0.015 (0.022)	0.015 (0.022)
<i>UTB</i>	1.619*** (0.261)	1.624*** (0.261)	1.620*** (0.261)
<i>DTA</i>	0.066 (0.120)	0.066 (0.120)	0.068 (0.120)
<i>DTL</i>	0.089 (0.137)	0.083 (0.137)	0.088 (0.137)
<i>NOL CHANGE</i>	0.003 (0.008)	0.003 (0.007)	-0.001 (0.008)
<i>ROA</i>	-0.039 (0.028)	-0.038 (0.027)	-0.039 (0.027)
<i>SIZE</i>	0.059*** (0.005)	0.059*** (0.005)	0.059*** (0.005)
<i>MTB</i>	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)
<i>MNE</i>	0.105*** (0.013)	0.0105*** (0.013)	0.0105*** (0.013)
<i>LEV</i>	-2.613*** (0.111)	-2.630*** (0.111)	-2.628*** (0.111)
<i>INTANGIBLE INTENSITY</i>	-0.074*** (0.025)	-0.074*** (0.024)	-0.074*** (0.024)
<i>R&D INTENSITY</i>	-0.003 (0.006)	-0.003 (0.006)	-0.003 (0.006)
<i>INVENTORY INTENSITY</i>	0.231*** (0.043)	0.231*** (0.043)	0.231*** (0.043)
<i>CAPITAL INTENSITY</i>	-0.072*** (0.026)	-0.071*** (0.026)	-0.072*** (0.026)
<i>SALES GROWTH</i>	-0.039*** (0.010)	-0.039*** (0.010)	-0.038*** (0.010)
<i>CASH</i>	-0.041 (0.026)	-0.041 (0.026)	-0.041 (0.026)
<i>INTERCEPT</i>	-3.251*** (0.038)	-3.253*** (0.038)	-3.251*** (0.038)

Observations	163,407	163,407	163,407
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Cluster	Firm	Firm	Firm

This analysis investigates the relationship between IRS attention and restatements when considering IRS enforcement rates. *ENFORCEMENT RATE* is measured as the ratio of corporate tax returns examined to the total number of returns filed for a given asset class and varies year to year over the sample period. In addition, *IRS DOWNLOADS* is measured as the total number of downloads made by the IRS during month *m* in year *t* by firm *i* over the sample period 2007-2016. Column 1, 2, and 3 presents the results of estimating equation 1 through a negative binomial regression of *IRS DOWNLOADS* on whether a firm has restated with the inclusion of *ENFORCEMENT RATE* and its interaction during 1, 2, and 3 month windows, respectively. All regressions contain firm fixed effects and year fixed effects. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 9

Analysis of the Incremental Effect of Tax Related Restatements and Internal Control Deficiencies

Dependent Variables:	(1) <i>IRS DOWNLOADS</i>	(2) <i>IRS DOWNLOADS</i>	(3) <i>Ln(IRS DOWNLOADS)</i>	(4) <i>Ln(IRS DOWNLOADS)</i>
<i>RESTATE WINDOW</i>	0.144** (0.052)	0.180*** (0.066)		
<i>TAX FOOTNOTE</i>	-0.015 (0.112)	-0.040 (0.125)		
<i>ICW TOTAL</i>			0.076*** (0.023)	
<i>ICW TOTAL*TAX CONTROL</i>			0.037 0.114	
<i>ICW</i>				0.198*** (0.072)
<i>TAX CONTROL</i>			0.018 (0.218)	-0.001 (0.137)
<i>GAAP ETR</i>	0.068 (0.062)	0.032 (0.068)	0.091 (0.113)	0.094 (0.113)
<i>CASH ETR</i>	(0.052)	-0.038 (0.058)	-0.050 (0.095)	-0.049 (0.095)
<i>BTD</i>	0.024 (0.021)	0.037 (0.044)	0.094** (0.042)	0.094** (0.042)
<i>UTB</i>		4.065*** (1.073)	6.256*** (1.764)	6.270*** (1.765)
<i>DTA</i>	-0.596 (0.389)	-0.371 (0.477)	-0.402 (0.592)	-0.397 (0.591)
<i>DTL</i>	-0.051 (0.635)	-0.157 (0.756)	0.055 (0.798)	0.070 (0.793)
<i>NOL CHANGE</i>	0.006 (0.009)	0.017 (0.017)	-0.026 (0.017)	-0.028* (0.017)
<i>ROA</i>	-0.051 (0.030)	-0.065 (0.059)	-0.150** (0.066)	-0.148** (0.066)
<i>SIZE</i>	0.204*** (0.034)	0.235*** (0.045)	0.203*** (0.046)	0.207*** (0.046)
<i>MTB</i>	-0.000 (0.001)	-0.001 (0.001)	-0.001 (0.002)	-0.001 (0.002)
<i>MNE</i>	0.092 (0.067)	0.089 (0.077)	0.123* (0.065)	0.123* (0.065)
<i>LEV</i>	-1.790*** (0.208)	-2.049*** (0.245)	-0.091 (0.089)	-0.084 (0.089)
<i>INTANGIBLE INTENSITY</i>	0.034 (0.085)	0.030 (0.108)	0.029 (0.116)	0.022 (0.116)
<i>R&D INTENSITY</i>	-0.019 (0.013)	-0.010 (0.022)	-0.027 (0.021)	-0.027 (0.021)
<i>INVENTORY INTENSITY</i>	-0.321 (0.197)	-0.504* (0.268)	-0.323 (0.277)	-0.321 (0.277)
<i>CAPITAL INTENSITY</i>	-0.247** (0.100)	-0.130 (0.151)	-0.309* (0.158)	-0.317** (0.159)
<i>SALES GROWTH</i>	-0.053*** (0.016)	-0.035 (0.023)	-0.032 (0.035)	-0.030 (0.035)
<i>CASH</i>	-0.188*** (0.053)	-0.210 (0.075)	-0.128 (0.080)	-0.128 (0.081)
<i>INTERCEPT</i>	-1.703*** (0.269)	-1.455*** (0.544)	0.601* (0.311)	0.570* (0.313)

Observations	308,272	165,457	12,524	12,524
R-squared			0.094	0.094
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Cluster	Firm	Firm	Firm	Firm

This analysis investigates the incremental effect of financial reporting deficiencies related to accounting for income taxes of financial reporting on IRS attention. First, in columns 1 and 2, we analyze whether a revision of a firm's tax expense, as part of a restatement, attracts additional IRS scrutiny using a negative binomial regression. *IRS DOWNLOADS* is measured as the total number of downloads made by the IRS during month m in year t of firm i over the sample period 2007-2016. In addition, *TAX FOOTNOTE* is measured as an indicator variable equal to one if a restatement involves an error from accounting for income taxes and zero otherwise. Columns 3 and 4 consider the disclosure of internal control weaknesses regarding a firm's tax expense through OLS. *TAX CONTROL* is an indicator variable equal to one for firm-year observations that disclose internal control weaknesses related to the tax expense and zero otherwise. The dependent variable for both columns 3 and 4 is the log of *IRS DOWNLOADS*. All regressions contain firm fixed effects and year fixed effects. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 10

Analysis of IRS Attention and the Acquisition of Financial and Non-Financial Statement Information

Dependent Variable:	<i>Financial Statement Downloads</i>			<i>Non-Financial Statement Downloads</i>		
	(1)	(2)	(3)	(4)	(5)	(6)
	1 Month	2 Months	3 Months	1 Month	2 Months	3 Months
<i>RESTATE WINDOW</i>	0.351*** (0.081)	0.267*** (0.059)	0.158*** (0.052)	0.028 (0.181)	0.099 (0.152)	0.140 (0.137)
<i>GAAP ETR</i>	0.019 (0.061)	0.022 (0.061)	0.019 (0.061)	0.029 (0.149)	0.030 (0.149)	0.031 (0.149)
<i>CASH ETR</i>	-0.059 (0.054)	-0.062 (0.055)	-0.059 (0.055)	0.075 (0.141)	0.074 (0.141)	0.074 (0.141)
<i>BTD</i>	-0.001 (0.040)	-0.001 (0.042)	-0.002 (0.042)	0.332* (0.186)	0.332* (0.186)	0.333* (0.185)
<i>UTB</i>	3.565*** (0.911)	3.453*** (0.916)	3.535*** (0.913)	6.343** (3.071)	6.336** (3.071)	6.282** (3.065)
<i>DTA</i>	-0.252 (0.413)	-0.252 (0.413)	-0.221 (0.413)	-0.510 (1.253)	-0.519 (1.251)	-0.519 (1.250)
<i>DTL</i>	-0.210 (0.589)	-0.082 (0.595)	-0.208 (0.590)	0.026 (1.764)	0.021 (1.764)	0.183 (1.763)
<i>NOL CHANGE</i>	0.007 (0.016)	0.008 (0.016)	0.007 (0.016)	0.034 (0.046)	0.034 (0.046)	0.034 (0.046)
<i>ROA</i>	-0.005 (0.054)	-0.003 (0.057)	-0.004 (0.054)	-0.425* (0.221)	-0.425* (0.221)	-0.425* (0.221)
<i>SIZE</i>	0.209*** (0.038)	0.212*** (0.039)	0.209*** (0.039)	0.503*** (0.112)	0.504*** (0.112)	0.503*** (0.112)
<i>MTB</i>	-0.002 (0.001)	-0.002 (0.001)	-0.002 (0.001)	-0.002 (0.003)	-0.002 (0.003)	-0.002 (0.003)
<i>MNE</i>	0.129** (0.064)	0.118* (0.064)	0.130** (0.064)	-0.121 (0.177)	-0.121 (0.177)	-0.122 (0.176)
<i>LEV</i>	-2.512*** (0.198)	-2.498*** (0.199)	-2.527*** (0.198)	-0.635 (0.440)	-0.642 (0.438)	-0.640 (0.438)
<i>INTANGIBLE INTENSITY</i>	-0.044 (0.089)	-0.042 (0.090)	-0.043 (0.090)	0.089 (0.258)	0.088 (0.258)	0.091 (0.258)
<i>R&D INTENSITY</i>	-0.020 (0.019)	-0.021 (0.019)	-0.021 (0.019)	0.154* (0.084)	0.153* (0.084)	0.153* (0.084)
<i>INVENTORY INTENSITY</i>	-0.419* (0.237)	-0.424* (0.238)	-0.423* (0.238)	-1.091 (0.705)	-1.088 (0.705)	-1.081 (0.704)
<i>CAPITAL INTENSITY</i>	-0.120 (0.123)	-0.126 (0.125)	-0.120 (0.123)	-0.346 (0.316)	-0.343 (0.315)	-0.345 (0.315)
<i>SALES GROWTH</i>	-0.040** (0.019)	-0.046** (0.019)	-0.040** (0.019)	-0.041 (0.064)	-0.042 (0.064)	-0.042 (0.064)
<i>CASH</i>	-0.194*** (0.074)	-0.200*** (0.075)	-0.193*** (0.074)	-0.045 (0.197)	-0.046 (0.197)	-0.046 (0.197)
<i>INTERCEPT</i>	-1.921 (1.261)	-1.924 (1.262)	-1.914 (1.261)	-2.523* (1.428)	-2.529* (1.428)	-2.532* (1.426)

Observations	163,861	163,861	163,861	138,858	138,858	138,858
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Firm	Firm	Firm	Firm	Firm	Firm

Table 10 presents the results of the negative binomial regressions of *IRS DOWNLOADS*, related to financial and non-financial statement information, on whether a firm has restated and the window following the restatement. In addition, various control variables have been included that control for general IRS attention for tax reasons and for firm characteristics. The dependent variable, *IRS DOWNLOADS*, is measured as the number of times during a month that the IRS acquired a firm's public information through a download for firm i in month m of year t . All regressions contain firm fixed effects and year fixed effects. Standard errors are clustered by firm and presented in parentheses. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively.