IRS Monitoring and Corporate Non-Financial Misconduct

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Abstract

Research suggests that in addition to bolstering government revenue, monitoring by tax authorities such as the IRS also serves as a mechanism for corporate oversight, affecting both firm- and investor-level outcomes. However, little is known about the impact of IRS monitoring on other, non-traditional stakeholders. To help fill this void, this study investigates the relation between IRS monitoring and non-financial corporate misconduct. Our findings reveal that increased IRS monitoring is associated with a higher propensity, frequency, and severity of non-financial regulatory violations. We support our findings by performing within-firm analyses, examining dynamic effects over time, and using the 2013 cut to IRS funding to mitigate endogeneity concerns. Evidence from cross-sectional analyses suggests that implicit coordination within a firm, where cost-cutting efforts to offset tax-related financial consequences lead to increased violations, is a likely mechanism underlying our findings. Our results shed light on the unintended negative externalities of increased tax monitoring, informing policymakers and regulators about the broader implications of such efforts.

1 Introduction

Tax monitoring is an important government function that not only increases government revenue but can also play a meaningful role in corporate oversight. Research documents that monitoring by tax authorities, such as the Internal Revenue Service (IRS), engenders several positive externalities for firms and investors by improving information quality (both internal and external) and reducing agency costs. These externalities include a lower cost of capital (Guedhami and Pittman 2008; El Ghoul et al. 2011; Gallemore and Jacob 2020), improved financial reporting quality (Hanlon et al. 2014; Mason and Williams 2022), and reduced crash risk (Bauer et al. 2021). While this literature examines the consequences of IRS monitoring for firms and their investors, there is limited research that investigates the impact of tax monitoring on other firm stakeholders (employees, customers, community, etc.). With the IRS set to nearly triple its audit rate on large corporations following the Inflation Reduction Act of 2022 (IRS 2024), understanding the implications for these alternative stakeholders is increasingly important.[1]

In this study, we investigate consequences of IRS monitoring for stakeholders other than the firm and its direct investors. Specifically, we examine whether and how IRS monitoring impacts non-financial corporate misconduct, including employee safety, environmental, employment, and consumer protection related offenses.[2] Existing research documents that external corporate oversight tends to decrease firms' misconduct (Heese et al. 2022; Gallo et al. 2023; Heese and Pacelli 2024). For example, research finds that corporate misconduct is decreasing in relation to media intensity (Heese et al. 2022; Heese and Pacelli 2024) and analyst following (Bradley et al. 2022). Similarly, evidence suggests that better monitoring by firms' owners (Cohn

[1] The IRS defines "large corporations" as those with assets greater than $250 million.
[2] Consistent with prior literature (e.g., Heese et al. 2022) we use the terms "corporate misconduct" and "regulatory violations" as well as derivatives of those terms interchangeably.

et al. 2021) and reduced internal information asymmetry between executives and divisional managers (Heese and Pérez-Cavazos 2020) is associated with a reduction in employee safety violations.

Given that prior literature suggests the IRS serves as a powerful external monitor that mitigates agency problems (e.g., Dyck and Zingales 2004; Desai et al. 2007) and facilitates improvement in firms' information environment (e.g., Hanlon et al. 2014; Bauer et al. 2021), it may be reasonable to expect that IRS monitoring is associated with a decrease in non-financial corporate misconduct. However, monitoring by tax authorities may differ from monitoring by other external parties because firms facing current or expected IRS enforcement actions must plan for costs arising from additional tax, penalties and fees (Hoopes et al. 2012). In response to these expected costs, managers may seek to reduce costs elsewhere throughout the firm, likely through implicit coordination efforts such as implementing cost-cutting or budgetary targets (Raghunandan and Ruchti 2024). The cost-cutting initiatives imposed by upper management can lead employees (including lower-level management) to take actions which may result in an increase in corporate misconduct. Thus, cost cutting efforts to mitigate the expected effect of increased cash tax outflows to the IRS can result in unintended spillover effects on corporate misconduct as employees may be overworked and pressured to cut costs (Caskey and Ozel 2017).[3] Overall, given the competing forces at play, the directional relationship between tax monitoring and non-financial corporate misconduct remains an empirical question.

To investigate the relation between tax monitoring and non-financial corporate misconduct, we use data on corporate misconduct provided by Good Jobs First's (GJF) Violation Tracker (e.g., Heese and Pérez-Cavazos 2020; Yost and Yu 2023; Raghunandan 2024). This dataset incorporates

[3] For example, in a recent WSJ Article, Richard Fairfax, a former OSHA enforcement director, suggests that employee safety is often compromised in manufacturing facilities when superiors exert pressure to "keep productivity moving".

a range of corporate regulatory violations from state and federal agencies, allowing us to measure not only the occurrence of violations, but also their presumed severity. We analyze how corporate misconduct varies with firm exposure to the IRS as measured by Armstrong et al. (2024). We find that as firms' exposure to IRS monitoring increases, firms are more likely to receive regulatory violations, and that the frequency and severity of violations increase as well.[4] We further corroborate this finding by showing consistent results using alternative tax monitoring proxies.

After documenting a positive relationship between IRS monitoring and non-financial corporate misconduct, we explore whether managers' cost cutting efforts (the implicit coordination channel) is likely responsible for our findings. Under the implicit coordination channel, we predict that firms, aiming to offset the expected financial consequences of IRS monitoring, will implement cost-cutting initiatives that may lead to more frequent and severe regulatory violations. Consistent with this channel, we show that IRS monitoring is associated with increased discretionary production and reduced discretionary expenditures (Roychowdhury 2006), and that the positive relation between IRS monitoring and corporate misconduct is concentrated within the firms that increase production and cut discretionary expenditures the most.

We next examine whether results vary cross-sectionally with respect to financial constraints (Cohn and Wardlaw 2016). If implicit coordination efforts aimed at reducing costs are responsible for our results, then we expect the positive relation between IRS monitoring and financial misconduct to be strongest for firms that are financially constrained. This is because financially constrained firms are likely less able to absorb the costs associated with tax monitoring, and thus feel increased pressure to cut costs elsewhere, including costs incurred to enhance

[4] Under 26 U.S.C. § 6103, the IRS is legally bound to keep taxpayer information confidential. Violation of these confidentiality rules can result in severe penalties, including criminal charges. Thus, the IRS is generally constrained from sharing tax return data or other information about taxpayers that was gleaned during investigative efforts with other regulatory bodies.

compliance with regulations. Consistent with this expectation, we find that the positive relation between tax monitoring and non-financial corporate misconduct is concentrated among financially constrained firms. Finally, we link our findings to the actual unwinding of tax settlements associated with firms' uncertain tax positions. If managers doubt that their tax positions will be upheld under IRS scrutiny, they are more likely to feel pressure to cut costs elsewhere. Consistent with this expectation, we find that the positive effect of IRS monitoring on corporate violations is concentrated among firms that subsequently realize high tax settlements.

We next consider several endogeneity concerns with our primary analysis. First, it is possible that regulatory violations engender firm responses that draw IRS attention (i.e., reverse causality). Conceptually, this explanation is unlikely because non-financial penalties and compliance costs are typically substantially less severe than costs imposed by the IRS.[5] Thus, it's not clear that the monetary penalties associated with non-financial misconduct are sufficiently large to encourage increased tax aggressiveness, which may draw IRS attention. Notwithstanding, to further mitigate this concern, we examine the dynamic effects of IRS monitoring over time on the propensity, frequency, and severity of regulatory violations. We find that current and past IRS monitoring is positively associated with the incidence, frequency and severity of violations, whereas future IRS monitoring is not. In other words, our findings are consistent with IRS monitoring leading, rather than following, violations.

Firms committing regulatory violations may be more likely to attract IRS scrutiny (i.e., a correlated omitted variable). We partially mitigate this concern by controlling for firm

[5] For example, in its FY 2023 the IRS reported it completed over 1,000 audits of large corporations which resulted in corporations paying, on average, an additional $16.2 million. In contrast, Heese and Pérez-Cavazos (2020) report the average penalty from corporate misconduct found in the Violations Tracker Database is less than $15,000. In addition tax-related compliance costs are viewed as a substantial cost that businesses of all sizes face, with estimates suggesting businesses-related tax compliance costs exceed $100 billion annually within the U.S. (Marcuss et al. 2013).

characteristics likely associated with IRS scrutiny, such as tax avoidance, profitability, size, and foreign operations. Additionally, we conduct several analyses to address this concern. First, we limit our sample to firms that commit non-financial violations within our sample period. Using this subsample, we continue to find a positive relation between IRS monitoring and non-financial corporate misconduct, mitigating the concern that a unique factor associated with corporate violators is responsible for our results. Next, we show that the positive relation between IRS monitoring and corporate misconduct persists after controlling for regulatory scrutiny by *other* government agencies (Armstrong et al. 2024), mitigating concerns that results are driven by firms that are generally "bad actors" subject to both IRS and other regulatory scrutiny.[6] We further employ entropy balancing for continuous treatment (EBCT) (Tübbicke 2022) and show our findings persist, mitigating concerns related to functional form misspecification.

Finally, to further mitigate endogeneity concerns, we conduct an analysis using within-firm variation in IRS monitoring and corporate misconduct, finding that relative *changes* to the level of IRS monitoring are correlated with changes in the intensity and severity of corporate violations. We also implement a difference-in-differences and an instrumental variable (IV) analysis using the 2013 IRS budget cut as plausibly exogenous variation that affects the within-firm level of IRS monitoring (Armstrong et al. 2024). Using the instrumented effect of the budget cut on IRS monitoring, we continue to find a positive association between IRS monitoring and non-financial misconduct, further supporting our primary findings.

[6] One reason IRS monitoring may contribute differently to non-financial corporate misconduct relative to monitoring by other financial-related regulators, such as the SEC, is that IRS monitoring and investigative efforts are relatively frequent and commonly result in direct, negative financial consequences. For example, IRS data suggests that from 2016-2018 the IRS annually audited approximately 1,500 corporate returns of large corporations. Of these audits, approximately 80% concluded with the corporation paying some additional taxes. In contrast, SEC investigations are less common; between 2000 and 2018, the SEC initiated about 2,100 investigations of public corporations, with only 20% resulting in enforcement actions or penalties (Blackburne and Quinn 2023).

Collectively, our results indicate that non-financial corporate misconduct increases in relation to IRS monitoring. Moreover, our evidence suggests this relation is likely driven by coordinated cost-cutting efforts that firms implement in response to IRS monitoring. These findings should be of interest to policymakers and government regulators, including the IRS, who administers tax monitoring in the United States. Our results provide evidence of potential negative externalities that accompany such monitoring efforts. Our findings should also be of interest to non-financial regulators, who are tasked with curbing the types of corporate misconduct that are the subject of this study (The Environmental Protection Agency, The Occupational Health and Safety Administration, etc.). Our results indicate that corporate misconduct increases with exposure to tax monitoring, providing a predictive indicator for pressure that can lead to increased misconduct. Further, our findings are also likely of interest to policymakers who are responsible for determining the breadth and intensity of IRS monitoring efforts. The Inflation Reduction Act of 2022 provides substantial funding to enhance IRS monitoring of corporations.[7] Our findings suggest that additional IRS monitoring may lead to a rise in non-financial corporate misconduct.

Our study also contributes to the broader literature on the spillover effects of tax authority monitoring. Prior research focuses primarily on how tax authority monitoring impacts investor and firm outcomes; for example, increased availability of capital for firms (Guedhami and Pittman 2008; El Ghoul et al. 2011; Gallemore and Jacob 2020), improved financial reporting quality (Hanlon et al. 2014; Bauer et al. 2021) and reduced managerial self-dealing (Yost and Shu 2022). In contrast to the relatively broad literature examining the effects of tax-related monitoring on firms and investors, research that investigates the impact of tax monitoring on alternative

[7] The Inflation Reduction Act of 2022 provided the IRS with approximately an additional $80 billion to be used over a 10-year period. Of this $80 billion, approximately $45 billion was allocated for enforcement efforts (McDermott 2022; Muresianu 2023). These enforcement efforts apply to both corporate and non-corporate taxpayers.

stakeholders such as employees, customers, and firm communities is relatively limited. We seek to fill this gap by demonstrating that tax monitoring leads to an increase in non-financial corporate misconduct that negatively affects these alternative stakeholders. Importantly, we do not necessarily view our findings as conflicting with research showing positive spillover effects of tax monitoring at the shareholder level. Given the probabilistic nature and relatively low direct cost of non-financial penalties, the decision to impose cost-cutting initiatives – despite potentially increasing such penalties – may still maximize shareholder value when facing the anticipated costs from IRS monitoring.

Finally, this study contributes to the literature on corporate misconduct. This literature has documented a range of misconduct determinants, including the impact of internal and external monitors (e.g., Heese and Pérez-Cavazos 2020; Cohn et al. 2021; Heese et al. 2022; Gallo et al. 2023; Heese and Pacelli 2024). In general, this literature finds that monitors are associated with a *decrease* in corporate misconduct. We extend this literature by considering the IRS as an external monitor and show that IRS monitoring is associated with an *increase* in corporate misconduct. One reason for this divergent finding may be that IRS monitoring imposes greater compliance and expected monetary costs on firms, relative to the types of external monitoring that are considered in other studies. Overall, our evidence suggests that the impact of external monitoring on corporate misconduct is complex and may vary by monitor.

2 Background and Hypothesis Development

2.1 Effects of Tax Monitoring

Research investigating the effects of tax authority monitoring has predominately focused on its role as a governance mechanism that improves information quality (both internal and

external) and mitigates agency problems within the firm.[8] For example, research finds that increased oversight by taxing authorities is associated with an increase in firm values (e.g., Dyck and Zingales 2004; Desai et al. 2007), a lower cost of capital (Guedhami and Pittman 2008; El Ghoul et al. 2011), increased access to credit (Gallemore and Jacob 2020), improved financial reporting quality (Hanlon et al. 2014; Mason and Williams 2022), reduced managerial self-dealing (Yost and Shu 2022), and lower stock price crash risk (Bauer et al. 2021).[9]

While most research on the effects of tax authority monitoring emphasizes positive externalities, some notable exceptions exist. For example, Goldman et al. (2024) find that in response to an expected increase in IRS scrutiny following the onset of Financial Interpretation Number 48 (FIN 48), firms seem to reduce innovation. In another study, Belnap et al. (2024) investigate the consequences of random IRS audits for small businesses and document that these audits are, in some cases, negatively associated with future performance, and may even affect the firm's survival. Overall, research investigating the effects of tax authority monitoring has primarily investigated effects associated with monitored firms and the firms' investors. Little, if any, research investigates the effects of tax authority monitoring on alternative corporate stakeholders (employees, customers, communities, etc.).

2.2 Corporate Misconduct

Corporate misconduct includes any violation of laws and regulation committed by corporate managers or employees (Campbell and Shang 2022).[10] A nascent literature investigating the determinants of corporate misconduct suggests misconduct is associated with managerial

[8] A related literature investigates the determinants of IRS monitoring. For example, Bozanic et al. (2017) investigate how firm-specific financial reporting features affect the likelihood and level of IRS monitoring.
[9] IRS monitoring has also been shown to reduce corporate tax avoidance (e.g., Hoopes et al. 2012). Kubick et al. (2016) show that tax-related scrutiny by the SEC is also associated with a reduction in future tax avoidance.
[10] As explained in Section 3.1, when operationalizing corporate misconduct, we remove instances of financial misconduct.

incentives (Caskey and Ozel 2017; Chircop et al. 2025; Raghunandan 2021; Thomas et al. 2022), financing frictions (Cohn and Wardlaw 2016), and the extent and effectiveness of both internal and external monitoring (Heese and Pérez-Cavazos 2020; Heese et al. 2022; Gallo et al. 2023; Heese and Pacelli 2024; Raghunandan 2024).

Corporate misconduct may arise from deliberate actions, or the unintended consequence of focus and attention being allocated to alternative goals and objectives. Raghunandan and Ruchti (2024) suggest that corporate misconduct may arise via internal corporate coordination efforts, such as efforts aimed at improving the firm's financial position. While this coordination may involve explicit directions from senior management (Holmstrom and Milgrom 1991), Raghunandan and Ruchti (2024) point out, a more plausible mechanism involves implicit coordination, such as cost cutting or budgeting mandates (e.g., Kanodia 1993) issued from corporate executives. In response to the imposed mandates, lower-level managers and employees may adjust the actions they would normally take in the absence of such regulatory pressures (and mandates), which may lead to corporate misconduct (Caskey and Ozel 2017).[11] Importantly, cost-cutting and budgetary mandates would conceptually be more likely to arise in response to regulatory scrutiny when the scrutiny, in expectation, imposes a financial cost on the firm, and when the firm lacks financial resources or flexibility.

2.3 Hypothesis – Effect of IRS Monitoring on Corporate Misconduct

Extensive research investigates the effects of monitoring on managerial actions, including corporate misconduct. For example, several studies document a negative relation between external

[11] For example, in response to increased regulatory scrutiny by the IRS and the expected cash flow implications of such scrutiny, a CEO may call upon managers and directors to cut costs by a specified amount (e.g., 10%). In response to cost cutting initiatives, managers may forego updating equipment, reviewing compliance with certain safety or environmental requirements, or providing safety training to employees. The result of such actions may lead to regulatory violations (i.e., misconduct) that are imposed by a variety of regulatory bodies.

monitoring and corporate misconduct (Bradley et al. 2022; Heese et al. 2022; Gallo et al. 2023; Heese and Pacelli 2024). Moreover, research specifically investigating the consequences of IRS monitoring suggests that such monitoring can serve as an effective governance mechanism that curbs managerial improprieties (Bauer et al. 2021; Mason and Williams 2022; Yost and Shu 2022). For example, Bauer et al. (2021) show that a positive externality of IRS monitoring is a reduced frequency of stock price crashes, purportedly because monitoring constrains managerial bad news hoarding. Several other papers document findings consistent with IRS monitoring leading to positive externalities for scrutinized firms and their investors (Guedhami and Pittman 2008; El Ghoul et al. 2011). The tenor of this research stream is that tax authority monitoring mitigates agency problems (e.g., Dyck and Zingales 2004) and improves information quality (e.g., Hanlon et al. 2014). Accordingly, to the extent IRS monitoring helps both curb negative managerial actions and improve the quality of information available for decision-making purposes, one may expect that IRS monitoring will be negatively associated with corporate misconduct.

However, there are reasons why we may also expect a positive relation between IRS monitoring and corporate misconduct. For example, because of IRS monitoring, firms may expect to incur future financial costs due to additional taxes, fees, and penalties. These expectations can cause firms to engage in implicit coordination efforts, such as budgetary or cost-cutting measures, to mitigate the effects of IRS monitoring on financial performance. As a result, firms may adopt or refrain from actions they would otherwise not consider in the absence of IRS monitoring, potentially leading to corporate misconduct. Along these lines, Caskey and Ozel (2017) and Raghunandan (2021) show that corporate misconduct is more common among firms that just meet-or-beat earnings targets. Thus, we propose an *implicit coordination* channel through which IRS

monitoring may engender corporate misconduct by motivating firms to take extraordinary actions to mitigate the expected financial impacts of such monitoring.

In sum, the expected effect of IRS monitoring on corporate misconduct is ambiguous. On the one hand, if IRS monitoring serves primarily as a governance mechanism that disciplines management, then monitoring is expected to be negatively associated with corporate misconduct. On the other hand, if firms primarily respond to IRS monitoring by taking actions to offset the anticipated financial costs of such monitoring, then IRS monitoring may be positively related to corporate misconduct. In total, these competing expectations about the effect of IRS monitoring on corporate misconduct create tension, making the setting worthy of an empirical investigation. Nevertheless, due to the competing expectations, we state our hypothesis in null form:

H1: There is no association between IRS monitoring and corporate misconduct.

3 Research Design, Data, and Sample Selection

3.1 Empirical Measurement – Corporate Non-Financial Misconduct

We obtain our measures of corporate misconduct from the Violation Tracker database, created by the Corporate Research Project of Good Jobs First. Violation Tracker represents a comprehensive database of penalties issued by over 400 state and federal regulatory agencies in the U.S. Violation Tracker contains more than 500,000 civil and criminal cases against corporations, carrying penalties of over $790 billion since the tracker began in 2000.[12] Because we are interested in evaluating firm-level misconduct, we use Violation Tracker's parent-subsidiary linking table to link each subsidiary to the historic parent company at the time of the violation. We omit any violation without a historical CIK identifier and violations that we are unable to match to Compustat firms. Additionally, to mitigate concerns that we are somehow capturing a

[12] The Violation Tracker excludes small violations where the penalty is less than $5,000.

mechanical relation between IRS findings and measured violations, we remove any violations classified as "financial offenses".[13] Therefore, the violations in our sample capture the incidence, frequency, and severity of *non-financial* corporate misconduct. When aggregating violations to the parent firm-year level, we create three primary measures of interest, an indicator variable for the existence of any violation in a firm-year (*Violation*), the natural log of 1 plus the total number of violations in a firm year (*Num_Violations*), and the natural log of 1 plus total penalty amount in a firm-year (*Penalties*).

3.2 Empirical Measurement – IRS Monitoring

Due to the proprietary nature of most tax-related matters within the U.S., IRS monitoring is difficult to measure with publicly available data. Prior studies that investigate the consequences of IRS monitoring have alternated between various measures, including the percentage of firms audited in a size category (Hoopes et al. 2012), IRS downloads of 10-Ks (Bozanic et al. 2017), and combinations of the two aforementioned measures (Yost and Shu 2022). However, these measures are subject to various limitations, including the SEC's decision to stop sharing IP addresses of EDGAR downloads from 2017-2020.[14]

Recently, Armstrong et al. (2024) introduced a measure of firms' time varying exposure to government agencies such as the IRS. Armstrong et al. (2024) construct this exposure measure by computing the relative number of sentences in a firms' 10-K that reference the IRS and associated agency action words, including: "regulation, jurisdiction, authority, examination, audit, enforce, and investigation." In effect, this measure captures managers' own discussion of the actual or

[13] Financial offenses represent only 247 violations in our final sample of observations, less than 0.6% of violations. Within this category, 71 are classified as "accounting fraud or deficiencies," 59 as "investor protection violations," 54 as "economic sanction violations," 52 as "tax violations" and the remaining 11 as "banking," "toxic securities abuse," or "anti-money-laundering deficiencies." Our results are nearly identical to the inclusion of these violations in our final dataset.

[14] The SEC's EDGAR Log files, which contain information about search traffic and downloads of SEC filings, are unavailable for July 1, 2017 through May 18, 2020.

potential scrutiny by the IRS, enabling us to capture a continuous measure of the extent to which managers are concerned about the IRS's monitoring of their actions. Armstrong et al. (2024) go through great lengths to validate this measure, tying it to previously used measures, such as IRS 10-K downloads, along with changes to IRS funding. Therefore, we utilize this measure, scaled by total sentences in a firm's 10-K, to provide us with a measure of firm-year exposure to IRS scrutiny (*IRS_MONITOR*). In Section 5.3, we further validate our primary analyses using alternative measures that are available in more limited sub-samples.

3.3 Empirical Model

We measure our primary research question with the following ordinary least squares (OLS) model:

$$Y_{it} = \alpha_{it} + \beta_1 IRS\_MONITOR_{it} + \sum_{2}^{n} \beta\, X + \gamma + \varepsilon_{it} \quad (1)$$

Where Y_{it} represents one of three measures of corporate violations as previously defined. While we follow prior literature and estimate our model using OLS (e.g., Heese et al. 2022; Heese and Pacelli 2024; Raghunandan 2024), we also confirm in an untabulated analysis that our results are robust to non-linear estimations, including a probit model for the likelihood of a violation (*Violation*), and Poisson pseudo-maximum likelihood (PPML) fixed effects estimation for *Num_Violations* and *Penalties* (Cohn et al. 2022).[15] $IRS\_MONITOR_{it}$ represents our primary independent variable of interest, capturing the effect of IRS scrutiny on corporate misconduct. Because *IRS_MONITOR* represents a current and partially backward looking "stock" of exposure

[15] Non-linear probit models can result in an incidental parameters problem with fixed effects (Greene 2004). Therefore, when using a probit model for *Violation*, we examine our results without fixed effects. For our analysis using PPML, we examine *Num_Violations* and *Penalties* as unlogged measures. PPML provides consistent estimates with high order fixed effects (Cohn et al. 2022).

to IRS scrutiny (Armstrong et al. 2024), we examine the contemporaneous relation between *IRS_MONITOR*, which may have accrued over several years, and corporate violations. In Section 5.1 we further examine the dynamics of this relation.[16]

To enhance the interpretability of our results, *X* represents a vector of *n* variables that may be associated with both IRS monitoring and corporate misconduct. Specifically, we include the natural log of a firm's market value (*SIZE*) which can elicit greater scrutiny by both tax authorities, the general public, and government agencies (Hoopes et al. 2012; Heese et al. 2022; Heese and Pacelli 2024). We also control for debt (*LEVERAGE*), pre-tax profitability (*PTROA*), and prior losses (*PY_LOSS*) which can affect both tax avoidance opportunities and influence the likelihood of violations (Cohn and Wardlaw 2016; Caskey and Ozel 2017). We also control for investment opportunities (*MTB*), the existence of multinational operations (*FOREIGN*), and the level of investment in *R&D,* and *CAPX,* as this can potentially influence IRS monitoring, and also expose the firm to more opportunities for violations (increased investment can result in more pollution, employee injuries, etc.). Next, we control for a firms' general internal information quality (*IIQ*) as this can influence external reporting (Gallemore and Labro 2015; Chen et al. 2018a) and the likelihood of a violation (Heese and Pérez-Cavazos 2020).

Finally, we control for a firm's cash tax avoidance. Although, we are not aware of a study that directly links firms' cash tax avoidance to corporate non-financial violations, higher tax avoidance can affect a firm's financial position and is likely to influence the IRS's risk evaluation when making monitoring and enforcement decisions (Mills and Sansing 2000).[17] To avoid

[16] Our primary results are also robust to using dependent variables measured over a three-year window (t, t+2), where *Violation* is an indicator variable for a violation in any of the three years, *Num_Violations* is the log of the sum of total violations and *Penalties* is the log of the sum of penalty amounts (Heese and Pacelli 2024).

[17] While not related to tax avoidance, Bradley et al. (2023) find evidence that higher state tax *rates* lead to increased workplace safety incidences when firms have facilities in a state with a rate change. However, this effect does not hold within the firm's headquarter state. They propose that higher tax rates change a firm's cost of investment, particularly when the firm also increases debt. This results in reduced investment in safety equipment.

dropping firms with negative pre-tax income, we utilize the Henry and Sansing (2018) measure of cash tax avoidance compared to expectation (*HSΔ*), where a higher (lower) measure of *HSΔ* represents greater (lower) cash taxes paid compared to expectation.[18] In addition to our vector of control variables (*X*), we also include industry-by-year fixed effects (γ).[19] This industry-by-year fixed effects structure mitigates the effects of time varying industry effects that may influence both IRS monitoring and corporate violations. Additionally, this fixed effect structure controls for macroeconomic effects that may influence all firms over time. We cluster standard errors at firm and industry-by-year level and winsorize all continuous variables at 1 and 99 percent.[20] Appendix A provides additional details about the construction of our variables.

3.4 Data and Sample Selection

We begin our sample with the Compustat universe of public, U.S. incorporated firms between 2000 and 2019. We begin in 2000 as this is the first year corporate violations data from the Good Jobs First Violation Tracker is available. Our sample ends in 2019 as this is the final year we have data available for our measure of IRS monitoring from Armstrong et al. (2024). This also limits potential confounding effects associated with the COVID-19 pandemic beginning in 2020.

Following prior literature examining both tax authority monitoring and violation activity (e.g., Yost and Shu 2022; Raghunandan 2024), we exclude observations from the utilities and financial industries (SIC codes 4900-4949 and 6000-6999) as these firms face unique regulatory environments. Next, we exclude observations missing a measure of *IRS_MONITOR*, and firm-year observations missing fundamental information from Compustat that is used for control variables.

[18] Our primary inferences are similar if we control for the ending balance of unrecognized tax benefits (UTBs), another proxy for aggressive tax avoidance. However, this results in a more limited sub-sample of firms with non-missing UTB information, post FIN48.
[19] We assign firms to industries following the Fama-French 48 industry classifications.
[20] This double clustering is consistent with prior work (e.g., Raghunandan 2024). Inferences across all tests are virtually identical if we only cluster by firm.

This sample selection process retains a comprehensive dataset of 58,543 firm-year observations across 7,532 unique firms. Table 1 details the sample selection process.

In Table 2, Panel A, we present univariate statistics for our sample of firm-year observations. Of note, violations occur within approximately 15.7 percent of our sample of firm-years.[21] Additionally, on average, firms in our sample report approximately 0.059% of sentences in their 10-K related to IRS agency actions, similar to the 0.063% reported in Armstrong et al. (2024). In Figure 1, we graph both measures over time during our sample period.[22]

Next, in Table 2, Panel B, we present the disaggregated violation categories that make up the violations in our sample. The top four categories are "safety-related offenses" at 69.98 percent, "environment-related offenses" at 18.43 percent, "employment-related offenses" at 10.09 percent, and "consumer-protection offenses" at 2.33 percent of violations. These types of non-financial violations are unlikely to be identified as a *mechanical* result of IRS monitoring since confidentially restrictions generally prevent the IRS from sharing taxpayer information.

4 Empirical Results

4.1 Primary Analysis

We present the results of our primary test of equation (1) in Table 3. We alternate between the likelihood of a violation in column (1), the number of violations in column (2), and the dollar value of penalties in column (3). Across all three columns, we find a significant positive association between *IRS_MONITOR* and corporate violations ($p<0.01$). In terms of economic significance, a within-fixed effects one standard deviation increase to *IRS_MONITOR* results in a 1.02 percentage

[21] In Section 5.3, we reexamine our analysis *within* only firms that ultimately receive a violation, mitigating concerns that something unique about firms that are identified as violators is driving our results. This, in addition to an untabulated analysis using Poisson pseudo maximum likelihood fixed effects estimation, also further mitigates econometric concerns related to the right-skewness of our dependent variables.
[22] *IRS_MONITOR* is multiplied by 100 such that 1 represents 1 percent.

point increase in the likelihood of a firm receiving a non-financial violation, or a 6.53 percent increase from the unconditional likelihood of a violation.[23]

Additionally, most of our control variables exhibit a relation with corporate misconduct. *SIZE*, *LEVERAGE,* and *PY_LOSS* are positively associated with measures of misconduct, consistent with increased exposure and higher financial pressure creating incentives and opportunities for violations. *PTROA*, *MTB*, *R&D*, and *CAPX*, are all negatively associated with corporate misconduct, consistent with more profitable firms, and firms with greater investment opportunities, being less likely to incur violations. Finally, *HSΔ* is *positively* associated with violations, consistent with a tradeoff between tax avoidance and misconduct. Stated differently, firms that avoid more taxes, on average, are *less* likely to be subject to non-financial misconduct.

4.2 Cross-sectional Analyses – Real Activities Management

Our finding of a positive relation between IRS monitoring and corporate misconduct suggests that managers may engage in implicit coordination efforts to reduce costs or enact other budgetary initiatives (e.g., Kanodia 1993; Raghunandan and Ruchti 2024) to offset the expected costs from increased cash tax outflows, including tax related fines and penalties (Hoopes et al. 2012). While it is unlikely that managers explicitly seek to engage in misconduct, the decision to reduce costs or enact other budgetary initiatives may result in adopting or refraining from actions that executives would not consider in the absence of IRS monitoring, leading to corporate misconduct (Caskey and Ozel 2017).

To evaluate whether the implicit coordination channel is a likely mechanism underlying our results, we conduct several various cross-sectional analyses. First, we test the possibility that IRS monitoring is associated with real efforts to offset the financial costs from reduced tax

[23] Calculated from column (1) as 0.0995*0.103 = 0.0102. 0.0102/0.157 = 0.0653. Where 0.103 represents the within industry-year standard deviation of *IRS_MONITOR*.

avoidance activities. To do this, we follow Roychowdhury (2006) and measure a firm's abnormal production (*Abn_Production*) and abnormal discretionary expenditures (*Abn_DiscExp*) (see Appendix A for variable construction).[24] In Table 4, Panel A, we replace the dependent variable of equation (1) with these two measures in columns 1 and 2 respectively, while also including the first stage controls to each model (e.g., Chen et al. 2018b).[25] Consistent with our expectations, the results of this analysis indicate that IRS monitoring is associated with increased abnormal production and reduced discretionary expenditures, suggesting that managers increase workload and reduce expenditures in response to increased IRS scrutiny.

Next, if the implicit coordination channel explains our results, then we expect the positive association between IRS monitoring and corporate misconduct to occur within firms that are more likely to be increasing (decreasing) production (discretionary expenditures) in response to increased IRS monitoring. To investigate whether this is the case, we decile rank *Abn_Production* and *Abn_DiscExp* by industry-year and transform the measures such that 0 represents firms within the bottom decile of *Abn_Production* (*Abn_Production10*) and 1 represents firms in the top decile. To remain consistent with the direction of our coefficients, we multiply *Abn_DiscExp* by -1 and transform the decile ranking *Abn_DiscExp10* such that 0 represents firms within the top decile of *Abn_DiscExp* and 1 represents firms within the bottom decile of *Abn_DiscExp*. We then interact *IRS_MONITOR* with *Abn_Production10* (*Abn_DiscExp10*) and report results in Table 4 Panel B (Panel C). With the inclusion of the interaction, the standalone coefficient on *IRS_MONITOR* represents the effect of IRS monitoring on misconduct within the bottom (top) decile of

[24] We examine these as measures of evidence of real activities management. While abnormal discretionary expenditures may be more directly related to the implicit coordination channel, abnormal production can also identify changes in real activities aimed at reducing cost of goods sold, thereby increasing earnings.

[25] Because discretionary expenditures consist, in part, of R&D, we remove R&D as a control in column 2. Results are qualitatively similar if we continue to include R&D (untabulated).

Abn_Production (*Abn_DiscExp)*, while the coefficient on the interaction term represents the effect as a firm moves toward the top (bottom) decile.

Across both panels, we find that corporate violations are increasing in relation to IRS monitoring specifically when managers engage in high abnormal production (Panel B) or low discretionary expenditures (Panel C).[26] Alternatively, we do not see this positive association for firms that have low (high) discretionary production (expenditures). Taken together, these analyses support the implicit coordination mechanism and suggest that increased corporate violations are likely driven by higher workloads and cuts to expenditures.

4.3 Cross-sectional Analysis – Financial Constraints

If the positive relation between IRS monitoring and non-financial misconduct arises because firms engage in coordinated cost cutting efforts in response to the expected costs associated with IRS monitoring, then we expect the effect to be concentrated within firms that are more financially constrained. This is because financially constrained firms are likely less able to absorb any costs associated with IRS monitoring, thereby increasing the incentive to implement cost-cutting measures which may result in misconduct. To examine this, we interact *IRS_MONITOR* with the firms *KZ_Score,* where a higher KZ score is associated with greater financial constraints (Kaplan and Zingales 1997), resulting in a higher likelihood of bankruptcy risk. To facilitate interpretation of coefficients, we decile rank *KZ_Score* and transform the variable such that *KZ_Score10* equals 0 for firms in the bottom decile of *KZ_Score* (e.g., low financial constraints) and 1 for firms in the top decile of *KZ_Score* (e.g., high financial constraints).

[26] Similar to Panel A, column 2, we remove R&D as a control for our cross-sectional analysis of high versus low *Abn_DiscExp*. However, we find qualitatively identical results (in sign and significance) if we include R&D (untabulated).

Table 5 presents the results of this analysis. Across all three columns, we see a positive coefficient on *IRS_MONITOR*KZ_Score10*, with all columns significant at conventional cutoffs ($p<0.05$ or stronger).[27] These results are consistent with the positive effect of IRS monitoring on misconduct being most salient for financially constrained firms. One reason for this finding is that financially constrained firms are presumably less able to absorb the financial impacts associated with IRS monitoring, and thus have greater incentives to either increase workloads or cut costs, leading to increased misconduct (Caskey and Ozel 2017).

4.4 Cross-sectional Analysis – Tax Settlements

Finally, if managers engage in implicit coordination due to expected costs from IRS monitoring, this effect should be concentrated within firms that expect to incur greater costs from IRS monitoring, such as firms that, on average, experience higher settlements of uncertain tax positions with tax authorities. To test this, we identify the average total settlements of unrecognized tax benefits (UTBs) over years (t, t+2) scaled by total assets (*SETTLE*).[28] To the extent that managers are concerned about weak support for their aggressive tax positions, which in turn leads to implicit coordination, we should see the positive association between *IRS_MONITOR* and violations occur within the firms that ultimately settle more of their uncertain tax positions. We again decile rank our measure of *SETTLE* and transform the measure such that *SETTLE10* equals 0 for the bottom decile of settlements, and 1 for the top decile of settlements. We then interact *IRS_MONITOR* with *SETTLE10*. With this interaction, the standalone coefficient of *IRS_MONITOR* represents the effect in the bottom decile, while the interaction

[27] The baseline effect of *KZ_Score10* on corporate violations is also positive and significant, consistent with the findings from Cohn and Wardlaw (2016).

[28] This results in a smaller sample size as UTBs are not required to be reported until after the implementation of FIN48 in 2006. Additionally, following prior literature, we do not replace missing UTBs or settlements with 0. Results are qualitatively similar if we instead use the sum of UTB settlements over (t, t+2) scaled by average assets.

*IRS_MONITOR*SETTLE10* reports how this relation changes as the firm realizes higher future settlements.[29]

Table 6 presents the results of this analysis. Across all three columns, we see a positive and significant coefficient on *IRS_MONITOR*SETTLE10* ($p<0.05$ or stronger). Alternatively, we do not see a significant coefficient on the standalone effect of *IRS_MONITOR*. These results indicate that the positive relation between IRS monitoring and corporate misconduct is concentrated among firms who are likely to incur relatively high financial costs as a result of IRS monitoring. Alternatively, firms with tax positions that are less likely to be overturned by the IRS do not realize increased misconduct. Taken together, the results of Tables 4 through 6 provide evidence consistent with the implicit coordination channel, suggesting that expected costs from IRS monitoring incentivize managers to increase workloads or cut costs in other areas, which in turn leads to increases in non-financial misconduct.

5 Additional Analyses and Robustness Checks

5.1 Robustness Check -Reverse Causality

We next perform several additional analyses to evaluate the robustness of our results to other alternative explanations. First, we examine the dynamic effect of IRS monitoring on non-financial misconduct. As discussed in Section 3, the exact timing of the relation between IRS monitoring and corporate violations is unclear. Because our measure of *IRS_MONITOR* represents the stock of current and prior year's transactions and interaction with the IRS (Armstrong et al. 2024), we base our primary measures in year *t.* However, it is possible that some violations take longer to be investigated and identified by various regulatory agencies.

[29] While the IRS and other external stakeholders are unlikely to know how much of a firm's positions will ultimately settle, we propose that managers are likely aware of the relative extent of future settlements, leading to increased internal coordination in the immediate term.

Additionally, although we are unaware of evidence suggesting that the IRS directly links its monitoring to non-financial misconduct, an alternative hypothesis is that in response to increased regulatory violations in prior years, firms engage in high levels of tax avoidance to reduce costs which, in turn, leads to increased scrutiny by the IRS (e.g., reverse causality). Importantly, we view this alternative explanation as unlikely as the economic magnitude of penalties related to non-financial misconduct are relatively low (see Table 2, Panel B), whereas tax settlements and penalties associated with IRS scrutiny are, on average, much higher.[30] Additionally, our primary results presented in Table 3 indicate that tax avoidance is typically *negatively* associated with violations (i.e., firms receiving violations engage in less tax avoidance as evidenced by a positive coefficient on *HSΔ*), inconsistent with a reverse-causality explanation. Notwithstanding, it is important to ensure that we do not identify pre-existing trends in which increases to violations are associated with future IRS monitoring. Therefore, following Wooldridge (2010) and Yotov et al. (2016) we modify our test of equation (1) by evaluating the effect of *IRS_MONITOR* on violations in the three years leading up to year *t* (where *IRS_MONITOR* is measured in the following years (*IRS_MONITOR*$_{(t+1,\ t+3)}$) and the effect of *IRS_MONITOR* on violations in the current and future two years (where *IRS_MONITOR* is measured in the prior two years (*IRS_MONITOR*$_{(t-2,\ t)}$)).[31] If IRS monitoring leads to misconduct, but not vice versa, the period leading up to IRS monitoring should not be statistically different from zero.

Table 7 reports the results of this analysis. Across all three columns, we fail to find evidence

[30] For example, in its FY 2023 the IRS reported it completed over 1,000 audits of large corporations which resulted in corporations paying, on average, an additional $16.2 million.

[31] The *t* period indicator is in reference to the year of *IRS_MONITOR* measurement versus our dependent variables of interest. Therefore, if corporate violations are measured in 2012, t+1 represents *IRS_MONITOR* in 2013, t+2 represents *IRS_MONITOR* in 2014, and t+3 represents *IRS_MONITOR* in 2015. Conversely, t-1 represents *IRS_MONITOR* in 2011, and t-2 represents *IRS_MONITOR* in 2010. We expect a positive association when *IRS_MONITOR* is measured in the current or prior years (leading up to the violation), and no association when *IRS_MONITOR* is measured in future years (after the violation).

that the lead-up to *IRS_MONITOR* is associated with corporate violations, mitigating the concerns of reverse causality explaining our results. However, we see an increase in violations in the year of *IRS_MONITOR* and subsequent two years. This result is consistent with some violation activity being identified and reported relatively quickly, with other activity taking longer to be fully identified by the respective agencies. Taken together, this result is consistent with IRS monitoring leading managers to increase real activities management in a way that results in increased misconduct over time.

5.2 Robustness Checks - Endogeneity

Another classic concern with our analysis is that a correlated unobservable characteristic drives both IRS monitoring and corporate misconduct. We work to mitigate this concern through four robustness checks. First, while any firm can technically be subject to a non-financial violation, it is possible that an unobservable characteristic about firms receiving (versus not receiving) violations is also associated with IRS monitoring. To partially mitigate this concern, we re-evaluate our primary analysis for *only* those firms that receive at least one violation during our sample period (approximately 37 percent of our sample). Table 8 presents the results of this analysis. When restricting our sample to the set of firms that receive at least one violation during our sample period, we continue to find a strong positive association between *IRS_MONITOR* and all three measures of corporate misconduct ($p<0.05$ or stronger). Furthermore, the economic magnitude of the coefficients are similar to our primary results presented in Table 3. While most control variables exhibit a similar relation with violations in this sub-sample, the sign on *HSΔ* switches to negative, suggesting that there may be some inherent differences between the effects of tax avoidance and violations between firms that do versus do not ever receive violations. Further analyses indicate that this may be driven by differences in losses between both samples (16.9% within the sample

of firms that receive violations versus 49.2% within firms that never receive a violation).

Next, it is possible that certain firms are effectively "poor corporate actors" that are subject both to IRS monitoring and scrutiny from many other regulatory bodies, leading to a correlation between IRS monitoring and violations. To mitigate this concern, we directly control for scrutiny from other regulatory bodies using measures developed by Armstrong et al. (2024). First, we categorize the regulators that are most likely to *mechanically* covary with our measures of non-financial misconduct, including the Environmental Protection Agency (*EPA_MONITOR*), Occupational Safety and Health Administration (*OSHA_MONITOR*), Federal Trade Commission (*FTC_MONITOR*), and Department of Labor (*DOL_MONITOR*). To avoid "throwing the baby out with the bath water" or controlling for the mechanical association between a given type of misconduct and firms' discussion of exposure to the regulatory body responsible for penalizing such misconduct, we control for monitoring from other regulatory bodies at year *t*-1. Next, we categorize firms' disclosure of scrutiny by *all* other regulators as *OTHER_MONITOR*, measured at year *t*. Including the regulatory scrutiny by other government agencies enables us to mitigate the concern that results are driven by firms that are generally "bad actors."

We report the results of this analysis in Table 9, Panel A. We highlight two important takeaways from this analysis. First, the coefficient on *IRS_MONITOR* remains positive and significant across all specifications ($p<0.01$), with similar coefficients to those reported in Table 3. Additionally, we highlight that the coefficient on *OTHER_MONITOR* is negative across all three columns, and significant in columns 1 and 2.[32] This result is consistent with the tension in our research question and suggests that, in general, increased regulatory monitoring is associated with

[32] Although controlling for monitoring by other regulators at year *t*-1 may reduce the mechanical relationship between these controls and our violation measures, it is unlikely to resolve it completely. As evidence, the coefficients on *EPA_MONITOR* and *DOL_MONITOR* in Table 9 are positive and significant, which we expect may be due to the mechanical relationship discussed above.

fewer corporate violations, similar to findings in other papers examining external monitors and corporate violations (Heese et al. 2022; Gallo et al. 2023; Heese and Pacelli 2024). This highlights the important and unique implications of the costs imposed by the IRS on corporate misconduct.

Next, in Table 9, Panel B, we implement an entropy balancing procedure, between firms that are subject to IRS monitoring (e.g., treated firms) versus those that are not, on all control variables, including all alternative regulatory scrutiny measures. Using Tübbicke's (2022) extension of entropy balancing for continuous treatments (EBCT), we re-weight observations so that the continuous treatment variable (*IRS_MONITOR*) is uncorrelated with all modeled covariates, mitigating concerns about functional form misspecification. We continue to find a positive relation between *IRS_MONITOR* and corporate violations.

To further mitigate the concern that an unmeasured cross-sectional difference between firms drives our results, we implement a model with firm fixed effects. While our primary goal is to model differences *between* firms that are or are not subject to IRS monitoring, we can also examine the effect of within-firm changes to the relative level of IRS monitoring on non-financial misconduct. This effectively limits variation to our sample's firm-year observations that eventually report non-zero IRS monitoring (Breuer and deHaan 2024). However, this analysis allows us to use the firm as its own control, examining only how changes in IRS monitoring influence violations while removing the effect of other time-invariant firm characteristics.

Table 10 reports the results of this analysis. In column (1), the coefficient on *IRS_MONITOR* is positive but insignificant at conventional levels (t=1.32), suggesting that within-firm changes to *IRS_MONITOR* do not explain violations on the extensive margin. However, in columns (2) and (3), we find a positive and significant effect on the number of total violations and the dollar magnitude of penalties respectively ($p<0.10$ or stronger). This provides evidence that as

a firm experiences greater scrutiny from the IRS, they realize higher violations on the intensive margin, consistent with the costs from IRS monitoring resulting in implicit coordination that increases non-financial misconduct.

Finally, Armstrong et al. (2024) show that *IRS_MONITOR* significantly decreases due to an exogenous cut in the IRS' budget in 2013. The 2013 IRS budget cuts were part of the larger sequestration triggered by the Budget Control Act of 2011. This legislation aimed to reduce federal spending by imposing automatic, across-the-board cuts in mandatory programs. These cuts significantly affected the IRS, causing the IRS budget to shrink by roughly $1 billion year-over-year, reducing staffing and straining its operational capabilities (Marr and Murray 2016). We use this exogenous reduction to the IRS' budget to support our analyses in two ways.

First, the IRS budget cut is likely to result in a lower probability that an otherwise tax aggressive firm will undergo scrutiny by the IRS (Nessa et al. 2020; Armstrong et al. 2024). Therefore, we anticipate that following the budget cut, more tax aggressive firms will face less pressure to cut costs due to IRS scrutiny. To examine this, we use a difference-in-differences research design where we interact an indicator variable for *POST2013* with the decile ranking of a firm's prior year ending balance of UTBs (*UTB10*), transformed such that 0 represents firms within the bottom decile and 1 represents firms within the top decile. We then augment equation (1) with firm fixed effects. If reduced IRS monitoring from the budget cut limits tax aggressive firms' concern about the financial costs from IRS monitoring, then we expect that the coefficient on *POST2013*UTB10* will be negative as tax aggressive firms are less likely to cut costs following the exogenous reduction to IRS monitoring. This identification strategy assumes that the aggregate probability of an examination of tax aggressive positions is decreased post-2013.[33]

[33] Nessa et al. (2020) find that, with more constrained resources, the IRS will reduce the probability of identifying a deficiency and instead focus on examining tax strategies that are supported by weaker facts. Importantly, the measure

Table 11, Panel A, presents the results of this analysis. Consistent with our expectations, the coefficient on *POST2013*UTB10* is negative across all three columns, and just below statistical significance in column (1) (t=1.60). This result indicates that tax aggressive firms realize a lower level of misconduct following the 2013 IRS budget cut, consistent with reduced concern about costs from IRS monitoring.

Next, motivated by the finding in Armstrong et al. (2024), we use this post 2013 budget cut in an instrumental variable (IV) analysis. Specifically, in the first stage regression, we model the effect of the 2013 budget cut (*POST2013*) on *IRS_MONITOR*. We retain controls from equation (1) and utilize firm fixed effects. Because we rely on a post 2013 (first difference) indicator variable, we remove year fixed effects and include a time trend variable (*TIMETREND*), increasing from 0 in 2000 to 19 in 2019. This time trend variable controls for the general increase in violations over time (Figure 1, Panel A). Importantly, while sequestration resulted in IRS budget cuts, it also affected other Federal agencies, potentially violating the exclusion restriction in an IV analysis. Therefore, we follow Raghunandan (2024) and exploit the legal principle of dual sovereignty for identification. Specifically, dual sovereignty allows state and federal enforcement agencies to concurrently penalize firms on the grounds that both the state and country are sovereign entities (Raghunandan 2024). While federal agencies may be affected by sequestration, actions by state agencies are plausibly insulated from this effect. Accordingly, we limit the second stage of our IV analysis to the incidence, frequency, and magnitude of *state* agency violations, plausibly exogenous to the *POST2013* IRS budget cut.

Table 11, Panel B, column (1) reports the first stage effects from this analysis. As expected,

of total UTBs (*UTB10*) is a measure of the *magnitude* of aggressive tax positions, not the relative strength of support for those positions. Therefore, it is unlikely that the IRS will simply shift its scrutiny toward (away from) firms with more (less) UTBs post 2013 in such a way that retains the same examination rate.

POST2013 is negatively associated with *IRS_MONITOR*, with a strong statistical relationship (t=-7.47).[34] Next, in columns (2) through (4), we report the effect of the instrumented value of *IRS_MONITOR* on state-level corporate violations. The predicted measure of *IRS_MONITOR* is positive and significant across all three columns. Thus, to the extent that the 2013 IRS budget cuts are exogenous from firm-level misconduct, this analysis provides additional support for our primary findings.[35]

5.3 Robustness Check -Alternative Measures of IRS Monitoring

As discussed in Section 3, it is difficult to measure IRS monitoring using publicly available data. While the measure of IRS monitoring offered by Armstrong et al. (2024) has advantages, we re-examine our primary tests using two alternative measures. First, we use the measure of IRS downloads of a firm's 10-K as a proxy for IRS attention *(#IRSDOWNLOADS*) (e.g., Bozanic et al. 2017). We use the IRS downloads data available from 2004 through 2014 via Jeff Hoopes' website and then augment this data with hand collected data on IRS downloads through 2016 provided by Yost and Shu (2022). Second, we use the indicator variable for a likely IRS audit from Yost and Shu (2022).[36] This measure is based on the probability of an IRS audit by each U.S. firm's size category using TRAC data. Then, the authors create an indicator variable equal to 1 for firms within the associated percentage of highest IRS downloads (e.g., if a firm's asset class indicates that 5% of firms are audited each year, the measure of *IRSAUDIT_IND* = 1 for firms with the top 5% of IRS downloads within that asset class).

[34] Examination of underidentification tests report a Kleibergen-Paap LM Statistic of 55.80, which is well above the critical values established by prior research (e.g., Stock and Yogo 2005), suggesting that *POST2013* is a strong first-stage instrument for *IRS_MONITOR*.

[35] We find qualitatively similar results if we restrict our sample to the years before the Tax Cuts and Jobs Act (TCJA) took effect.

[36] We thank Ben Yost for graciously sharing the data on IRS Downloads and IRS audit probability used in Yost and Shu (2022).

Table 12, Panels A and B present the results of the analysis of the *#IRSDOWNLOADS* and *IRSAUDIT_IND* respectively. Across all six specifications, we find a positive and significant effect of IRS monitoring activity on non-financial misconduct ($p<0.01$). This provides additional support for our main findings and suggests that our primary results are unlikely to be a spurious result of unique nuance in our measure of *IRS_MONITOR*.

5.4 Additional Analysis - IRS Coordinated Industry Case Program

The IRS assigns what it deems the highest risk U.S. firms to its Coordinated Industry Case (CIC) program (Ayers et al. 2019), subjecting these firms to a 100% audit probability and significant IRS resources.[37] While variation in our measure of *IRS_MONITOR* can exist within CIC firms due to variation in management's discussion of activities that are likely to be subject to IRS scrutiny, it is unlikely that this variation will significantly alter the likelihood and magnitude of non-financial misconduct. Therefore, to provide additional support that the mechanism underlying our results is working as expected, we examine a falsification test of firms that are likely to be subject to the CIC program.

We follow the methodology outlined by Ayers et al. (2019) and calculate the probability that a firm is included in the CIC program using six point-based categories (assets, sales, geographic segments, unique industry segments, foreign sales, and foreign tax expense) that are constructed from public data along with the prediction formula in Ayers et al. (2019). We use the 95th percentile probability that a firm is subject to CIC audit and create an indicator variable equal to 1 for firms with a CIC audit probability greater or equal to this probability. We then modify our test of equation (1) by interacting *IRS_MONITOR* with this indicator variable.

[37] The Large Corporate Compliance Program (LCC) replaced the CIC Program beginning in 2019.

The (untabulated) results of this analysis suggest that the effect of *IRS_MONITOR* on corporate misconduct is concentrated within firms that are unlikely to be subject to the IRS CIC program. Furthermore, we fail to find a positive relation between IRS monitoring and corporate misconduct for firms that are more likely to be subject to the CIC program, which mitigates the concern of an alternative explanation for our results.

6 Conclusion

In this paper, we investigate whether and to what extent IRS monitoring affects non-financial corporate misconduct. Our results suggest the incidence, frequency and severity of non-financial corporate misconduct is increasing in relation to IRS monitoring. To reduce concerns that our results may be due to correlated, omitted factors, we show that our findings persist both for a subsample of firms that incur at least one violation and when including firm fixed effects to isolate within-firm variation. We also find consistent results when directly controlling for alternative regulatory scrutiny and when implementing an instrumental variable analysis. To mitigate concerns about reverse causality, we show that past and current IRS monitoring is positively associated with corporate misconduct, however, future IRS monitoring is not. Notwithstanding these findings, we acknowledge that we cannot rule out all endogeneity concerns.

We consider whether an implicit coordination mechanism is likely to explain these results. This mechanism suggests that firms respond to the increased expected costs associated with IRS monitoring by engaging in efforts to reduce costs associated with other non-tax functions, which, in turn leads to an increase in corporate misconduct. We find extensive evidence consistent with this mechanism. For example, we find that IRS monitoring is associated with real activities management (Roychowdhury 2006) and the positive association between IRS monitoring and non-financial misconduct occurs within the firms that manage activities the most. Furthermore, we find

that the positive effect of IRS monitoring on non-financial corporate misconduct is concentrated among financially constrained firms and firms that report more future settlements with tax authorities. These sets of firms likely face greater expected tax costs from IRS monitoring and find it more difficult to cope with additional costs arising from IRS monitoring, suggesting our evidence is largely consistent with the implicit coordination channel.

Our conclusions are subject to several caveats. First, our findings cannot speak to the overall social welfare effects associated with IRS monitoring. While our findings suggest that IRS monitoring is positively associated with non-financial corporate misconduct, other research suggests IRS monitoring engenders numerous positive externalities such as reduced tax avoidance (Hoopes et al. 2012), increased financial reporting quality (Hanlon et al. 2014; Mason and Williams 2022) , and reduced managerial self-dealing (Yost and Shu 2022). Second, we are unable to speak to whether firms' increase in corporate misconduct in response to IRS monitoring is a rational response. Although the penalties and fines associated with the violations we use as proxies for non-financial corporate misconduct are relatively small compared to the additional taxes and fees resulting from IRS enforcement actions, the true long-term costs firms incur due to corporate misconduct are difficult to quantify.

Notwithstanding these limitations, we believe our findings are relevant for policymakers and regulators. Notably, our evidence suggests that IRS monitoring may indirectly harm non-traditional corporate stakeholders. As policymakers contemplate and debate the appropriate breadth and intensity of IRS monitoring, our evidence suggests it is important to consider the impact such monitoring may have on non-traditional corporate stakeholders.

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Appendix A
Variable Definitions

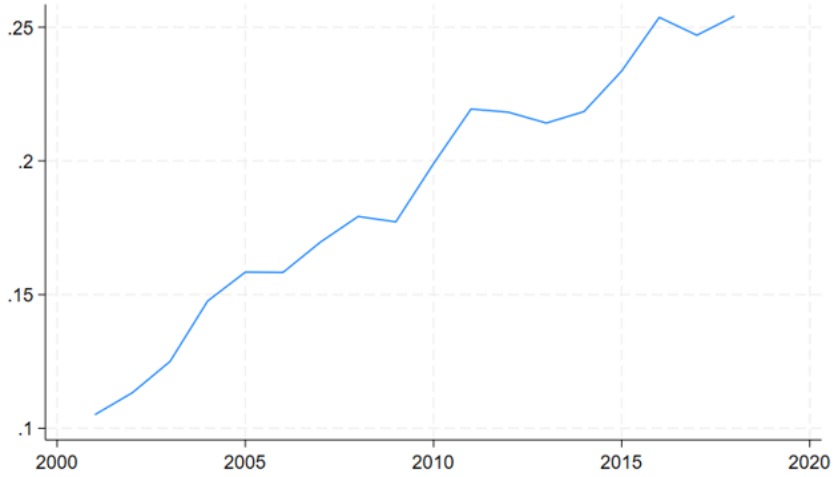
Violation	An indicator variable equal to 1 if a firm realizes at least one non-financial violation during the year, 0 otherwise. Source: Violation Tracker.
Num_Violations	The natural log of 1 plus the total number of non-financial violations during the year. Source: Violation Tracker.
Penalties	The natural log of 1 plus the total dollar value of penalties associated with non-financial violations. Source: Violation Tracker.
Abn_Production	Following Roychowdhury (2006), the residual from the following regression by Fama French 48 Industry and Year: $PROD_t/AT_{t-1} = 1/AT_{t-1} + REVT_t/AT_{t-1} + \Delta REVT_t/AT_{t-1} + PPENT_{t-1}/AT_{t-1}$ Where PROD is calculated as $(COGS_t+\Delta INVT_t/AT_{t-1})$. Source: Compustat.
Abn_DiscExp	Following Roychowdhury (2006), the residual from the following regression by Fama French 48 Industry and Year: $DISC\_EXP_t/AT_{t-1} = 1/AT_{t-1} + REVT_t/AT_{t-1}$ Where DISC_EXP is calculated as $(XRD_t+XAD_t+XSGA_t/AT_{t-1})$. Source: Compustat.
KZ_Score	The Kaplan and Zingales (KZ) score calculated as: $-1*((IB+DP)/PPENT_{t-1}) + 0.28*((AT+(PRCC\_F*CSHO)-CEQ-TXDB)/AT) + 3.13*((DLTT+DLC)/(DLTT+DLC+SEQ)) – 39.36*((DVC+DVP)/PPENT_{t-1}) – 1.31*(CHE/PPENT_{t-1})$. Source: Compustat.
SETTLE	The average settlement of UTBs (TXTUBSETTLE) scaled by total assets (AT) over years (t,t+2). Source: Compustat.
IRS_MONITOR	The percentage of sentences in a firm's 10-K that reference IRS agency action words. Source: Armstrong et al. (2024).
EPA_MONITOR	The percentage of sentences in a firm's 10-K that reference EPA agency action words. Source: Armstrong et al. (2024).
OSHA_MONITOR	The percentage of sentences in a firm's 10-K that reference OSHA agency action words. Source: Armstrong et al. (2024).
FTC_MONITOR	The percentage of sentences in a firm's 10-K that reference FTC agency action words. Source: Armstrong et al. (2024).

DOL_MONITOR	The percentage of sentences in a firm's 10-K that reference DOL agency action words. Source: Armstrong et al. (2024).
OTHER_MONITOR	The percentage of sentences in a firm's 10-K that reference all other agency action words. Source: Armstrong et al. (2024).
UTB	The ending balance of UTBs (TXTUBEND) scaled by total assets (AT). Source: Compustat.
POST2013	An indicator variable equal to 1 for years 2014 and later, 0 otherwise.
LEVERAGE	Total long-term debt (DLTT) divided by average total assets (($AT_t - AT_{t-1}$) / 2). Source: Compustat.
HSΔ	Adjusted cash taxes paid less expected tax expense divided by market value of assets. Where adjusted cash taxes paid are calculated as cash tax paid (TXPD) less the change in income tax refunds (TXR). Expected tax expense is calculated as pre-tax income (PI) multiplied by the statutory tax rate of either 35% (pre-2017) or 21% (post-2017). Market value of assets is calculated as total assets (AT) plus market value of equity (CSHO*PRCCF) less book value of equity (CEQ). Source Compustat.
SIZE	The natural log of a firm's total market value of equity (CSHO*PRCC_F). Source: Compustat.
PTROA	Pre-tax income (PI) divided by average total assets (($AT_t - AT_{t-1}$) / 2). Source: Compustat.
PY_LOSS	An indicator variable equal to 1 if a firm had negative pre-tax earnings (PI) in the prior year, 0 otherwise. Source: Compustat.
MTB	Market value of equity (CSHO*PRCC_F) divided by average total assets (($AT_t - AT_{t-1}$) / 2). Source: Compustat.
IIQ	The number of days between fiscal year end and earnings announcement date, multiplied by -1. Source: Compustat
FOREIGN	An indicator variable equal to 1 if a firm reports pre-tax foreign earnings or foreign tax expense, 0 otherwise. Source: Compustat
R&D	Total R&D expenditures (XRD) divided by average total assets (($AT_t - AT_{t-1}$) / 2). Missing R&D is replaced with 0. Source: Compustat.

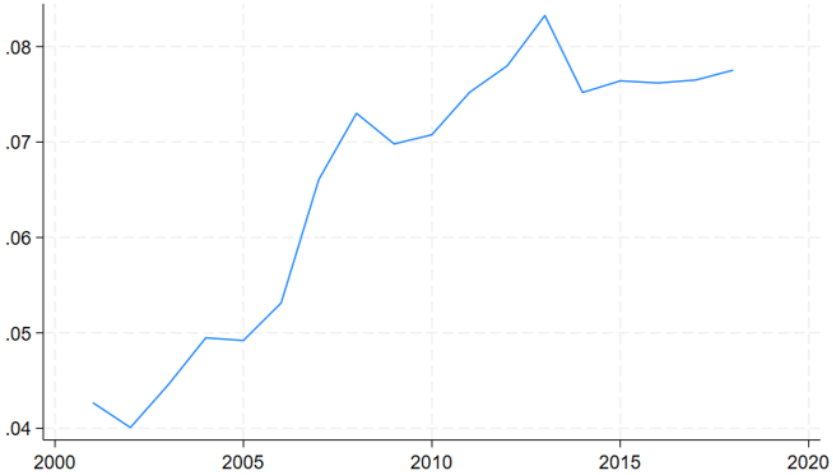
CAPX	Total capital expenditures (CAPX) divided by average total assets ((AT_t – AT_{t-1}) / 2). Source: Compustat.
#IRSDOWNLOADS	Following Bozanic et al. (2017) and Yost and Shu (2022), calculated as the number of SEC EDGAR downloads of a firm's 10-K from IP addresses associated with the IRS. Source: Ben Yost (Yost and Shu 2022).
IRSAUDIT_IND	Following Yost and Shu (2022), an indicator for an IRS audit. This measure is equal to 1 for firm-years where a firm's total number of IRS downloads is in the top X percentile by asset class. Where X is calculated as the probability of IRS audit, based on asset class, from TRAC. Source: Ben Yost (Yost and Shu 2022).

Figure 1

Panel A: Average Violations Per Year



Panel B: Average IRS Monitoring Per Year



This figure presents the average annual measure of Violation (Panel A) and IRS_MONITOR (Panel B) by year between 2010 and 2019.

Table 1: Sample Selection Process

	Observations	Unique Firms
Compustat Public U.S. Incorporated Firms Between 2000 and 2019	113,423	13,332
Firms not Classified as Financial Services (SIC2: 60-69)	89,623	10,918
Firms not Classified as Utilities (SIC2: 49)	86,738	10,678
Firms not Missing IRS Exposure Data	71,830	9,102
Firms not Missing Compustat Control Variables	**58,473**	**7,532**

This table presents the sample selection process.

Table 2: Descriptive Statistics

Panel A: Univariates

Variable	N	Mean	SD	p10	p25	p50	p75	p90
Violation	58,473	0.157	0.364	0.000	0.000	0.000	0.000	1.000
Num_Violations	58,473	0.192	0.528	0.000	0.000	0.000	0.000	0.693
Penalties	58,473	1.803	4.281	0.000	0.000	0.000	0.000	10.127
IRS_MONITOR	58,473	0.059	0.105	0.000	0.000	0.000	0.082	0.170
LEVERAGE	58,473	0.201	0.262	0.000	0.000	0.122	0.309	0.504
HSΔ	58,473	0.019	0.063	-0.014	-0.007	0.001	0.019	0.068
SIZE	58,473	5.671	2.472	2.417	3.959	5.822	7.394	8.782
PTROA	58,473	-0.356	2.764	-0.403	-0.074	0.038	0.105	0.179
PY_LOSS	58,473	0.361	0.480	0.000	0.000	0.000	1.000	1.000
MTB	58,473	4.249	27.125	0.239	0.524	1.030	1.981	4.095
IIQ	58,473	-59.058	33.685	-90.000	-74.000	-53.000	-38.000	-28.000
FOREIGN	58,473	0.507	0.500	0.000	0.000	1.000	1.000	1.000
R&D	58,473	0.060	0.159	0.000	0.000	0.000	0.058	0.159
CAPX	58,473	0.049	0.064	0.005	0.014	0.029	0.059	0.112

Panel B: Violations By Category

Offense Category	**Frequency**	**Percent**	**Median Penalty**	**Mean Penalty**
Safety-Related Offenses	27,952	65.98%	$8,250.00	$578,215.79
Environment-Related Offenses	7,808	18.43%	$22,052.00	$2,454,370.75
Employment-Related Offenses	4,274	10.09%	$38,626.00	$2,068,444.68
Consumer-Protection Offenses	986	2.33%	$225,000.00	$12,656,738.53
Competition-Related Offenses	526	1.24%	$3,775,000.00	$26,678,270.61
Government Contracting Offenses	460	1.09%	$5,100,000.00	$37,720,263.58
Healthcare-Related Offenses	349	0.82%	$30,000.00	$38,239,992.24
Miscellaneous Offenses	9	0.02%	$217,000.00	$6,132,111.11

This table presents descriptive statistics. Panel A presents the descriptive statistics for our sample of firm-year observations. Panel B presents the type and frequency of corporate violations that make up our sample of violations. All continuous variables are winsorized at the 1st and 99th percentile.

Table 3: Main Results

VARIABLES	(1) Violation	(2) Num_Violations	(3) Penalties
IRS_MONITOR	**0.0995*** **	**0.1560*** **	**1.3560*** **
	(4.16)	**(3.56)**	**(4.61)**
LEVERAGE	0.0637***	0.0669***	0.6873***
	(6.76)	(4.70)	(6.12)
HSΔ	0.2740***	0.4436***	3.4740***
	(10.85)	(9.35)	(10.85)
SIZE	0.0596***	0.0881***	0.7392***
	(22.12)	(14.40)	(20.98)
PTROA	-0.0059***	-0.0084***	-0.0718***
	(-10.42)	(-9.06)	(-10.59)
PY_LOSS	0.0067	0.0236***	0.1286**
	(1.42)	(3.16)	(2.23)
MTB	-0.0005***	-0.0008***	-0.0059***
	(-6.85)	(-5.96)	(-6.93)
IIQ	0.0000	-0.0001	-0.0005
	(0.44)	(-0.75)	(-0.65)
FOREIGN	-0.0015	-0.0168	-0.0260
	(-0.23)	(-1.29)	(-0.33)
R&D	-0.0440***	-0.0235	-0.4921***
	(-3.93)	(-1.53)	(-3.69)
CAPX	-0.2165***	-0.4950***	-3.0328***
	(-4.65)	(-5.25)	(-5.30)
Observations	58,473	58,473	58,473
Adjusted R-squared	0.258	0.266	0.262
Fixed Effects	Industry-By-Year	Industry-By-Year	Industry-By-Year

This table presents the results of our estimation of equation (1) where we examine the relation between IRS monitoring (*IRS_MONITOR*) and corporate violations. In columns 1 through 3, we alternate our dependent variable of interest between an indicator for a corporate violation (*Violation*), the natural log of 1 plus the number of corporate violations (*Num_Violations*), or the natural log of 1 plus the penalty amount (*Penalties*), respectively. Standard errors are clustered by firm and industry-year. Robust t-statistics are in parentheses. Significance is based on two-tailed p-values. *** p<0.01, ** p<0.05, * p<0.1

Table 4: Cross-Sectional Analysis: Implicit Coordination Channel

Panel A: IRS Monitoring and Real Activities Management

VARIABLES	(1) Abn_Production	(2) Abn_DiscExp
IRS_MONITOR	**0.0725****	**-0.4889*****
	(2.47)	**(-3.78)**
LEVERAGE	0.0334	0.1650
	(1.21)	(1.20)
HSΔ	0.5529***	2.6610***
	(7.44)	(4.64)
SIZE	0.0057**	0.1032***
	(2.00)	(5.62)
PTROA	-0.0694***	-0.0979*
	(-9.06)	(-1.79)
PY_LOSS	0.0430***	0.1769***
	(5.58)	(5.77)
MTB	0.0057***	-0.0424***
	(7.00)	(-6.29)
IIQ	-0.0004**	-0.0007
	(-2.45)	(-0.58)
FOREIGN	-0.0499***	-0.1298***
	(-5.67)	(-4.22)
R&D	-0.0432	
	(-0.39)	
CAPX	-0.3971***	2.2056***
	(-4.23)	(5.74)
Observations	56,970	58,380
Adjusted R-squared	0.870	0.673
First Stage Controls?	Yes	Yes
Fixed Effects	Industry-By-Year	Industry-By-Year

Panel B: High versus Low Abnormal Production

VARIABLES	(1) Violation	(2) Num_Violations	(3) Penalties
IRS_MONITOR*Abn_Production10	**0.1945*** **	**0.3158*** **	**2.3384*** **
	(2.69)	**(2.94)**	**(2.64)**
IRS_MONITOR	**-0.0024**	**-0.0151**	**0.1224**
	(-0.06)	**(-0.24)**	**(0.25)**
Abn_Production10	0.0731***	0.1121***	0.8631***
	(7.67)	(7.58)	(7.66)
LEVERAGE	0.0604***	0.0600***	0.6443***
	(6.19)	(4.05)	(5.52)
HSΔ	0.2038***	0.3369***	2.6467***
	(7.74)	(7.15)	(8.06)
SIZE	0.0593***	0.0881***	0.7373***
	(22.01)	(14.25)	(20.89)
PTROA	-0.0056***	-0.0080***	-0.0688***
	(-8.87)	(-7.69)	(-9.05)
PY_LOSS	0.0016	0.0151**	0.0688
	(0.33)	(2.02)	(1.19)
MTB	-0.0006***	-0.0009***	-0.0072***
	(-7.19)	(-6.30)	(-7.28)
IIQ	0.0001	-0.0000	0.0001
	(1.19)	(-0.03)	(0.13)
FOREIGN	0.0036	-0.0091	0.0322
	(0.54)	(-0.69)	(0.40)
R&D	-0.0294***	0.0013	-0.3175**
	(-2.65)	(0.08)	(-2.31)
CAPX	-0.1767***	-0.4676***	-2.6391***
	(-3.64)	(-4.88)	(-4.47)
Observations	56,970	56,970	56,970
Adjusted R-squared	0.265	0.275	0.270
Fixed Effects	Industry-By-Year	Industry-By-Year	Industry-By-Year

Panel C: High versus Low Abnormal Discretionary Expenditures [Multiplied by -1]

VARIABLES	(1) Violation	(2) Num_Violations	(3) Penalties
IRS_MONITOR*Abn_DiscExp10	**0.2263*** **	**0.4975*** **	**3.1642*** **
	(2.79)	**(3.70)**	**(3.11)**
IRS_MONITOR	**-0.0374**	**-0.1399** **	**-0.5346**
	(-0.83)	**(-2.00)**	**(-0.97)**
Abn_DiscExp10	0.0868***	0.1265***	1.0005***
	(8.98)	(8.43)	(8.82)
LEVERAGE	0.0551***	0.0526***	0.5833***
	(5.79)	(3.64)	(5.12)
HSΔ	0.2886***	0.4718***	3.6462***
	(10.34)	(9.02)	(10.36)
SIZE	0.0581***	0.0858***	0.7216***
	(21.90)	(14.28)	(20.82)
PTROA	-0.0060***	-0.0093***	-0.0741***
	(-10.28)	(-9.23)	(-10.60)
PY_LOSS	0.0131***	0.0355***	0.2057***
	(2.82)	(4.76)	(3.61)
MTB	-0.0006***	-0.0009***	-0.0071***
	(-8.11)	(-7.06)	(-8.25)
IIQ	0.0001	0.0000	0.0002
	(1.33)	(0.14)	(0.24)
FOREIGN	0.0038	-0.0088	0.0368
	(0.57)	(-0.68)	(0.46)
CAPX	-0.1891***	-0.4519***	-2.7130***
	(-4.09)	(-4.84)	(-4.79)
Observations	58,380	58,380	58,380
Adjusted R-squared	0.265	0.274	0.269
Fixed Effects	Industry-By-Year	Industry-By-Year	Industry-By-Year

This table presents the results of a cross-sectional analysis examining the effect of high versus low measures of abnormal production and discretionary expenditures on the relation between IRS monitoring and corporate violations. In Panel A, we replace the dependent variable from equation (1) with a measure of *Abn_Production* and *Abn_DiscExp* in columns 1 and 2 respectively. For each analysis, we include the corresponding first stage controls. In Panel B, we decile rank *Abn_Production* by industry-year and transform the measure (Abn_Production10) such that 1 represents the top decile and 0 represents the bottom decile. We then interact Abn_Production10 with *IRS_MONITOR* to examine the differential effect of *IRS_MONITOR* on violations as a firm increases from the bottom to top decile of *Abn_Production*. In Panel C, we multiply *Abn_DiscExp* by negative 1 and then decile rank this measure (*Abn_DiscExp10*) such that 1 represents the bottom decile of Abn_DiscExp and 0 represents the top decile of *Abn_DiscExp*. We then interact *Abn_DiscExp10* with *IRS_MONITOR* to examine the differential effect of *IRS_MONITOR* on violations as firm decreases from the top decile of *Abn_DiscExp* to the bottom decile of *Abn_DiscExp*. For Panels B and C, in columns 1 through 3, we alternate our dependent variable of interest between an indicator for a corporate violation (*Violation*), the natural log of 1 plus the number of corporate violations (*Num_Violations*), or the natural log of 1 plus the penalty amount (*Penalties*), respectively. Standard errors are clustered by firm and industry-year. Robust t-statistics are in parentheses. Significance is based on two-tailed p-values. *** p<0.01, ** p<0.05, * p<0.1

Table 5: Cross-Sectional Analysis: Financial Constraints

VARIABLES	(1) Violation	(2) Num_Violations	(3) Penalties
IRS_MONITOR*KZ_Score10	**0.2047*** **	**0.5783*** **	**2.2708** **
	(2.73)	**(3.77)**	**(2.37)**
IRS_MONITOR	**0.0014**	**-0.1143***	**0.2651**
	(0.04)	**(-1.69)**	**(0.51)**
KZ_Score10	0.1052***	0.1524***	1.2117***
	(11.14)	(9.00)	(10.69)
LEVERAGE	0.0282***	0.0077	0.2762**
	(2.77)	(0.46)	(2.24)
HSΔ	0.1695***	0.2836***	2.2824***
	(6.51)	(6.47)	(7.03)
SIZE	0.0633***	0.0939***	0.7839***
	(22.78)	(14.67)	(21.52)
PTROA	-0.0073***	-0.0101***	-0.0893***
	(-9.08)	(-7.82)	(-9.10)
PY_LOSS	-0.0021	0.0092	0.0285
	(-0.46)	(1.34)	(0.52)
MTB	-0.0011***	-0.0015***	-0.0126***
	(-8.39)	(-7.78)	(-8.49)
IIQ	0.0001	0.0000	0.0004
	(1.64)	(0.29)	(0.52)
FOREIGN	-0.0046	-0.0217*	-0.0630
	(-0.71)	(-1.66)	(-0.80)
R&D	-0.0445***	-0.0173	-0.4945***
	(-3.48)	(-0.95)	(-3.20)
CAPX	-0.3190***	-0.6631***	-4.2203***
	(-6.78)	(-6.53)	(-7.21)
Observations	57,232	57,232	57,232
Adjusted R-squared	0.267	0.278	0.271
Fixed Effects	Industry-By-Year	Industry-By-Year	Industry-By-Year

This table presents the results of a cross-sectional analysis examining the effect of financial constraints on the relation between IRS monitoring (*IRS_MONITOR*) and corporate violations. *KZ_Score10* represents the decile ranking of the firm's KZ_Score transformed such that 0 equals the bottom decile (low financial constraints) and 1 equals the top decile (high financial constraints). In columns 1 through 3, we alternate our dependent variable of interest between an indicator for a corporate violation (*Violation*), the natural log of 1 plus the number of corporate violations (*Num_Violations*), or the natural log of 1 plus the penalty amount (*Penalties*), respectively. Standard errors are clustered by firm and industry-year. Robust t-statistics are in parentheses. Significance is based on two-tailed p-values. *** p<0.01, ** p<0.05, * p<0.1

Table 6: Cross-Sectional Analysis: Settlements

VARIABLES	(1) Violation	(2) Num_Violations	(3) Penalties
IRS_MONITOR*SETTLE10	**0.1779*** **	**0.2431** **	**2.5952*** **
	(2.59)	**(2.19)**	**(3.15)**
IRS_MONITOR	**-0.0116**	**0.0201**	**-0.2035**
	(-0.30)	**(0.32)**	**(-0.45)**
SETTLE10	0.0533***	0.0574***	0.6890***
	(4.19)	(2.87)	(4.53)
LEVERAGE	0.0724***	0.0613**	0.7217***
	(3.96)	(2.22)	(3.21)
HSΔ	0.4061***	0.7168***	5.3624***
	(6.82)	(6.48)	(7.01)
SIZE	0.0696***	0.1116***	0.9083***
	(15.84)	(11.10)	(15.56)
PTROA	-0.0105***	-0.0146***	-0.1311***
	(-6.33)	(-6.00)	(-6.48)
PY_LOSS	0.0169**	0.0400***	0.2786***
	(2.00)	(3.07)	(2.69)
MTB	-0.0007***	-0.0010***	-0.0089***
	(-3.84)	(-3.66)	(-3.81)
IIQ	0.0002	-0.0002	-0.0001
	(0.96)	(-0.59)	(-0.06)
FOREIGN	-0.0184*	-0.0333	-0.2202*
	(-1.79)	(-1.61)	(-1.75)
R&D	-0.0808***	-0.0397	-0.8832***
	(-3.29)	(-1.11)	(-2.92)
CAPX	-0.0768	-0.4734**	-1.8597
	(-0.80)	(-2.51)	(-1.58)
Observations	22,287	22,287	22,287
Adjusted R-squared	0.281	0.301	0.286
Fixed Effects	Industry-By-Year	Industry-By-Year	Industry-By-Year

This table presents the results of a cross-sectional analysis examining the effect of tax settlements on the relation between IRS monitoring (*IRS_MONITOR*) and corporate violations. *SETTLE* represents the measure of average tax settlements between (t, t+2) scaled by total assets. We then decile rank this measure and transform the variable such that *SETTLE10* equals 1 for firms within the top decile of *SETTLE* and 0 for firms within the bottom decile of *SETTLE*. In columns 1 through 3, we alternate our dependent variable of interest between an indicator for a corporate violation (*Violation*), the natural log of 1 plus the number of corporate violations (*Num_Violations*), or the natural log of 1 plus the penalty amount (*Penalties*), respectively. Standard errors are clustered by firm and industry-year. Robust t-statistics are in parentheses. Significance is based on two-tailed p-values. *** p<0.01, ** p<0.05, * p<0.1

Table 7: Dynamic Effects

VARIABLES	(1) Violation	(2) Num_Violations	(3) Penalties
IRS_MONITOR$_{t-2}$	**0.0561****	**0.0683***	**0.7167****
	(2.37)	**(1.87)**	**(2.58)**
IRS_MONITOR$_{t-1}$	**0.0269**	**0.0460**	**0.3207**
	(1.14)	**(1.46)**	**(1.16)**
IRS_MONITOR$_{t}$	**0.0530****	**0.0541***	**0.5449***
	(2.10)	**(1.93)**	**(1.91)**
IRS_MONITOR$_{t+1}$	-0.0119	0.0075	-0.0035
	(-0.47)	(0.26)	(-0.01)
IRS_MONITOR$_{t+2}$	0.0127	0.0101	0.1736
	(0.54)	(0.33)	(0.64)
IRS_MONITOR$_{t+3}$	-0.0021	0.0430	0.1188
	(-0.08)	(1.15)	(0.39)
LEVERAGE	0.0835***	0.0758***	0.8774***
	(5.77)	(3.45)	(5.01)
HSΔ	0.2757***	0.4719***	3.4946***
	(6.83)	(6.72)	(6.98)
SIZE	0.0676***	0.1020***	0.8398***
	(20.15)	(12.92)	(19.05)
PTROA	-0.0100***	-0.0152***	-0.1242***
	(-6.55)	(-5.95)	(-6.56)
PY_LOSS	0.0170***	0.0372***	0.2633***
	(2.72)	(3.95)	(3.51)
MTB	-0.0009***	-0.0016***	-0.0117***
	(-4.72)	(-4.24)	(-4.71)
IIQ	0.0000	-0.0001	-0.0003
	(0.41)	(-0.65)	(-0.22)
FOREIGN	-0.0045	-0.0244	-0.0548
	(-0.56)	(-1.44)	(-0.56)
R&D	-0.0775***	-0.0543**	-0.8705***
	(-4.02)	(-2.13)	(-3.78)
CAPX	-0.2423***	-0.6274***	-3.5525***
	(-3.78)	(-4.54)	(-4.47)
Observations	35,543	35,543	35,543
Adjusted R-squared	0.261	0.280	0.270
Fixed Effects	Industry-By-Year	Industry-By-Year	Industry-By-Year

This table presents the results of our analysis of the dynamics in the relation between IRS monitoring (*IRS_MONITOR*) and corporate violations. Specifically, we examine the effect of *IRS_MONITOR* on Violations in the current and subsequent two years (*t*, *t*-2). Additionally, we examine the effect of *IRS_MONITOR* on violations in the three years prior (*t*+1, *t*+3). In columns 1 through 3, we alternate our dependent variable of interest between an indicator for a corporate violation (*Violation*), the natural log of 1 plus the number of corporate violations (*Num_Violations*), or the natural log of 1 plus the penalty amount (*Penalties*), respectively. Standard errors are clustered by firm and industry-year. Robust t-statistics are in parentheses. Significance is based on two-tailed p-values. *** p<0.01, ** p<0.05, * p<0.1

Table 8: Analysis with Violating Firms Only

VARIABLES	(1) Violation	(2) Num_Violations	(3) Penalties
IRS_MONITOR	**0.1004*** **	**0.1759** **	**1.4234*** **
	(2.76)	**(2.55)**	**(3.22)**
LEVERAGE	0.0693**	0.0402	0.5901
	(2.38)	(0.82)	(1.59)
HSΔ	-0.7977***	-0.8748**	-9.6828***
	(-3.66)	(-2.19)	(-3.34)
SIZE	0.0923***	0.1847***	1.2861***
	(19.07)	(13.37)	(19.61)
PTROA	-0.4825***	-0.8161***	-6.4114***
	(-5.75)	(-5.24)	(-5.52)
PY_LOSS	0.0411***	0.0813***	0.6034***
	(3.43)	(4.09)	(4.04)
MTB	-0.0178***	-0.0358***	-0.2335***
	(-2.80)	(-3.19)	(-2.58)
IIQ	0.0000	-0.0000	0.0002
	(0.14)	(-0.11)	(0.05)
FOREIGN	-0.0231*	-0.0607**	-0.2904*
	(-1.69)	(-1.98)	(-1.74)
R&D	-1.3746***	-1.7300***	-15.1041***
	(-8.55)	(-6.36)	(-7.31)
CAPX	-0.0663	-0.6786**	-1.8930
	(-0.50)	(-2.42)	(-1.16)
Observations	21,667	21,667	21,667
Adjusted R-squared	0.189	0.307	0.215
Fixed Effects	Industry-By-Year	Industry-By-Year	Industry-By-Year

This table presents the results of our estimation of equation (1) where we examine the relation between IRS monitoring (*IRS_MONITOR*) and corporate violations, focused solely within a sub-sample of firm-year observations for firms that receive at least one corporate violation during our sample period. In columns 1 through 3, we alternate our dependent variable of interest between an indicator for a corporate violation (*Violation*), the natural log of 1 plus the number of corporate violations (*Num_Violations*), or the natural log of 1 plus the penalty amount (*Penalties*), respectively. Standard errors are clustered by firm and industry-year. Robust t-statistics are in parentheses. Significance is based on two-tailed p-values. *** p<0.01, ** p<0.05, * p<0.1

Table 9: Overall Regulatory Monitoring

Panel A: Controlling for Other Regulatory Monitoring

VARIABLES	(1) Violation	(2) Num_Violations	(3) Penalties
IRS_MONTOR	**0.0919*** **	**0.1422*** **	**1.2615*** **
	(3.80)	**(3.23)**	**(4.23)**
EPA_MONITOR$_{t-1}$	0.1510***	0.2579***	1.8121***
	(5.41)	(4.54)	(5.19)
OSHA_MONITOR$_{t-1}$	-0.0068	-0.0052	-0.1833
	(-0.10)	(-0.05)	(-0.23)
FTC_MONITOR$_{t-1}$	-0.0442	-0.0349	-0.2080
	(-1.31)	(-0.58)	(-0.44)
DOL_MONITOR$_{t-1}$	0.4289***	0.6775***	5.4721***
	(5.26)	(4.33)	(5.38)
OTHER_MONITOR	-0.0058*	-0.0092**	-0.0484
	(-1.94)	(-1.99)	(-1.24)
LEVERAGE	0.0614***	0.0609***	0.6549***
	(6.33)	(4.18)	(5.66)
HSΔ	0.2851***	0.4626***	3.6074***
	(11.00)	(9.44)	(10.98)
SIZE	0.0599***	0.0886***	0.7423***
	(22.11)	(14.26)	(20.97)
PTROA	-0.0058***	-0.0082***	-0.0710***
	(-10.38)	(-9.01)	(-10.57)
PY_LOSS	0.0076	0.0258***	0.1400**
	(1.61)	(3.41)	(2.43)
MTB	-0.0004***	-0.0007***	-0.0054***
	(-6.40)	(-5.51)	(-6.49)
IIQ	-0.0000	-0.0001	-0.0008
	(-0.08)	(-1.09)	(-1.08)
FOREIGN	-0.0003	-0.0139	-0.0042
	(-0.04)	(-1.08)	(-0.05)
R&D	-0.0417***	-0.0169	-0.4614***
	(-3.54)	(-1.04)	(-3.30)
CAPX	-0.2333***	-0.5323***	-3.2364***
	(-4.90)	(-5.53)	(-5.53)
Observations	57,026	57,026	57,026
Adjusted R-squared	0.262	0.271	0.267
Fixed Effects	Industry-By-Year	Industry-By-Year	Industry-By-Year

Panel B: Entropy Balancing on Continuous IRS_MONITOR

VARIABLES	(1) Violation	(2) Num_Violations	(3) Penalties
IRS_MONTOR	**0.0795*** **	**0.1243*** **	**1.0898*** **
	(3.52)	**(3.18)**	**(4.00)**
EPA_MONITOR$_{t-1}$	0.1673***	0.2881***	2.0480***
	(5.66)	(4.79)	(5.43)
OSHA_MONITOR$_{t-1}$	-0.0161	-0.0558	-0.3745
	(-0.26)	(-0.61)	(-0.52)
FTC_MONITOR$_{t-1}$	-0.0591*	-0.0588	-0.4344
	(-1.83)	(-1.22)	(-1.06)
DOL_MONITOR$_{t-1}$	0.3815***	0.5641***	4.8249***
	(4.86)	(3.96)	(4.96)
OTHER_MONITOR	-0.0051*	-0.0086**	-0.0394
	(-1.75)	(-2.02)	(-1.08)
LEVERAGE	0.0575***	0.0535***	0.6061***
	(5.74)	(3.44)	(5.10)
HSΔ	0.2832***	0.4520***	3.5437***
	(9.99)	(8.67)	(9.93)
SIZE	0.0593***	0.0858***	0.7260***
	(21.10)	(14.39)	(20.02)
PTROA	-0.0051***	-0.0071***	-0.0619***
	(-7.93)	(-6.97)	(-8.10)
PY_LOSS	0.0068	0.0233***	0.1263**
	(1.44)	(3.17)	(2.22)
MTB	-0.0004***	-0.0005***	-0.0044***
	(-4.04)	(-3.82)	(-4.10)
IIQ	0.0000	-0.0001	-0.0006
	(0.18)	(-0.92)	(-0.74)
FOREIGN	0.0025	-0.0022	0.0423
	(0.38)	(-0.20)	(0.56)
R&D	-0.0467***	-0.0261	-0.5012***
	(-3.81)	(-1.56)	(-3.55)
CAPX	-0.2126***	-0.5185***	-3.0490***
	(-4.15)	(-4.76)	(-4.74)
Observations	57,026	57,026	57,026
Adjusted R-squared	0.255	0.265	0.259
Fixed Effects	Industry-By-Year	Industry-By-Year	Industry-By-Year

This table presents the results of our analysis when including controls for firms' disclosure of scrutiny by other regulatory agencies. We include controls for agencies that are most likely to mechanically relate to our measure of violations at year *t*-1 (*EPA_MONITOR, OSHA_MONITOR, FTC_MONITOR, DOL_MONITOR*). Then we control for scrutiny by all other regulatory agencies (*OTHER_MONITOR*) in year *t*. Panel A includes the controls in our main sample. Panel B reports results after implementing a entropy balancing procedure that re-weights all observations so that the continuous treatment variable (*IRS_MONITOR*) is uncorrelated with all modeled covariates (Tübbicke 2022). Entropy balancing is performed for all controls and regulatory scrutiny measures. In columns 1 through 3, we alternate our dependent variable of interest between an indicator for a corporate violation (*Violation*), the natural log of 1 plus the number of corporate violations (*Num_Violations*), or the natural log of 1 plus the penalty amount (*Penalties*), respectively. Standard errors are clustered by firm and industry-year. Robust t-statistics are in parentheses. Significance is based on two-tailed p-values. *** p<0.01, ** p<0.05, * p<0.1

Table 10: Analysis with Firm Fixed Effects

VARIABLES	(1) Violation	(2) Num_Violations	(3) Penalties
IRS_MONITOR	**0.0202**	**0.0405****	**0.3359***
	(1.32)	**(1.98)**	**(1.91)**
LEVERAGE	0.0085	0.0148*	0.1209*
	(1.50)	(1.96)	(1.85)
HSΔ	0.0432***	0.0847***	0.5182***
	(3.14)	(4.80)	(3.28)
SIZE	0.0146***	0.0205***	0.1769***
	(9.43)	(8.63)	(9.53)
PTROA	-0.0003*	-0.0005**	-0.0042**
	(-1.85)	(-2.20)	(-2.04)
PY_LOSS	0.0053*	0.0060	0.0775**
	(1.68)	(1.51)	(2.11)
MTB	-0.0001***	-0.0001***	-0.0009***
	(-3.28)	(-3.83)	(-3.08)
IIQ	-0.0000	-0.0001	-0.0004
	(-0.22)	(-1.57)	(-0.84)
FOREIGN	-0.0009	0.0105	0.0005
	(-0.18)	(1.49)	(0.01)
R&D	0.0019	0.0028	0.0040
	(0.57)	(0.58)	(0.09)
CAPX	-0.0069	-0.0070	-0.2052
	(-0.26)	(-0.18)	(-0.69)
Observations	57,445	57,445	57,445
Adjusted R-squared	0.534	0.711	0.555
Fixed Effects	Firm, Industry-by-Year	Firm, Industry-by-Year	Firm. Industry-by-Year

This table presents the results of a within-firm estimation of equation (1) where we examine the relation between IRS monitoring (*IRS_MONITOR*) and corporate violations. In columns 1 through 3, we alternate our dependent variable of interest between an indicator for a corporate violation (*Violation*), the natural log of 1 plus the number of corporate violations (*Num_Violations*), or the natural log of 1 plus the penalty amount (*Penalties*), respectively. Standard errors are clustered by firm and industry-year. Robust t-statistics are in parentheses. Significance is based on two-tailed p-values. *** p<0.01, ** p<0.05, * p<0.1

Table 11: Exogenous Variation in IRS Monitoring - 2013 IRS Budget Cut

Panel A: Difference-in-Differences Analysis

VARIABLES	(1) Violation	(2) Num_Violations	(3) Penalties
POST2013*UTB10	**-0.0236**	**-0.0420****	**-0.3195***
	(-1.60)	**(-2.23)**	**(-1.76)**
UTB10	-0.0054	-0.0088	0.0094
	(-0.33)	(-0.42)	(0.05)
LEVERAGE	0.0083	0.0202	0.1113
	(0.78)	(1.54)	(0.86)
HSΔ	0.0770*	0.1240**	0.8394*
	(1.84)	(2.29)	(1.73)
SIZE	0.0125***	0.0220***	0.1595***
	(4.02)	(4.98)	(4.23)
PTROA	-0.0001	-0.0003	-0.0040
	(-0.32)	(-0.57)	(-0.72)
PY_LOSS	0.0031	0.0042	0.0503
	(0.48)	(0.59)	(0.69)
MTB	-0.0000	-0.0001	0.0003
	(-0.04)	(-0.73)	(0.29)
IIQ	0.0001	0.0000	0.0009
	(1.27)	(0.32)	(0.70)
FOREIGN	-0.0082	0.0023	-0.0678
	(-0.91)	(0.18)	(-0.61)
R&D	0.0080	0.0045	0.0547
	(1.07)	(0.40)	(0.55)
CAPX	0.0545	-0.0551	0.3217
	(0.86)	(-0.75)	(0.44)
Observations	22,819	22,819	22,819
Adjusted R-squared	0.542	0.737	0.562
Fixed Effects	Firm, Industry-By-Year	Firm, Industry-By-Year	Firm, Industry-By-Year

Panel B: Instrumental Variables Analysis and State Agency Violations

VARIABLES	(1) IRS_MONITOR	(2) State - Violation	(3) State - Num_Violations	(4) State - Penalties
IRS_MONITOR		**0.5316***	**0.6159****	**6.0485***
		(1.90)	**(2.08)**	**(1.91)**
POST2013	**-0.0169*****			
	(-7.47)			
LEVERAGE	-0.0065***	0.0041	0.0030	0.0280
	(-2.59)	(0.90)	(0.66)	(0.58)
HSΔ	-0.0026	0.0274***	0.0352***	0.3152***
	(-0.44)	(2.68)	(3.00)	(2.88)
SIZE	-0.0000	0.0058***	0.0057***	0.0628***
	(-0.07)	(4.58)	(4.15)	(4.51)
PTROA	-0.0003**	-0.0001	-0.0000	-0.0006
	(-2.07)	(-0.55)	(-0.19)	(-0.44)
PY_LOSS	0.0001	0.0064**	0.0056**	0.0696***
	(0.05)	(2.56)	(2.28)	(2.62)
MTB	-0.0000	-0.0000***	-0.0000**	-0.0004***
	(-1.21)	(-3.03)	(-2.45)	(-2.84)
IIQ	0.0000	0.0000**	0.0000	0.0004*
	(0.82)	(1.99)	(1.62)	(1.79)
FOREIGN	-0.0003	0.0059	0.0060	0.0620
	(-0.16)	(1.49)	(1.49)	(1.45)
R&D	-0.0109***	0.0055	0.0054	0.0604
	(-3.25)	(1.42)	(1.34)	(1.39)
CAPX	-0.0113	-0.0174	-0.0123	-0.1812
	(-1.07)	(-0.81)	(-0.59)	(-0.78)
TIMETREND	0.0031***	0.0007	0.0006	0.0091
	(13.71)	(1.12)	(0.83)	(1.23)
Observations	58,473	58,473	58,473	58,473
Fixed Effects	Firm	Firm	Firm	Firm

This table presents the results of additional analyses using exogenous variation in IRS monitoring. In Panel B, we use a difference-in-differences analysis around the 2013 IRS budget cut (*POST2013*) to examine how violations change within more tax aggressive firms. *UTB10* represents the decile ranking of prior year UTBs scaled by total assets. This measure is transformed so that *UTB10* = 0 for firms within the bottom decile of UTBs (low tax aggressiveness) and *UTB10* = 1 for firms within the top decile of UTBs (high tax aggressiveness). Panel B presents an instrumental variable analysis. Following the intuition from Armstrong et al. (2024), we instrument *IRS_MONITOR* on the post 2013 IRS budget cut (*POST2013*). Column 1 reports the first stage of this analysis. Next, we use the predicted value from this first stage analysis as an instrument in a second stage analysis in which we examine the instrumented effect of IRS monitoring on an indicator for a state agency corporate violation (*Violation*), the natural log of 1 plus the number of state agency corporate violations (*Num_Violations*), or the natural log of 1 plus the state agency penalty amount (*Penalties*), in columns 2 through 4 respectively. This analysis is performed using firm fixed effects and a time trend variable (*TIMETREND*) to account for the overall time-trend in IRS monitoring and violations. Standard errors are clustered by firm and industry-year. Robust t-statistics are in parentheses. Significance is based on two-tailed p-values. *** p<0.01, ** p<0.05, * p<0.1

Table 12: Alternative Measures of IRS Monitoring

Panel A: IRS 10-K Downloads – 2004 through 2016

VARIABLES	(1) Violation	(2) Num_Violations	(3) Penalties
Ln(1+#IRSDOWNLOADS)	0.0288***	0.0633***	0.4392***
	(7.10)	(7.32)	(8.37)
Observations	29,438	29,438	29,438
Adjusted R-squared	0.286	0.327	0.298
Controls	Yes	Yes	Yes
Fixed Effects	Industry-By-Year	Industry-By-Year	Industry-By-Year

Panel B: Yost and Shu Measure of IRS Audit – 2004 through 2016

VARIABLES	(1) Violation	(2) Num_Violations	(3) Penalties
IRSAUDIT_IND	0.0524***	0.1212***	0.7977***
	(6.70)	(7.70)	(8.15)
Observations	29,438	29,438	29,438
Adjusted R-squared	0.286	0.326	0.297
Controls	Yes	Yes	Yes
Fixed Effects	Industry-By-Year	Industry-By-Year	Industry-By-Year

This table presents the results of our re-estimation of equation (1) using alternative measures of IRS monitoring. In Panel A, we examine the natural log of 1 plus the number of IRS downloads of 10-Ks from SEC EDGAR. In Panel B, we use the measure of IRS Audits from Yost and Shu (2022). Across both panels, in columns 1 through 3, we alternate our dependent variable of interest between an indicator for a corporate violation (*Violation*), the natural log of 1 plus the number of corporate violations (*Num_Violations*), or the natural log of 1 plus the penalty amount (*Penalties*), respectively. Standard errors are clustered by firm and industry-year. Robust t-statistics are in parentheses. Significance is based on two-tailed p-values. *** p<0.01, ** p<0.05, * p<0.1