Shine in Your Spotlight: Firms' Strategic Disclosure Response to Corporate Tax Incidents among Their Peers

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Abstract:

This paper examines whether and how peer firms' high-profile tax incidents influence corporate tax disclosure. Our cohort-based stacked difference-in-differences analysis shows an increase in voluntary tax disclosure within corporate ESG reports for firms with less aggressive tax planning (henceforth tax-responsible firms) in response to their industry peers' tax incidents. The effect is stronger for tax-responsible firms that have higher reputational concerns or a greater degree of product market rivalry with the industry peers involved in the incidents. We also find that tax-responsible firms experience an increase in product market share if they increase their voluntary tax disclosure in ESG reports in response to peers' tax incidents. Overall, our results are consistent with the view that firms strategically adjust their tax disclosure choices in response to industry peers' tax incidents to gain product market benefits.

Keywords: Strategic disclosure; reputational risk; information spillover; peer effect; corporate tax disclosure

1. Introduction

Firms can strategically choose voluntary disclosure policy to manage their reputation. The effectiveness of these strategies arguably hinges on the timing, forms, and credibility of their disclosures. This paper identifies industry peers' high-profile controversial tax incidents as an opportunity for tax-responsible firms to make strategic disclosure choices that enhance their reputation and capitalize on economic benefits from their stakeholders. Specifically, we examine whether and how firms respond to their industry peers' tax incidents through making strategic disclosure choices and investigate the economic consequence of these decisions.

We focus on corporate tax incidents because companies not paying the "fair share" of tax has received considerable spotlight and heavy public scrutiny in recent years. Tax and finance executives particularly note concerns about tax-related reputational risk (Deloitte 2014; Ernst & Young [EY] 2023; KPMG 2016; PricewaterhouseCoopers [PwC] 2014). Anecdotes show that large corporations such as Apple, Amazon, General Electric, Google, and Starbucks face significant negative publicity for their aggressive tax strategies (Barford and Holt 2013; Duhigg and Kocieniewski 2012; Neville and Treanor 2012; Kocieniewski 2011). Recent empirical evidence also shows that firms with negative publicity on tax strategies attract backlash from various stakeholder groups (Dhaliwal et al. 2022; Hoopes et al. 2018; Lee et al. 2021). Graham et al. (2014) report that, among the corporate tax executives surveyed, 69.5 percent list potential reputational damage as an important reason for not engaging in tax planning. This perspective is in contrast with the "tax-minded" view that regards tax avoidance practices as enhancing shareholder value (Hasan et al. 2017). Therefore, on the one hand, high-profile tax incidents could be salient bad news events that cause reputation damage among the public. On the other hand, shareholders may view them as acceptable business strategies.

We predict that firms strategically adjust their disclosure policies in response to their industry peers' high-profile tax incidents and the responses are likely to differ between tax aggressive and tax-responsible firms. For tax-responsible firms, industry peers' tax incidents serve as an opportunity for them to signal to the public, especially their customers that they are responsible tax duty-abiding corporate citizens, allowing them to enhance their position in the product market and potentially gain market shares from their peers undergoing public scrutiny (Bloom et al. 2013; Cao et al. 2021). In addition, existing literature on information spillovers shows that adverse events such as financial restatements and securities lawsuits have a negative spillover effect within the industry because outsiders may infer the prevalence of such practices among industry peers (Donelson et al. 2022; Gande and Lewis 2009; Gleason et al. 2008; Kravet and Shevlin 2010). Therefore, tax-responsible firms have incentives to increase tax-related disclosure to differentiate themselves from their tax aggressive peers under the spotlight. In addition, voluntary tax disclosures are generally considered highly credible because the disclosed information regarding effective tax rates and tax payment is easily verifiable. Therefore, tax aggressive firms cannot mimic the disclosure choices of tax-responsible firms and may instead reduce such disclosures to avoid further attention and potential backlash from the public.

We further anticipate that tax-responsible firms may strategically choose the most effective disclosure outlets to bolster their tax-responsible reputation among the public and customers. We identify standalone Environmental, Social, and Governance (ESG) reports as the communication channel that tax-responsible firms can effectively leverage for this purpose for two reasons. First, compared with tax-related financial disclosures, ESG reports have a broader reach, encompassing consumers and the general public, who are the intended audience of these disclosures. Second, the public has increasingly viewed corporate tax as a key element of firms' social responsibility (PwC 2023). Along this line, the practice of discussing corporate tax in ESG reports has gained prevalence in recent years (Adams et al. 2024). In ESG reports, firms typically provide details on tax expenses, highlight their contributions to the community through tax payments, or outline their tax strategies (Hardeck et al. 2024). Therefore, ESG reports can serve as an effective disclosure channel to promote firms as "good tax citizens" while addressing any potential concerns or suspicions raised by the public about their tax practices due to the tax irresponsible behavior exhibited by their industry peers.

To explore firms' disclosure choices in response to peers' tax incidents, we collect the data of tax-related ESG incidents from the RepRisk database during 2010–2022. RepRisk is a leading ESG data provider that identifies incidents posing significant reputational risks to firms. The database monitors over 100,000 public sources on a daily basis, capturing incidents such as media criticism (print, online, or social media), regulatory violations, and scrutiny from non-government organizations. It applies proprietary machine learning models to unstructured text content to automatically identify and categorize relevant incidents. Tax incidents are those categorized by Reprisk as *tax optimization* or *tax evasion*. To ensure that the tax incidents are accurately categorized, we exclude "unsharp" incidents, that is, those without a precisely defined criticism due to the nature of the source reports. Our final sample consists of 54 such corporate tax incidents.¹

To measure tax disclosure in ESG reports, we first manually collect the ESG reports for Compustat firms from Bloomberg Terminal for the period of 2008–2023. We next apply a text search algorithm to identify ESG reports containing tax-related information and measure the amount of tax disclosures by counting the number of sentences that reference corporate tax. Based

¹ The final sample excludes tax incidents for which we are unable to identify treated or control peer firms that meet our sample construction criteria.

on our self-constructed dataset, about 41% of ESG reports contain relevant tax information.²

For each corporate tax incident, we identify treated firms as those operating in the same industry as firms involved in the tax incidents (i.e., incident firms) based on the 3-digit Standard Industry Classification (SIC) codes. We select control firms as those operating in the same 1-digit SIC code industry, but not the same 3-digit SIC code industry with the incident firm. For each year with a tax incident, we construct a cohort that includes firm-year observations for the treated and control firms over the [-3, +3] window. Using a cohort-based stacked difference-in-differences (DiD) design, we show that, tax-responsible treated firms significantly increase their tax disclosures in ESG reports following industry peers' material tax incidents. However, we do not observe a significant change in tax disclosures for tax aggressive treated firms. The results of dynamic analysis verify the non-parallel trends assumption underlying our DiD design. Additionally, the increase in tax disclosures for tax compliant treated firms occurs immediately after the tax incidents and persists in the post-incident period.

We conduct several cross-sectional analyses to substantiate our main findings. First, we expect that tax-responsible firms competing more closely with the incident firms have stronger incentive to promote their tax reputation to either attract consumers from the incident firms or mitigate the negative spillover effect of their peers' irresponsible tax practices. We measure the extent of rivalry between a treated firm and its corresponding peer involved in the tax incident using product similarity and spillover vagueness scores (Cao et al. 2021). Our findings reveal a more significant increase in tax disclosures in ESG reports among tax-responsible treated firms with greater product similarity and lower spillover vagueness with the incident firms. Second, we

 $^{^2}$ For comparisons, we use the same text search algorithm to parse conference call transcripts and 8-K filings as two prevalent voluntary disclosure outlets with investors as the primary audience. As shown in the word clouds of tax disclosure in Figure 1, the content of tax disclosures in ESG reports is different from that in conference calls and 8-K filings. In particular, tax disclosures in ESG reports are more oriented to the economic impact of tax payments on society and local communities.

use media coverage and advertising expenses as two proxies for potential reputational damage and the importance of upholding positive public perceptions. Our results show a greater increase in tax disclosures in ESG reports among tax-responsible treated firms that have higher media coverage or invest more in establishing brand equity through advertisement. These findings lend further support to our main results, suggesting that firms strategically adjust their disclosure policies in response to their industry peers' adverse tax incidents to gain product market benefits.

Next, we examine whether tax-responsible firms indeed benefit in the product market from promoting their tax reputation through increasing tax-related disclosures in ESG reports following industry peers' tax incidents. Our results show that tax-responsible treated firms with increased tax disclosures experience a significant increase in market shares during the postincident period compared with tax-responsible treated firms that do not increase their tax disclosures. This result suggests that tax disclosures in ESG reports serve as an effective strategic tool for tax-responsible firms to take advantage of the heightened public attention on their taxaggressive counterparts, enhancing their competitive position in the product market.

Finally, we check whether firms also use alternative voluntary disclosure outlets such as conference calls and 8-K filings to strategically respond to peer firms' tax-related incidents. We apply the same text search algorithm to conference call transcripts and 8-K filings. Our results show that firms seem not to use these prevalent voluntary disclosure outlets intended mainly for investors to improve their tax-related reputation in response to peer firms' tax incidents.

Our study contributes to several streams of literature. First, we contribute to the tax disclosure literature by identifying reputation management as a critical factor in determining voluntary tax disclosure choices. Existing studies on corporate tax disclosure focus on how tax disclosure choices vary with firms' own tax complexity, tax strategies, and tax enforcement risk

(e.g., Balakrishnan et al. 2019; Chen et al. 2023; Chychyla et al. 2021; Dyreng et al. 2016, 2020; Ehinger et al. 2024; Hoopes et al. 2018). We utilize industry peers' tax incidents as a setting to provide evidence on the reputation-driven disclosure incentive for tax-related disclosures. Firms may not control their industry peers' tax incidents, but can utilize this opportunity to establish their reputation as responsible tax citizens, garnering favor from their potential customers. This approach also helps mitigate the typical endogeneity concern encountered when investigating the effect of firms' own tax incidents on their voluntary tax disclosure choices.³ In addition, prior studies largely examine tax-related disclosure from the perspective of investors. We further contribute to this literature by identifying tax disclosure in corporate ESG reports as an effective tax disclosure outlet for informing the public about a firm's responsible tax practices (Adams et al. 2024; Hardeck et al. 2024).

Second, our study contributes to the emerging literature of strategic peer-harming disclosure. Building on information spillover effects among industry peers (e.g., Badertscher et al. 2013; Baginski 1987; Beatty et al. 2013; Durnev and Mangen 2009, 2020; Foster 1981; Han et al. 1989), a few recent studies find that firms internalize the spillover effect of their disclosures in the product market and strategically change their disclosure decisions to harm their peer firms to gain benefits from the product market (Abodia and Cheng 2018; Bloomfield et al. 2024; Cao et al. 2021). In contrast to the traditional view of the proprietary cost of disclosure (e.g., Glaeser 2018; Li et al. 2018), studies on peer-harming strategic disclosures emphasize disclosures' strategic benefits (i.e., negative proprietary costs) in the product market. Our study extends this literature by providing the first evidence on strategic tax-related disclosures, demonstrating how firms strategically use tax disclosures in ESG reports to enhance their competitive positions in

³ It is also possible that firms adjust tax planning activities in response to peers' tax-related reputational incidents. Therefore, we control for firms' effective tax rates in our regressions to ensure that our results are driven by tax incidents, rather than real actions taken by firms, that is, changes in tax aggressiveness.

the product market.

Lastly, we contribute to the literature on the reputational cost of irresponsible tax practice (e.g., Gallemore et al. 2014; Austin and Wilson 2017; Hanlon and Slemrod 2009; Graham et al. 2013; Hardeck and Hertl 2014). We provide novel evidence that tax aggressive firms may face greater reputational cost when their industry peers strategically promote their own responsible tax practices to undermine their competitive position in the product market.

2. Literature Review and Hypothesis Development

2.1 Literature on tax planning and reputation

In recent years, corporate tax planning practices have made headlines in newspapers and magazines around the world. Because tax-related issues are closely tied to corporate reputation, large companies such as Apple, Google, and Amazon have faced significant reputational damage and become targets for public shaming, consumer boycotts, and protests, when they are accused of tax-minimizing strategies (Barford and Holt 2013). The large-scale backlash pressures firms to take actions to re-align themselves with public expectations. For example, Starbucks voluntarily paid £20 million additional taxes in U.K. in order to regain consumer trust (Neville and Treanor 2012). While ample anecdotal evidence shows that tax aggressiveness provokes strong reactions from various stakeholder groups, prior literature provides mixed evidence on how stakeholders respond to corporate tax aggressiveness. Graham et al. (2014) report that, among the corporate tax executives surveyed, 69.5 percent list potential reputational damage as an important reason for not engaging in tax planning. Experiment studies show that media coverage of corporate tax aggressiveness reduces consumers' purchase intentions, especially among those with strong tax morals or left-leaning political ideology, as well as for firms perceived to have

high ethical standards in tax practices (Hardeck and Hertl 2014; Antonetti and Anesa 2017). Hoopes et al. (2018) find that Australia private firms experience declines in consumer sentiment after publicly disclosing income tax returns. Hanlon and Slemrod (2009) find that firms experience stock price declines when they are accused by news articles of engaging in tax shelter, and the market reaction is more negative for consumer-facing retail companies. Lee et al. (2021) show that media coverage of tax avoidance negatively affects employee perceptions of managers and firms.

However, some studies document no significant stakeholder backlash against firms' aggressive tax planning. Specifically, Gallemore et al. (2014) find that public disclosure of tax shelter participation does not lead to a decline in sales revenue, suggesting no reputational costs among customers. Asay et al. (2024) provide both survey and empirical evidence that negative tax news does not significantly alter consumer purchase behavior. Moreover, while Hanlon and Slemrod (2009) show negative short-term market reactions to tax avoidance news, Gallemore et al. (2014) and Choy et al. (2017) find no long-term stock market penalties for tax aggressive firms.

2.2 Literature on tax-related disclosures

Since tax represents a substantial portion of corporate earnings, information about income tax is critical to investors. Prior literature, however, finds that corporate tax-related disclosures are often insufficient and opaque. One prominent reason is that tax avoidance activities create financial, geographic, and organizational complexities. These complexities make it difficult to fully clarify the details and economic implications of tax-related transactions to investors, thereby reducing firms' transparency. Balakrishnan et al. (2019) demonstrate that tax aggressive firms have higher information asymmetry, greater analysts' forecast errors, larger analysts'

forecast dispersion, and lower earnings quality.

In addition to the complexity-induced transparency problem, managers intentionally withhold tax-related information and/or strategically choose the format of tax-related disclosures to avoid tax-related reputational cost and IRS enforcement. Dyreng et al. (2016) demonstrate that, before ActionAid's campaign, numerous U.K. firms failed to comply with the legal obligation to disclose information about their tax haven subsidiaries. Similarly, Dyreng et al. (2020) show that the decision by some U.S. firms to withhold subsidiary information is partially motivated by concerns over media attention. Additionally, Hoopes et al. (2018) highlight that Australian companies strategically report their income just below the disclosure threshold to avoid publicly revealing their income tax return information. Chychyla et al. (2022) show that tax aggressive firms strategically choose the presentation formats of their tax disclosures to minimize the visibility of their tax-related activities and avoid unfavourable perceptions of their tax positions. Hope et al. (2013) find that firms with a lower effective tax rate (ETR) are more likely to discontinue disclosure of geographic earnings after the implementation of SFAS 131, and argue that the nondisclosure can help managers avoid IRS' attention to their tax avoidance behavior. This is consistent with the argument by Leuz (2004) that tax authorities may use the disclosure of geographic earnings in transfer pricing disputes, although it is not part of tax-related disclosures. Ehinger et al. (2024) show a negative association between IRS enforcement and voluntary tax disclosures in conference calls and earnings announcements for firms with high tax avoidance levels.

In contrast, some recent studies document that firms attempt to avoid penalties from the capital market or reduce tax-related reputational cost by actively communicating with outsiders about income tax. Specifically, Balakrishnan et al. (2019) find that tax aggressive firms attempt

to mitigate tax-induced transparency problems by discussing more tax-related information in MD&A sections of the 10-K report and conference calls. Kays (2022) finds that Australia firms tend to voluntarily disclose tax-related information in order to offset potential reputational damage caused by mandatory tax return disclosures.

Prior studies on tax-related disclosures primarily concentrated on traditional disclosure outlets, such as financial reports and conference calls (e.g., Balakrishnan et al. 2019; Dyreng et al. 2020; Ehinger et al. 2024; Inger et al. 2018). As corporate tax issues increasingly intersect with corporate social responsibility, firms have begun disclosing their tax positions and strategies in ESG reports. This shift also reflects growing calls for greater transparency in tax disclosures from standard setters and practitioners (KPMG 2021; PwC 2023; Principles for Responsible Investment [PRI] 2018; Global Reporting Initiative [GRI] 2019). A few recent studies have explored how firms disclose tax information in ESG reports and the determinants and consequences of such disclosures (Hardeck and Krin 2016; Adams et al. 2024; Hardeck et al. 2024). Specifically, tax-related discussions in ESG reports could be used to highlight firms' financial contributions to society, project a responsible tax image, and depict socially responsible tax strategies (Hardeck et al. 2024). To avoid public scrutiny and regulatory enforcement, firms with more aggressive tax strategies are less likely to discuss tax information in ESG reports (Adams et al. 2024).⁴ Additionally, firms with poor environmental performance, negative media coverage on tax issues, or industry-specific stakeholder pressure are generally more inclined to disclose tax information in ESG reports (Hardeck and Krin 2016; Hardeck et al. 2024). Tax disclosures in ESG reports are shown to be an effective tool for reducing information asymmetry (Adams et al. 2024).

⁴ Hardeck et al. (2024) provide weak evidence of a positive association between tax aggressiveness and tax disclosure in ESG reports. Adams et al. (2024) attribute this discrepancy to differences in sample selection criteria, arguing that their findings are more generalizable as they are not affected by the GRI filing self-selection bias.

2.3 Literature on information spillover and strategic peer-harming disclosure

Intra-industry information spillover effect has drawn great attention across different disciplines. As formalized by Bloom et al. (2013), information about one firm can generate at least two distinct types of spillover effects on peer firms within the same industry.⁵ On the one hand, as favorable (unfavorable) information about one firm may imply a decreased (increased) market share and profitability for peer firms, one firm's favorable (unfavorable) information may negatively (positively) affect its peers (Chen and Miller 2012; Naumovska and Lavie 2021). For example, Lang and Stulz (1992) find that due to the potential benefit gained from the difficulties of a bankrupt firm, peer firms' stock prices go up following the firm's bankruptcy announcement in highly concentrated industries. On the other hand, as firms in an industry face similar economic forces and may engage with the same suppliers and customers, one may generalize favorable (unfavorable) information about one firm as the same favorable (unfavorable) information for its peers (Donelson et al. 2022; Gande and Lewis 2009; Gleason et al. 2008; Jonsson et al. 20009; Yu et al. 2008; Zavyalova et al. 2012). For example, Gleason et al. (2008) find that accounting restatements induce stock price declines among non-restating peer firms, because the accounting misstatement discovered at one firm leads to investors' concerns over the accounting quality of non-restating peer firms. Donelson et al. (2022) document that when one firm is targeted in security class actions, investors may expect peer firms with high litigation risk to be targeted in similar future litigation. As a result, peer firms experience negative abnormal returns before and after case filings.

While most of the existing literature focuses on the capital market and product market

⁵ Information spillover can be caused by either accounting or non-accounting information. For accounting information, prior studies find that spillovers can arise from earnings announcements, management forecasts, and restatement announcements (e.g., Baginski 1987; Foster 1981; Han et al. 1989; Kim et al. 2008). For non-accounting information, spillover effects have been documented for bankruptcy filings, Internet hacker attacks, dividend initiations (Ettredge and Richardson 2003; Firth 1996; Lang and Stulz 1992).

consequences of information spillover, recent studies have started to explore the spillover effect in a novel way and investigate whether firms internalize the potential information spillover and use disclosure to gain competitive advantages in the product market. Cao et al. (2021) investigate negative peer disclosure, which is the disclosure made by one firm of adverse news of its industry peers. They find that firms strategically publicize their industry peers' adverse news on social media as an implicit positive self-disclosure, and the disclosing firms experience positive market reactions following the news. Aobdia and Cheng (2018) find that non-unionized firms tend to disclose more information, especially good news, when their unionized peer firms are engaged in labor renegotiations. This strategic disclosure helps labor unions at peer firms obtain more favorable employment agreements, which, in turn, hurts these unionized peer firms' competitive positions in the product market. In another related work, Kim et al. (2020) study the effect of information spillover on disclosure decisions in the M&A setting. The authors find that acquiring firms' managers strategically disclose news that are intended to depress the target's stock price during the negotiation period. A recent study, Bloomfield et al. (2024), finds that firms using relative performance evaluation for CEOs internalize the spillover effects from their own disclosures and strategically disclose information that harms their peers' stock price, which, in turn, boost CEOs' incentive compensation.

2.4 Hypothesis development

According to the literature on information spillover effect, firms can be influenced by their peer firms' high-profile controversies in two distinct ways. On one hand, firms may gain opportunities from peer firms' tax incidents to enhance their competitive positions in the product market. Prior literature and anecdotal evidence suggest that when a firm faces negative publicity, its customers often consider transferring to competitors offering similar products (Bloom et al. 2013; Cao et al. 2021; Chen and Miller 2012; Naumovska and Lavie 2021).⁶ For example, after WorldCom was accused of financial misconduct, the Washington Post reported that "major customers were considering switching their telephone and Internet business to other companies" (Noguchi 2002). On the other hand, firms may suffer reputational harm because outsiders may generalize negative impressions across firms in the entire industry (e.g., Donelson et al. 2022; Gleason et al. 2008).

We predict that firms adjust their tax disclosures in ESG reports in response to peers' tax incidents, and their responses differ between tax responsible and irresponsible firms. Unlike traditional financial disclosure channels that primarily target sophisticated investors and professionals, ESG reports reach a broader audience, making them an effective medium for signaling tax responsibility. With corporate tax issues increasingly integrated into the ESG framework, in recent years, firms frequently discuss tax issues in ESG reports to emphasize their contributions to public welfare through tax payment and transparency.⁷

Facing the dual spillover effects, tax-responsible firms may strategically increase their tax discussions in ESG reports following peers' tax incidents. By positioning themselves as a "good tax citizen", tax responsible firms can mitigate the negative public perceptions caused by their peers' tax incidents, differentiate themselves from implicated peers, weaken peers' competitive position, and attract customers switching from the tax irresponsible peers. In contrast, tax irresponsible firms may reduce their tax disclosures in ESG reports following peer firms' tax controversies, as openly discussing tax matters could attract public attention and exacerbate the

⁶ As discussed in Section 2.1, prior studies provide mixed evidence on consumer reactions to corporate tax aggressiveness (Asay et al. 2024; Antonetti and Anesa 2017; Hardeck and Hertl 2014; Hardeck et al. 2021; Hoopes et al. 2018). However, we conjecture that as long as managers perceive that tax incidents of peer firms provide them an opportunity to gain a competitive advantage in the product market, they may change their tax disclosures as a response.

⁷ See appendix A for examples of ESG report excerpts that highlight the reporting firms' tax contributions.

reputational damage caused by their peers' tax incidents. We state our predictions for tax responsible and irresponsible firms separately in the following hypotheses.

- H1a: All else being equal, for tax responsible firms, the amount of tax-related discussions in ESG reports will increase following the tax incidents.
- H1b: All else being equal, for tax irresponsible firms, the amount of tax-related discussions in ESG reports will decrease following the tax incidents.

3. Data, Sample Selection, and Research Design

3.1 Identifying tax incidents

We obtain firm-level negative tax incidents from RepRisk, the world's largest ESG risk incident database, covering over 200,000 public and private companies across all sectors and markets since 2007. RepRisk systematically identifies and monitors material ESG incidents and violations of international standards that impose reputational and compliance impacts on firms. Using a rules-based methodology, it screens, on a daily basis, more than 100,000 information sources, such as print media, social media, government bodies, and regulators, in 23 different languages for adverse ESG incidents. Its core research scope includes 28 ESG-related issues.

To identify tax incidents used in our analysis, we start with all incidents defined by RepRisk as issues *tax evasion* or *tax optimization*. Tax evasion refers to illegal efforts to avoid tax obligations, such as tax fraud. Tax optimization, while not illegal, involves minimizing tax liability through strategic planning, which can sometimes exploit legal loopholes. Examples of tax optimization include tax inversion, the relocation of a company's headquarters to a low-tax country while maintaining operations in a high-tax jurisdiction, and tax avoidance. For each incident, RepRisk classifies it as either a sharp incident or an unsharp incident. An unsharp incident occurs when a firm is mentioned in an incident, but the criticism directed at the firm is not precisely defined due to the nature of the incident. Since our study aims to focus on tax incidents that specifically result in tax-related reputational risk, we retain only tax incidents with clearly defined criticism, that is, sharp incidents recorded in RepRisk.

3.2 Measuring tax disclosures in ESG reports

We manually collect ESG reports for Compustat firms from the Bloomberg Terminal for the period 2008 to 2023.⁸ Following Hardeck et al. (2024), we use a multistep, iterative text search to identify reports that include tax-related information. First, we retained all sentences containing the keyword "tax*" to capture any tax-related context in ESG reports. Because the term "tax" can appear in non-tax disclosure contexts (e.g., "taxi," "earnings before income taxes," "pre-tax income", and "net of tax"), we manually review the potential tax-related sentences identified above to compile a list of 66 false-positive terms and three suspicious phrases (see Appendix B). If a sentence includes any of the false-positive phrases, we exclude it from our count of tax-related sentences. If a sentence contains a suspicious phrase, we manually assess whether it is a tax-related disclosure. Finally, we define the variable *TaxDisc* as the number of validated tax-related sentences included in the ESG reports.

3.3 Sample and regression model

We employ a stacked Difference-in-Differences (DiD) design to examine how tax responsible and tax irresponsible firms adjust their tax disclosure behavior following tax incidents of their peers. Specifically, for each year during the period 2010 to 2022, we first create a cohort of treatment firms, which are firms sharing the same 3-digit Standard Industrial Classification (SIC) code as the incident firms.⁹ Then, following Beatty et al. (2013), we construct the control group for each cohort using firms with the same 1-digit SIC code but different 3-digit SIC code as

⁸ Our initial sample of ESG reports starts in 2008 because it is the first year with ESG reports provided by the Bloomberg Terminal.

⁹ The RepRisk database provides information on tax incidents starting from 2007. As we require both treatment and control peers not to be influenced by any tax incidents during a three-year window before the incidents, to ensure a clean pre-event window for each cohort, we start cohort years from 2010.

incident firms. Prior studies document that the information spillover effect is more likely to occur among peers more similar to the focal firm (Jonsson et al. 2009; Naumovska and Lavie 2021). Compared with firms with the same 3-digit SIC code as the incident firm, firms with the same 1digit SIC code are less likely to be directly influenced by the tax incidents and, thus, can serve as a valid control group. More importantly, by using firms belonging to the same broader group defined by the 1-digit SIC code as control firms, we account for any potential influence of group characteristics at the 1-digit SIC code level.

For both treatment and control firms in each cohort, we use firm-year observations within a [-3, +3] window around the tax incidents and then stack the data across different cohorts. To ensure that the observed effect stems from peer influence rather than firms' responses to their own incidents, we require that neither treatment nor control firms experience any tax incidents throughout the whole sample period. Additionally, to identify a clean treatment effect, we further require treatment firms not to be influenced by any tax incidents involving peers in their 3-digit SIC industry during the pre-event window and control firms not to serve as treatment peers during the whole cohort window. After constructing the stacked sample, we classify firms (both treatment and control firms) as tax responsible (tax irresponsible) firms if their long-term cash ETRs prior to the tax incident are above (below) the median of the sample distribution.¹⁰

Based on the stacked sample on cohort-firm-year level, we estimate the following baseline model using an ordinary least squares (OLS) regression:

$$TaxDisc = \beta_0 + \beta_1 Post \times TaxResponsibleTreated + \beta_2 Post \times TaxIrresponsibleTreated + \beta_3 Post \times TaxIrresponsible + a_k Controls + Cohort \times Firm FE + Cohort \times Year FE + \varepsilon_t,$$
(1)

where *TaxDisc* is the number of tax-related sentences included in a ESG report as defined above.

¹⁰ Our choice of cash ETR rather than GAAP ETR is consistent with the findings documented by Chen et al. (2019). These authors show that the negative sentiment in tax-related media articles is significantly higher for firms with a low cash ETR but such a relation does not hold for GAAP ETR.

TaxResponsibleTreated (TaxIrresponsibleTreated) is an indicator variable that equals one for tax responsible (irresponsible) treatment firms, and zero otherwise. *Post* is an indicator variable that equals one for both treatment firms and control firms in the period after the tax incidents, and zero otherwise. *TaxIrresponsible* is an indicator variable that equals one for tax irresponsible firms, and zero otherwise.¹¹ If tax responsible firms increase their tax disclosures in ESG reports following the tax incidents of their peers to highlight their "fair share" of tax payment, we would observe a significantly positive coefficient on *Post×TaxResponsibleTreated (β*₁). For the tax irresponsible firms, if they reduce tax disclosures after peers' tax incidents to avoid further public attention, we expect a negative coefficient on *Post×TaxIrresponsibleTreated (β*₂).

We control for several firm characteristics that potentially influence disclosure decisions, including *Size*, *Profitability*, and *Leverage*. Additionally, prior studies suggest that tax-related reputational concerns may also result in changes in tax aggressiveness behavior, which, in turn, may affect firms' tax disclosure decisions (Dyreng et al. 2016; Austin and Wilson 2017; Dhaliwal et al. 2022). Therefore, we include *ETR* as a control variable in our regression to account for the indirect effect of tax incidents on tax disclosures in ESG reports through the changes in tax aggressiveness levels. This ensures that the observed effect, if any, is attributable to the tax incident itself, rather than changes in tax aggressiveness resulting from the incident. Following prior studies using a stacked DiD design (e.g., Gormley and Matsa 2011; Gormley et al. 2013), we include Cohort-by-Firm fixed effects to account for time-invariant firm-level characteristics

¹¹Post×TaxResponsibleTreated (Post×TaxIrresponsibleTreated) is equivalent to Post× TaxResponsible ×Treated (Post×TaxIrresponsible×Treated), where TaxResponsible (TaxIrresponsible) is an indicator variable that equals one for tax responsible) treatment firms and control firms, and zero otherwise. Treated is an indicator variable that equals one for treatment firms, and zero for control firms. The standalone terms Post, TaxResponsible, TaxIrresponsible, and Treated are absorbed by the Cohort×Year fixed effects or Cohort×Firm fixed effects. The interaction terms TaxResponsible × Treated and TaxIrresponsible × Treated are absorbed by the Cohort×Firm fixed effects. Additionally, Post× Treated is colinear with Post× TaxResponsible × Treated and Post×TaxIrresponsible × Treated and Post×TaxIrresponsible × Treated, and Post×TaxIrresponsible × Post is colinear with TaxIrresponsible×Post. As a result, the remaining interaction terms included in the model are Post×TaxResponsibleTreated, Post×TaxIrresponsibleTreated, and Post×TaxIrresponsible.

within each cohort, and Cohort-by-Year fixed effects to control for any secular time trend for each cohort.

4. Results

4.1 Descriptive statistics

Table 1 reports the yearly and industry distributions of the corporate tax incidents in our sample in Panels A and B, respectively. As shown in Panel A, each year in 2010–2022 has at least one tax incident, with 2021 recording the most incidents. In Panel B, we observe that the tax incidents in our sample cover a wide group of industries. The distributions across years and industries reported in Table 1 show that the tax-related reputational incidents that we collect from the RepRisk database are not limited to a few years or industries. Our results based on these incidents should be free of generalizability concerns.

Table 2 presents the descriptive statistics of our stacked sample. The mean value of *TaxDisc* is 1.43, indicating that on average an ESG report in our sample includes 1.43 tax sentences. Among ESG reports that include tax disclosures, the average number of tax-related sentences is 3.44 (untabulated). In addition, the mean (median) value of *ETR* is 0.24 (0.23).

4.2 Main results

Table 3 reports our main results. Column (1) shows the result without including the control variables, while column (2) reports the result of estimating Eq. (1). In both columns, we observe significantly positive coefficients of $Post \times TaxResponsibleTreated$. The coefficients of $Post \times TaxIrresponsibleTreated$ are negative but not statistically significant. These results show that tax responsible treated firms respond to tax-related reputational incidents by increasing voluntary tax disclosure in ESG reports relative to control firms. To the extent that the mean

value of *TaxDisc* for tax responsible treated firms in the year before the incident is 1.59, the result in column (2) suggest that tax responsible treated firms increase tax disclosures in ESG reports by 104% after tax incidents. For tax irresponsible firms, we do not observe a decrease in voluntary tax disclosure in their ESG reports relative to control firms around tax incidents. One possible explanation for the null result for tax irresponsible firms is that they provide boilerplate-type tax disclosure in ESG reports in the first place and thus do not bother cutting such disclosure following peer firms' tax incidents. This explanation is aligned with recent research showing that, to satisfy stakeholders' demand for ESG information, poor social performers often engage in selective disclosure and use less precise languages in ESG reports (Baker et al. 2024).

Table 4 and Figure 2 report the results of testing the dynamic effects. We find that the increase in voluntary tax disclosure in ESG reports for tax responsible treated firms occurs after, not before, tax incidents. These results verify the parallel trends assumption underlying our DiD design. In addition, tax responsible firms increase their voluntary tax disclosure in ESG reports immediately after tax incidents and the increase persists through our post-incident period. As for tax irresponsible firms, we do not observe significant patterns in either pre- or post-incident periods.

[Insert Table 4 and Figure 2 about here]

4.3 Cross-sectional tests

Our argument is that firms not aggressive in corporate tax strategies can increase voluntary tax disclosure in ESG reports in response to a tax incident of their peers to maintain reputation for paying a "fair share" of tax and attract consumers from the incident peer firm. To substantiate this argument, we conduct two groups of cross-sectional tests.

First, we examine whether the effect of peers' tax-related reputational incidents on firms'

voluntary tax disclosure varies with the potential reputational damage. We measure the potential reputational damage by firms' advertising expenditures and ex-ante media coverage. Specifically, advertising expenditures is calculated as the advertising expense scaled by sales in the incident year. Media coverage is defined as the number of firm-specific news articles from RavenPack over the year before the incident. Higher advertising expenditures indicate that firms care more about brand values and thus would be more concerned about reputational damage arising from a tax incident that targets their industry groups. Higher ex-ante media coverage suggests higher visibility in the public domain and higher potential negative publicity. In this sense, we predict that tax responsible firms with greater advertising expenditures or higher ex-ante media coverage would increase voluntary tax disclosure in ESG reports more after peer firms' tax incidents.

To test this prediction, we augment Eq. (1) by including an indicator variable that equals one for firms with the potential reputational damage (i.e., advertising expenditures or ex-ante media coverage) above the sample median in the incident year. Table 5 shows that the interaction term $Post \times TaxResponsibleTreated \times Hvar$ loads positively in columns (1) and (2) when Hvarindicates high advertising expenditures and high ex-ante media coverage, respectively. These results are consistent with our prediction and support the argument that tax responsible firms increase voluntary tax disclosure in ESG reports to address stakeholders' concerns about the prevalence of aggressive tax strategies in the industry.

[Insert Table 5 about here]

Second, we examine whether the effect of tax incidents of industry peers on firms' voluntary tax disclosure varies with the closeness of the rivalry between firms and the incident peer firm. We measure the closeness of the rivalry by product similarity and spillover vagueness (Cao et al. 2021). Specifically, product similarity is the pairwise product cosine similarity score

between the firm and the incident peer firm, calculated based on the unique words used by the two firms to describe their products in the business description sections of their 10-K filings (Hoberg and Phillips 2010, 2016). To calculate spillover vagueness, we first compute the ratio of the number of firms in the 3-digit SIC industry to the number of firms in the TNIC-3 industry for each incident firm and its corresponding peers. We then take the arithmetic mean of these two ratios for each pair of firm and incident peer firm in the incident year. Higher product similarity and lower spillover vagueness indicate that a strategic disclosure response by firms is more likely to attract customers from the incident peer firm. We thus predict that tax responsible treated firms would increase voluntary tax disclosure in ESG reports more after a tax incident when product similarity (spillover vagueness) is higher (lower) between the firms and the incident firm.

We test this prediction in a similar way to that of the first group of cross-sectional tests. That is, we augment Eq. (1) by interacting $Post \times TaxResponsibleTreated$ with an indicator variable that equals one for firms with product similarity or spillover vagueness above the sample median in the incident year. Table 6 shows that the interaction term $Post \times TaxResponsibleTreated \times Hvar$ loads positively in column (1) when Hvar indicates high product similarity while loading negatively in column (2) when Hvar indicates high spillover vagueness. These results are consistent with our prediction and support the argument that tax responsible treated peer firms increase voluntary tax disclosure in ESG reports to attract customers from the incident peer firm.

[Insert Table 6 about here]

4.4 Consequence tests

Next, we conduct a direct test of the consequence of firms' adjustment of voluntary tax disclosure in ESG reports in response to peer firms' tax-related reputational incidents. Consistent

with Aobdia and Cheng (2018), we estimate the following regression of $\Delta Market_Share_{[t-1,t+\tau]}$, the change in product market share from the year before the incident (i.e., *t*-1) to a year after the incident (i.e., year *t*+ τ , where $\tau = 1, 2, \text{ or } 3$).

$$\Delta Market_Share_{[t-1,t+\tau]} = \beta_0 + \beta_1 TaxResponsibleTreated + \beta_2 Inc_Disclosure_{[t-1,t+\tau]} + \beta_3 TaxResponsibleTreated \times Inc_Disclosure_{[t-1,t+\tau]} + \beta_4 TaxIrresponsibleTreated + \beta_5 Dec_Disclosure_{[t-1,t+\tau]} + \beta_6 TaxIrresponsibleTreated \times Dec_Disclosure_{[t-1,t+\tau]} + \alpha_k Controls + Cohort \times Firm FE + Cohort \times Year FE + \varepsilon_t,$$
(2)

where $Inc_Disclosure_{[t-1,t+\tau]}$ ($Dec_Disclosure_{[t-1,t+\tau]}$) is an indicator variable that equals one if the firm provides more (less) voluntary tax disclosure in ESG reports in year $t+\tau$ than in t-1, and zero otherwise. If an increase (decrease) in tax disclosure in ESG reports indeed help tax responsible (irresponsible) treated firms to attract customers from the incident peer firm, we should expect to observe a positive β_3 (β_6).

Table 7 reports the result. We observe a significantly positive coefficient of $TaxResponsibleTreated \times Inc_Disclosure$, while that of $TaxIrresponsibleTreated \times Dec_Disclosure$ is positive but not statistically significant.¹² This result is consistent with the notion that tax responsible treated firms can improve their competitive position in their industry by increasing voluntary tax disclosure in ESG reports in response to a tax incident that targets the industry. On the other hand, we do not observe such product market benefit for tax irresponsible treated firms that reduce their voluntary tax disclosure.

[Insert Table 7 about here]

4.5 Additional tests

In our main tests, we focus on tax disclosure in ESG reports because such disclosure is more likely to reflect firms' communication of their images of a good tax citizen to audience

¹² The stand-alone variables *TaxResponsibleTreated* and *TaxIrresponsibleTreated* have no variation within each cohort-firm combination and thus can be absorbed by the Cohort×Firm fixed effects. We thus omit these two terms from the regression results in Table 7.

beyond investors. Figure 1 also shows that ESG reports are quite different from two alternative prevalent voluntary disclosure outlets, namely conference calls and 8-K filings, regarding the content of tax disclosure. In this final section, we further compare these disclosure outlets by analyzing firms' tax disclosure in conference calls and 8-K filings in response to peer firms' tax-related incidents.

Using the text search algorithm described in Section 3.2 to parse conference call transcripts and 8-K filings, we define two alternative tax disclosure variables: $TaxDisc_CC$, the average number of tax-related sentences in conference call transcripts over the fiscal year, and $TaxDisc_8K$, the average number of tax-related sentences in 8-K filings over the fiscal year. We then replace the dependent variable in in Eq. (1) with these two variables. As shown in Table 8, we find no statistically significant coefficients on $Post \times TaxIrresponsibleTreat$, suggesting that tax-responsible treated firms do not respond to tax-related reputational incidents by increasing tax disclosure in either conference calls or 8-K filings, relative to control firms.

[Insert Table 8 about here]

5. Conclusions

This paper studies the effect of peer firms' tax-related reputational incident on firms' voluntary tax disclosure. We find that such spillover effect depends on the firms' own tax strategies. Specifically, tax responsible firms tend to increase voluntary tax disclosure in ESG reports in response to a tax incident that targets their industry group. The effect is stronger for firms with higher advertising expenditure, higher ex-ante media coverage, higher product similarity with the incident firm, or lower spillover vagueness. We also show that tax responsible firms that increase voluntary tax disclosure in response to peers' tax incidents indeed gain a

higher product market share. Overall, these results are consistent with the view that firms can strategically use voluntary tax disclosure to maximize stakeholders' perceptions of firm image.

Our study identifies reputation management as an important motive for voluntary disclosure choices. We improve the understanding of the link between tax-related reputational concerns and corporate tax disclosure, particularly the tax disclosure in ESG reports, a tax disclosure venue that gains prevalence among corporations but receives disproportionately little attention from academics. We also add to the emerging literature of strategic disclosure for peer-harming purposes by showing that firms may strategically adjust tax disclosure to attract customers from competitors.

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Appendix A Examples of Tax Disclosure in ESG Reports

MERCK & CO, INC.

Environmental, Social & Governance Progress Report 2021/2022

We recognize our role as a responsible taxpayer to pay our full share of taxes, including corporate income taxes. We also recognize that our contribution is much more than the corporate income tax we pay.

We pay a significant amount of taxes to national and local governments in the form of employment taxes, value added taxes, sales taxes, excise taxes, property taxes, and customs duties. We also collect numerous taxes paid by our employees. We pay all taxes due in full and on time in the jurisdictions in which we operate. The way we conduct business, including the economic impact from the taxes we pay, also reflects our commitment to striving to reach those in need with our medicines and vaccines and helping to build robust, durable health systems worldwide through partnership, investment and innovation.

Our chief financial officer (CFO) is ultimately responsible for our overall tax position. The day-to-day management of tax is performed by the Company's global corporate tax department, which is led by the senior vice president of Tax. Effective oversight of the tax function is maintained by at least an annual tax presentation to the Audit Committee of our Board and regular meetings with the CFO; senior vice president, Tax and Treasury; and other executive leaders to discuss emerging tax matters.

We comply with tax rules and regulations on a worldwide basis and only engage in tax planning that is aligned with our commercial business activities and reputation. We are committed to the arm's length standard in transfer pricing and Organisation for Economic Co-operation and Development (OECD) guidelines for international tax matters. We have a zero-tolerance approach to tax evasion and the facilitation of tax evasion. Where uncertainty exists, and when appropriate, we seek clarification from our external advisors and/or governmental authorities. This can take the form of tax rulings or advanced pricing agreements from governmental authorities.

We monitor proposals and changes to tax incentives and regulations in the countries in which we operate in order to assess their impact on our business, and we actively participate in industry groups interacting with government representatives to support the development of effective tax systems that encourage innovation and growth. We utilize available tax incentives and opportunities, such as Research and Development tax reliefs, in the spirit in which they were intended.

The effective income tax rates from continuing operations were 11.0 percent in 2021, 22.9 percent in 2020 and 21.8 percent in 2019.

APPLE, INC. Environmental, Social & Governance Report 2022 Tax payments

Taxes play a necessary and important role in our society and Apple believes every corporation has a responsibility to pay all the taxes they owe. As one of the largest taxpayers in the world, we comply with the law wherever we operate and pay taxes on everything we earn around the world. Over the past decade, Apple has paid more than \$100 billion in corporate income taxes — and our annual effective tax rate was 23 percent on average.

The Audit and Finance Committee of the Board of Directors regularly reviews and discusses Apple's reports on tax matters from Apple's Chief Financial Officer, General Counsel, the heads of global Tax, Business Assurance, and Internal Audit, and from Apple's independent auditor. These reports include, among other matters, updates on significant domestic and international tax-related developments, worldwide tax audits, international tax structure, international tax policy, and other tax-related legislative matters.

Appendix A – Continued

AMERICAN ELECTRIC POWER COMPANY, INC.

Environmental, Social & Governance Report 2011

The ongoing recession made AEP's contribution to local economies more important than ever in 2010. We are among the largest employers in the communities where we operate, and the taxes we generate are a major source of revenue to those communities. AEP paid almost \$1.2 billion in federal, state and local taxes in 2010 and employed nearly 19,000 people. Our annual payroll is more than \$1.8 billion and positively impacts families, communities and economies in our service area.

AVISTA CORPORATION

Corporate Responsibility Report 2022

Local Impact

As one of the largest taxpayers in the region, paying over \$100 million in taxes annually, our economic impact supports family-wage jobs in rural, suburban and urban communities in our 30,000 square-mile service territory in eastern Washington, northern Idaho and parts of southern and eastern Oregon and Sanders County, Montana.

Appendix B False-positive and Suspicious Phrases Used in Tax Disclosure Search

During our search for tax disclosures in ESG reports, we first retained all sentences containing the keyword "tax*" to capture any tax-related context. Recognizing that "tax" can also appear in unrelated contexts (e.g., "taxi," "earnings before interest and taxes," and "pre-tax income"), we manually reviewed these sentences and compiled a list of 66 false-positive terms and three suspicious terms (as shown below). If a sentence includes any of the false-positive phrases, we exclude it from our count of tax-related sentences. If a sentence contains a suspicious phrase, we manually assess whether it is a tax-related sentence.

| False-positive terms | | | |
|----------------------|--------------------|--------------------------|---------------------|
| after tax | employee{*}benefit | political action | tax deduction |
| after-tax | estate tax | political engagement | tax equity investor |
| before income tax | excise tax | post-tax | tax free |
| before tax | gas | pretax | tax holiday |
| before-tax | ghg | pre-tax | tax incentive |
| benefit plan | green | provision for income tax | tax law |
| carbon | greenhouse | public policy | tax policy |
| carbon tax | gross-up | reform | tax reduction |
| charitable | legal issue | regulation | tax saving |
| climate | legislation | renewable | taxable |
| co2 tax | lobby | risk | tax-adjusted |
| compensation | net of tax | soda tax | tax-advantaged |
| deductible | nonprofit | tax act | tax-exempt |
| deferred tax | non-profit | tax assistance | tax-free |
| donate | oil | tax code | |
| donation | payroll tax | tax credit | |
| emission | perquisite | tax cut | |
| | | | |
| Suspicious terms | | | |
| audit committee | | | |
| vice president | | | |

chief financial officer

Appendix C Variable Definitions

| Variables | Definitions |
|-------------------------|--|
| TaxDisc | The number of sentences in ESG reports that contain corporate tax information. |
| Post | An indicator variable that equals one for both treatment peers and control firms in the period after the tax incidents, and zero otherwise. |
| ETR | Long-term cash effective tax rate, calculated as the sum of cash tax paid $(\#txpd)$ over past five years divided by the sum of pretax book income $(\#pi)$ over the same period. |
| TaxResponsibleTreated | An indicator variable that equals one for treated firms with <i>ETR</i> prior to the tax incident above the sample median, and zero otherwise. |
| TaxIrresponsibleTreated | An indicator variable that equals one for treated firms with <i>ETR</i> prior to the tax incident below the sample median, and zero otherwise. |
| TaxIrresponsible | An indicator variable that equals one for firms (treated or control) with <i>ETR</i> prior to the tax incident below the sample median, and zero otherwise. |
| Size | The natural logarithm of the market capitalization (# <i>prcc_f</i> ×# <i>csho</i>). |
| Profitability | Pre-tax income (#pi) less special items (#spi) divided by total assets (#at). |
| Leverage | The sum of long-term debt ($\#dltt$) and debt in current liabilities ($\#dlc$) divided by total assets ($\#at$). |
| Adv | Advertising expenditure (#xad) scaled by sales (#sale) in the tax incident year. |
| MediaCov | The number of firm-specific news articles from RavenPack over the year before the tax incident. |
| ProductSim | The average product similarity score between the peer firm and the incident firm during the three years before the tax incident. Product similarity score is the pairwise product cosine similarity calculated based on the unique words used by the two firms to describe their products in the business description sections of their 10-K filings (Hoberg and Phillips 2010, 2016). |
| SpilloverVague | Spillover vagueness between the peer firm and the incident firm in the incident year. To calculate spillover vagueness, we first compute the ratio of the number of firms in the 3-digit SIC industry to the number of firms in the TNIC-3 industry for each incident firm and its peer firms. We then take the average of these two ratios for each pair of peer firm and incident firm in the incident year. |
| HighVar | An indicator variable that equals one if the partitioning variable for the peer firm is above the sample median, and zero variable. The partitioning variable |

is Adv, MediaCov, ProductSim, or SpilloverVague, defined above. $\Delta Market Share_{[t-1,t+\tau]}$ The change in market share for peer firms from the year before the incident (i.e., year *t*-1) to a post-incident year (i.e., year *t*+ τ , where $\tau = 1, 2, \text{ or } 3$). The market share is calculated as the percentage of a firm's revenue (#revt) relative to the total revenue within its respective 3-digit SIC industry. An indicator variable that equals one if the peer firm provides more tax $Inc_Disclosure_{[t-1,t+\tau]}$ disclosure in its ESG reports in a post-incident (i.e., year $t+\tau$, where $\tau = 1, 2$, or 3) than in the year prior to the incident (i.e., year *t*-1), and zero otherwise. An indicator variable that equals one if the peer firm provides less tax $Dec_Disclosure_{[t-1,t+\tau]}$ disclosure in its ESG reports in a post-incident (i.e., year $t+\tau$, where $\tau = 1, 2$, or 3) than in the year prior to the incident (i.e., year *t*-1), and zero otherwise. TaxDisc_CC The number of sentences in conference call transcripts that contain corporate tax information. TaxDisc_8K The number of sentences in 8-K filings that contain corporate tax information.

Figure 1: Word Cloud of Tax Disclosure

This figure presents word clouds of tax-related disclosures from ESG reports, conference call transcripts, and 8-K filings, respectively, during our sample period.



(A) Word Cloud of Tax Disclosure in ESG Reports

(B) Word Cloud of Tax Disclosure in Conference Call Transcripts



(C) Word Cloud of Tax Disclosure in 8-K Filings



Figure 2: Dynamic Effects of Peer Firms' Tax Incidents on Corporate Tax Disclosure

This figure plots the dynamic treatment effects on tax disclosure by tax responsible and irresponsible treated firms and the corresponding 90% confidence intervals over the six-year period, that is, three years before and after the treatment year. We interact an indicator that takes a value of one for the treatment group and zero for the control group with a yearly indicator relative to the treatment year, except for year -3, which serves as the reference year. The coefficient plotted on each interaction represents the treatment effect relative to the reference year.



(A) Treatment Effects for Tax Responsible Firms





Table 1: Summary Statistics on Tax Incidents

This table presents summary statistics on 54 tax incidents in our final sample from 2010 to 2022. Panel A and Panel B provide the frequency of tax incidents by year and industry, respectively.

| Year | No. of Incidents | Percent |
|-------|------------------|---------|
| 2010 | 5 | 9.26 |
| 2011 | 6 | 11.11 |
| 2012 | 4 | 7.41 |
| 2013 | 9 | 16.67 |
| 2014 | 1 | 1.85 |
| 2015 | 4 | 7.41 |
| 2016 | 3 | 5.56 |
| 2017 | 3 | 5.56 |
| 2018 | 2 | 3.70 |
| 2019 | 1 | 1.85 |
| 2020 | 1 | 1.85 |
| 2021 | 14 | 25.93 |
| 2022 | 1 | 1.85 |
| Total | 54 | 100.00 |

Panel A: Tax Incidents by Year

| raner b. Tax incidents by industry | | |
|--|------------------|---------|
| Industry | No. of Incidents | Percent |
| Metal Mining | 1 | 1.85 |
| Oil and Gas Extraction | 3 | 5.56 |
| Food and Kindred Products | 3 | 5.56 |
| Chemicals and Allied Products | 6 | 11.11 |
| Petroleum Refining and Related Industries | 1 | 1.85 |
| Leather and Leather Products | 1 | 1.85 |
| Primary Metal Industries | 2 | 3.70 |
| Industrial and Commercial Machinery and Computer Equipment | 4 | 7.41 |
| Electronic and other Electrical Equipment and Components, | | |
| except Computer Equipment | 1 | 1.85 |
| Transportation Equipment | 2 | 3.70 |
| Measuring, Analyzing, and Controlling Instruments; Photographic, | | |
| Medical and Optical Goods; Watches and Clocks | 6 | 11.11 |
| Railroad Transportation | 1 | 1.85 |
| Water Transportation | 1 | 1.85 |
| Transportation by Air | 2 | 3.70 |
| Communications | 3 | 5.56 |
| Electric, Gas and Sanitary Services | 3 | 5.56 |
| Wholesale Trade-Durable | 1 | 1.85 |
| General Merchandise Stores | 2 | 3.70 |
| Miscellaneous Retail | 2 | 3.70 |
| Depository Institutions | 1 | 1.85 |
| Non-Depository Credit Institutions | 1 | 1.85 |
| Security and Commodity Brokers, Dealers, Exchanges, and | | |
| Services | 2 | 3.70 |
| Insurance Carriers | 2 | 3.70 |
| Holding and other Investment Offices | 1 | 1.85 |
| Business Services | 2 | 3.70 |
| Total | 54 | 100.00 |

Table 1 – Continued

Panel B: Tax Incidents by Industry

Table 2: Descriptive Statistics

| Variable | Ν | Mean | Std Dev | P25 | Median | P75 |
|-------------------------|-------|------|---------|------|--------|-------|
| TaxDisc | 4,652 | 1.43 | 5.15 | 0.00 | 0.00 | 1.00 |
| Post | 4,652 | 0.46 | 0.50 | 0.00 | 0.00 | 1.00 |
| TaxResponsibleTreated | 4,652 | 0.03 | 0.17 | 0.00 | 0.00 | 1.00 |
| TaxIrresponsibleTreated | 4,652 | 0.07 | 0.25 | 0.00 | 0.00 | 1.00 |
| TaxIrresponsible | 4,652 | 0.47 | 0.50 | 0.00 | 0.00 | 1.00 |
| Size | 4,652 | 9.41 | 1.39 | 8.44 | 9.40 | 10.38 |
| Profitability | 4,652 | 0.10 | 0.07 | 0.05 | 0.08 | 0.13 |
| Leverage | 4,652 | 0.31 | 0.15 | 0.22 | 0.31 | 0.40 |
| ETR | 4,652 | 0.24 | 0.16 | 0.14 | 0.23 | 0.30 |

This table presents the descriptive statistics of our sample. See Appendix C for detailed definitions of the variables.

Table 3: Main Tests

This table presents the estimated effects of peer firms' tax incidents on corporate tax disclosure. *Tax Disclosure* is the number of tax sentences in the ESG report. *Post* is an indicator variable that equals one for both treated and control firms in the period after peer firms' tax incidents, and zero otherwise. *TaxResponsibleTreated* (*TaxIrresponsibleTreated*) is an indicator variable that equals one for treatment firms if their long-term cash ETR prior to the tax incident are above (below) the median of the sample distribution, and zero otherwise. See Appendix C for the detailed definitions of all other variables. The *t*-statistics reported in parentheses are based on standard errors clustered at the incident level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

| | Dependent variable = $TaxDisc$ | | |
|------------------------------------|--------------------------------|----------------------------------|--|
| | (1) | (2) | |
| Post×TaxResponsibleTreated (H1a) | 1.616** (2.460) | 1.652 ** (2.531) | |
| Post×TaxIrresponsibleTreated (H1b) | -0.960 (-1.494) | -0.906 (-1.470) | |
| Post×TaxIrresponsible | 1.280*** | 1.261*** | |
| Size | (3.508) | (3.856) 0.392 (0.878) | |
| Profitability | | 1.963 | |
| Leverage | | (0.533) -3.430*** (-3.141) | |
| ETR | | 0.252 (0.415) | |
| Cohort-Firm FE | Yes | Yes | |
| Cohort-Year FE | Yes | Yes | |
| Observations | 4,649 | 4,649 | |
| Adjusted R-squared | 0.251 | 0.253 | |

Table 4: DiD Regressions with Dynamic Effects

This table presents the DiD regressions with dynamic effects. *Tax Disclosure* is the number of tax sentences in the ESG report. *Pre1* (*Pre2*) is an indicator variable that equals one if an observation is in one year (two years) before the tax incident, and zero otherwise. *Post1* (*Post2*, or *Post3*) is an indicator variable that equals one if an observation is in one year (two years or three years) after the tax incident, and zero otherwise. *TaxResponsibleTreated* (*TaxIrresponsibleTreated*) is an indicator variable that equals one for treated firms if their long-term cash ETR prior to the tax incident are above (below) the median of the sample distribution, and zero otherwise. See Appendix C for the detailed definitions of all other variables. The *t*-statistics reported in parentheses are based on standard errors clustered at the incident level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

| | Dependent variable = $TaxDisc$ | | |
|---------------------------------|--------------------------------|--|--|
| | | | |
| Pre2×TaxResponsibleTreated | -0.933 | | |
| | (-0.781) | | |
| Pre1×TaxResponsibleTreated | 0.134 | | |
| | (0.166) | | |
| Post1×TaxResponsibleTreated | 1.025* | | |
| | (1.788) | | |
| Post2×TaxResponsibleTreated | 1.846* | | |
| | (1.986) | | |
| Post3×TaxResponsibleTreated | 1.648** | | |
| | (2.091) | | |
| Pre2×TaxIrresponsibleTreated | -2.233 | | |
| | (-1.281) | | |
| Pre1×TaxIrresponsibleTreated | -2.539 | | |
| | (-1.251) | | |
| Post1×TaxIrresponsibleTreated | -2.911 | | |
| | (-1.458) | | |
| Post2×TaxIrresponsibleTreated | -2.160 | | |
| | (-1.293) | | |
| Post3×TaxIrresponsibleTreated | -3.063 | | |
| | (-1.359) | | |
| Pre2× TaxIrresponsible | -1.164 | | |
| | (-1.554) | | |
| $Pre1 \times TaxIrresponsible$ | -0.095 | | |
| | (-0.169) | | |
| $Post1 \times TaxIrresponsible$ | 0.894*** | | |
| | (2.696) | | |
| Post2× TaxIrresponsible | 0.728** | | |
| | (2.269) | | |
| Post3× TaxIrresponsible | 0.705 | | |
| | (1.354) | | |
| | | | |
| Control variables | Yes | | |
| Cohort-Firm FE | Yes | | |
| Cohort-Year FE | Yes | | |
| Observations | 4,649 | | |
| Adjusted <i>R</i> -squared | 0.254 | | |

Table 5: Cross-Sectional Tests: Reputational Concerns

This table presents the results of our cross-sectional tests based on advertising expenditure (*Adv*) and media coverage (*MediaCov*). The dependent variable is *TaxDisc*, the number of tax sentences in the ESG report. *Post* is an indicator variable that equals one for treated and control firms in the period after peer firms' tax incidents, and zero otherwise. *TaxResponsibleTreated (TaxIrresponsibleTreated)* is an indicator variable that equals one for treated after peer firms in the results one for treated firms if their long-term cash ETRs prior to the tax incident are above (below) the sample median, and zero otherwise. See Appendix C for the detailed definitions of all variables. The *t*-statistics reported in parentheses are based on standard errors clustered at the incident level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

| | Partitioning variable = | |
|------------------------------------|-------------------------|-----------|
| — | Adv | MediaCov |
| | (1) | (2) |
| | | |
| Post×TaxResponsibleTreated | 0.239 | -0.751 |
| | (0.392) | (-1.137) |
| Post×TaxResponsibleTreated×HighVar | 3.410*** | 2.929*** |
| | (2.752) | (3.232) |
| Post×TaxIrresponsibleTreated | -0.509 | -1.143** |
| | (-1.442) | (-2.440) |
| Post× TaxIrresponsible | 1.254*** | 1.267*** |
| | (3.830) | (3.853) |
| Post× TaxIrresponsible ×HighVar | -1.440 | 0.416 |
| | (-0.703) | (0.372) |
| Size | 0.405 | 0.402 |
| | (0.917) | (0.895) |
| Profitability | 1.783 | 2.004 |
| | (0.485) | (0.545) |
| Leverage | -3.295*** | -3.448*** |
| | (-3.129) | (-3.216) |
| ETR | 0.295 | 0.263 |
| | (0.489) | (0.427) |
| Cohort-Firm FE | Yes | Yes |
| Cohort-Year FE | Yes | Yes |
| Observations | 4.649 | 4,649 |
| Adjusted R-squared | 0.254 | 0.253 |

Table 6: Cross-Sectional Tests: Peer Firm-Incident Firm Relationship

This table presents the results of our cross-sectional tests based on product similarity (*ProductSim*) and spillover vagueness (*SpilloverVague*). The dependent variable is *TaxDisc*, the number of tax sentences in the ESG report. *Post* is an indicator variable that equals one for treated or control firms in the period after peer firms' tax incidents, and zero otherwise. *TaxResponsibleTreated (TaxIrresponsibleTreated)* is an indicator variable that equals one for treated firms if their long-term cash ETRs prior to the tax incident are above (below) the sample median, and zero otherwise. See Appendix C for the detailed definitions of all variables. The *t*-statistics reported in parentheses are based on standard errors clustered at the incident level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

| | Partitioning variable = | |
|------------------------------------|-------------------------|----------------|
| | ProductSim | SpilloverVague |
| | (1) | (2) |
| Post×TaxResponsibleTreated | -0.611 | 2.632*** |
| | (-1.299) | (3.078) |
| Post×TaxResponsibleTreated×HighVar | 2.353*** | -2.082* |
| | (3.214) | (-1.995) |
| Post×TaxIrresponsibleTreated | -2.117* | -0.517 |
| | (-1.865) | (-1.162) |
| Post× TaxIrresponsible | 1.264*** | 1.252*** |
| | (3.863) | (3.787) |
| Post× TaxIrresponsible ×HighVar | 1.225 | -1.007 |
| | (0.977) | (-0.687) |
| Size | 0.388 | 0.397 |
| | (0.868) | (0.886) |
| Profitability | 1.921 | 1.922 |
| | (0.524) | (0.528) |
| Leverage | -3.456*** | -3.391*** |
| | (-3.151) | (-3.081) |
| ETR | 0.253 | 0.296 |
| | (0.416) | (0.496) |
| Cohort-Firm FE | Yes | Yes |
| Cohort-Year FE | Yes | Yes |
| Observations | 4,649 | 4,649 |
| Adjusted R-squared | 0.253 | 0.253 |

Table 7: Consequence Test: Market Share

This table presents the estimated effects of peer firms' tax incidents on the change of market share. $\Delta Market_Share_{[t-1,t+\tau]}$ is the change in market share for treated and control firms from the year before the incident (i.e., year t-1) to a post-incident year (i.e., year t+ τ , where $\tau = 1, 2, \text{ or } 3$). Post is an indicator variable that equals one for both treated and control firms in the period after the tax incident, and zero otherwise. TaxResponsibleTreated (TaxIrresponsibleTreated) is an indicator variable that equals one for treated firms if their long-term cash ETRs prior to the tax incident are above (below) the sample median, and zero otherwise. Inc_Disclosure_{[t-1,t+\tau]} equals one if the firm provides more tax disclosure in ESG reports in year t+ τ than in year t-1, and zero otherwise. Dec_Disclosure_{[t-1,t+\tau]} equals one if the firm provides less tax disclosure in ESG reports in year t+ τ than in year t-1, and zero otherwise. See Appendix C for the detailed definitions of all variables. The t-statistics reported in parentheses are based on standard errors clustered at the incident level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

| | Dependent variable = $\Delta Market_Share_{[t-1,t+\tau]}$ |
|---|--|
| | |
| $Inc_Disclosure_{[t-1,t+\tau]}$ | -1.267** |
| | (-2.553) |
| $TaxResponsibleTreated \times Inc_Disclosure_{[t-1,t+\tau]}$ | 1.008** |
| | (2.065) |
| $Dec_Disclosure_{[t-1,t+\tau]}$ | -0.678 |
| | (-0.984) |
| $TaxIrresponsibleTreated 	imes Dec_Disclosure_{[t-1,t+\tau]}$ | 1.002 |
| - | (1.531) |
| Size | 2.945*** |
| | (3.858) |
| Profitability | -8.699** |
| | (-2.487) |
| Leverage | 4.010 |
| | (0.951) |
| ETR | 0.043 |
| | (0.047) |
| | |
| Cohort-Firm FE | Yes |
| Cohort-Year FE | Yes |
| Observations | 1,396 |
| Adjusted R-squared | 0.705 |

Table 8: Additional Test: Tax Disclosure in Alternative Voluntary Disclosures

This table presents the results of repeating the main analyses from Table 3 using alternative types of voluntary disclosure. *TaxDisc_CC* is the average number of sentences in conference call transcripts that contain corporate tax information in the corresponding year. *TaxDisc_8K* is the average number of sentences in 8-K filings that contain corporate tax information in the corresponding year. *Post* is an indicator variable that equals one for both treated and control firms in the period after the tax incidents, and zero otherwise. *TaxResponsibleTreated* (*TaxIrresponsibleTreated*) is an indicator variable that equals one for treated firms if their long-term cash effective ETRs prior to the tax incident are above (below) the median of the sample distribution, and zero otherwise. See Appendix C for the detailed definitions of all other variables. The *t*-statistics reported in parentheses are based on standard errors clustered at the incident level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

| | TaxDisc_CC | TaxDisc_8K |
|---------------------------------------|------------|------------|
| | (1) | (2) |
| | | |
| Post×TaxResponsibleTreated | -0.045 | -0.012 |
| | (-0.656) | (-0.986) |
| Post×TaxIrresponsibleTreated | -0.002 | 0.005 |
| | (-0.053) | (0.223) |
| <i>Post</i> × <i>TaxIrresponsible</i> | -0.129*** | -0.016*** |
| | (-5.064) | (-3.004) |
| Size | 0.120*** | 0.008*** |
| | (6.661) | (2.707) |
| Profitability | -0.487*** | -0.038** |
| | (-4.125) | (-2.114) |
| Leverage | -0.248*** | -0.006 |
| | (-4.178) | (-0.506) |
| ETR | 0.089** | 0.004 |
| | (2.406) | (0.608) |
| Cohort-Firm FE | Yes | Yes |
| Cohort-Year FE | Yes | Yes |
| Observations | 68,623 | 108,235 |
| Adjusted <i>R</i> -squared | 0.512 | 0.516 |