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A Leak in Paradise: Reputation Repair Policies After Offshore Data Leaks

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A Leak in Paradise: Reputation Repair Policies After Offshore Data Leaks *

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Simone Traini[‡]

January 2026

Abstract

We examine whether the public revelation of sensitive tax information prompts firms to adopt reputation repair policies targeting shareholders. Between 2013 and 2021, the International Consortium of Investigative Journalists (ICIJ) released leaked information on over 800,000 offshore entities incorporated in tax havens, publicly revealing their use by multinational firms to avoid taxes. Leveraging this setting, we investigate whether firms implicated in the leaks improve their governance, increase investor remuneration, and reorganize their activities to restore shareholder trust relative to unaffected firms. We find that, after the leaks, firms appoint more directors, especially in operations, audit, and finance and accounting, pay higher dividends, and reduce their presence in tax havens, without increasing effective tax rates. Additional analyses suggest that concerns about managerial diversion and public scrutiny may drive these responses. Overall, data leaks appear to change the cost-benefit trade-off of tax strategies in ways that are, on net, favorable to shareholders.

Keywords: Offshore Subsidiaries; Tax Havens; Data Leaks; Corporate Governance; Dividend Payouts; Reputation Repair

JEL: G30; H25; L14; M41

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1 Introduction

Aggressive tax avoidance has ambiguous implications for shareholders. It can enhance firm value, but it can also facilitate managerial opportunism when monitoring is weak (Desai and Dharmapala 2009; Desai, Dyck, and Zingales 2007). Firms frequently rely on offshore financial structures to implement aggressive tax planning strategies, which can increase organizational opacity and complicate external monitoring (Balakrishnan, Blouin, and Guay 2019). Offshore data leaks partially mitigate this opacity by publicly revealing sensitive tax information, thereby providing a setting to examine how exogenous increases in transparency affect managerial accountability and shareholder-oriented policies.

This study examines whether the public revelation of sensitive tax information prompts firms to adopt reputation repair policies targeting shareholders. Previous research has focused on the costs of such revelations (Hanlon and Slemrod 2009; Gallemore, Maydew, and Thornock 2014; Lee, Ng, Shevlin, and Venkat 2021; Asay, Hoopes, Thornock, and Wilde 2024) and their impact on tax behavior (Dyreng, Hoopes, and Wilde 2016; Hoopes, Robinson, and Slemrod 2018; Joshi, Outslay, and Persson 2020), but less is known about how these disclosures influence firm governance and financial decisions. We address this gap by examining whether firms implicated in offshore data leaks adopt reputation repair policies, specifically through directors' appointments to key functional roles and dividend distributions.

Between April 2013 and October 2021, the International Consortium of Investigative Journalists (ICIJ), a network of more than 290 reporters from over 100 countries, released a series of data leaks exposing more than 800,000 offshore entities incorporated in tax havens. These leaks, which included incorporation documents, contracts, and other records, garnered substantial media attention.¹ While the ICIJ refrained from disclosing raw documents or sensitive details, such as bank accounts, email exchanges, or financial transactions, the revelations exposed the identities of

¹See, for example, the articles published by CNBC on April 5, 2013 [here](#), The Guardian on April 3, 2016 [here](#), The Economist on November 9, 2017 [here](#), the Wall Street Journal on October 4, 2021 [here](#), or Financial Times on June 9, 2023 [here](#).

company owners, proxies, and intermediaries operating in secrecy jurisdictions.² In this paper, we focus on offshore data leaks and examine whether these disclosures influence not only corporate tax strategies but also governance and financial decisions. The potential for such leaks to alter firm behavior is significant, though not without tension.

The effect of offshore data leaks on reputation repair policies depends on whether corporate managers expect the leaks to reduce shareholder trust. Shareholders may lose confidence in the firm due to concerns about poor management or the possibility that the opacity of tax havens enables the diversion of corporate resources. Leaks can also lower expectations of the firm's prospects by exposing it to compliance costs, loss of proprietary information, and negative publicity (O'Donovan, Wagner, and Zeume 2019). To address these concerns, firms can rebuild trust by improving governance structures and increasing investor remuneration, signaling stronger monitoring and responsible resource management (Chakravarthy, deHaan, and Rajgopal 2014; Farber 2005).

In contrast, firms may choose not to respond to leaks if they believe that the information is already known to shareholders or broadly aligned with their interests. Shareholders might even view the disclosures as reducing information asymmetry between themselves and corporate managers, thereby increasing confidence in the firm (Nesbitt, Outslay, and Persson 2023). Furthermore, the complexity of ownership structures in leaked firms may make it difficult for shareholders to clearly associate the firm with the disclosures, limiting their ability to fully process the information (Blankespoor, deHaan, and Marinovic 2020). In these cases, firms may refrain from implementing reputation repair policies.³

We use a stacked difference-in-differences design, combined with an event study approach, to

²The ICIJ compiled the leaked data into an open-access database, including detailed information on offshore entities, such as their names, incorporation dates, jurisdictions, associated individuals or companies, and intermediaries. More information is available on the ICIJ Offshore Leaks website [here](#).

³We focus on firm policies that prior studies identify as effective in repairing reputation with shareholders (Chakravarthy et al. 2014; Farber 2005). Specifically, we examine policies targeting shareholders, the ultimate claimants of firms' residual values and, consequently, the stakeholders most directly affected by the leaks. Although firms may also adopt policies to address other stakeholders (e.g., tax authorities, consumers, or employees), such responses are beyond the scope of this paper.

examine the behavior of firms implicated in offshore data leaks before and after the leaks relative to firms not involved. Our analysis focuses on two main sets of outcome variables reflecting reputation repair policies targeting shareholders. First, we investigate whether exposed firms implement governance changes following the leaks. We use the number of directors and board members, as well as the functions they serve, as proxies for corporate governance, where an increase in the number of directors indicates stronger firm governance. Second, we assess whether firms seek to rebuild shareholder trust by increasing their dividend distributions after the leaks.⁴

Our sample consists of offshore corporate entities identified by the ICIJ as being involved in data leaks between April 2013 and October 2021. To construct our dataset, we cross-reference the names of the 800,000 entities in the ICIJ Offshore Leaks database with the Orbis database, verifying each entity's country of operation and address for accuracy. Using Orbis, we identify the global ultimate owner of each leaked entity, and these parent firms form our treated group of firms implicated in the data leaks. The control group includes all other firms in Orbis not affected by the leaks. For both groups, we restrict the sample to firms with consolidated financial statements, at least one foreign subsidiary, and total assets exceeding \$20 million. The resulting sample covers publicly listed and privately owned firms globally from 2010 to 2023 and includes approximately 53,000 firms with director data and 22,000 with dividend data.

We find evidence that firms implicated in offshore data leaks adopt reputation repair policies in response to the disclosures. Following the leaks, these firms increase the number of directors by an average of one, with appointments concentrated in key functional areas, such as operations, audit, finance and accounting, and legal roles. This is reflected in significant increases in the number, likelihood, and proportion of directors in these functions. Additionally, consistent with efforts to rebuild shareholder trust, firms increase dividend distributions on average by 2.5%. These findings suggest that public disclosure of sensitive tax information incentivizes firms to strengthen

⁴We use dividends as our proxy for investor remuneration because, unlike share repurchases, dividend payments represent a relatively persistent commitment to shareholders (DeAngelo, DeAngelo, and Skinner 2004). Moreover, dividends can serve as a credible signaling mechanism for both privately owned and publicly listed firms in our sample.

governance and signal responsible resource management by increasing investor remuneration.

We also examine whether offshore data leaks prompt firms to alter their tax behavior, focusing on tax haven presence and effective tax rates (ETR). Consistent with Dyreng et al. (2016), firms involved in the leaks reduce their share of subsidiaries in tax havens. These reductions occur primarily in large and dot havens, but not in jurisdictions with preferential tax regimes. The pattern mirrors De Simone and Olbert (2022), who document similar reductions resulting from financial information privately reported to tax authorities. While overall ETR does not change significantly after the leaks, privately owned firms report higher ETR, consistent with Hoopes et al. (2018).

Next, we investigate the mechanism driving the observed responses. To assess whether leaks lead to reputation loss, we analyze firms' coverage in tax-related news and the leaks' impact on sales turnover and employment. Our findings show that leaked firms are more likely to appear in tax-related news post-leak, particularly in news with higher novelty and broader reach, as defined by RepRisk, indicating increased visibility of their business practices. We observe modest but statistically significant declines in sales turnover and employment, potentially reflecting negative reactions from customers and employees.⁵ Finally, for a sample of U.S. firms, we document a substantial increase in 10-K filings downloaded around the time of the leaks, suggesting heightened stakeholder attention following the disclosures.

Building on this, we examine three sets of firm heterogeneities to provide further evidence for the reputation repair mechanism. First, we find that governance changes are primarily driven by firms with leaks originating from more secretive tax havens and firms that are headquartered in countries with weak shareholder protection rights, where the risk of managerial diversion is potentially higher. Second, we test whether firms with greater reputational risk are more likely to adopt reputation repair policies. Using three proxies for public exposure—publicly listed status, high analyst coverage, and news coverage—we find that firms more vulnerable to reputation loss respond more strongly to the leaks. Third, we find that firms' responses do not vary based on

⁵While the employment reduction aligns with Lee et al. (2021), it may also reflect internal reorganizations away from tax havens. We therefore refrain from drawing definitive conclusions about employee responses.

market reactions to the leaks, suggesting that the perceived likelihood of reputation loss rather than the actual loss primarily drives the effects we find.

We perform a number of sensitivity tests to validate our main results. To address concerns about data coverage in Orbis, we restrict the sample to countries for which we observe at least 100 firms or to firms with over \$100 million in total assets, finding consistent results in both cases. To ensure the robustness of our control group, we compare treated firms against those with tax havens in their group structures or those without any tax haven presence, with all findings on firm governance and investor remuneration remaining significant. To address empirical design concerns, we use alternative fixed effects or restrict the pre- and post-leak windows to three years instead of four, with no change to our results. To account for potential confounding factors, we control for firm size and profitability, re-weight treated and control firms using entropy balance, or match them using propensity score matching, all of which confirm the baseline estimates of the leaks on firm governance and investor remuneration. Lastly, excluding firms involved in multiple leaks yields consistent results, further reinforcing the robustness of our conclusions.

Our study makes three main contributions. First, it adds to the growing body of research on public tax disclosures. Prior studies suggest that the costs of such disclosures vary across stakeholder groups (Hanlon and Slemrod 2009; Gallemore et al. 2014; Asay et al. 2024; Lee et al. 2021), and that firms adjust their behavior when tax haven activities become more transparent (Amberger, Wilde, and Wu 2025; Dyreng et al. 2016; Overesch and Wolff 2021). We extend this literature by examining whether public tax disclosures trigger changes in governance and payout policies. Specifically, we find that offshore data leaks influence directors' appointments and dividend distributions, providing novel evidence on the strategies firms adopt following the sudden increase in transparency of their global tax practices.

Second, our study contributes to the reputation repair literature. Previous research has documented reputation repair policies following reputation-damaging events, such as financial misconduct (Chakravarthy et al. 2014), operational deficiencies (Lee, Hutton, and Shu 2015), environmental and social violations (Cai, Raghunandan, Rajgopal, and Wang 2025), and corporate data

breaches (Akey, Lewellen, Liskovich, and Shiller 2025). However, little is known about whether firms adopt such policies in response to public tax disclosures. Offshore data leaks represent a distinct form of disclosure, involving the unauthorized release of sensitive tax information by third parties, rather than regulatory enforcement actions or voluntary firm announcements. We examine firm responses to these leaks, focusing on directors' appointments and dividend distributions as strategies to rebuild shareholder trust and repair reputations.

Third, our study contributes to the emerging literature on third-party disclosure of sensitive tax information (Hoopes, Robinson, and Slemrod 2024). While previous research has primarily examined the impact of data leaks on market values (O'Donovan et al. 2019; Nesbitt et al. 2023; Li, Lusch, and Murphy 2023) and disclosure decisions (Schmal, Schulte Sasse, and Watrin 2023), we shift the focus to their implications for firms' real activities. Using data from five separate leaks, which together provide a global sample of about 9,000 treated firms, we compare the effects across leaks and find that these disclosures influence firm governance and investor remuneration, providing large-sample evidence on real responses to third-party tax disclosures.

The remainder of the paper is organized as follows. Section 2 outlines the institutional background and the prior literature and develops the hypothesis. Section 3 explains the data and sample construction. Section 4 describes the empirical methodology, and Section 5 discusses the results. Section 6 concludes.

2 Institutional background, relevant literature, and hypothesis development

2.1 Institutional background

Over the past decade, a series of high-profile data leaks from international tax havens have revealed how multinational corporations and high-net-worth individuals use offshore financial structures to obscure ownership, shift profits, and avoid or evade taxes (Alstadsæter, Johannesen, and

Zucman 2019; Zucman 2015). These disclosures have raised concerns about transparency and fairness in the global tax system and informed international policy initiatives designed to curb the misuse of offshore financial structures and improve tax compliance.⁶

Whistle-blowers and investigative journalists have been instrumental in exposing extensive offshore data leaks. A leading organization in this work is the International Consortium of Investigative Journalists (ICIJ). Between April 2013 and October 2021, the ICIJ compiled information on over 800,000 offshore entities into the open-access Offshore Leaks Database, providing details on owners, addresses, proxies, and intermediaries. Although the underlying materials contain highly sensitive information, including bank account details, email correspondence, and financial transactions, the ICIJ refrains from publicly disclosing such data.

In this study, we focus on the five major leaks in the ICIJ database—the Offshore Leaks, the Panama Papers, the Bahamas Leaks, the Paradise Papers, and the Pandora Papers—to examine their effects on firm behavior. We briefly describe each leak below.⁷

The first major leak was the Offshore Leaks. This leak occurred in April 2013 and revealed confidential information on more than 100,000 offshore entities linked to individuals and companies worldwide. The data included over 2.5 million files, covering incorporation records, shareholder lists, and other documents from service providers in jurisdictions such as the British Virgin Islands, the Cook Islands, and Singapore.

The second major leak occurred three years later, in April 2016. This leak was named the Panama Papers because it exposed 11.5 million files from the Panamanian law firm Mossack Fonseca. The leaked documents showed how jurisdictions such as Panama, the British Virgin Islands, and the Seychelles were used by politicians, business leaders, and celebrities worldwide to shelter

⁶Offshore data leaks have been referenced in official documents related to the OECD’s Base Erosion and Profit Shifting project, the OECD’s Automatic Exchange of Information, and the EU’s Anti-Money Laundering Directive (see, for example, Organisation for Economic Co-operation and Development (OECD) (2016) and European Parliamentary Research Service (EPRS) (2018)).

⁷Several studies examine the Luxembourg Leaks (LuxLeaks) (Nesbitt et al. 2023; Li et al. 2023). We exclude LuxLeaks because they are not comparable to the leaks studied here. LuxLeaks disclose advance tax rulings negotiated between Luxembourg’s tax authorities and specific multinational firms, whereas the leaks we analyze reveal confidential information about the ownership structures of offshore entities used broadly by multinational firms.

wealth and reduce tax liabilities.

The third major leak was the Bahamas Leaks. This leak occurred in September 2016 and disclosed 1.3 million files detailing over 175,000 entities registered in the Bahamas, a jurisdiction known for financial secrecy and absence of corporate taxes. The information revealed through the leak underscored the Bahamas' role as a prominent tax haven and raised concerns about its regulatory framework.

The fourth major leak was the Paradise Papers. This leak was released in November 2017 and exposed 13.4 million files from the offshore law firm Appleby and corporate registries across 19 tax havens, including Bermuda, the Cayman Islands, the Isle of Man, and Jersey. These documents highlighted the use of complex offshore arrangements by multinational corporations and political elites to minimize tax liabilities.

The fifth and most recent major leak occurred in October 2021. This leak was named the Pandora Papers and the disclosed information included over 11.9 million files from 14 offshore service providers. The documents revealed financial dealings in offshore jurisdictions, such as the British Virgin Islands, Belize, Cyprus, and Singapore, and highlighted once more the global scale of offshore financial secrecy.

The ICIJ collaborated with media outlets to publish findings shortly after each leak, followed by public release of datasets through its website. For example, data for the Offshore Leaks were made publicly available in June 2013, two months after the initial announcement, while the Panama Papers were released in May 2016, following their announcement in April 2016. By making these datasets publicly accessible, the ICIJ has significantly increased public awareness and transparency in global tax practices.⁸

⁸For the Bahamas Leaks, Paradise Papers, and Pandora Papers, the dates of leak announcement and information disclosure coincide. See Figure A1a in the Online Appendix for a complete timeline of all leaks, including both announcement and disclosure dates.

2.2 Relevant literature

Reputation Loss and Repair Reputation is a key intangible asset that enables firms to attract and retain stakeholders in a competitive market (Klein and Leffler 1981; Shapiro 1983). Its economic value stems from the confidence stakeholders have in transacting with the firm, because a strong reputation reduces uncertainty about the firm's ability to meet its obligations. By lowering this uncertainty, reputation generates financial benefits in the form of higher net cash flows and a lower cost of capital, as stakeholders trust the firm to act in their best interests and avoid opportunistic behavior (Karpoff 2012). The present value of these benefits constitutes an intangible asset, known as "reputation capital," that is reflected in the higher market valuations of firms that consistently honor their commitments.

However, reputation capital is fragile and can deteriorate quickly when firms fail to meet their obligations to stakeholders (Diamond 1989). Although such failures may yield short-term benefits, they often erode long-term trust and credibility. Empirical evidence shows that capital markets react negatively to reputation-damaging events: Dechow, Sloan, and Sweeney (1996) and Palmrose, Richardson, and Scholz (2004) document significant stock price declines following accounting restatements, and Hribar and Jenkins (2004) show that such restatements increase the cost of equity capital, reflecting lower investor confidence and higher perceived risk. Taken together, these findings suggest that reputation loss undermines firm value by increasing stakeholder uncertainty about managerial reliability and future performance.

In response to reputation loss, firms can adopt policies that restore stakeholder confidence and reduce uncertainty (Rhee and Kim 2012). The scope and nature of these responses depend on managerial perceptions of the severity of reputation loss and the costs of implementing remedial actions. Shareholders, as the ultimate claimants of the firm's residual value, are typically the primary focus of reputation repair efforts, as they are most directly affected by reputation loss. Policies targeting shareholders commonly include governance improvements, such as improving

internal controls and monitoring, and organizational changes to address weaknesses.⁹ Additionally, firms may increase investor payouts through dividend distributions or stock repurchases to signal financial stability and demonstrate a commitment to shareholder interests (Chakravarthy et al. 2014; Farber 2005).

Public Tax Disclosures and Reputation Loss The public revelation of sensitive tax information can lead to substantial costs for firms, including increased compliance costs, loss of proprietary information, and negative publicity surrounding business practices. These costs influence corporate reputation by causing stakeholders to reassess the firm’s willingness and ability to meet its obligations. Consistent with this mechanism, a survey by Graham, Hanlon, Shevlin, and Shroff (2014) identifies the impact of adverse media exposure on corporate reputation as a key concern deterring tax executives from pursuing aggressive tax strategies. Capital market evidence also reflects reputation loss. Hanlon and Slemrod (2009) find that public revelations of tax shelter involvement trigger negative stock market reactions, particularly among retail firms. However, Gallemore et al. (2014) show that these market penalties are generally short-lived, with stock prices reverting to pre-disclosure levels within 30 days. Beyond investors, such disclosures can also affect other stakeholders. Lee et al. (2021) document declines in employees’ perceptions following tax avoidance news, whereas Asay et al. (2024) find no evidence that customers adjust their purchasing behavior in response to similar news. Overall, this literature suggests that the public revelation of sensitive tax information can lead to reputation loss, but the magnitude and persistence of this loss vary across stakeholders.

2.3 Hypothesis development

An extensive literature documents that public revelation of sensitive tax information can prompt changes in firms’ tax behavior. For example, Dyreng et al. (2016) find that, in the United Kingdom,

⁹Ghannam, Bugeja, Matolsky, and Spiropoulos (2019) show that qualified and experienced directors who join firms with tarnished reputations are later rewarded with additional board seats and higher compensation.

public pressure to increase transparency about firms' tax haven subsidiaries led to improved disclosure, higher ETR, and reduced use of tax havens. Similarly, Dwenger and Treber (2022) show that, in Slovenia, the threat of naming and shaming has a stronger impact on tax compliance than direct policy enforcement. In Australia, Hoopes et al. (2018) find that mandatory public disclosure of tax return information induces privately owned firms, but not publicly listed firms, to increase their ETR in response to perceived disclosure costs. However, less is known about whether firms adopt broader governance and financial policies to repair their reputation with shareholders.

Although the occurrence, timing, and magnitude of the costs associated with the public revelation of sensitive tax information are largely unknown at the time of the leaks, reputation-sensitive firms are likely to adopt policies to reduce the risk of reputation loss. Such policies often include improving governance, restructuring operations, and increasing investor remuneration (Chakravarthy et al. 2014; Farber 2005). For example, firms may appoint directors to key functional roles, such as audit committees, finance, and legal departments, that monitor internal controls, financial reporting, and regulatory compliance. Offshore data leaks can expose deficiencies in these areas, prompting firms to enhance monitoring and reallocate resources where risks are most pronounced. Firms may also reduce their reliance on tax havens, reflecting a strategic shift toward greater transparency and accountability. Finally, dividend distributions and stock repurchases can be used to reassure shareholders, signaling financial strength and mitigating concerns about managerial diversion of corporate resources (Ellahie and Kaplan 2021; Atwood and Lewellen 2019).

Alternatively, some firms may take a less reputation-sensitive position and choose not to implement reputation repair policies despite offshore data leaks. This response is more likely when managers believe that the information revealed is already known to shareholders or broadly aligned with their interests. For example, shareholders may view such disclosures as reducing information asymmetry between themselves and corporate managers, thereby increasing confidence in the firm (Nesbitt et al. 2023). In addition, the complex ownership structures of many firms implicated in the leaks can make it difficult for shareholders to fully process the information or clearly associate

the firm with the disclosure (Blankespoor et al. 2020).

Firms may also consider the perceived costs of reputation repair policies, such as changes in governance, resource reallocation, or increased investor remuneration, to outweigh the expected benefits, especially if they anticipate that the negative market reaction to the leaks will be small and short-lived (Hanlon and Slemrod 2009; Gallemore et al. 2014). Moreover, not all stakeholders impose direct costs on tax aggressive firms (Asay et al. 2024; Lee et al. 2021), which may reduce firms' incentives to alter their behavior.¹⁰

Consequently, it remains unclear whether, and to what extent, firms adopt reputation repair policies to mitigate the costs of the public revelation of sensitive tax information resulting from offshore data leaks. Based on the above discussion, we state our hypothesis in the null form.

Hypothesis: The public revelation of sensitive tax information is not associated with firms' reputation repair policies.

3 Data and sample construction

Our starting point is the ICIJ dataset, which contains information on over 800,000 unique entities implicated in offshore data leaks. The ICIJ categorizes the leaked data into five major leaks: the Offshore Leaks (2013), the Panama Papers (2016), the Bahamas Leak (2016), the Paradise Papers (2017), and the Pandora Papers (2021). The original dataset comprises 13% Offshore Leaks, 26.2% Panama Papers, 21.6% Bahamas Leak, 35.6% Paradise Papers, and 3.6% Pandora Papers. Most of the entities (96.8%) are implicated in only one leak, while 3% (16,844 entities) are involved in two leaks, 356 in three, and 4 in four leaks.

The leaks span 52 jurisdictions where the subsidiary location is known; however, in 7.5%

¹⁰Instead of modifying their tax strategies or real activities, firms may focus on managing perceptions by adjusting their corporate disclosures (Kays 2022; Bilicka, Casi, Seregini, and Stage 2025; Schmal et al. 2023).

of cases, the originating country of the leak is unknown. Figure A2a in the Online Appendix illustrates the jurisdictions where the leaked entities operate (Panel A) and the countries to which these entities are tied through their parent firms (Panel B). While the leaked entities primarily operate in a small number of countries, mostly tax havens such as the Bahamas (27.8%), the British Virgin Islands (22.9%), and Malta (11.1%), their parent firms are tied to a wide range of countries, spanning 193 nations worldwide.¹¹

3.1 Sample construction

For each unique company name in the ICIJ dataset, we search for matches in the Orbis dataset and identify 544,301 firms. For each matched subsidiary, we retrieve information on its global ultimate owner from Orbis, resulting in 96,590 distinct global ultimate owners for 110,516 subsidiaries. The majority of those owners are individuals (51.5%), followed by corporations (38.7%), financial companies (4.2%), and mutual funds (3%). To construct the treated group, we exclude individually owned firms, leaving a sample of over 46,000 firms. Among the treated firms, 69% had one subsidiary implicated in a leak, 19% had two, 8% had three, and 4% had four or five subsidiaries implicated.

We then turn to Orbis key financial data and extract the population of firms with consolidated data available after 2003. To ensure consistency, we include only firms that report annual financial statements, disclose total assets, and own at least one foreign subsidiary with at least 50% ownership. This restriction limits the sample to multinational enterprises (MNEs). Additionally, we exclude firms with less than \$20 million in total assets in any sample year. After merging our treated sample with this population, we obtain a sample of 96,656 firms from which we draw a subset of firms with non-missing directors, dividend or ownership information for each part of our analysis. Table 1 summarizes all of these data selection steps outlining the number of firms and the firm-year observations used in the analysis of each set of outcome variables.

¹¹Wagner and Zeume (2024) provide a complete overview of the leaked data.

3.2 Variable description

The main variables in our analysis include proxies for firm governance and dividend payments. To investigate changes in the number of firm directors, we utilize Orbis directors' and managers' data, which provides a comprehensive list of directors/managers for each firm, their roles, the year they assumed the roles, and whether they are still serving. Using this data, we construct a time series dataset for each firm that includes the total number of current directors and the number of board members. Table 2 summarizes the distribution of directors and board members across firms in our sample. On average, firms in our sample have 8.77 directors, 4.94 of whom are board members. It is important to note that a single director may hold multiple positions simultaneously.

Orbis provides unique and detailed information about directors, allowing us to distinguish directors who are not necessarily part of the board of directors but are appointed across various functional roles within firms. These functions include, for instance, finance and accounting, human resources (HR), information technology (IT), and marketing. In Table A4a of the Online Appendix, we provide a comprehensive list of all possible functions and outline how we classify directors into the functional categories used in this study.

Our analysis uses three outcome variables: the number of directors, the share of directors, and a binary indicator for whether a firm reports any directors in a given function. This information is proprietary to Orbis and is not available in other datasets, such as BoardEx, which only includes information on board members and their roles in specific board committees. In Section A.4 of the Online Appendix, we validate the Orbis data against BoardEx by comparing coverage for a selection of five firms. Additionally, Table A4g compares the average number of directors reported in Orbis and BoardEx across countries. Orbis offers significantly broader and more detailed coverage of directors globally, with exceptionally detailed information for certain countries.¹²

We measure investor payouts using ordinary and accrued dividends, expressed in natural log-

¹²BoardEx allows for the calculation of the number of board members and their committee membership for publicly listed firms only. It does not provide the detailed functional roles of directors outside of the board, nor information on privately owned firms, which are both available in Orbis.

arithms and scaled by total assets, and construct indicator variables equal to one if a firm reports positive dividends in a given year, and zero otherwise. For firm-year observations with missing dividend data, we set the indicator variables to zero provided the firm reports non-missing dividends in at least one other year during the sample period.¹³ We further construct an indicator equal to one if a firm's dividend payment exceeds its firm-specific median over the sample period, and zero otherwise.

To assess the effect of the leaks on tax avoidance, we use ETR and firm presence in tax havens as outcome variables. We compute ETR as the ratio of tax liability to profit and loss before tax. Following Gupta and Newberry (1997), we set ETR to missing when tax liability is negative, profits are negative, or ETR exceeds 1, to mitigate the influence of outliers. Given that ETR can exhibit significant year-to-year volatility, we also calculate a three-year moving average ETR, between $t-1$ and $t+1$, to smooth fluctuations and better capture long-term trends in tax behavior.

To analyze firm presence in tax havens, we calculate, for each firm, the share of subsidiaries located in tax havens relative to the total number of subsidiaries reported in Orbis. Following De Simone and Olbert (2022), we classify subsidiaries into three categories based on their locations: large tax havens, dot tax havens, and preferential tax regimes. By construction, this variable is bound between 0 and 1. Table A2c lists countries classified as large and dot tax havens, or as having preferential tax regimes. We winsorize all continuous variables at the top and bottom 1% of their distributions to mitigate the influence of outliers.

3.3 Sample description

Our final sample consists of 46% publicly listed firms, with the remainder being privately owned. Treated firms operate primarily in manufacturing (34%), finance (22%), and service (16%) sectors; as shown in Table A2a of the Online Appendix. Similarly, control group firms are predominantly in manufacturing (29%), finance (28%), and services (17%), although the control group

¹³Firms that never distribute dividends are absorbed by firm fixed effects and do not contribute to identification.

includes a higher proportion of finance firms. The majority of treated firms are headquartered in the United States, the United Kingdom, Japan, Taiwan, and Bermuda, while the majority of control firms are headquartered in the United Kingdom, India, the United States, the Netherlands, and Canada (see Figure A2b and Table A2b).

In Table A3a, we compare the observable characteristics of treated and control firms. On average, the treated firms are larger in terms of turnover, assets, and employment, and they operate more subsidiaries. While these differences between the two groups are expected, the key assumption underlying our identification strategy is that the outcomes of interest for treated and control firms would have continued to evolve similarly after the leaks in the absence of treatment. In the following sections, we assess the plausibility of this assumption by examining the evolution of the main outcome variables before the leaks.

4 Empirical methodology

To identify the effects of offshore data leaks on firm reputation repair policies, we compare the outcomes of interest before and after the leaks using a difference-in-differences framework. Treated firms are defined as those with at least one subsidiary included in the leaked data, while control firms consist of all other firms with no subsidiaries implicated in the leaks. To account for the staggered timing of the leaks, we employ a stacked difference-in-differences methodology, which enables us to estimate the average effect of all leaks on firm outcomes. Consequently, we estimate the following baseline Equation:

$$FirmOutcomes_{itc} = \alpha + \beta_t \times Post_{ct} \times Leaked_i + \varphi_{tc} + \eta_{ic} + \delta_{tj} + \varepsilon_{it} \quad (1)$$

where i is a firm, t is a calendar year, c is cohort, and j is sector. $Post_{ct}$ is an indicator variable indicating the years after each leak, specific to firms in each cohort. Each cohort corresponds to a distinct leak: the 2013 cohort corresponds to the Offshore leak, the 2016 cohort to the Panama and Bahamas leaks, the 2017 cohort to the Paradise leak, and the 2021 cohort to the Pandora leak. For

firms implicated in multiple leaks, we assign the timing of the first leak and test the robustness of this approach in Section 5.6.¹⁴ $Leaked_i$ is an indicator variable equal to one for firms with at least one subsidiary implicated in the leaks and zero otherwise. We include cohort-specific firm (η_{ic}), cohort-specific year (φ_{tc}), and time-specific sector (δ_{tj}) fixed effects. This specification allows us to estimate the effect of the ICIJ leaks using within-firm, within-cohort variation. Standard errors are clustered at the firm level. Our main outcome variables include the number, dummies, and shares of directors in different functions; a dummy for dividend payouts; the natural logarithm of dividend payouts; dividends scaled by total assets; abnormal dividend payouts; effective tax rates (ETR); and the share of tax haven subsidiaries in different haven locations.

Our identification strategy relies on the assumption that, in the absence of the leaks, the outcome variables for treated and control groups would have followed parallel trends. To test the plausibility of this parallel trend assumption, we employ an event study. This approach also allows us to evaluate the timing and dynamics of the leaks' effects on our outcome variables. Specifically, we estimate a version of Equation 1 in which the interaction between the post-treatment dummy and the leaked firm indicator is replaced with eight separate indicator variables, each representing a year from t-4 to t+4, relative to the year of the leak (t=0) for each cohort. The indicator for period t-1 is omitted to serve as a reference period.

We estimate the following model:

$$FirmOutcomes_{itc} = \alpha + \sum_{\kappa=-4}^4 \delta_{\kappa} D_{i\kappa c} + \sum_{\kappa=-4}^4 \beta_{\kappa} (D_{i\kappa c} \times Leaked_i) + \varphi_{tc} + \eta_{ic} + \delta_{tj} + \varepsilon_{it} \quad (2)$$

where $D_{i\kappa}$ is a treatment adoption indicator that we define following Schmidheiny and Siegloch

¹⁴In Figure 9, we show that our results remain robust when firms with multiple leaks are excluded.

(2023) and McCrary (2007) as:

$$D_{ikc} = \begin{cases} 1[t \leq E_{ic} + \kappa] & \text{if } \kappa = -4 \\ 1[t = E_{ic} + \kappa] & \text{if } -4 < \kappa < 4 \\ 1[t \geq E_{ic} + \kappa] & \text{if } \kappa = 4 \end{cases}$$

where 1 denotes a set of event-time indicator variables equal to one if firm i in cohort c is observed in κ years relative to its leak year E_{ic} , and zero otherwise. The indicator for $\kappa = -1$ is omitted, so all coefficient estimates are normalized relative to the year immediately preceding the leak. For firms that do not experience a leak, all event-time indicators are set to zero. The coefficients of interest are the β_{κ} , which measure the difference in the outcome variable between leaked and non-leaked firms κ years before or after the leak.

5 Results

5.1 Reputation repair policies

Table 4 and Figures 1 and 2 present evidence on the effects of offshore data leaks on director appointments. Table 5 and Figure 3 report corresponding results for dividend distributions. Coefficients represent differences between the treated and control groups.

Table 4 reports difference-in-differences estimates for the total number of directors employed by the firm (Column 1) and the number of directors serving on the board of directors (BoDs) (Column 2). In both specifications, the coefficient on the interaction term $post \times leaked$ is positive and statistically significant, indicating that firms implicated in offshore data leaks subsequently expand their director base relative to control firms. In Column (1), the estimated coefficient on $post \times leaked$ is 1.01 (p-value < 0.000), implying that treated firms appoint, on average, one additional director in the post-leak period relative to control firms, compared to the pre-leak period. This corresponds to a 16.5% increase relative to the sample mean. Column (2) shows a similar

pattern for board-level appointments. The coefficient estimate on $post \times leaked$ is 0.144 (p-value < 0.001), indicating a statistically significant increase in the number of directors serving on the board following the leaks.

Taken together, these results suggest that firms respond to offshore data leaks by increasing monitoring capacity through additional director appointments, consistent with governance adjustments aimed at mitigating agency concerns following reputational shocks.¹⁵ These findings suggest that firms adjust governance structures in response to the public revelation of sensitive tax information. The response is heterogeneous. Firms appoint more directors to key functions outside the board, while changes to board composition are comparatively modest. Although board changes are more visible to investors, appointments outside the board may reflect broader efforts to strengthen internal governance and monitoring.

Figure 1 breaks down the total number of directors by functional role. Panel A presents the share of directors in each functional role relative to the total number of firm directors. Panels B and C report the likelihood that a firm has at least one director in each functional role and the number of directors in each role, respectively.¹⁶ Each marker in the figure represents a difference-in-difference coefficient, with vertical dashed lines indicating 95% confidence intervals. The results indicate that, following the leaks, leaked firms increase the share, number, and likelihood of having directors in several functional roles relative to non-leaked firms. The largest increases in the share of directors are observed in operations, audit, and finance and accounting. When focusing on the likelihood of having directors, the largest increases occur in operations, finance and accounting, and legal roles. For the number of directors, the largest increases are in operations, finance and

¹⁵Prior research suggests that corporate tax outcomes can carry reputational and career consequences for senior managers, potentially creating incentives for firms to respond proactively to events that cast their tax strategies in a negative light (Chyz and Gaertner 2018). However, evidence on executive turnover following tax-related disclosures is mixed. For example, Gallemore et al. (2014) find no significant effect of tax shelter news on CEO or CFO turnover among U.S. public firms. Consistent with this evidence, Table B3a shows that CEO and CFO turnover does not change significantly following the leaks in our global sample of publicly listed and privately owned firms.

¹⁶Approximately 1% of directors in our sample hold multiple functional roles within the same firm. In our main analysis, we allow directors to have multiple roles as reported by Orbis. Figure B1a examines the robustness of our findings by assigning each director a single functional role (their first reported role), yielding qualitatively similar results.

accounting, and marketing.

The magnitudes of these effects are both statistically and economically significant. For instance, evidence from Panel A indicates a 0.005 percentage point increase in the share of operations directors relative to all firm directors. Given an average share of operations directors per firm of 0.0135, this represents a 37% increase.¹⁷ Similarly, the 0.05 percentage point increase in the likelihood of having an operations director that we find in Panel B corresponds to a 68% increase, while the 0.5 increase in the number of operations directors in Panel C reflects a 159% increase.

Figure 2 presents event-study estimates for the share of operations, audit, finance and accounting, and legal directors. For operations, legal, and finance and accounting directors, the estimates indicate that differences between treated and control firms increase in the post-leak periods.¹⁸ In contrast, we observe statistically significant pre-trends for audit directors prior to the leaks. Collectively, these patterns indicate that, following offshore data leaks, exposed firms adjust director functions in a selective manner, with differential responses across functional roles.

These adjustments are concentrated in functions central to internal controls, financial reporting, legal compliance, and business operations, areas in which the leaks revealed potential weaknesses. Appointing directors to these roles may help restore credibility with investors, regulators, and external auditors and facilitate changes to offshore tax arrangements exposed by the leaks. As we show later, leaked firms reduce their reliance on tax haven subsidiaries. This reduction is consistent with an operational response to enhanced internal monitoring. Directors in these roles can contribute to simplifying group structures, redesigning transfer pricing arrangements, managing post-leak compliance and investigations, and enhancing tax-related disclosures. Consistent with this interpretation, prior research highlights the role of internal actors in shaping corporate tax outcomes (Belnap, Hoopes, and Wilde 2024).

¹⁷Note that in Panel B of Table 2 we report a share of firm observations with at least one operations director which is different than the average share of operations directors in each firm that we use here. We do not tabulate these statistics in the paper.

¹⁸For finance and accounting directors, although the coefficient in period t-3 suggests differences between treated and control firms, the coefficient in period t-2 is statistically indistinguishable from zero, with a statistically significant break in trend at the time of the leak.

Table 5 presents results for dividend distributions. Column (1) reports the likelihood of dividend payouts, with the coefficient estimate for $post \times leaked$ being 0.021 (p-value < 0.000). This indicates that leaked firms are 2.1% more likely to distribute dividends after the leak than non-leaked firms, representing a 5% increase relative to the sample mean. Columns (2) through (4) examine the magnitude of dividend distributions. In Column (2), using the natural logarithm of ordinary dividends as the outcome variable, we find a 2.5% increase for leaked firms in the post-leak period. Column (3) examines ordinary dividends scaled by total assets and estimates a coefficient of 0.001 (p-value < 0.000), indicating a 7.1% increase relative to the sample mean. Column (4) focuses on firm-specific abnormal dividend distributions, showing that leaked firms are 2.4% more likely to distribute abnormal dividends after the leaks, an 8.6% increase relative to the sample mean.

Panel B reports results for accrued dividends, which are broadly consistent with those for ordinary dividends. Figure 3 presents the events studies for a subset of the outcome variables in Table 5. The event studies show no significant pre-leak differences between treated and control firms, followed by a significant and sustained post-leak increase in distributions. The persistence of this payout increase aligns with dividend-based reputation repair and the relatively sticky nature of dividend payments (DeAngelo et al. 2004).

5.2 Corporate taxes and tax haven subsidiaries

Table 6 presents results for firms' group structures and effective tax rates (ETR). Column (1) shows no significant effect of offshore data leaks on the overall share of foreign subsidiaries. In contrast, Column (2) shows a negative and statistically significant effect for subsidiaries in tax havens, with the coefficient implying a 7.7% decline in the share of tax haven subsidiaries for leaked firms relative to non-leaked firms after the leaks. This pattern is consistent with firms reorganizing exposed tax structures (Dyregang et al. 2016), and the reduction is persistent across tax haven types. Columns (3) and (4) further indicate that leaked firms reduce their presence in both large and dot tax havens, whereas no significant effects are observed in preferential tax regimes.

These results are in line with De Simone and Olbert (2022), who document similar reductions following the private disclosure of financial information to tax authorities. Panels A and B of Figure 4 present event studies for the share of tax haven subsidiaries and dot tax haven subsidiaries, respectively, showing no significant differences before the leaks but a pronounced decline for dot tax havens after the leaks.

In Table B4a of the Online Appendix, we show that this structural reorganization of tax haven subsidiaries is not solely due to the closure of the leaked subsidiaries. Specifically, only 55% of the leaked subsidiaries shut down operations in response to the leaks. Firms that retain their leaked subsidiaries do not exhibit significantly different reductions in the share of tax haven subsidiaries compared to firms that close them.¹⁹

Columns (6) and (7) of Table 6 present results for ETR. Column (6) shows a modest 1% increase in ETR for leaked firms. However, this effect is not present when ETR is measured using a three-year average in Column (7). Event-study plots in Panels C and D of Figure 4 likewise show no statistically significant differences between treated and control firms for either ETR measure before or after the leaks. Taken together, these results indicate that offshore data leaks are not associated with economically meaningful changes in firms' effective tax rates.

Further analysis in Figure 7 shows that the effect on ETR is statistically insignificant for publicly listed firms, whereas privately owned firms experience a statistically significant increase in ETR following the leaks. This heterogeneity mirrors the findings of Hoopes et al. (2018) and may reflect differences in the costs associated with the public revelation of sensitive tax information across ownership types.

5.3 Effects on firm reputation

To link offshore data leaks to reputation repair policies, we first examine whether these leaks affect firms' exposure to the risk of reputation loss. If the leaks do not affect stakeholders' per-

¹⁹The partial shutdown of leaked offshore subsidiaries is consistent with prior evidence that exposure can prompt the abandonment of offshore entities, though exit is not universal (Omartian 2017).

ceptions, reputational considerations are unlikely to motivate systematic changes in governance or payout policies. Because the risk of reputation loss is unobservable, we proxy for changes in stakeholder perceptions about the firm using risk-related media coverage and operational outcomes. We therefore analyze whether firms implicated in offshore data leaks experience changes in these outcomes, following prior studies (Chen, Schuchard, and Stomberg 2019; Lee et al. 2021; Asay et al. 2024).

We measure exposure to reputation loss using two indicators: the likelihood of a firm being covered by any risk-related news and the likelihood of being covered by tax-specific risk-related news, as reported in RepRisk, along with the associated severity, novelty, and reach scores. These three categorical measures range from 1 to 3 and capture different dimensions of the news: severity reflects the harshness of the reported risk, novelty indicates how new the issue is, and reach measures the influence of the source's readership. To examine the effects of leaks on firm operations, we analyze the natural logarithm of the number of employees, turnover, total assets, and fixed assets.

Table 7 presents results for the effects of offshore data leaks on firm reputation. Panel A focuses on whether a firm is in RepRisk for any risk-related news, Panel B for tax-specific risk-related news, and Panel C focuses on firm operations. Panel A indicates that leaked firms are 2.4% more likely to be covered by any risk-related news in the post-leak period than non-leaked firms, with this effect concentrated in news with higher novelty and broader reach. Panel B shows that at least part of this effect is driven by tax news. Column (1) suggests that leaked firms are 1% more likely to appear in tax-specific risk-related news after the leaks. However, the coefficients for severity, novelty, and reach are statistically insignificant, reflecting the low frequency of tax news.

Panel C examines the operational effects of the leaks. Leaked firms experience a small decline (less than 0.5%) in sales revenue and in the number of employees relative to control firms. While these declines may reflect reputation loss, we interpret them with caution, as the reduction in employees, although consistent with Lee et al. (2021), could also stem from strategic reorganizations aimed at reducing the number of tax haven subsidiaries. In addition, we find no significant changes

in total assets or fixed assets for leaked firms.²⁰

5.4 The analysis of mechanisms

Managerial diversion The risk of reputation loss associated with offshore data leaks is likely higher when the implicated tax haven is more secretive, as secrecy exacerbates agency problems and provides a greater scope for managerial diversion of corporate resources (Balakrishnan et al. 2019). This level of secrecy influences how stakeholders interpret the leaks, intensifying concerns about opacity and potential managerial opportunism when firms are linked to more secretive jurisdictions. Accordingly, we expect firms' reputation repair responses to be more pronounced when the exposed offshore entity is incorporated in a more secretive jurisdiction.

We measure tax haven secrecy using the secrecy scores of the 2025 Financial Secrecy Index (FSI) developed by the Tax Justice Network. Secrecy scores measure how much room for financial secrecy a country's laws and regulations provide. They range from 0 (no room) to 100 (unlimited room).²¹ For our analysis, we classify the incorporation countries of leaked subsidiaries based on these scores, defining subsidiaries incorporated in countries with a score above 70 as located in more secretive jurisdictions (Table A2c).

Figure 5 compares firms with leaked subsidiaries incorporated in more versus less secretive jurisdictions, based on the secrecy of the subsidiaries' incorporation countries, and illustrates how offshore data leaks affect reputation repair policies (red: more secretive; blue: less secretive). Firms with subsidiaries incorporated in more secretive jurisdictions are significantly more likely to appoint directors to specific functional roles. Panel B shows larger post-leak increases in appointments related to operations, finance and accounting, legal, HR, IT, and marketing, while Panels A and C indicate significant increases in audit appointments.²² By contrast, we do not observe

²⁰Ortiz and Imbet (2025) document investment reductions among privately owned firms following offshore data leaks. Examining both privately owned and publicly listed firms, we do not find a significant average investment response, suggesting that firms may adjust along multiple margins in response to leak exposure.

²¹Further details on the Tax Justice Network's Financial Secrecy Index (FSI) are available at this [link](#).

²²Non-overlapping 95% confidence intervals for red and blue markers indicate statistically significant differences at the 5% level.

secrecy-related differences in dividend distributions, ETR, or the share of tax haven subsidiaries.²³ Overall, these results suggest that when exposure arises from subsidiaries in more secretive jurisdictions, where concerns about managerial diversion are higher, firms place greater emphasis on visible governance adjustments rather than on changes to tax structures, which are less immediately observable to external stakeholders. The absence of secrecy-based heterogeneity in remuneration responses further indicates that some reputation repair mechanisms operate independently of the degree of offshore secrecy.

To further examine managerial diversion as a mechanism, we classify firms based on the strength of minority shareholder protection in the country where the firm is headquartered. Specifically, we use the World Bank, Doing Business, Extent of Shareholder Rights Index, which captures legal protections against expropriation by corporate insiders. The index ranges from 0 to 6, with countries scoring above 4 classified as having high shareholder protection.²⁴ Figures 6 and 7 show that, following the leaks, firms headquartered in countries with weaker shareholder protection are more likely to appoint directors in operations, audit, finance, and legal roles and to increase dividend payouts. These patterns are suggestive of governance and payout responses that partially offset weaker institutional monitoring environments.²⁵

We also observe contrasting effects on tax behavior. Firms in high shareholder protection countries increase their ETR and reduce the share of tax haven subsidiaries. In contrast, firms in low protection countries decrease ETR relative to control firms and show no change in the share of tax haven subsidiaries. Together, these results suggest that in environments with weak shareholder protection, firms prioritize visible governance adjustments and dividend distributions to mitigate reputational risk while maintaining tax avoidance. By contrast, in strong shareholder protection environments, firms prioritize reducing tax avoidance over governance and dividend adjustments.

²³Figures B1b and B1c present robustness tests using alternative secrecy score cutoffs.

²⁴More information on the World Bank Doing Business Extent of Shareholder Rights Index is available at this [link](#).

²⁵Atwood and Lewellen (2019) show that managerial diversion and tax avoidance often complement each other in firms incorporated in tax havens and based in countries with weak investor protection.

Public exposure To further assess whether the observed effects are attributable to reputation repair, we examine cross-sectional variation in firms' exposure to the risk of reputation loss. Firms with higher public visibility face a greater risk of reputation loss. We proxy for public visibility using publicly listed status, analyst coverage, and media coverage in tax-specific risk-related news. Figures 6 and 7 show the effects for governance and other outcomes, respectively. Responses for firms with higher public visibility are shown in red, while those for less visible firms are shown in blue.

We first examine whether responses vary with public listing status. Publicly listed firms have greater visibility and are therefore more susceptible to reputation loss following the leaks. Consistent with this interpretation, changes in director appointments and investor remuneration are concentrated among publicly listed firms. In contrast, while privately owned firms exhibit a significant increase in ETR, publicly listed firms show no corresponding change, consistent with prior evidence (Hoopes et al. 2018). These patterns suggest that the observed responses are, at least in part, driven by concerns over reputation loss.

Next, we consider analyst coverage measured over the three years preceding the leaks. Firms with above-median number of analysts' estimates face heightened scrutiny and may therefore be more sensitive to reputational concerns. Governance changes and dividend payments are primarily associated with these high analyst coverage firms. Although these patterns are directionally similar to those observed for publicly listed firms, the differences between high and low analyst coverage firms are generally not statistically significant, with the exception of operations directors. High analyst coverage firms also reduce their ETR, while low analyst coverage firms show no significant change, consistent with greater attention to after-tax performance among more closely monitored firms.

We then examine exposure to tax risk-related media coverage, as reported by RepRisk. Firms covered by such news face heightened public scrutiny and may be more vulnerable to reputation loss. Governance responses, particularly appointments of operations directors, are concentrated among these firms. They also exhibit larger increases in payouts on the intensive margin, a sig-

nificant reduction in ETR, and no differential change in the share of tax haven subsidiaries. Firms without such exposure show no comparable responses. Collectively, these patterns indicate that firms' responses across governance, financial, and tax outcomes are shaped by their exposure to public scrutiny, consistent with a reputation repair mechanism.

Market reactions Finally, we examine market reactions to the leaks as a proxy for realized reputation loss. Firms are classified based on whether they experience positive (low reputation loss) or negative (high reputation loss) three-day cumulative abnormal returns (CAR) around the leak dates. Across all outcome variables, we observe no significant differences between these two groups. This pattern suggests that realized negative market responses do not drive our results; instead, firms' responses appear to be motivated by the perceived likelihood of reputation loss.

5.5 Effects on 10k downloads

For the subsample of U.S. firms, we provide additional evidence on potential concerns about reputation loss. Table B6a of the Online Appendix shows that our baseline director and dividend results hold for U.S. firms. Unlike the baseline, U.S. firms also reduce ETR and make smaller adjustments to tax haven subsidiaries. Figure 8 shows that immediately *before* the Panama Papers leak, there is a sharp increase in the average number of 10-K downloads for treated firms, with a substantially smaller change for control firms. Similarly, following the Bahamas Leaks, we observe a large spike in 10-K downloads for treated firms immediately *after* the leak.²⁶ These patterns are consistent with heightened interest in the financial information of affected firms. Because the primary users of 10-K filings are investors and shareholders, this evidence indicates increased attention from stakeholders who may perceive heightened risk due to the leaks. Firms are likely aware of this scrutiny, which can amplify concerns about reputation loss and motivate reputation

²⁶The Panama Papers were publicly disclosed on April 3, 2016, with the ICIJ releasing the searchable data in May 2016, whereas the Bahamas Papers were not announced in advance. This timing implies that spikes in downloads reflect the increased scrutiny of treated firms' financial statements.

repair policies.

To demonstrate that interest in the leaks is not limited to US firms, we examine global Google search volumes for each leak around the time of their announcements. As shown in Figure A5a, there is a large increase in Google searches for each leak in the days following its release. This further supports the hypothesis that firms are motivated by the potential for reputation loss in the wake of public disclosures.

5.6 Robustness tests

We conduct a number of robustness tests to ensure that our results are not driven by sample selection, data quality, methodology, or outliers. We summarize those in Figures 9-11. First, we confirm that our findings remain consistent if we limit the sample to countries with at least 100 firms or to firms with over \$100 million in total assets. This demonstrates that our results are not driven by reporting differences in countries where Orbis coverage is limited.

Second, we test the robustness of our findings by modifying the control group to include only firms with a tax haven in their group structures or only firms without any tax haven presence. Our results remain significant, with no substantial change in effect magnitudes. However, we find that the increase in ETR is much larger in magnitude when comparing treated firms to a control group without tax haven subsidiaries. This large ETR increase may partially reflect concurrent global initiatives to curb tax avoidance, such as the OECD's Base Erosion and Profit Shifting (BEPS) and Country-by-Country Reporting (CbCR), rather than being solely attributable to the leaks.

Third, we test the robustness of our staggered specification, which includes four pre- and four post-leak periods, by employing two-way fixed effects (TWFE) estimators and restricting the pre- and post-leak windows to shorter periods. The results remain robust under these alternative specifications. Additionally, we exclude the Pandora Papers from the sample to address the shorter post-leak period associated with this leak and find that our results are largely unchanged.

To address concerns that differences between leaked and control firms before the leaks influence our results (Table A3a), we control for firm size and profitability, and apply entropy balancing

or propensity score matching approaches. Using entropy balancing, we re-weighted the control firms to satisfy the pre-treatment parallel trend assumption. Specifically, following Basri, Felix, Hanna, and Olken (2021), we balance on the mean of the outcome variables in the three years preceding the leak. For example, when analyzing the effects on ETR for a firm implicated in a 2016 leak, we weight control firms based on the average ETR in 2013, 2014, and 2015. This ensures that treated and control firms exhibit similar pre-leak trends in the outcome variables. Alternatively, we apply one-to-one propensity score matching, pairing treated firms with control firms of similar size within the same industry. Across all three approaches, our results remain consistent, with comparable magnitudes for the effects of the leaks on governance and payout outcomes. Using entropy balance, we observe no significant increase in the number of directors in specific functions, but continue to find strong increases in the shares and likelihood of appointments to those functions.

Lastly, given that 30% of treated firms experienced multiple leaks, we examine whether our results differ for firms involved in only one leak. Excluding firms with multiple leaks slightly reduces the magnitude of the baseline effects across most outcomes. However, the differences between this specification and the baseline are generally not statistically significant, except for the number of directors appointed to specific functional roles. The shares and likelihood of appointments are largely unchanged. Taken together, these findings are consistent with the expectation that firms experiencing multiple leaks exhibit stronger reputation repair responses.

6 Conclusion

This study examines whether firms implicated in offshore data leaks adopt reputation repair policies to address the risk of reputation loss. We find that leaked firms adjust their governance structures and payout policies by appointing additional directors to operations, audit, finance and accounting, and legal functions and by increasing dividend distributions. Leaked firms also reduce their reliance on tax haven subsidiaries, although we do not observe corresponding changes in effective tax rates (ETR).

We interpret these patterns as reflecting two complementary mechanisms. First, firms appear to respond to concerns about managerial diversion of corporate resources. Consistent with this interpretation, governance and payout adjustments are more pronounced for firms with leaked subsidiaries located in more secretive tax havens and for firms headquartered in countries with weaker investor protection, where agency concerns are high. Second, firms' responses vary with their degree of public exposure. Firms with greater public exposure—such as publicly listed firms, those followed by financial analysts, and those receiving tax-related media coverage—face a greater risk of reputation loss, and accordingly, we observe stronger governance and payout responses post-leak in these settings.

This study has several limitations. First, while we document the actions firms take following the leaks, we do not assess whether these actions lead to measurable improvements in firm reputation or investor perceptions. Although prior studies document reputational recovery after reputation repair actions in smaller samples of U.S. firms, as evidenced by improved stock market reactions (Chakravarthy et al. 2014; Farber 2005), identifying comparable outcomes in a large, global sample is challenging due to uncertainty around the timing and measurement of reputation changes. Second, our analysis focuses on investor-oriented responses. Given the public nature of offshore data leaks, firms may also adjust their behavior toward other stakeholders, such as tax authorities, consumers, or employees. We leave these potential responses for future research. Finally, our analysis captures short- to medium-term effects, spanning three to four years post-leak, and does not speak to potential longer-term consequences of reputation-related adjustments.

By documenting governance, payout, and organizational changes following offshore data leaks, this study contributes to the growing literature on corporate responses to public tax disclosures (Hoopes et al. 2024). Our findings highlight the role of governance and financial policies as observable firm reactions to reputational shocks and provide evidence on how firms adjust internal structures and payout decisions after a sudden increase in transparency surrounding their global tax practices.

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Appendix

Variable Description

Variable name	Variable description	Source
leaked	Indicator equal to one if a firm has at least one subsidiary implicated in offshore data leaks, and zero otherwise.	ICIJ
post	Indicator equal to one in the post-leak period, and zero otherwise.	ICIJ
nb directors	Number of directors for each firm in each year.	Orbis directors
nb BoD	Number of directors reported to be members of the board of directors.	Orbis directors
share directors in each function	Number of directors in a given functional role scaled by total number of firm directors.	Orbis directors
dum directors in each function	Indicator equal to one if the firm has at least one director in a functional role in a given year, and zero otherwise.	Orbis directors
nb directors in each function	Number of directors reported to have a specific functional role.	Orbis directors
dum ord div	Indicator equal to one if the firm reports ordinary dividends in a given year, and zero otherwise.	Orbis financials
ln(ord div)	Natural logarithm of ordinary dividends.	Orbis financials
ord div/total assets	Ordinary dividends scaled by total assets.	Orbis financials
dum abn ord div	Indicator equal to one if ordinary dividends in a given year are above the median for the firm, and zero otherwise.	Orbis financials
dum div pay	Indicator equal to one if the firm reports dividends payable in a given year, and zero otherwise.	Orbis financials
ln(div pay)	Natural logarithm of dividends payable.	Orbis financials
div pay/total assets	Dividends payable divided by total assets.	Orbis financials
dum abn div pay	Indicator equal to one if dividends payable in a given year are above the median for the firm, and zero otherwise.	Orbis financials
share f subs	Number of foreign subsidiaries scaled by the total number of subsidiaries.	Orbis ownership
share h subs	Number of subsidiaries located in tax haven jurisdictions scaled by the total number of subsidiaries (see Table A3).	Orbis ownership
share large h subs	Number of subsidiaries located in large tax havens (e.g., Ireland, Hong Kong) scaled by the total number of subsidiaries (see Table A3).	Orbis ownership
share dot h subs	Number of subsidiaries located in small (“dot”) tax havens (e.g., Anguilla, Nauru) scaled by the total number of subsidiaries (see Table A3).	Orbis ownership
share pref subs	Number of subsidiaries located in jurisdictions with preferential tax regimes (e.g., Netherlands, Luxembourg) scaled by the total number of subsidiaries.	Orbis ownership
ETR	Effective tax rate: Tax liability scaled by profit before tax. Set to missing when either tax liability or profit before tax is negative, or when $ETR > 1$.	Orbis financials
ETR 3y avg	Three-year rolling average of the firm’s ETR; from t-1 to t+1.	Orbis financials
reprisk news	Indicator equal to one if the firm is covered by any risk-related news, and zero otherwise. Data ends in 2020.	RepRisk
reprisk tax	Indicator equal to one if the firm is covered by tax risk-related news, and zero otherwise.	RepRisk
reprisk severity	Severity of the news (categorical, takes values 1–3).	RepRisk
reprisk novelty	Novelty of the news (categorical, takes values 1–3).	RepRisk
reprisk reach	Reach of the news (categorical, takes values 1–3).	RepRisk

Variable name	Variable description	Source
more secretive tax havens	Indicator equal to one if a firm has a leaked subsidiary incorporated in a more secretive tax haven, and zero otherwise. Tax haven secrecy is defined using the secrecy scores of the 2025 Financial Secrecy Index (FSI) as developed by the Tax Justice Network (TJN). Secrecy scores measure how much room for financial secrecy the country's laws and regulations provide and range from 0 (no room) to 100 (unlimited room). Secrecy scores above 70 indicate more secretive tax havens.	Tax Justice Network
high shareholder rights	Indicator equal to one if a firm is headquartered in a country with high shareholder protection rights, and zero otherwise. Shareholder protection rights are measured using the World Bank, Doing Business, Extent of Shareholder Rights Index, which captures legal protections against expropriation by corporate insiders. The index ranges from 0 to 6, with higher values indicating stronger protection of minority investors. Countries with index values above 4 are classified as having high shareholder protection.	World Bank
high analyst coverage	Indicator equal to one if the number of financial analysts covering the firm is above the sample median, and zero otherwise.	IBES
neg CAR	Indicator equal to one if a firm experiences negative three-day (-1,+1) cumulative abnormal returns (CAR) around the leak date, and zero otherwise. Abnormal returns are calculated by subtracting the market returns from the firm returns.	Compustat, WRDS
10K downloads	Number of downloads of 10-K filings filed with the Security Exchange Commission (SEC) per firm.	SEC EDGAR

Tables and figures

Table 1: Sample Selection

Selection Steps	Firms	Firm-year obs
Selection of the treated sample		
all leaked entries in ICIJ (less entries with no firm name)	814,345 (307)	
unique firms in ICIJ	781,036	
unique firms in ICIJ matched to Orbis	544,301	
entities matched to parent firms	110,516	
parent companies	96,684	
– that are not owned by individuals	46,846	
Selection of the whole sample		
parent companies with 12 months consolidated financial statements in Orbis after 2003	167,735,301	
that have non-missing total assets	26,781,118	
that are MNEs	122,532	
– and report data in any of 2010-2023	96,656	
that are treated	8,942	
– and have over \$20 million total assets	8,940	
that are control	87,714	
– and have over \$20 million total assets	87,374	
Final samples used in the paper		
firms with non-missing number of directors	52,639	358,302
– that are treated	3,965	44,562
firms with ordinary dividends in at least one of the sample years	22,292	196,045
– that are treated	4,669	47,529
firms with non-missing subsidiary ownership data	89,393	564,944
– that are treated	8,897	92,510
firms with non-missing directors, div, and ownership data	6,212	46,739
– that are treated	1,639	15,630

Table 2: Descriptive statistics: summary of governance variables

Variable	N	Mean	SD	P25	Median	P75	P90	P99
Panel A: number of directors								
nb directors	358,302	8.77	10.28	3.00	5.00	10.00	20.00	55.00
nb BoD	358,302	4.94	4.96	2.00	3.00	7.00	11.00	25.00
Panel B: share of firms with directors in each function								
share obs with operations directors	358,302	0.07	0.26					
share obs with audit directors	358,302	0.10	0.29					
share obs with fin & acc directors	358,302	0.11	0.31					
share obs with legal directors	358,302	0.04	0.19					
share obs with marketing directors	358,302	0.05	0.21					
share obs with CSR directors	358,302	0.01	0.09					
share obs with HR directors	358,302	0.03	0.18					
share obs with admin directors	358,302	0.01	0.10					
share obs with IT directors	358,302	0.02	0.15					
share obs with governance directors	358,302	0.00	0.03					
share obs with nom & remun directors	358,302	0.00	0.07					
share obs with other board directors	358,302	0.04	0.20					
share obs with risk directors	358,302	0.00	0.04					
share obs with other directors	358,302	0.19	0.39					
Panel C: number of directors, conditional on having > 0								
nb operations directors	26,421	4.27	20.10	1.00	1.00	3.00	6.00	49.00
nb audit directors	34,434	8.17	4.69	5.00	8.00	12.00	14.00	20.00
nb fin & acc directors	40,001	1.92	12.96	1.00	1.00	1.00	2.00	9.00
nb legal directors	13,037	1.70	3.36	1.00	1.00	1.00	2.00	15.00
nb marketing directors	16,540	3.90	14.03	1.00	1.00	2.00	5.00	53.00
nb CSR directors	2,901	1.59	1.76	1.00	1.00	1.00	3.00	10.00
nb HR directors	12,011	1.75	4.10	1.00	1.00	1.00	2.00	21.00
nb admin directors	3,648	1.29	1.17	1.00	1.00	1.00	2.00	8.00
nb IT directors	8,661	2.04	5.07	1.00	1.00	1.00	3.00	25.00
nb governance directors	343	2.01	1.15	1.00	2.00	3.00	4.00	5.00
nb nom & remun directors	1,752	2.10	1.74	1.00	1.00	2.00	4.00	8.00
nb other board directors	15,145	4.14	4.71	1.00	2.00	5.00	10.00	23.00
nb risk directors	534	1.78	1.16	1.00	1.00	2.00	3.00	6.00

This table presents descriptive statistics for director variables using a global sample of privately owned and publicly listed firms from 2010 to 2023. Panel A shows descriptive statistics for the total number of directors and board members, Panel B for the shares of directors in each function, and Panel C for the number of directors in each function, conditional on firms having those directors.

Table 3: Descriptive statistics: summary of other variables

Variable	N	Mean	SD	P25	Median	P75	P90	P99
dum ord div	196,045	0.69	0.46	0.00	1.00	1.00	1.00	1.00
ln(ord div)	134,730	16.13	1.99	14.74	16.02	17.45	18.81	21.18
ord div/total assets	185,570	0.02	0.03	0.00	0.01	0.03	0.06	0.17
dum abn ord div	185,570	0.45	0.50	0.00	0.00	1.00	1.00	1.00
dum div pay	199,557	0.99	0.06	1.00	1.00	1.00	1.00	1.00
ln(div pay)	192,789	15.00	2.73	13.53	15.25	16.81	18.27	20.69
div pay/total assets	199,557	0.02	0.03	0.00	0.01	0.03	0.06	0.22
dum abn div pay	199,557	0.46	0.50	0.00	0.00	1.00	1.00	1.00
nb subs	564,944	66.24	443.37	3.00	8.00	23.00	78.00	1,130.00
share f subs	564,944	0.38	0.33	0.05	0.33	0.67	0.90	1.00
share h subs	564,944	0.09	0.21	0.00	0.00	0.07	0.33	1.00
share large h subs	564,944	0.06	0.16	0.00	0.00	0.02	0.17	0.89
share dot h subs	564,944	0.03	0.10	0.00	0.00	0.00	0.04	0.50
share pref subs	564,944	0.06	0.18	0.00	0.00	0.00	0.12	1.00
ETR	447,508	0.25	0.16	0.16	0.24	0.32	0.43	0.84
ETR 3y avg	259,476	0.25	0.11	0.18	0.24	0.32	0.39	0.60
reprisk news	562,024	0.06	0.24	0.00	0.00	0.00	0.00	1.00
reprisk tax	556,533	0.01	0.09	0.00	0.00	0.00	0.00	0.00
ln(turnover)	695,044	18.21	2.69	16.92	18.35	19.83	21.34	23.90
ln(nb employees)	486,261	6.10	2.17	4.66	6.05	7.55	8.96	11.29
ln(total assets)	749,256	18.61	2.56	17.01	18.50	20.18	21.95	25.09
ln(fixed assets)	708,987	17.50	2.74	15.80	17.50	19.27	21.03	23.88
firm age	746,152	33.71	25.14	18.00	27.00	40.00	65.00	126.00
publicly listed	750,405	0.46	0.50	0.00	0.00	1.00	1.00	1.00

This table presents descriptive statistics for other variables using a global sample of privately owned and publicly listed firms from 2010 to 2023.

Table 4: Effects of offshore data leaks on firm governance

	(1) nb directors	(2) nb BoD
$\text{post}_t \times \text{leaked}_i$	1.009*** (0.088)	0.144*** (0.044)
Observations	736,436	736,436
# firms	46,269	46,269
Mean	6.116	3.465
R-squared	0.952	0.944
Cohort \times Year FE	✓	✓
Cohort \times Firm FE	✓	✓
Sector \times Year FE	✓	✓

This table presents regression results of the effects of offshore data leaks on firm governance using a global sample of privately owned and publicly listed firms from 2010 to 2023. The dependent variables are the number of directors (Column 1), and the number of members of the board of directors (Column 2). Variable definitions are provided in the Appendix. Each column includes cohort times year FE, cohort times firm FE, and sector times year FE. Standard errors are clustered at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Table 5: Effects of offshore data leaks on dividends

Panel A: ordinary dividends				
	(1)	(2)	(3)	(4)
	dum ord div	ln(ord div)	ord div/total assets	dum abn ord div
$post_t \times leaked_i$	0.021*** (0.005)	0.025* (0.014)	0.001*** (0.000)	0.024*** (0.009)
Observations	344,703	226,588	324,606	324,606
# firms	20,028	15,600	19,792	19,792
Mean	0.422	16.073	0.014	0.280
R-squared	0.581	0.905	0.623	0.326
Cohort \times Year FE	✓	✓	✓	✓
Cohort \times Firm FE	✓	✓	✓	✓
Sector \times Year FE	✓	✓	✓	✓
Panel B: dividend payables				
	(1)	(2)	(3)	(4)
	dum div pay	ln(div pay)	div pay/total assets	dum abn div pay
$post_t \times leaked_i$	-0.000 (0.001)	0.101*** (0.022)	0.001*** (0.000)	0.042*** (0.009)
Observations	351,060	338,639	351,060	351,060
# firms	20,415	19,742	20,415	20,415
Mean	0.726	14.942	0.022	0.477
R-squared	0.392	0.832	0.672	0.227
Cohort \times Year FE	✓	✓	✓	✓
Cohort \times Firm FE	✓	✓	✓	✓
Sector \times Year FE	✓	✓	✓	✓

This table presents regression results of the effects of offshore data leaks on dividend payments using a global sample of privately owned and publicly listed firms from 2010 to 2023. The dependent variables in Panel A are the natural logarithm of ordinary dividends (Column 1), ordinary dividends scaled by total assets (Column 2), ordinary dividends scaled by total assets (Column 3), and a dummy for abnormal ordinary dividends, which is equal to one if ordinary dividends are above median for each firm, and zero otherwise (Column 4). Panel B presents the results for accrued dividends. Variable definitions are provided in the Appendix. Each column includes cohort times year FE, cohort times firm FE, and sector times year FE. Standard errors are clustered at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Table 6: Effects of offshore data leaks on tax haven subsidiaries and ETR

	(1) share f subs	(2) share h subs	(3) share large h subs	(4) share dot h subs	(5) share pref subs	(6) ETR	(7) ETR 3y avg
$\text{post}_i \times \text{leaked}_i$	-0.001 (0.002)	-0.007*** (0.001)	-0.004*** (0.001)	-0.003*** (0.001)	-0.001 (0.001)	0.003** (0.002)	0.001 (0.001)
Observations	1,082,364	1,082,364	1,082,364	1,082,364	1,082,364	870,052	520,791
# firms	74039	74,039	74,039	74,039	74,039	63,507	40,897
Mean	0.381	0.091	0.058	0.026	0.056	0.255	0.256
R-squared	0.873	0.911	0.902	0.894	0.951	0.570	0.829
Cohort \times Year FE	✓	✓	✓	✓	✓	✓	✓
Cohort \times Firm FE	✓	✓	✓	✓	✓	✓	✓
Sector \times Year FE	✓	✓	✓	✓	✓	✓	✓

This table presents regression results of the effects of offshore data leaks on tax haven subsidiaries and effective tax rates (ETR) using a global sample of privately owned and publicly listed firms from 2010 to 2023. Column 1 shows the effect on the share of foreign subsidiaries, Column 2 on the share of tax haven subsidiaries, Column 3 on the share of large tax haven subsidiaries, Column 4 on the share of dot tax haven subsidiaries, and Column 5 on the share of subsidiaries in preferential tax jurisdictions. Tax havens and preferential tax jurisdictions are classified by type, following De Simone and Olbert (2022). Columns 6 and 7 show the effects of the leaks on ETR. The dependent variable in Column 6 is the ratio of tax liability to profit and loss before tax. Column 7 shows the results for the three-year average ETR. Variable definitions are provided in the Appendix. Each column includes cohort times year FE, cohort times firm FE, and sector times year FE. Standard errors are clustered at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

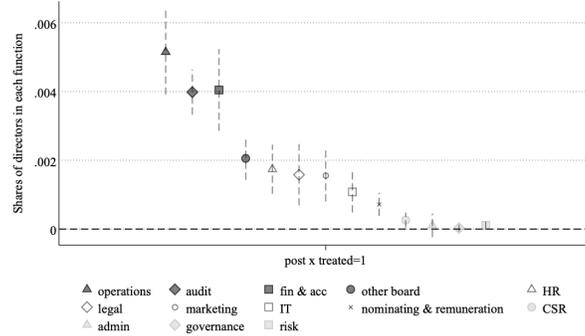
Table 7: Effects of offshore data leaks on news coverage and firm operations

Panel A: any risk-related news				
	(1) reprisk news	(2) severity	(3) novelty	(4) reach
$post_t \times leaked_i$	0.024*** (0.004)	0.019 (0.019)	0.043*** (0.012)	0.049** (0.022)
Observations	551,396	22,198	22,198	22,198
# firms	40,633	2,922	2,922	2,922
Mean	0.056	1.610	1.862	1.991
R-squared	0.742	0.501	0.413	0.533
Panel B: tax risk-related news				
	(1) reprisk tax	(2) severity	(3) novelty	(4) reach
$post_t \times leaked_i$	0.009*** (0.003)	-0.043 (0.058)	0.024 (0.038)	0.106 (0.070)
Observations	544,399	2,288	2,288	2,288
# firms	39,655	457	457	457
Mean	0.007	1.758	1.920	1.593
R-squared	0.489	0.546	0.478	0.652
Panel C: firm operations				
	(1) ln(turnover)	(2) ln(employees)	(3) ln(total assets)	(4) ln(fixed assets)
$post_t \times leaked_i$	-0.021** (0.010)	-0.031*** (0.009)	0.006 (0.008)	0.013 (0.010)
Observations	886,460	886,460	1,492,149	1,413,878
# firms	59,569	59,569	87,993	87,993
Mean	18.202	6.097	18.576	17.480
R-squared	0.952	0.960	0.965	0.951
Cohort \times Year FE	✓	✓	✓	✓
Cohort \times Firm FE	✓	✓	✓	✓
Sector \times Year FE	✓	✓	✓	✓

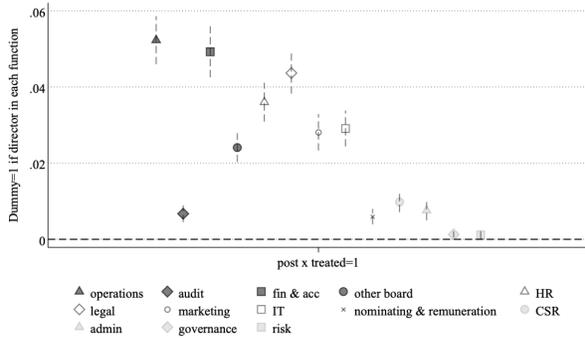
This table presents regression results of the effects of offshore data leaks on news coverage and firm operations using a global sample of privately owned and publicly listed firms from 2010 to 2023. In Panel A, Column 1, the dependent variable is an indicator equal to one if a firm is covered by any risk-related news, and zero otherwise. Columns 2-4 show the effects of the leaks on news' severity, novelty, and reach, respectively. Panel B shows the effects of the leaks on tax risk-related news, following the format of Panel A. Data on risk-related news from RepRisk ends in 2020. The dependent variables in Panel C are the natural logarithm of turnover (Column 1), number of employees (Column 2), total assets (Column 3), and fixed assets (Column 4). Variable definitions are provided in the Appendix. Each column includes cohort times year FE, cohort times firm FE, and sector times year FE. Standard errors are clustered at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Figure 1: Effects of offshore data leaks on firm governance: directors in functional roles

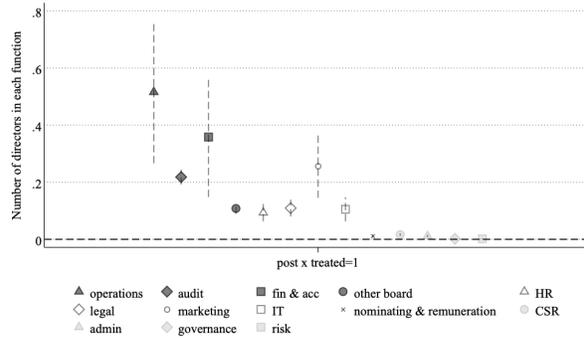
Panel A: share directors in each function



Panel B: dum directors in each function

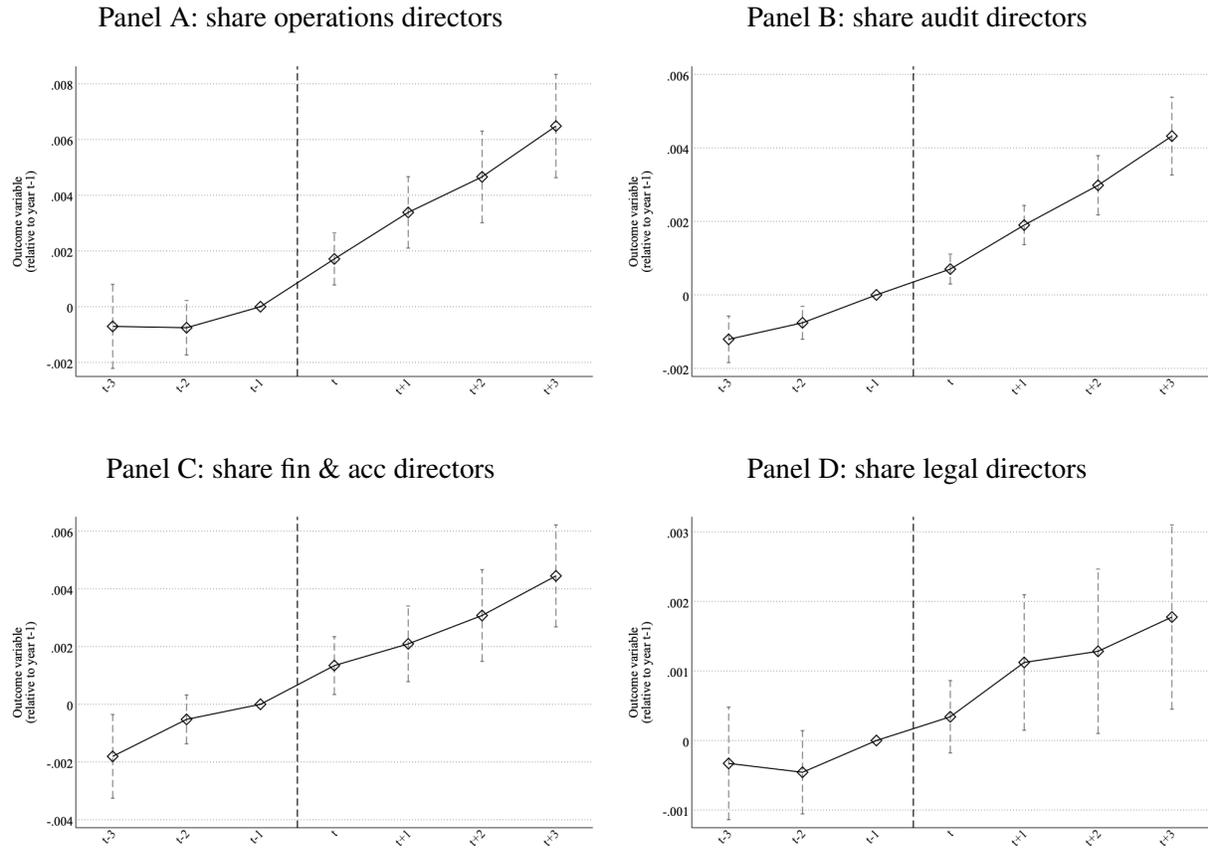


Panel C: nb directors in each function



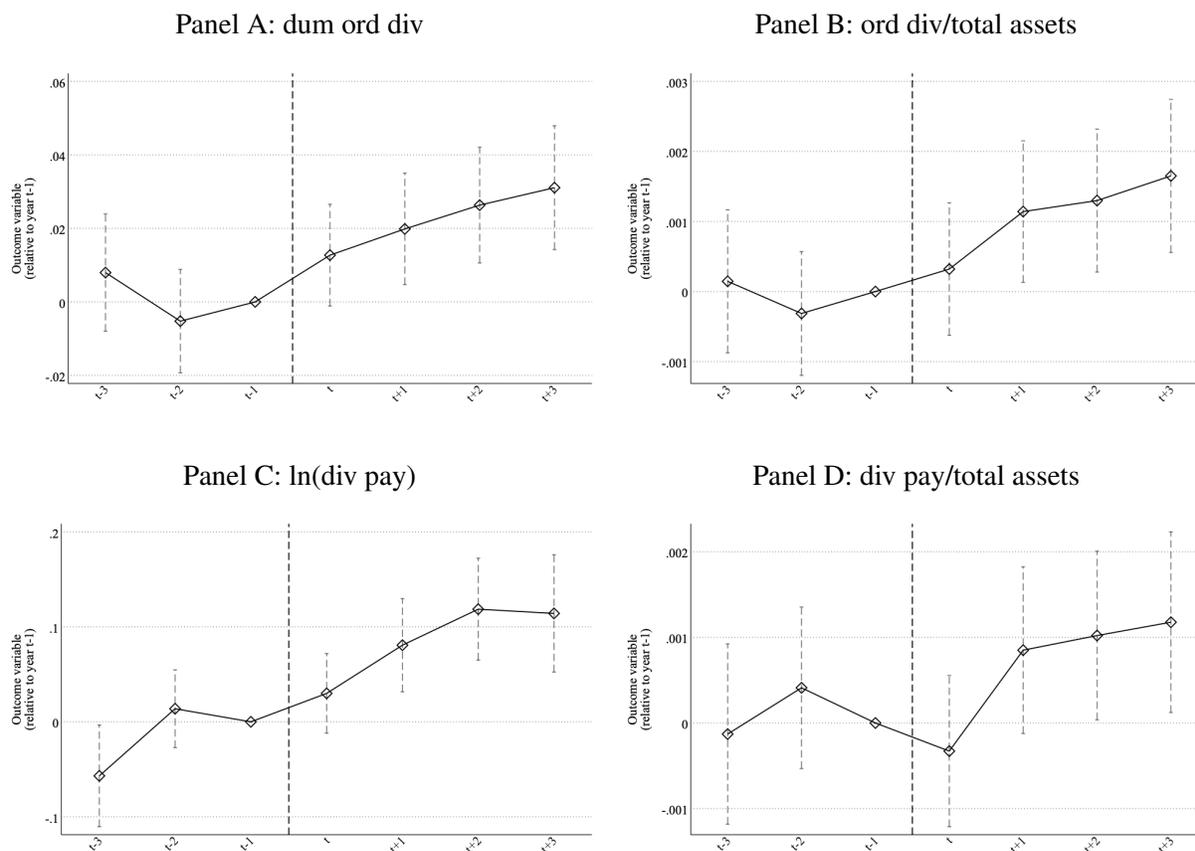
This figure shows the effects of offshore data leaks on directors' functional roles. Each shape corresponds to the coefficient estimate from the baseline difference-in-differences model with vertical bars representing 95% confidence intervals. In Panel A, the dependent variables are shares of directors in each function (the number of directors in each function scaled by the total number of directors). In Panel B, the dependent variables are indicators equal to one if a firm has any directors in a given function, and zero otherwise. In Panel C, the dependent variables are numbers of directors in each function. The coefficient estimates are sorted by magnitude in Panel A. Panels B and C keep the same order as in Panel A. Table A4a in the Online Appendix show how functional forms are defined. Variable definitions are provided in the Appendix. Each specification includes cohort times year FE, cohort times firm FE, and sector times year FE. Standard errors are clustered at the firm level.

Figure 2: The impact of offshore data leaks on firm governance: event studies



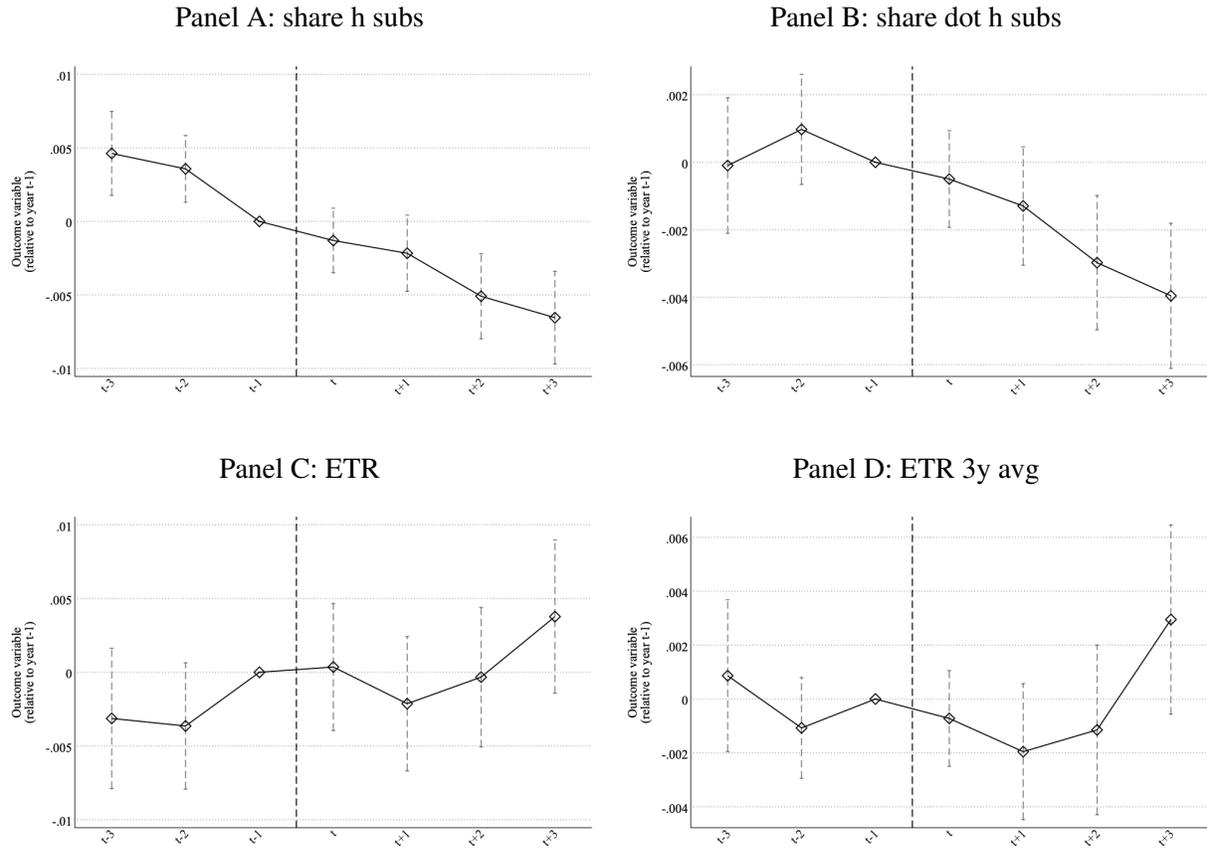
This figure plots the stacked difference-in-differences coefficient estimates from the dynamic model relative to period $t-1$. Period $t-1$ is the year before each leak occurred and varies across leaks. Each dot represents the difference in coefficients between the treated and control groups. Vertical lines represent the 95% confidence intervals. The dependent variables are the shares of directors in each of the first four functions, as shown in Panel A of Figure 1. These are operations, finance and accounting, marketing, and audit. The vertical dashed line marks the last pre-leak period. Variable definitions are provided in the Appendix. Each specification includes cohort times year FE, cohort times firm FE, and sector times year FE. Standard errors are clustered at the firm level.

Figure 3: The impact of offshore data leaks on firm dividends



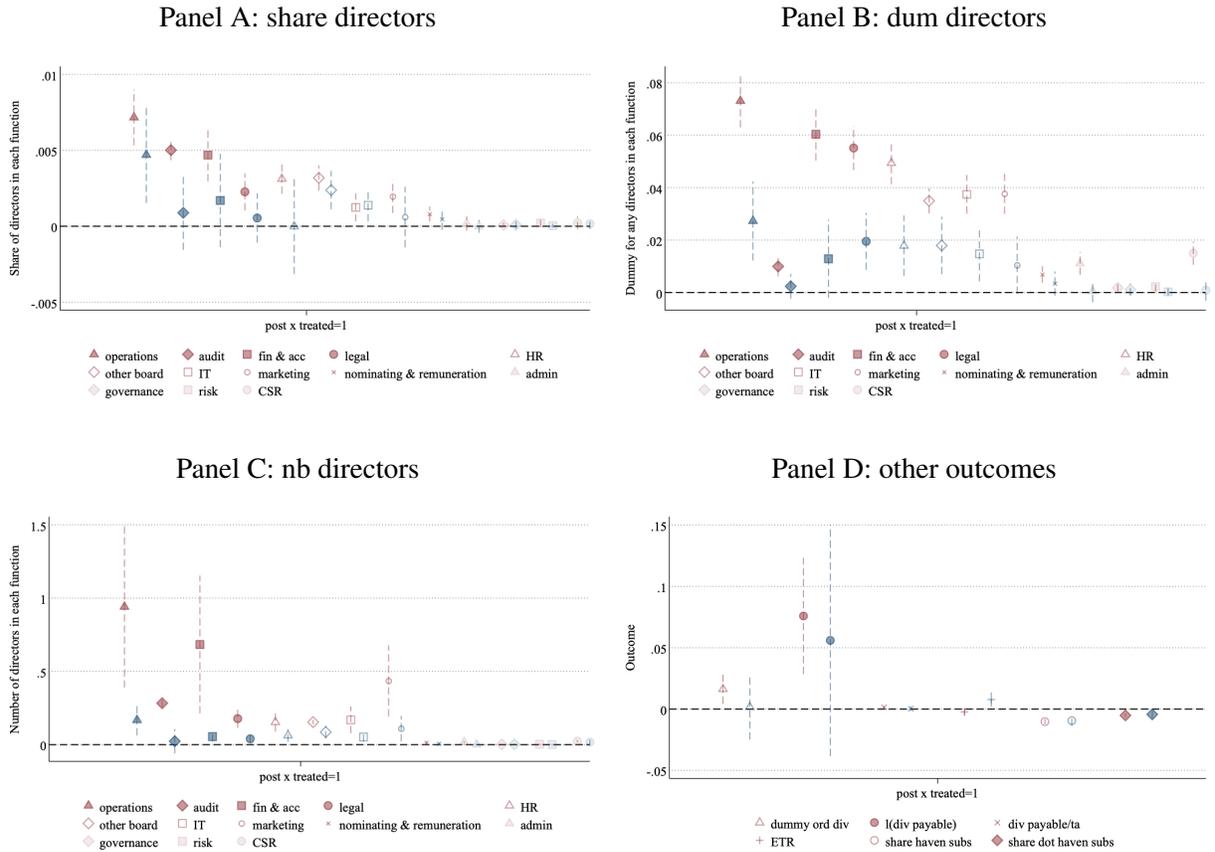
This figure plots the stacked difference-in-differences coefficient estimates from the dynamic model relative to period t-1. Period t-1 is the year before each leak occurred and varies across leaks. Each dot represents the difference in coefficients between the treated and control groups. Vertical lines represent the 95% confidence intervals. The dependent variables are an indicator equal to one if the firm distributed ordinary dividends, and zero otherwise (Panel A), ordinary dividends scaled by total assets (Panel B), the natural logarithm of dividends payable (Panel C), and dividends payable scaled by total assets (Panel D). The vertical dashed line marks the last pre-leak period. Variable definitions are provided in the Appendix. Each specification includes cohort times year FE, cohort times firm FE, and sector times year FE. Standard errors are clustered at the firm level.

Figure 4: The impact of offshore data leaks on tax haven subsidiaries and ETR



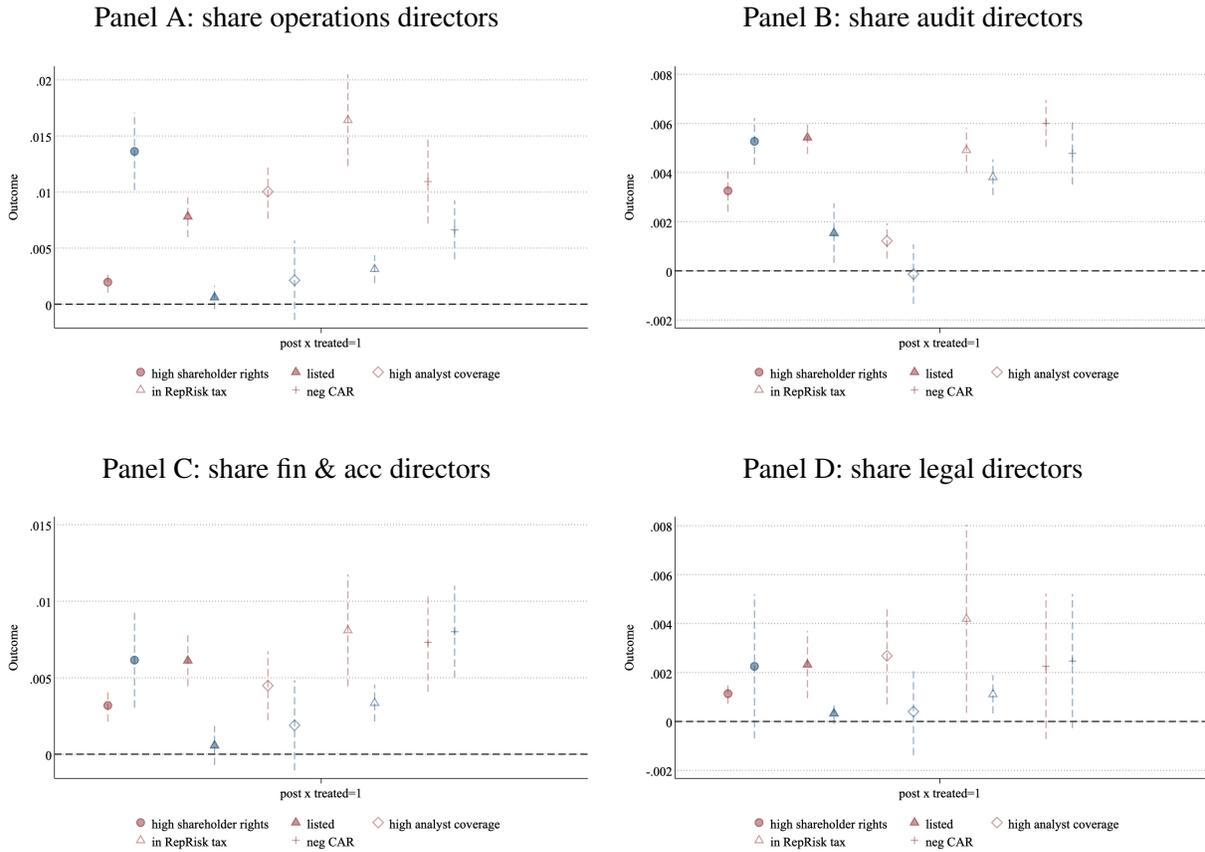
This figure plots the stacked difference-in-differences coefficient estimates from the dynamic model relative to period $t-1$. Period $t-1$ is the year before each leak occurred and varies across leaks. Each dot represents the difference in coefficients between the treated and control groups. Vertical lines represent the 95% confidence intervals. The dependent variables are shares of tax haven subsidiaries relative to all subsidiaries (Panel A), shares of dot haven subsidiaries relative to all subsidiaries (Panel B), the effective tax rate (ETR) (Panel C), and the three-year average ETR (Panel D). The vertical dashed line marks the last pre-leak period. Variable definitions are provided in the Appendix. Each specification includes cohort times year FE, cohort times firm FE, and sector times year FE. Standard errors are clustered at the firm level.

Figure 5: Mechanism: secrecy of the leaked tax haven



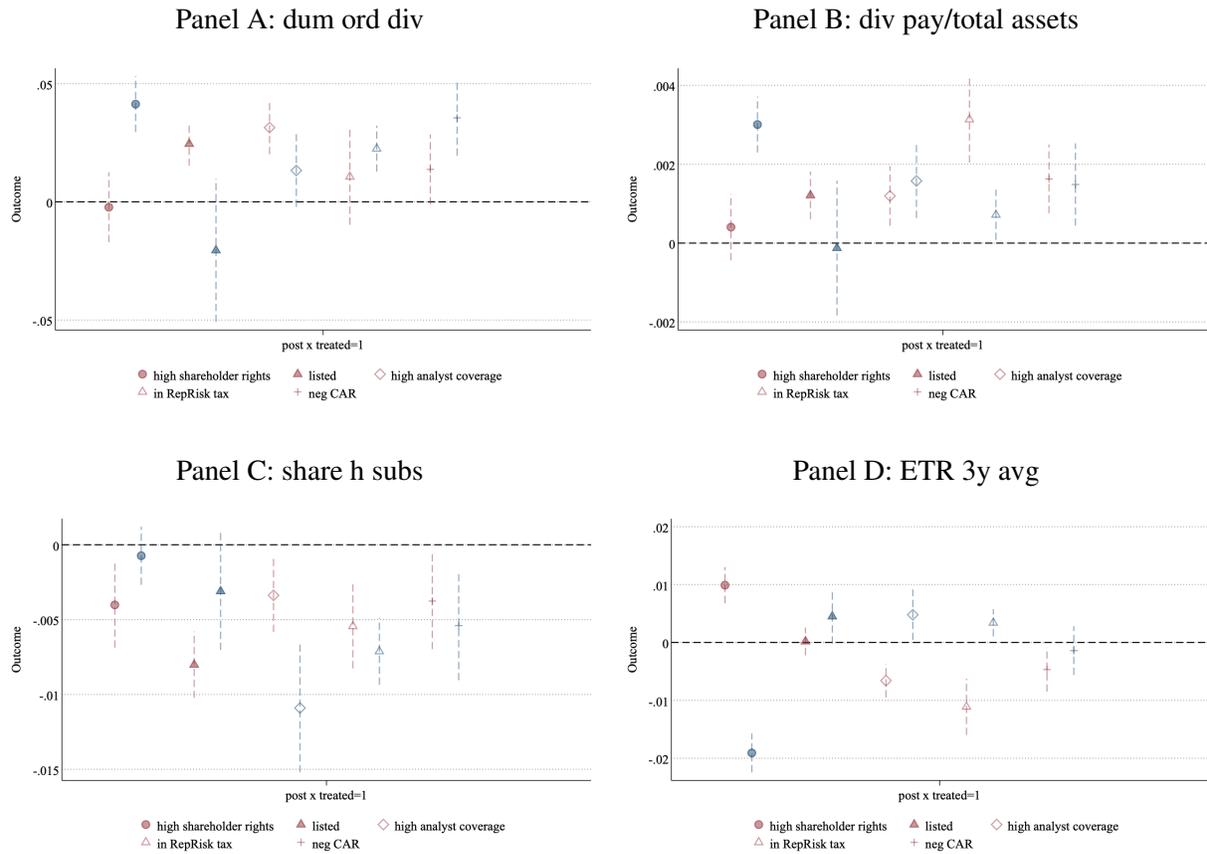
This figure shows the effects of offshore data leaks after splitting the sample between firms with leaked subsidiaries located in more secretive tax havens and those with leaked subsidiaries located in less secretive tax havens. Financial secrecy classifications are based on the secrecy score of the Tax Justice Network's 2025 Financial Secrecy Index (FSI). Secrecy scores measure how much room for financial secrecy the country's laws and regulations provide and range from 0 (no room) to 100 (unlimited room). Leaked tax havens are classified as more secretive if they have a secrecy score above 70. Table A2c shows tax haven classifications. Each panel shows results for a different outcome variable. Results for firms with leaked subsidiaries located in more secretive tax havens are shown in red, and those for firms with leaked subsidiaries located in less secretive tax havens are shown in blue. The vertical dashed lines show 95% confidence intervals. Variable definitions are provided in the Appendix. Each specification includes cohort times year FE, cohort times firm FE, and sector times year FE. Standard errors are clustered at the firm level.

Figure 6: Mechanism: heterogeneous response to offshore data leaks, governance



This figure shows the effects of offshore data leaks after splitting the sample across six key heterogeneities. Each panel shows results for a different outcome variable. Results for a subsample of firms headquartered in countries with high shareholder protection rights are plotted in red filled circles, publicly listed firms in red filled triangles, firms with above median analyst coverage in hollow red diamonds, firms covered by tax risk-related news in red hollow triangles, firms with negative market reaction to the leaks in red crosses. In blue, we plot their counterparts, firms headquartered in countries with low shareholder protection rights, privately owned firms, firms with below median analyst coverage, firms never covered by tax risk-related news, and firms experiencing non-negative market reactions to the leaks. The vertical dashed lines show 95% confidence intervals. Variable definitions are provided in the Appendix. Each specification includes cohort times year FE, cohort times firm FE, and sector times year FE. Standard errors are clustered at the firm level.

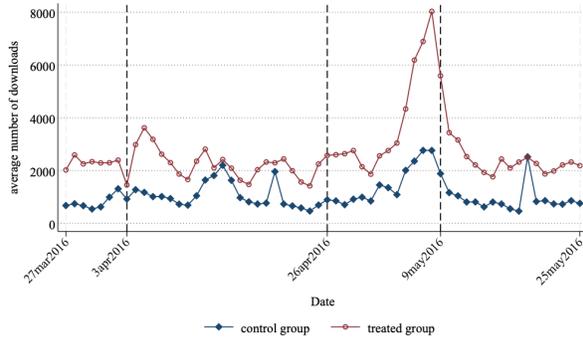
Figure 7: Mechanism: heterogeneous response to offshore data leaks, other outcomes



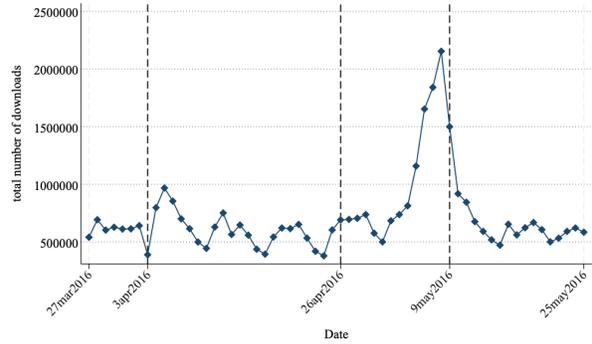
This figure shows the effects of offshore data leaks after splitting the sample across six key heterogeneities. Each panel shows results for a different outcome variable. Results for a subsample of firms headquartered in countries with high shareholder protection rights are plotted in red filled circles, publicly listed firms in red filled triangles, firms with above median analyst coverage in hollow red diamonds, firms covered by tax risk-related news in red hollow triangles, firms with negative market reaction to the leaks in red crosses. In blue, we plot their counterparts, firms headquartered in countries with low shareholder protection rights, privately owned firms, firms with below median analyst coverage, firms never covered by tax risk-related news, and firms experiencing non-negative market reactions to the leaks. The vertical dashed lines show 95% confidence intervals. Variable definitions are provided in the Appendix. Each specification includes cohort times year FE, cohort times firm FE, and sector times year FE. Standard errors are clustered at the firm level.

Figure 8: Effect of offshore data leaks on 10k downloads

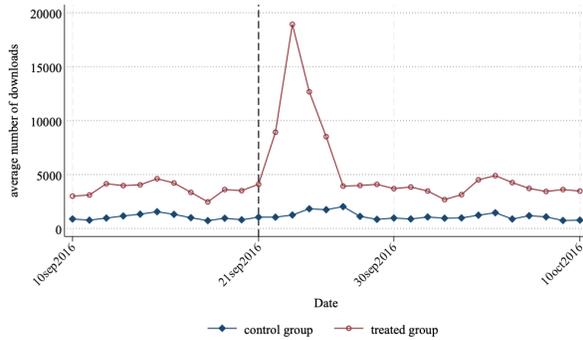
Panel A: Panama Leaks: average nb downloads



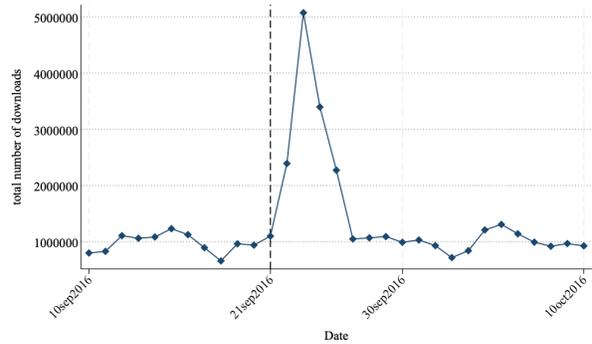
Panel B: Panama Leaks: total nb downloads



Panel C: Bahamas Leaks: average nb downloads

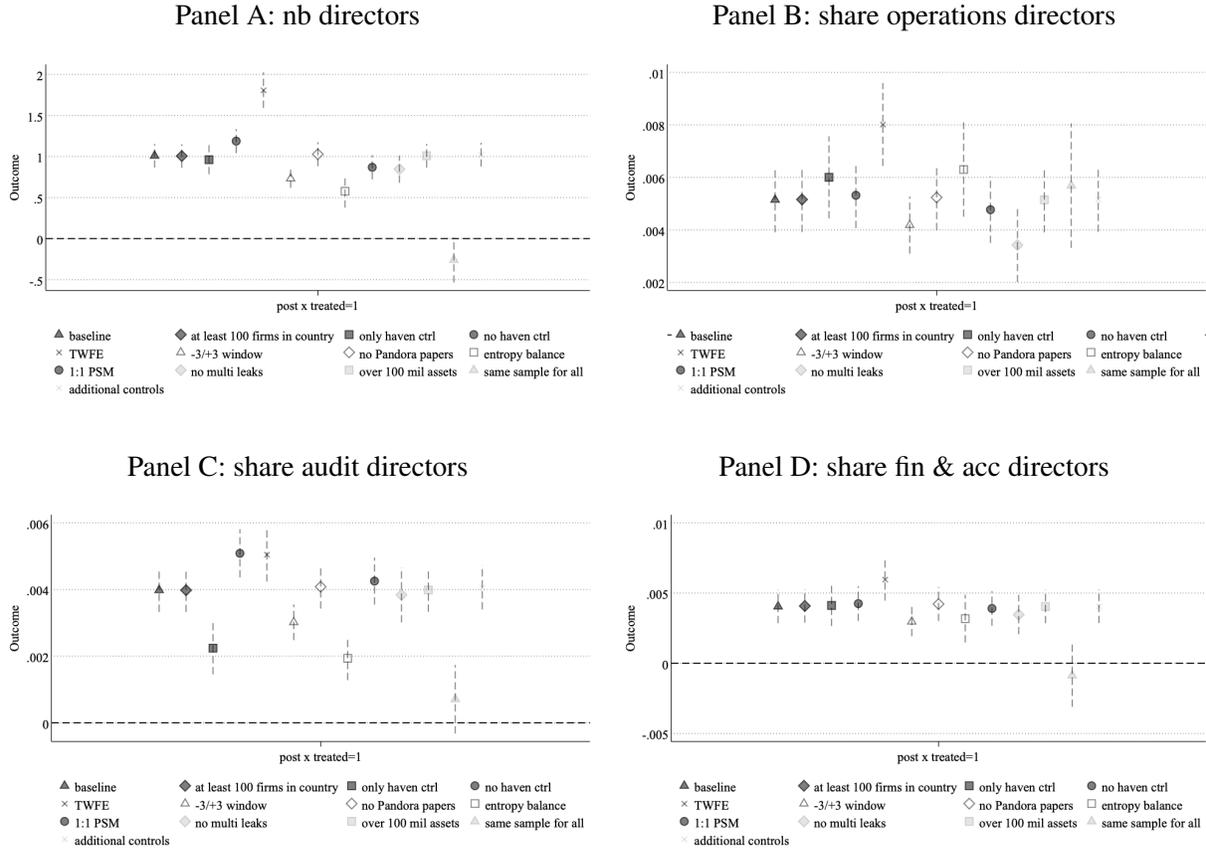


Panel D: Bahamas Leaks: total nb downloads



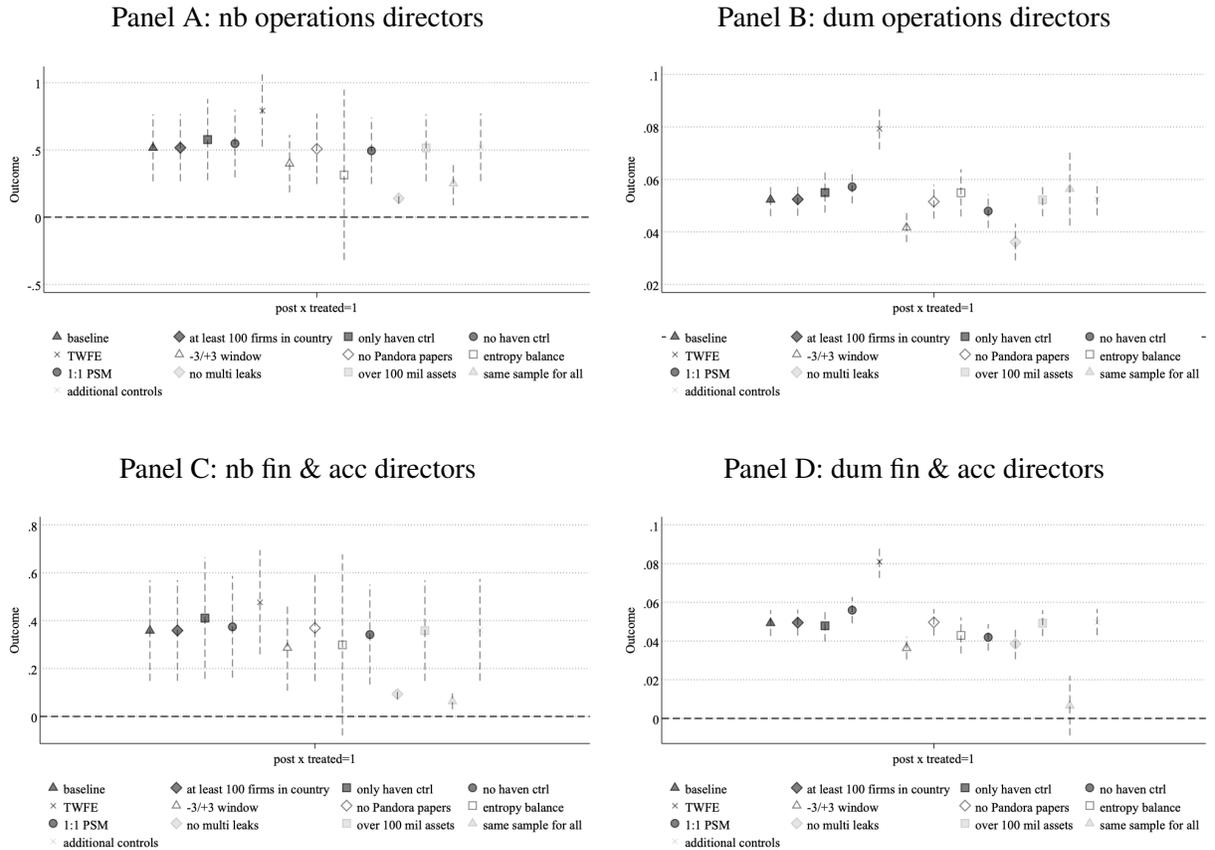
This figure shows 10K downloads around the time of offshore data leaks. Panels A and C plot the average number of 10k downloads per firm, distinguishing between the treated group (in red filled circles) and the rest of the firms that filed their 10k with the SEC (in blue filled diamonds). The average number of downloads for the control group is 56 in Panel A, 69 in Panel C, and for the treated firms is 2,641 in Panel A and 4,839 in Panel C. Panels B and D plot the total number of 10k downloads on each date, only for treated firms. In Panels A and B, we have 268 firms with unique CIK number and 577,740 control firms. In Panels C and D, we have 268 unique treated firms and 601,231 unique control firms. The sample consists only of the US firms that filed their 10ks with SEC. The vertical line indicates the date of the leaks. In case of Panama leaks, we also mark the date that the ICIJ announced it will share the leaked data on their website (26 April) and the date that they shared the leaked data on their website (9 May 2016).

Figure 9: Robustness of main results: director outcomes, pt 1



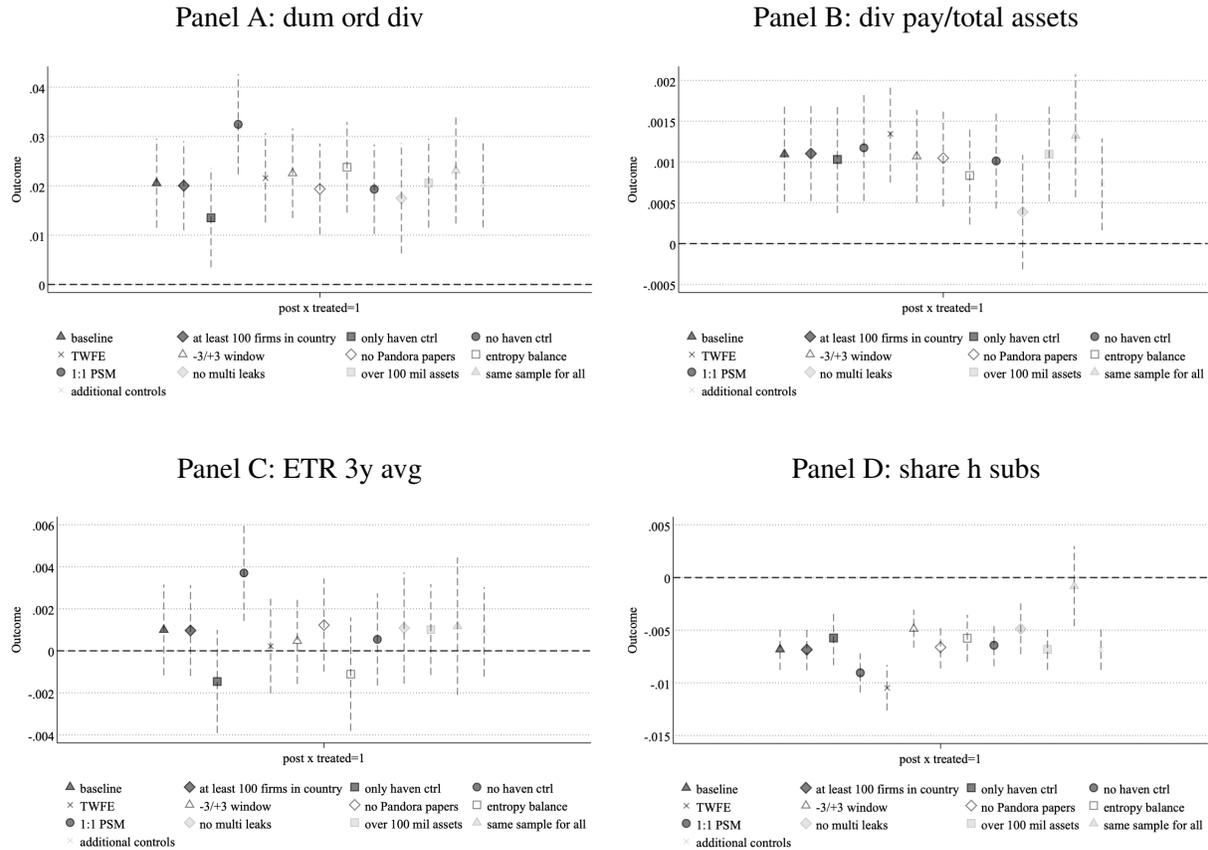
This figure shows the robustness tests for the results on the effects of offshore data leaks across the main variables of interest. In this figure, we focus on different director outcomes, as outlined in each figure title. Each figure shows the robustness of the baseline result, marked with a filled dark triangle, to various sample cuts and empirical estimation methods. In order, we show coefficients from regressions that limit the sample to countries with at 100 firms in the country, use as a control group only those MNEs with tax haven subsidiaries or without any tax haven subsidiaries, use two-way fixed effects (TWFE) methods rather than stacked DID research design, use a different time window around the event (-3/+3 years instead of -4/+4), exclude Pandora papers leaked firms, use entropy balancing to find an appropriate control group (balancing on the pre-leaks mean outcome variable in t-1, t-2 and t-3 years), use 1:1 nearest neighbor propensity score matching (PSM) with common support on the natural logarithm of total assets within each 2 digit SIC code, only consider firms that experienced 1 leak in the treated group, limit the treated and control group to firms with assets over \$100 million rather than \$20 million in the baseline, use the same sample across all regressions limiting the analysis to those firms that report all of the main outcome variables, and includes controls for firm size and profitability. The vertical dashed lines show 95% confidence intervals and each shape corresponds to a difference-in-differences coefficient estimate. Variable definitions are provided in the Appendix. Each specification includes cohort times year FE, cohort times firm FE, and sector times year FE (apart from two-way fixed effects regressions that only include sector times year and firm fixed effects) and cluster standard errors at the firm level.

Figure 10: Robustness of main results: director outcomes, pt 2



This figure shows the robustness tests for the results on the effects of offshore data leaks across the main variables of interest. In this figure, we focus on additional director outcomes, as outlined in each figure title. Each figure shows the robustness of the baseline result, marked with a filled dark triangle, to various sample cuts and empirical estimation methods. In order, we show coefficients from regressions that limit the sample to countries with at 100 firms in the country, use as a control group only those MNEs with tax haven subsidiaries or without any tax haven subsidiaries, use two-way fixed effects (TWFE) methods rather than stacked DID research design, use a different time window around the event (-3/+3 years instead of -4/+4), exclude Pandora papers leaked firms, use entropy balancing to find an appropriate control group (balancing on the pre-leaks mean outcome variable in t-1, t-2 and t-3 years), use 1:1 nearest neighbor propensity score matching (PSM) with common support on the logarithm of total assets within each 2 digit SIC code, only consider firms that experienced 1 leak in the treated group, limit the treated and control group to firms with assets over 100 million USD rather than 20 million in the baseline, use the same sample across all regressions limiting the analysis to those firms that report all of the main outcome variables. The vertical dashed lines show 95% confidence intervals and each shape corresponds to a difference-in-differences coefficient estimate. Variable definitions are provided in the Appendix. Each specification includes cohort times year FE, cohort times firm FE, and sector times year FE (apart from two-way fixed effects regressions that only include sector times year and firm fixed effects) and cluster standard errors at the firm level.

Figure 11: Robustness of main results: dividend, firm structure and ETR outcomes



This figure shows the robustness tests for the results on the effects of offshore data leaks across the main variables of interest. In this figure, we focus on dividends, firm structure, and ETRs as outcomes, as outlined in each figure title. Each figure shows the robustness of the baseline result, marked with a filled dark triangle, to various sample cuts and empirical estimation methods. We show coefficients from regressions that limit the sample to countries with at 100 firms in the country, use as a control group only those MNEs with tax haven subsidiaries or without any tax haven subsidiaries, use two-way fixed effects (TWFE) methods rather than stacked difference-in-differences research design, use a different time window around the event (-3/+3 years instead of -4/+4), exclude Pandora papers leaked firms, use entropy balancing to find an appropriate control group (balancing on the pre-leaks mean outcome variable in t-1, t-2 and t-3 years), use 1:1 nearest neighbor propensity score matching (PSM) with common support on the logarithm of total assets within each 2 digit SIC code, only consider firms that experienced 1 leak in the treated group, limit the treated and control group to firms with assets over \$100 million rather than \$20 million in the baseline, use the same sample across all regressions limiting the analysis to those firms that report all of the main outcome variables. The vertical dashed lines show 95% confidence intervals and each shape corresponds to a difference-in-differences coefficient estimate. Variable definitions are provided in the Appendix. Each specification includes cohort times year FE, cohort times firm FE, and sector times year FE (apart from two-way fixed effects regressions that only include sector times year and firm fixed effects) and cluster standard errors at the firm level.

ONLINE APPENDIX—NOT FOR PUBLICATION, January 28, 2026
“Offshore Data Leaks and Reputation Repair”

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A Additional descriptives

A.1 Leaks timeline

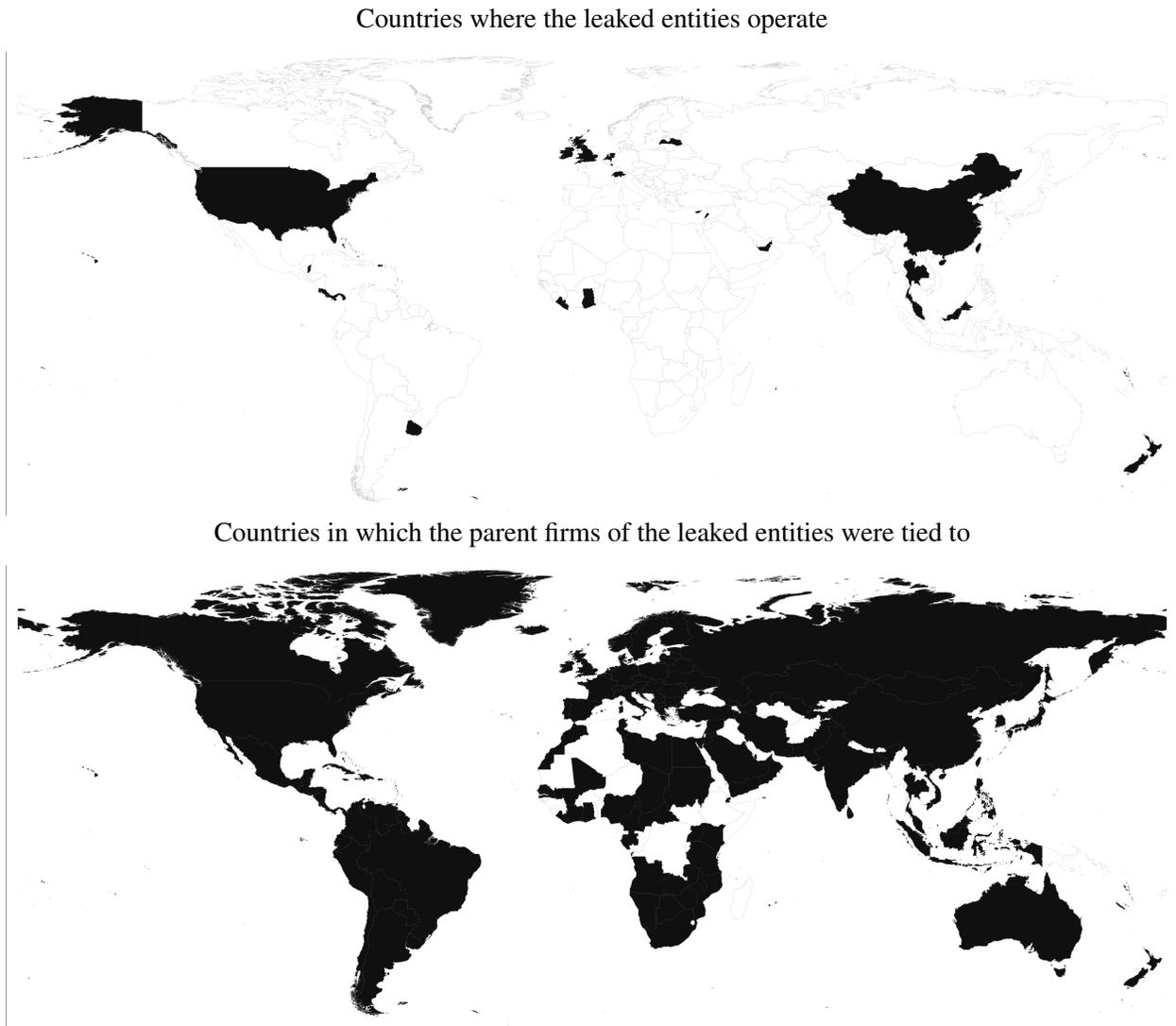
Figure A1a: Leaks Timeline



This timeplot shows when each leak was announced (in black) and when the actual information was leaked (in color).

A.2 Description of sample coverage

Figure A2a: Distribution of countries implicated in the leaks



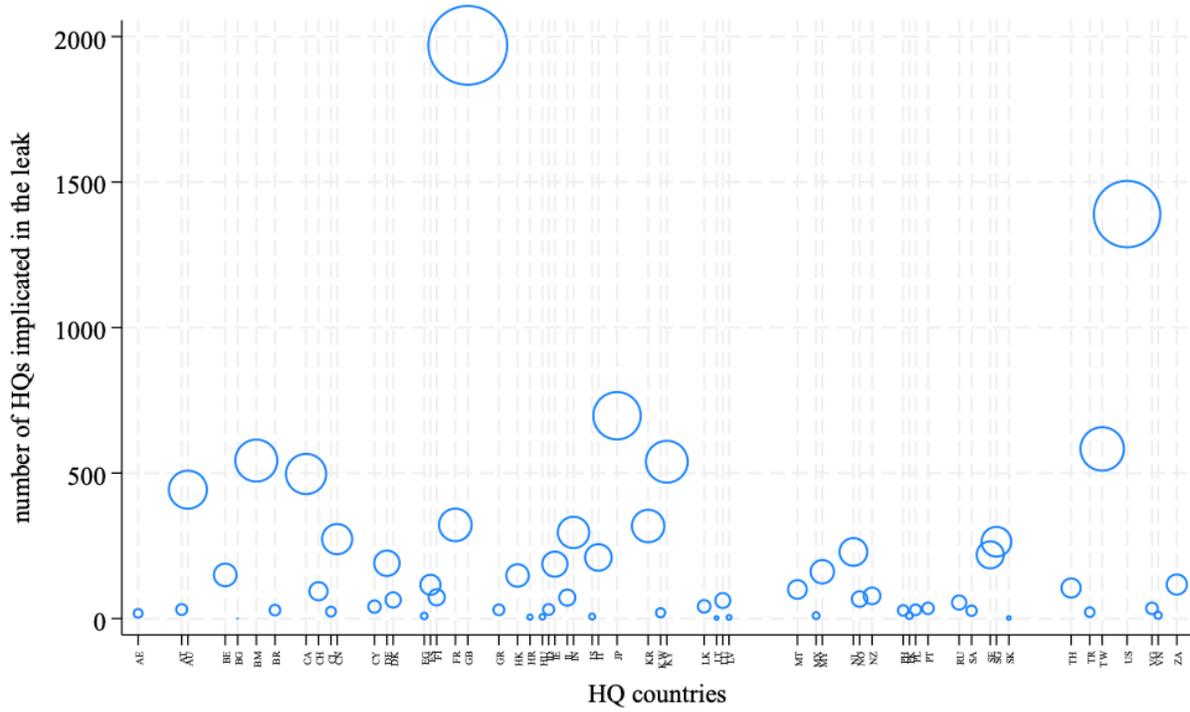
This figure shows the distribution of countries where leaked entities operate (Panel A) and countries where the parent firms of these leaked entities are headquartered (Panel B).

Table A2a: Industry breakdown: treated vs control group

Industry	Leaked		Non-Leaked	
	Freq.	Percent	Freq.	Percent
Agriculture	879	0.83	6,437	1.02
Mining	7,275	6.86	29,751	4.70
Construction	2,458	2.32	17,143	2.71
Manufacturing	35,539	33.50	183,593	28.98
Transport	9,444	8.90	40,229	6.35
Wholesale trade	5,763	5.43	41,471	6.55
Retail trade	4,253	4.01	17,438	2.75
Finance	23,329	21.99	179,189	28.29
Services	16,675	15.72	108,641	17.15
Public adm	128	0.12	1,063	0.17
Non-classifiable	351	0.33	8,546	1.35
Total	106,094		633,501	

This table presents the distribution of firms with leaked subsidiaries (treated) and firms without leaked subsidiaries (control) across industries.

Figure A2b: Country of headquarter: intensity of leaked firms



This figure shows the number of parent entities grouped by headquarter location. Each country is marked on horizontal axis using the two-digit ISO code. Countries with labels in the bottom part of the graph have over 100 parent firms implicated in the leaks and those have the largest circles. Each circle is weighted according to the number of parent firms implicated in the leak.

Table A2b: Country of headquarter breakdown: treated vs control group

Leaked			Non-Leaked		
country code	Freq.	Percent	country code	Freq.	Percent
US	13,343	12.58	GB	42,970	6.78
GB	12,947	12.20	IN	41,785	6.60
JP	8,127	7.66	US	38,557	6.09
TW	7,147	6.74	NL	36,290	5.73
BM	6,092	5.74	CN	34,681	5.47
KY	5,717	5.39	IT	33,614	5.31
CA	4,747	4.47	SE	31,759	5.01
AU	4,469	4.21	JP	29,791	4.70
KR	3,316	3.13	DE	26,790	4.23
CN	3,045	2.87	CA	24,588	3.88
IN	2,941	2.77	MY	21,992	3.47
FR	2,810	2.65	FR	19,638	3.10
SG	2,575	2.43	ES	19,210	3.03
DE	1,941	1.83	TW	16,628	2.62
HK	1,823	1.72	SG	16,108	2.54
MY	1,736	1.64	NO	15,403	2.43
SE	1,632	1.54	AU	15,180	2.40
IT	1,491	1.41	DK	13,610	2.15
NL	1,360	1.28	KY	13,336	2.11
ZA	1,331	1.25	FI	12,782	2.02
TH	1,263	1.19	TH	12,013	1.90
BE	1,088	1.03	KR	11,934	1.88
IE	1,071	1.01	BE	6,941	1.10
CH	1,019	0.96	PL	5,778	0.91
ES	981	0.92	AT	4,911	0.78
IL	795	0.75	VN	4,865	0.77
NZ	686	0.65	IE	4,658	0.74
FI	562	0.53	PT	4,108	0.65
RU	552	0.52	IL	4,077	0.64
NO	544	0.51	BR	3,935	0.62
LK	538	0.51	RU	3,355	0.53
ID	409	0.39	TR	3,300	0.52
LU	401	0.38	BM	3,054	0.48
PH	363	0.34	CH	2,972	0.47
DK	354	0.33	ID	2,816	0.44
CY	350	0.33	GR	2,811	0.44
MU	347	0.33	ZA	2,282	0.36
SA	339	0.32	KW	1,884	0.30
CL	319	0.30	LU	1,790	0.28
PL	319	0.30	MX	1,772	0.28
GR	292	0.28	NZ	1,760	0.28
VG	288	0.27	BG	1,668	0.26
PT	281	0.26	LT	1,638	0.26
AT	263	0.25	LK	1,570	0.25
BR	258	0.24	CL	1,562	0.25
MT	246	0.23	PH	1,525	0.24
TR	238	0.22	LV	1,364	0.22
KW	230	0.22	HK	1,357	0.21
AE	216	0.20	PK	1,356	0.21
MH	193	0.18	SA	1,167	0.18
MX	135	0.13	VG	1,141	0.18
PA	126	0.12	IS	1,121	0.18
CO	123	0.12	CY	1,104	0.17
QA	120	0.11	EG	1,086	0.17
KE	113	0.11	HU	1,031	0.16
ZW	103	0.10	AE		0.14

This table shows the number of observations in each headquarter country of parent firms sorted in decreasing order. The table shows countries where at least 100 observations are included for the treated group and those where at least 1,000 observations are included for the control group.

Table A2c: Tax haven classification

Country	Large Haven	Dot Haven	Pref Reg	Secr75	Secr70	Secr65
Andorra		1				
Anguilla		1		1	1	1
Antigua and Barbuda		1		1	1	1
Aruba		1				1
Bahamas		1		1	1	1
Bahrain		1				1
Barbados		1			1	1
Belize		1				1
Bermuda		1			1	1
Cayman Islands		1			1	1
Costa Rica		1				
Cyprus			1			
Djibouti		1				
Dominica		1				
Gibraltar		1				1
Grenada		1				
Hong Kong	1					1
Ireland	1		1			
Jordan		1		1	1	1
Lebanon	1					
Liberia		1				1
Liechtenstein		1			1	1
Luxembourg			1			
Macao		1				1
Maldives		1				1
Malta			1			
Marshall Islands		1				
Mauritius		1			1	1
Micronesia		1				
Monaco		1			1	1
Montserrat		1			1	1
Nauru		1				
Netherlands			1			
Panama	1			1	1	1
Saint Kitts and Nevis		1		1	1	1
Saint Lucia		1			1	1
Saint Vincent and the Grenadines		1				
Samoa		1			1	1
San Marino		1				
Seychelles		1			1	1
Singapore	1					1
Switzerland	1		1	1	1	1
Tonga		1				
Turks and Caicos Islands		1		1	1	1
Vanuatu		1		1	1	1
Virgin Islands (British)		1			1	1

This table presents country-level classifications for tax havens, preferential tax regimes, and financial secrecy. Countries are classified as large and dot tax haven, and preferential tax regimes following De Simone and Olbert (2022). Financial secrecy classifications are based on the secrecy score of Tax Justice Network's 2025 Financial Secrecy Index (FSI). Secrecy scores measure how much room for financial secrecy the country's laws and regulations provide and range from 0 (no room) to 100 (unlimited room). Leaked tax havens are classified as highly secretive if their secrecy score is above 70. Robustness tests use 75 and 65 as alternative thresholds.

A.3 Descriptive statistics

Table A3a: Descriptive statistics: comparison of treated and control groups

	(1) all: mean	(2) control: mean	(3) treated: mean	(4) diff	(5) t-test
nb directors	6.198	5.929	7.607	-1.678***	-12.035
nb BoD	3.385	3.210	4.299	-1.089***	-15.756
nb operations directors	0.194	0.097	0.701	-0.604***	-4.503
nb audit directors	0.716	0.803	0.256	0.547***	20.696
nb fin & acc directors	0.129	0.077	0.403	-0.326***	-2.932
nb legal directors	0.035	0.017	0.133	-0.116***	-6.915
nb marketing directors	0.114	0.057	0.412	-0.355***	-4.801
dum ord div	0.424	0.392	0.529	-0.137***	-19.240
ln(ord div)	16.075	15.713	16.949	-1.236***	-32.455
ord div/total assets	0.012	0.011	0.014	-0.003***	-10.999
dum abn ord div	0.287	0.266	0.356	-0.090***	-12.962
dum div pay	0.723	0.713	0.753	-0.040***	-5.556
ln(div pay)	14.951	14.584	16.037	-1.453***	-32.710
div pay/total assets	0.021	0.020	0.021	-0.001***	-2.613
dum abn div pay	0.483	0.479	0.498	-0.019**	-2.063
nb subs	61.810	26.590	223.960	-197.370***	-19.996
share f subs	0.372	0.352	0.468	-0.116***	-27.520
share h subs	0.088	0.073	0.156	-0.084***	-27.703
share large h subs	0.056	0.051	0.080	-0.029***	-14.290
share dot h subs	0.025	0.017	0.063	-0.046***	-27.188
share pref subs	0.060	0.063	0.042	0.021***	11.807
ETR	0.258	0.258	0.254	0.004*	1.854
ETR 3y avg	0.259	0.260	0.256	0.003	1.522
reprisk news	0.074	0.045	0.222	-0.177***	-35.486
reprisk tax	0.017	0.006	0.073	-0.067***	-21.553
ln(turnover)	18.058	17.804	19.410	-1.607***	-49.755
ln(employees)	6.050	5.821	7.205	-1.384***	-47.404
ln(total assets)	18.416	18.127	20.019	-1.892***	-62.723
ln(fixed assets)	17.295	16.994	18.992	-1.998***	-60.368
firm age	34.422	33.522	39.422	-5.900***	-17.649
publicly listed	0.417	0.374	0.657	-0.283***	-52.292

This table presents the descriptive statistics for treated and control firms in 2015, before most leaks occurred. "diff" indicates the difference between means of treated and control firms and ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

A.4 Orbis directors data description

Table A4a: Orbis directors data: functional form classifications

Type of position in Orbis	Board/ committee/ department description	Our functional form classification
AdmDep	Administration department	administration_department
AudC	Audit Committee	audit_committee
BoD	Board of Directors	board
SupB	Supervisory Board	board
CoGoC	Corporate Governance Committee	governance_committee
CSRC	Corporate Social Responsibility Committee	csr_committee
EnvC	Environment Committee	csr_committee
EthC	Ethics Committee	csr_committee
Health	Health & Safety	csr_committee
SafC	Safety Committee	csr_committee
FinAcc	Finance & Accounting	finance_accounting_department
HR	Human Resources (HR)	hr_department
IT&IS	Information Technology (IT) & Information Systems (IS)	it_department
LegDep	Legal/Compliance/Risk department	legal_department
CustSv	Customer Service	marketing_department
GovAff	Public & Government Affairs	marketing_department
MarkAdv	Marketing & Advertising	marketing_department
Sales	Sales & Retail	marketing_department
NomC	Nomination Committee	nomination_remuneration_committee
RemC	Remuneration/Compensation Committee	nomination_remuneration_committee
Oper	Operations & Production & Manufacturing	operations
PMPMan	Product/Project/Market Management	operations
Proc	Purchasing & Procurement	operations
Qual	Quality Assurance	operations
R&D	Research & Development / Engineering	operations
AdvB	Advisory Board	other_board_committee
OthBC	Other Board or Committee	other_board_committee
BrOff	Branch office	other_department
Proxy,FinAcc	Proxyholders; Finance & Accounting	other_department
SpecPos	Other specific positions	other_department
OthDep	Other or unspecified department	other_department
RiskC	Risk Committee	risk_committee
ExeB	Executive Board	senior_management
ExeC	Executive Committee	senior_management
SenMan	Senior management	senior_management

Table A4b: Orbis directors data: verification with BoardEx, Pulsion Medical Systems

BoardEx	Orbis
Doctor Jens Viebke	Dr. Jens Ake Harald Viebke
Michael Vallon	Mr Michael Peter Rudolf Vallon
Reinhard Mayer	Mr Reinhard Josef Mayer
Ajey Atre	Ms Ajey Atre
Carlos Lacalle Zando	Mr Carlos Patricio Lacalle Zando
Doctor Burkhard Wittek	Dr. Burkhard Franz August Wittek
Elin Frostehav	Ms Elin Frostehav
Frank Fischer	Mr Frank Fischer
Heinz Jacqui	Mr Heinz Jacqui
Henrik Stenmo	Mr Henrik Stenmo
Jürgen Kelch	Dr. Juergen Kelch
Jürgen Lauer	Mr Juergen Konrad Lauer
Mikael Johansson	Mr Mikael Kenny Johansson
Niclas Sjöswärd	Mr Niclas Dan Peter Sjoeswaerd
Stephan Haft	Mr Stephan Andreas Haft
Ulf Andersson	Mr Ulf Stig Mikael Palm Andersson
	Mr Carl Reinhold Adolf Bennet
	Mr Dan Frohm
	Mr Sven Mattias Perjos
	Dr Carsten Blecker
	Dr. Sergej Kammerzell
	Mr Claes Johan Bygge
	Mr Erik Harald Robert Castler
	Mr Kristian Samuelsson
	Mr Lars David Sandstroem
	Mr Magnus Lundbaeck
	Mr Nils Johan Mikael Malmquist
	Mr Stephane Julien Le Roy
	Ms Anna Romberg
	Ms Barbro Friden
	Cecilia Margartetha Daun Wennborg
	Ms Eva Christina Malin Persson
	Ms Jeanette Heden Carlsson
	Ms Lena Birgitta Hagman
	Dipl.-Kfm. Gerhard Mayer
	Graf Clemens von Bruehl
	Ing. Josef Hinterberger
	Mr Achim Lindner
	Mr Ake Larsson
	Mr Alfred Roeckelein
	Mr Carl Magnus Isaksson
	Mr Fredrik Brattborn
	Mr Johann Obermaier
	Mr Lars Mattsson
	Mr Pontus Kaell
	Mr Serge Exshaw
	Ms Cecilia Sjoestedt
	Ms Ida Maria Elisabet Gustafsson
	Ms Petra Franke
	Ms Petra Te Heesen
	Ms Petra Theesen
	Ms Petra te Heesen

This table compares the directors available in Boardex with those available in Orbis for a specific firm. The firm is Pulsion Medical Systems (ISIN: DE0005487904).

Table A4c: Orbis directors data: verification with BoardEx, Poujoulat

BoardEx	Orbis
André Prunier	Mr Andre Prunier
Hedwige De Penfentenyo De Kerv..	Hedwige De Penfentenyo De Kervereg..
Florence Coirier Giraudon	Ms Florence Coirier
Frédéric Coirier	Mr Frederic Jean Francois Coirier
Jérôme Coirier	Mr Jerome Coirier
	Mr Stephane Thomas
	Mr David Plazanet
	Mr Jean Francois Benot
	Mr Christophe Ordureau
	Mr Guillaume Neveu
	Mr Jean Joseph Gildas Leaute
	Mr Jean Menut
	Mr Laurent Anquetil
	Mr Mathieu Nivault
	Mr Arnaud Drouhet
	Mr Arnaud Pezzotti
	Mr Enrique Debois
	Mr Jean Jacques Pierre Adam
	Mr Jean-Christophe Lapegue
	Mr Lionel Druette
	Mr Michel Camp
	Mr Michel Van Pruysen
	Mr Nicolas Beyer
	Mr Nicolas Boivin
	Mr Paul Vandenbroucque
	Mr Pierre Olivier Moreau
	Mr Bruno Pierry
	Mr Damien Mathon
	Mr Erwan Crenn
	Mr Fabrice Bonneton
	Mr Jean-Luc Pierre
	Mr Jerome Pradal
	Mr Joel Lemoine
	Mr Laurent Grolier
	Mr Louis Deparis
	Mr Nicolas Brigant
	Mr Philippe Roger Michel Bullier
	Mr Yann Gouel
	Mr Yves Coirier
	Ms Alix Delamarre
	Ms Florence Giraudon
	Ms Hedwige Reynaud
	Ms Lise Coirier
	Ms Melanie Georget-Truchi
	Ms Muriele Taveneau

This table compares the directors available in Boardex with those available in Orbis for a specific firm. The firm is Poujoulat (ISIN: FR0000066441).

Table A4d: Orbis directors data: verification with BoardEx, MegaFon

BoardEx	Orbis	Orbis
BoarEx	Orbis	Orbis
Evgeny Bystrykh	Mr Evgenii Aleksandrovich Bystrykh	Mr Vlad Volfson
Ivan Streshinskiy	Mr Vladimir Yakovlevich Streshinskii	Mr Aleksandr Vladimirovich Bashmakov
Nikolai Krylov	Mr Nikolai Borisovich Krylov	Mr Aleksei Aleksandrovich Titov
Sergey Kulikov	Mr Sergei Aleksandrovich Kulikov	Mr Dmitrii Leonovich Kononov
Alexander Esikov	Mr Aleksandr Yuryevich Esikov	Mr Evgenii Nikolaevich Chermashentsev
Alexander Ushkov	Mr Aleksandr Anatolyevich Ushkov	Mr Mikhail Andreevich Dubin
Alexey Antonyuk	Mr Aleksei Vladimirovich Antonyuk	Mr Roman Ermolenko
Anna Serebryanikova	Ms Anna Andreevna Serebryanikova	Mr Vlad Wolfson
Anton Cherepennikov	Mr Anton Andreevich Cherepennikov	Ms Anna Andreevna Goryainova
Anton Rybalkin	Mr Anton Mikhailovich Rybalkin	Mr Aimo Elokholma
Ardavan Moshiri	Mr Ardavan Farhad Moshiri	Mr Aleksandr Anatolyevich Barunin
Carl Luiga	Ms Karl Piter Kristian Luiga	Mr Aleksandr Boreiko
Cecilia Edström	Ms Sesiliya Edstrom	Mr Aleksei Borisovich Semenov
Curt Blomquist	Mr Kurt Per-Arne Blomkvist	Mr Aleksei Leonidovich Tyutin
Doctor Emin Antonyan	Mr Emin Andranikovich Antonyan	Mr Andrei Borisovich Levykin
Doctor Harri Koponen	Mr Harri Eerik Koponen	Mr Dmirtrii Alekseevich Voizanov
Doctor Sasha Galitsky	Mr Aleksandr Vladimirovich Galitskii	Mr Gagik Arutyunovich Grigoryan
Henriette Wendt	Vendt Oland Khenriette	Mr Igor Borisovich Parfenov
Igor Ivanov	Mr Igor Sergeevich Ivanov	Mr Igor Shirokov
Ingrid Stenmark	Ms Ingrid Maria Stenmark	Mr Ivan Yakovlevich Streshinskii
Ivan Tavrin	Mr Ivan Vladimirovich Tavrin	Mr Jan Henrik Ahrnell
Jan Erixon	Mr Yan Devid Erikson	Mr Konstantin Mikhailovich Likhodedov
Jan Rudberg	Mr Yan Erik Rudberg	Mr Konstantin Vladlenovich Yunov
Jarkko Veijalainen	Mr Jarkko Armas Veijalainen	Mr Maksim Vladimirovich Poletaev
Johan Dannelind	Mr Johan Eric Dannelind	Mr Mikhail Ivanovich Molotkov
Kenneth Karlberg	Mr Berndt Kennet Karlberg	Mr Pavel Sergeevich Kaplun
Khachatur Pombukhchan	Mr Khachatur Eduardovich Pombukhchan	Mr Petr Lidov
Lars Nyberg	Mr Lars Gyunnar Nyuberg	Mr Stanislav Aleksandrovich Frolov
Lord Myners	Mr Pol Mainers	Mr Valerii Leonidovich Velichko
Maxim Anipkin	Mr Maksim Nikolaevich Anipkin	Ms Anait Grigoryevna Gasparyan
Natalya Chumachenko	Ms Natalya Viktorovna Chumachenko	Ms Anna Bazhina
Per Nilsson	Mr Per Emil Nilsson	Ms Darya Aleksandrovna Lizunova
Robert Andersson	Mr Robert Vilgelm Andersson	Ms Irina Borisovna Likhova
Sergei Soldatenkov	Mr Sergei Vladimirovich Soldatenkov	Ms Larisa Sergeevna Tkachuk
Tero Kivisaari	Mr Tero Kivisaari	Ms Lyubov Nikolaevna Strelkina
	Mr Pavel Viktorovich Korchagin	Ms Natalya Taldykina
	Mr Aleksandr Sobolev	Ms Olga Andreevna Narvskaya
	Mr Gevork Arutyunovich Vermishyan	Ms Olga Filatova
	Ms Martynova Elena	Ms Valentina Igorevna Vatrak
	Mr Nikita Romanovich Orlov	Vatrak Valentina
	Mr Sergei Andreevich Pereverzev	

This table compares the directors available in Boardex with those available in Orbis for a specific firm. The firm is MegaFon (ISIN: RU000A0JS942).

Table A4e: Orbis directors data: verification with BoardEx, ICT Group

BoardEx	Orbis
Carlo D'Agnolo	Mr Carlo Antonio Giovanni d' Agnolo
A Schot	Mr Abraham Schot
Ben Kostwinder	Mr Berend Folkert Kostwinder
Carl Kämper	Mr Carl Kamper
Deepak Luthra	Mr Deepak Luthra
Jan Sinoo	Mr Jan Arie Sinoo
Angélique de Vries-Schipperijn	Ms Angelique Johanna Maria de Vries-S..
Doctor Fritz Fröschl	Mr Friedrich Josef Froeschl
Gina van der Werf	Ms G. A. Van Der Werf
Hans Oberg	Mr Johan Oberg
Hans Van den Boogaard	
Jan Wienbelt	Mr Jan Willem Wienbelt
Janneke Niessen	Ms Janneke Wesseling - Niessen
Jos Blejje	Mr Jos H. Blejje
Koen Beeckmans	Mr Koen Beeckmans
Peter Zuidema	Dr. Ir. Peter Zuidema
Theo van der Raadt	Drs. Theodorus Johannes Van Der Raadt
Willem De Vlugt	Mr Willem De Vlugt
Wouter van de Bunt	Mr Wouter Nicolaas van de Bunt
	Jan-Jaap Bongers
	Mr Bart Peter Coopmans
	Mr I Bronswijk
	Mr Jacobus Hendrik Blejje
	Mr Martijn Alexander Koster
	Mr Th. J. van der Raadt
	Mr Wj Wienbelt
	NPM Investments XI B.V.
	Mr Bp Coopmans
	Mr Ej Schutte
	Mr Gerrit Oosterhof
	Mr Jc Bruinaars
	Mr Jh Blejje
	Mr Rene Caspar Van De Ven
	Mr Tj Van Der Raadt
	Mr Willem Johan Wienbelt
	Ms Cn Stuifzand
	Ms Ga Sinnema - Van Der Werf
	Ms Gina Annette Sinnema-van der Werf
	Ms M Van Dijk
	Ms Ma Koster
	Ms P Gols
	Ms Sm Van Leeuwen

This table compares the directors available in Boardex with those available in Orbis for a specific firm. The firm is ICT Group (ISIN: NL0000359537).

Table A4f: Orbis directors data: verification with BoardEx, Tyson Foods

BoardEx	Orbis	Orbis
Noel White	Mr Noel Wesley White	Ms Melanie Boulden
Donnie King	Ms Donnie D. King	Mr Brady Stewart
Donnie Smith	Mr Donald Smith	Mr Wes Morris
Jim Kever		Maria Kristina Soederstroem
John Tyson	Mr John R. Tyson	Ms Sandy Luckcuck
Leland Tollett		Mr Adam Scott Deckinger
Barbara Tyson	Ms Barbara A. Tyson	Mr Andrew P Callahan
Chris Langholz	Mr Christopher Langholz	Mr David Bray
Dean Banks	Mr Deana Banks	Mr Douglas Kulka
Dennis Leatherby	Mr Dennis Lee Leatherby	Mr Howell P Carper
Gaurdie Banister Jr	Gaurdie Edward Banister Jr.	Mr Jason Nichol
Jim Lochner		Mr Justin Whitmore
Kevin McNamara	Mr Kevin Michael McNamara	Mr Phillip Thomas
Mikel Durham	Mr Mikel A. Durham	Mr Ramsey Doug
Richard Bond		Mr Shane Miller
Tom Hayes	Mr Thomas P Hayes	Mr Stephen R Stouffer
Al Gonzalez-Pita		Ms Cheryl S. Miller
Amy Tu	Ms Amy Tu	Ms Noelle O'Mara
Bernard Leonard		Mr Andrew J. York
Bill Lovette		Mr Chad Martin
Brad Sauer	Mr Brad T Sauer	Mr Curt Thomas Calaway
Cheryl Miller		Mr D. Todd Menotti
Dave Bronczek	Mr David Joseph Bronczek	Mr David Leon Van Bebber
Doctor Vic Hackley		Mr Dennis Jones
Don Tyson	Mr John H. Tyson	Mr Devin Graham
Greg Lee		Mr Graham Hall
J Spradley	Mr Scott Spradley	Mr Jeffrey G. Wood
Jeff Schomburger	Mr Jeffrey K. Schomburger	Mr Jonathan Rushing
Jo Smith		Mr Mike Roetzel
Jonathan Mariner	Mr Jonathan D. Mariner	Mr Ragan Dickens
Les Baledge	Mr Les R. Baledge	Mr Scott Rouse
Maria Borrás	Ms Maria Claudia Borrás	Mr Stephen Leslie Gibbs
Mary Oleksiuk	Ms Mary A Oleksiuk	Mr Tristan Breaux
Rick Greubel Jr		Ms Claudia R Coplein
Robert Thurber	Mr Robert C. Thurber	Ms Katherine B. Quinn
Sally Grimes	Ms Sally Grimes	Ms Lori J. Bondar
Scott Ford		Ms Megan Britt
Stewart Glendinning	Mr Stewart F. Glendinning	Ms Monica Mcgurk
The Hon. Al Zapanta Jr		Ms Nora H. Venegas
The Hon. Kathleen Bader		Ms Ruth Madeline Bradley
The Hon. Mike Beebe	Mr Michael Dale Beebe	
Wade Miquelon		

This table compares the directors available in Boardex with those available in Orbis for a specific firm. The firm is Tyson Foods (ISIN: US9024941034).

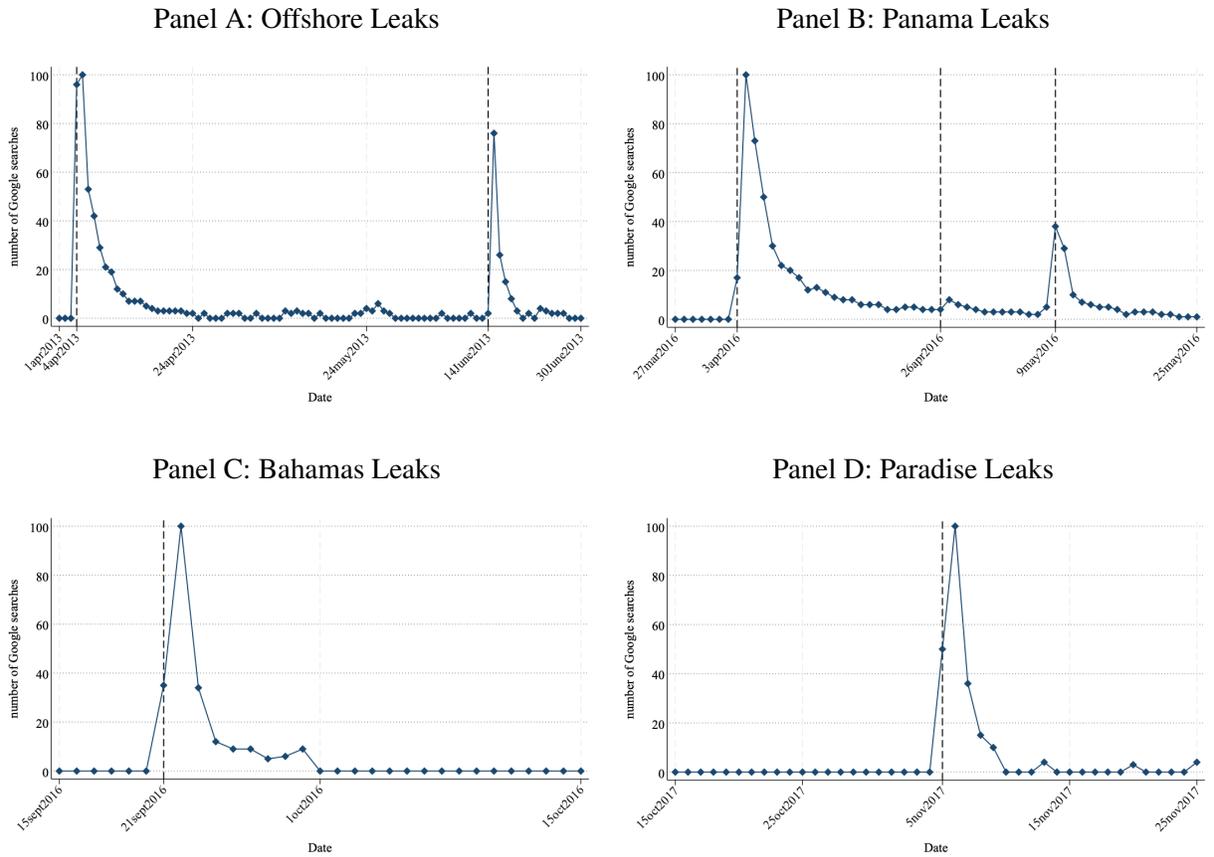
Table A4g: Orbis directors data comparison with BoardEx, country coverage

country	mean nb of Orbis directors	mean nb of Boardex directors
Anguilla	12	6
Australia	27	12
Austria	49	28
Bahamas	8	5
Belgium	48	18
Bermuda	36	17
British Virgin Islands	18	11
Canada	24	12
Cayman Islands	22	9
Croatia	38	32
Curacao	32	23
Cyprus	32	15
Czech Republic	37	32
Denmark	32	19
Estonia	24	11
Finland	48	14
France	47	19
Georgia	33	14
Germany	52	24
Gibraltar	13	12
Greece	46	30
Hong Kong	14	10
Hungary	96	13
Iceland	26	10
Ireland	42	22
Israel	35	13
Italy	81	22
Lebanon	38	11
Liberia	38	27
Liechtenstein	187	27
Lithuania	28	21
Luxembourg	41	14
Malta	30	15
Marshall Islands	17	10
Mauritius	22	14
Monaco	48	14
Netherlands	50	17
New Zealand	35	6
Norway	35	16
Panama	56	30
Poland	34	30
Portugal	57	26
Romania	161	16
Russia	64	30
Singapore	12	5
Slovenia	48	26
Spain	36	23
Sweden	32	14
Switzerland	55	14
Turkey	67	18
United Kingdom	16	12
United States	35	19
Total	38	18

This table compares the mean number of directors in Orbis data and in BoardEx for firms in each country. The comparison is performed only for North America and European firms in BoardEx which could be matched to Orbis using ISIN number.

A.5 Leaks and news searches

Figure A5a: Effect of leaks on web searches

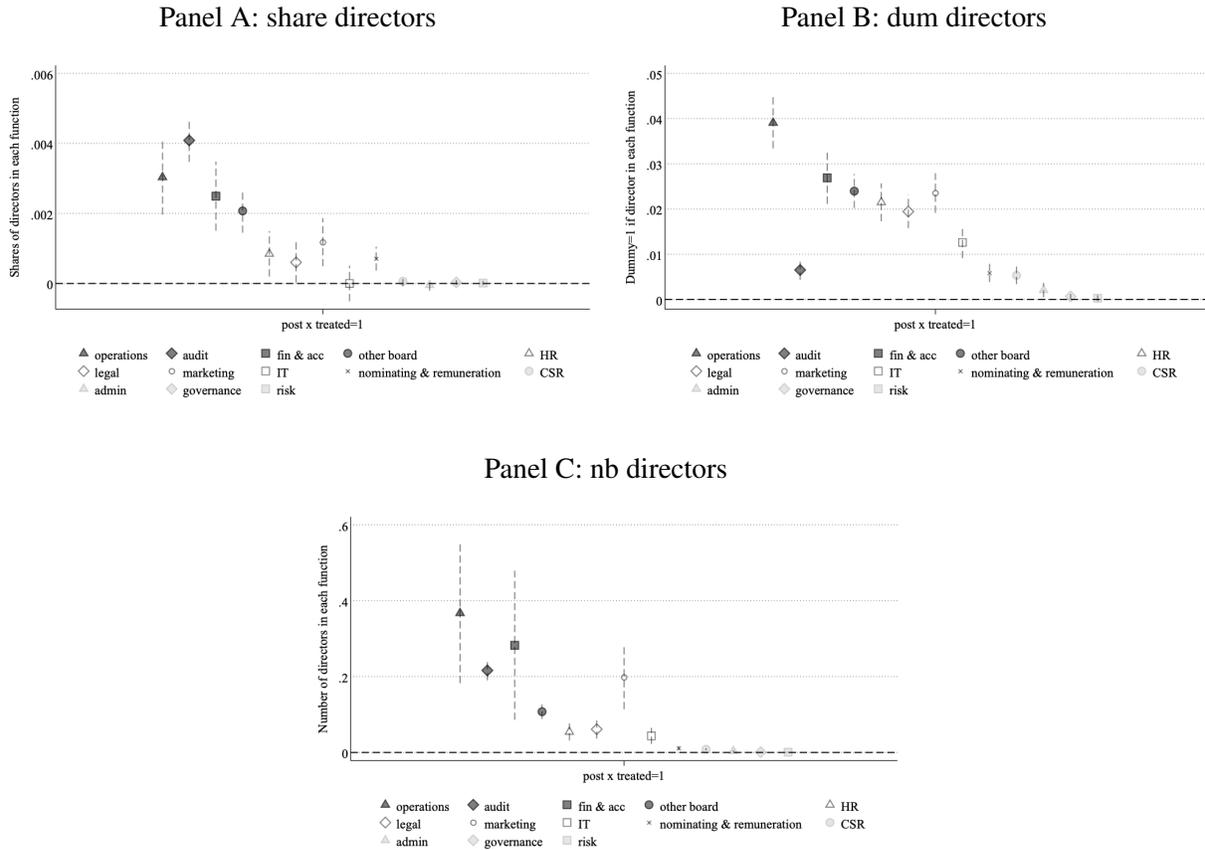


This figure shows Google searches for each leak. The vertical line indicates the date of the leaks. In case of Panama and Offshore leaks, the figure also marks the date that the ICIJ announced it will share the leaked data on their website (26 April for Panama leaks) and the date that the ICIJ actually shared the data on their website (9 May 2016 for Panama leaks and 14 June for Offshore Leaks).

B Additional results

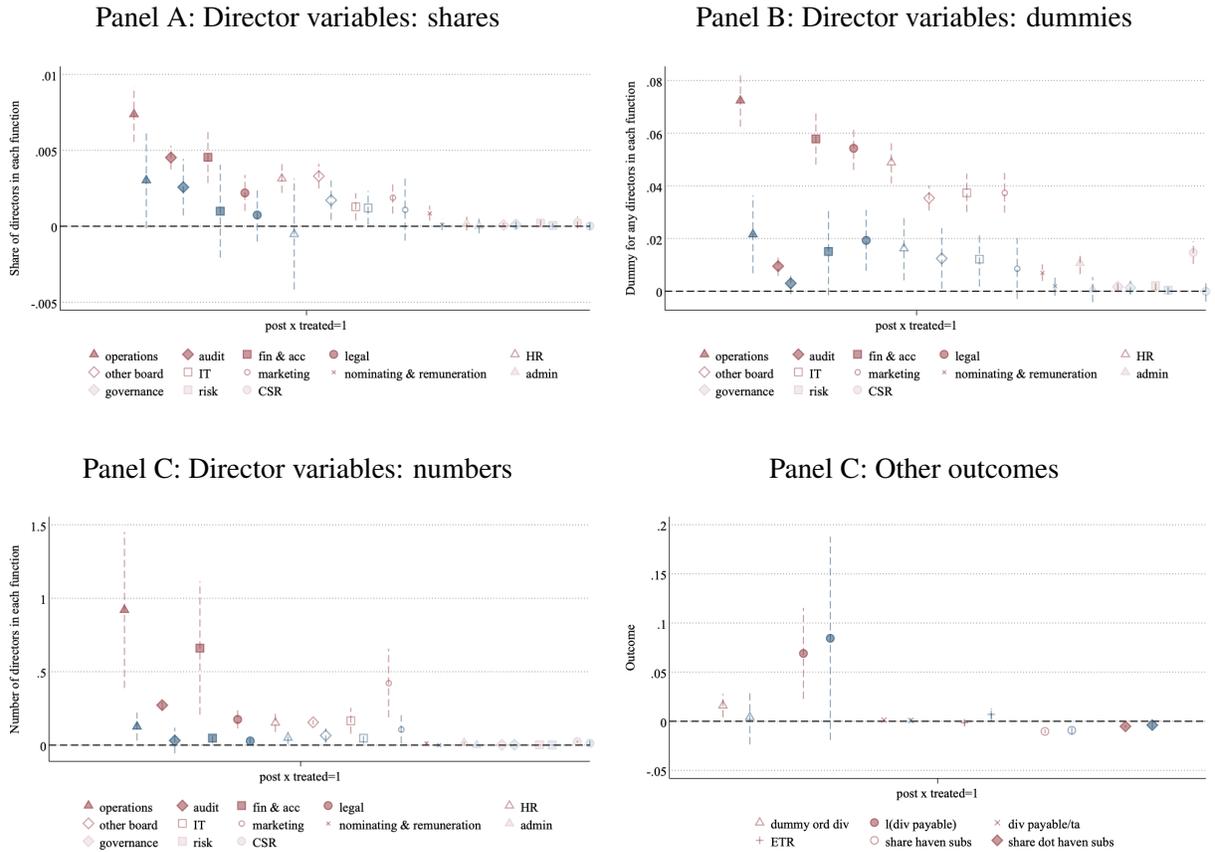
B.1 Robustness tests

Figure B1a: Effects of tax leaks on firm governance: non-overlapping functional roles



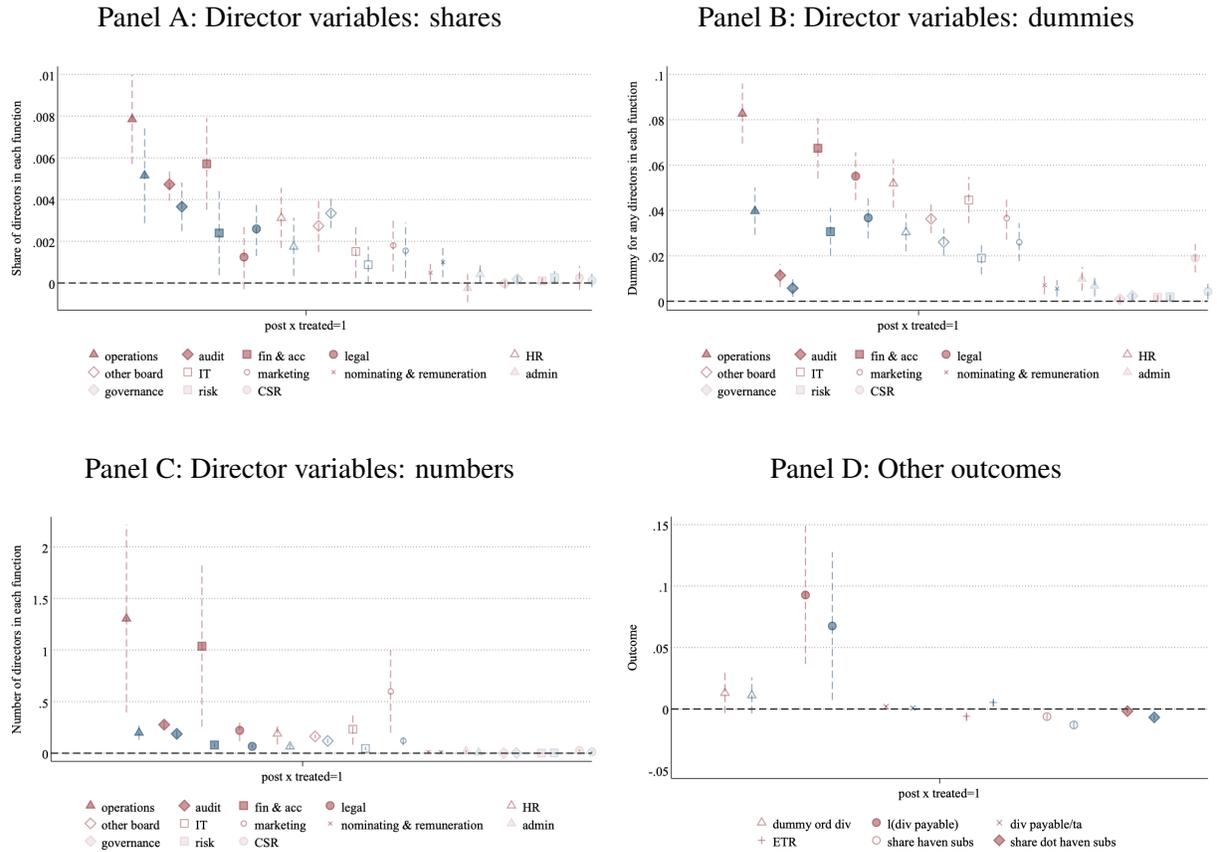
This figure shows the effects of offshore data leaks on firm governance for directors appointed to a single functional role. 1% of observations in the sample include directors appointed to multiple functional roles. For these directors, we use only the first functional role listed in Orbis, rather than allowing directors to have multiple roles (non-overlapping directors). Each shape corresponds to the coefficient estimate from the baseline difference-in-differences model with vertical bars representing 95% confidence intervals. Panel A uses the share of directors in each function (the number of directors in each function scaled by total number of directors) as dependent variables. Panel B uses an indicator equal to one if a firm has any directors in a given function, and zero otherwise as dependent variables. Panel C uses the number of directors in each function as dependent variables. The coefficient estimates are sorted based on their magnitude in Panel A of Figure 1. Variables definitions are provided in the Appendix. For the detailed list of Orbis functional role classifications see Table A4a in the Online Appendix. Each specification includes cohort times year FE, cohort times firm FE, and sector times year FE. Standard errors are clustered at the firm level.

Figure B1b: Mechanism: secrecy of the leaked tax haven, robustness to a lower secrecy threshold.



This figure shows the effects of offshore data leaks across the main variables of interest highlighting heterogeneity between firms that experienced a leak of a more secretive and less secretive tax haven. Table A2c indicates which tax havens are classified into more and less secretive. This figure uses the 65 as an alternative cutoff for the secrecy score to define secretive tax havens. Each panel shown results for a different dependent variable across each heterogeneity. Results for leaks in more secretive tax havens are showed in red and results for leaks in less secretive tax havens are showed in navy. The vertical dashed lines show 95% confidence intervals. Variables descriptions are provided in the Appendix. Each specification includes cohort times year FE, cohort times firm FE, and sector times year FE, and cluster standard errors at the firm level.

Figure B1c: Mechanism: secrecy of the leaked tax haven, robustness to a higher secrecy threshold.



This figure shows the effects of offshore data leaks across the main variables of interest highlighting heterogeneity between firms that experienced a leak of a more secretive and less secretive tax haven. Table A2c indicates which tax havens are classified into more and less secretive. This figure uses the 75 as an alternative cutoff for the secrecy score to define secretive tax havens. Each panel shown results for a different dependent variable across each heterogeneity. Results for leaks in more secretive tax havens are showed in red and results for leaks in less secretive tax havens are showed in navy. The vertical dashed lines show 95% confidence intervals. Variables descriptions are provided in the Appendix. In each specification we include cohort times year FE, cohort times firm FE, and sector times year FE, and cluster standard errors at the firm level.

B.2 Alternative ETR measures

Table B2a: Effects of offshore data leaks on ETR: alternative measures

	(1) ETR	(2) ETR	(3) ETR
$\text{post}_i \times \text{leaked}_i$	-0.002 (0.002)	-0.002 (0.002)	0.001 (0.001)
Observations	386,393	798,776	338,815
firms	25,872	60,822	27,772
Mean	0.248	0.329	0.256
R-squared	0.582	0.623	0.913
Cohort \times Year FE	✓	✓	✓
Cohort \times Firm FE	✓	✓	✓
Sector \times Year FE	✓	✓	✓

This table presents regression results of offshore data leaks on ETR, using alternative ETR calculations. Column 1 scales tax liability by earnings before tax (EBT), Column 2 scales it by net income, and Column 3 calculates the five-year running average of tax liability scaled by profit and loss before taxes. Variables are defined in the Appendix. Each specification includes cohort times years FE, cohort times firm FE, and sector times year FE, and cluster standard errors at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

B.3 Effects on CEO and CFO new appointment and turnover

Table B3a: Effects on CEO and CFO new appointment and turnover

	(1) new CEO appt	(2) CEO turnover	(3) new CFO appt	(4) CFO turnover
$\text{post}_t \times \text{leaked}_i$	0.006 (0.011)	-0.009 (0.006)	0.019 (0.024)	-0.012* (0.006)
Observations	78,512	78,512	13,022	13,022
# firms	4,955	4,955	858	858
Mean	0.108	0.008	0.112	0.001
R-squared	0.271	0.279	0.263	0.279
Cohort \times Year FE	✓	✓	✓	✓
Cohort \times Firm FE	✓	✓	✓	✓
Sector \times Year FE	✓	✓	✓	✓

This table presents regression results of offshore data leaks on CEO and CFO new appointment and turnover. In Columns 1 and 2, the dependent variables are indicators equal to one for CEO new appointment and turnover, respectively, and zero otherwise. In Columns 3 and 4, the dependent variables are indicators equal to one for a CFO new appointment and turnover, respectively, and zero otherwise. The sample is restricted to only firms that report CEO and CFO information. Variables are defined in the Appendix. Each specification includes cohort times years FE, cohort times firm FE, and sector times year FE, and cluster standard errors at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

B.4 Heterogeneity based on the closure of the leaked subsidiary

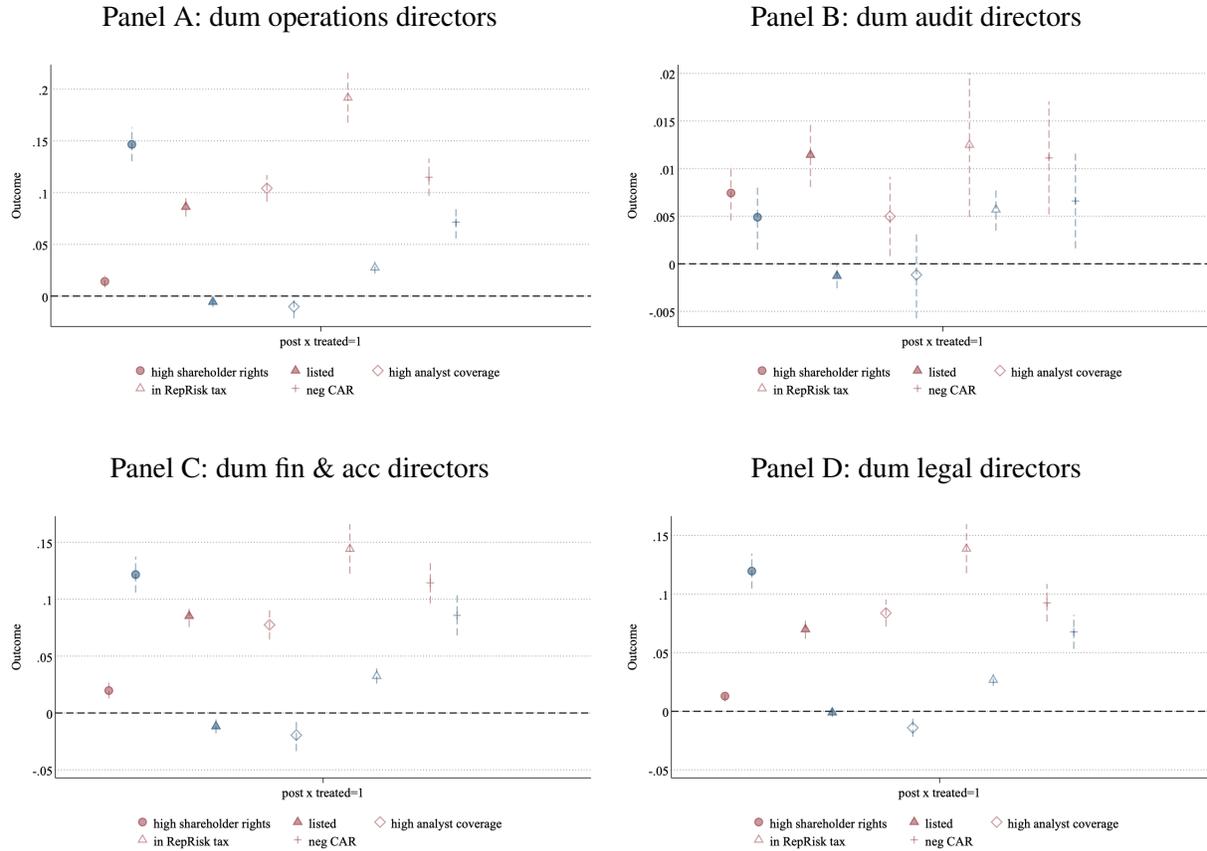
Table B4a: Effects of offshore data leaks based on the closure of the leaked subsidiary

	(1) share h subs	(2) share large h subs	(3) share dot h subs	(4) share pref subs	(5) ETR	(6) ETR 3y avg
$\text{post}_t \times \text{leaked}_i$	-0.006*** (0.002)	-0.004** (0.002)	-0.002* (0.001)	-0.001 (0.001)	0.008*** (0.003)	0.002 (0.002)
$\text{post} \times \text{treated}=1$ $\times \text{active}=1$	-0.004 (0.003)	-0.004 (0.002)	-0.001 (0.002)	0.002 (0.001)	0.003 (0.004)	0.005 (0.003)
Observations	1,055,612	1,055,612	1,055,612	1,055,612	620,182	382,342
# firms	70,222	70,222	70,222	70,222	49,008	31,452
Mean	0.091	0.058	0.026	0.056	0.255	0.256
R-squared	0.911	0.902	0.894	0.952	0.583	0.837
Cohort \times Year FE	✓	✓	✓	✓	✓	✓
Cohort \times Firm FE	✓	✓	✓	✓	✓	✓
Sector \times Year FE	✓	✓	✓	✓	✓	✓

This table presents regression results of offshore data leaks on effective tax rates (ETRs) and group structure, comparing firms that did not close down the leaked haven subsidiary (where dummy active is equal to one) and those that did close the leaked haven subsidiary. Columns 1-4 show the effects on group structure by examining the effects on the share of tax haven subsidiaries in Column 1, share of large tax haven subsidiaries in Column 2, share of dot tax haven subsidiaries in Column 3, and share of subsidiaries in countries with preferential tax regimes in Column 4. Definitions of tax havens and countries with preferential tax regimes are based on De Simone and Olbert (2022). Columns 5 and 6 show the effects of the leaks on ETR. The outcome variable in Column 5 is the ratio of tax liability to profit and loss before tax. Column 6 uses the three-year moving average ETR. Variables are defined in the Appendix. Each specification includes cohort times years FE, cohort times firm FE, and sector times year FE, and cluster standard errors at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

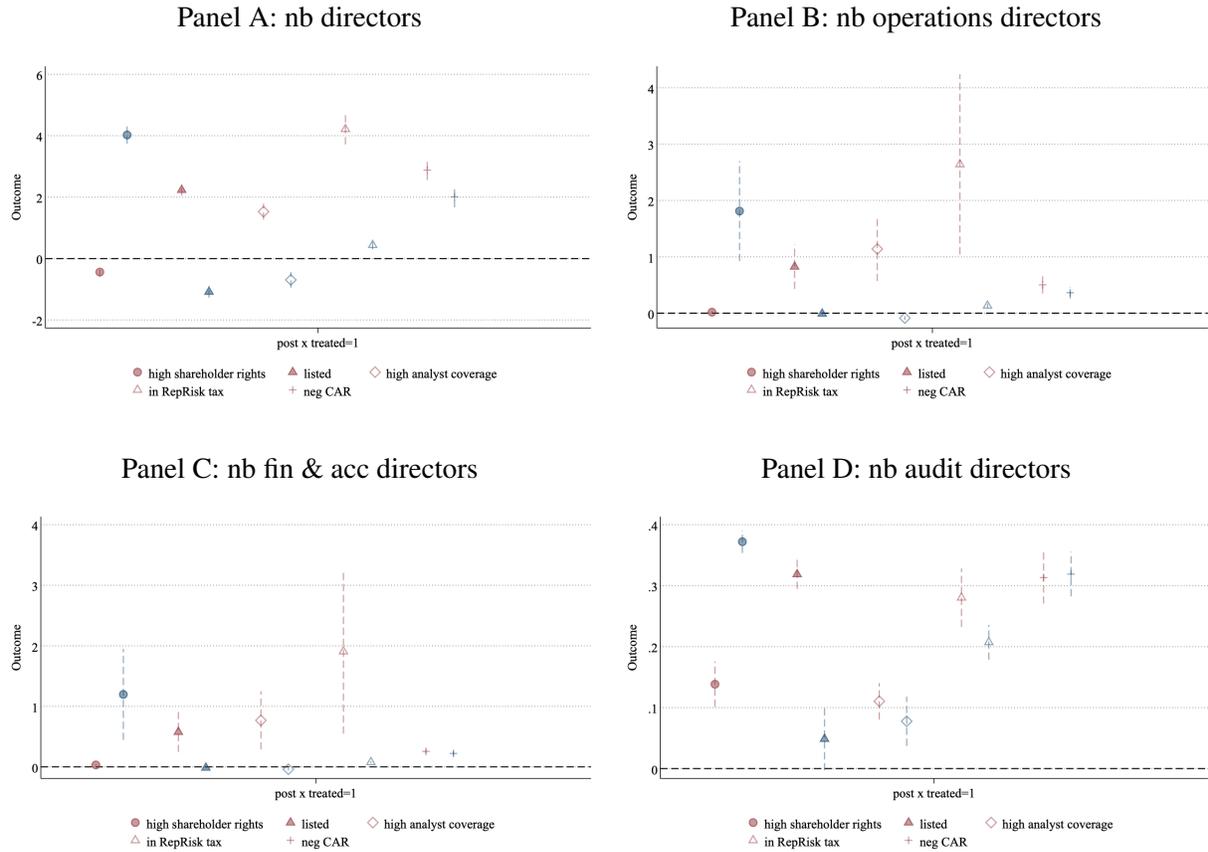
B.5 Mechanisms: additional outcome variables

Figure B5a: Mechanism: heterogeneous response to leaks, governance with dummies as outcomes



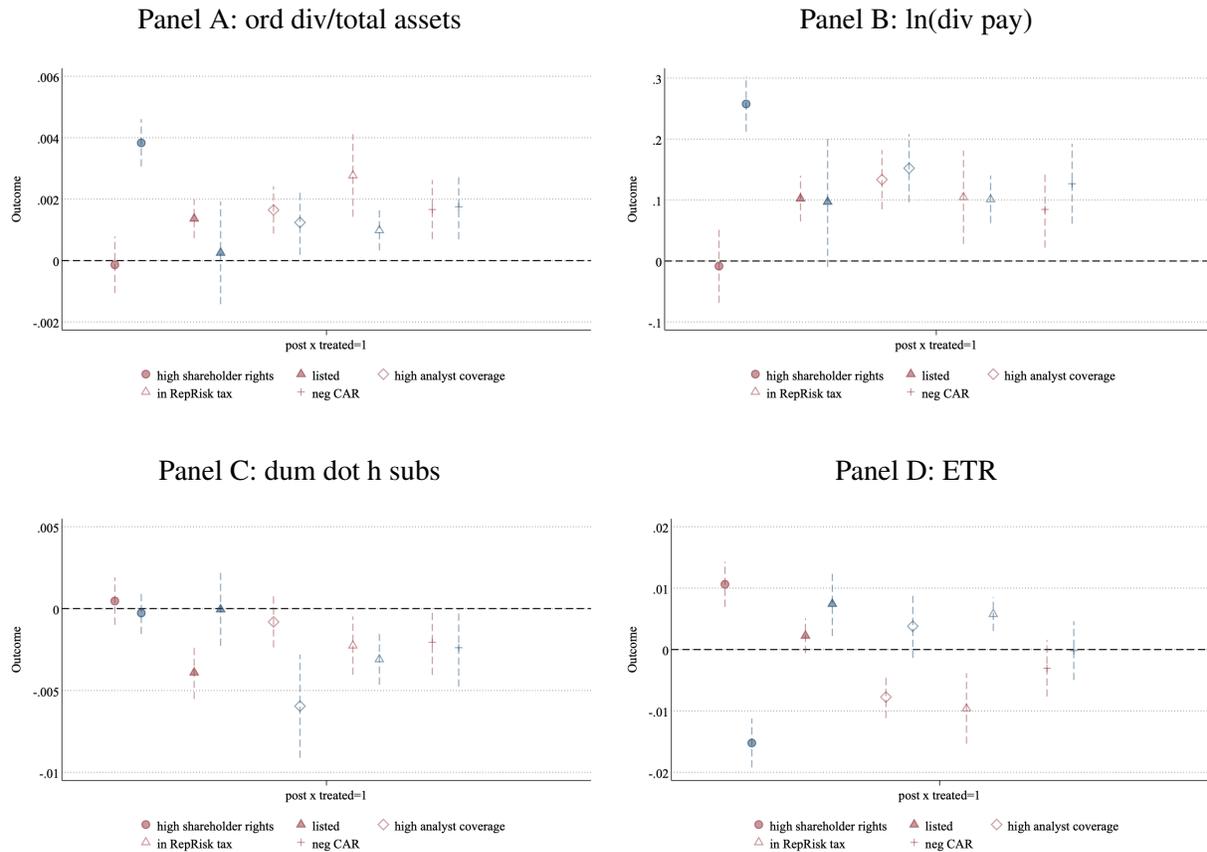
This figure shows the effects of offshore data leaks across the top four functional roles with largest magnitude of the response, highlighting six key heterogeneities. Each panel shows results for a different dependent variable across each heterogeneity. Firms headquartered in countries with high shareholder protection rights are plotted in red filled circles, publicly listed firms in red filled triangles, firms with above median analyst coverage in hollow red diamonds, firms that are covered by tax risk-related news in red hollow triangles, and firms with negative market reaction to the leaks in red crosses. Their counterparts are plotted in blue. Firms headquartered in countries with low shareholder protection rights, privately owned firms, firms with below median analyst coverage, firms that are not covered by tax risk-related news, and firms with experiencing non-negative market reactions to the leaks. The vertical dashed lines show 95% confidence intervals. Variables are defined in the Appendix. In each specification we include cohort times years FE, cohort times firm FE, sector times year FE, and cluster standard errors at the firm level.

Figure B5b: Mechanism: heterogeneous response to leaks, additional governance variables pt 1



This figure shows the effects of offshore data leaks across the top four functional roles with largest magnitude of the response, highlighting six key heterogeneities. Each panel shows results for a different dependent variable across each heterogeneity. Firms headquartered in countries with high shareholder protection rights are plotted in red filled circles, publicly listed firms in red filled triangles, firms with above median analyst coverage in hollow red diamonds, firms that are covered by tax risk-related news in red hollow triangles, and firms with negative market reaction to the leaks in red crosses. Their counterparts are plotted in blue. Firms headquartered in countries with low shareholder protection rights, privately owned firms, firms with below median analyst coverage, firms that are not covered by tax risk-related news, and firms with experiencing non-negative market reactions to the leaks. The vertical dashed lines show 95% confidence intervals. Variables are defined in the Appendix. In each specification we include cohort times years FE, cohort times firm FE, sector times year FE, and cluster standard errors at the firm level.

Figure B5c: Mechanism: heterogeneous response to leaks, additional variables pt 2



This figure shows the effects of offshore data leaks across the top four functional roles with largest magnitude of the response, highlighting six key heterogeneities. Each panel shows results for a different dependent variable across each heterogeneity. Firms headquartered in countries with high shareholder protection rights are plotted in red filled circles, publicly listed firms in red filled triangles, firms with above median analyst coverage in hollow red diamonds, firms that are covered by tax risk-related news in red hollow triangles, and firms with negative market reaction to the leaks in red crosses. Their counterparts are plotted in blue. Firms headquartered in countries with low shareholder protection rights, privately owned firms, firms with below median analyst coverage, firms that are not covered by tax risk-related news, and firms with experiencing non-negative market reactions to the leaks. The vertical dashed lines show 95% confidence intervals. Variables are defined in the Appendix. In each specification we include cohort times years FE, cohort times firm FE, sector times year FE, and cluster standard errors at the firm level.

B.6 US vs non-US firms

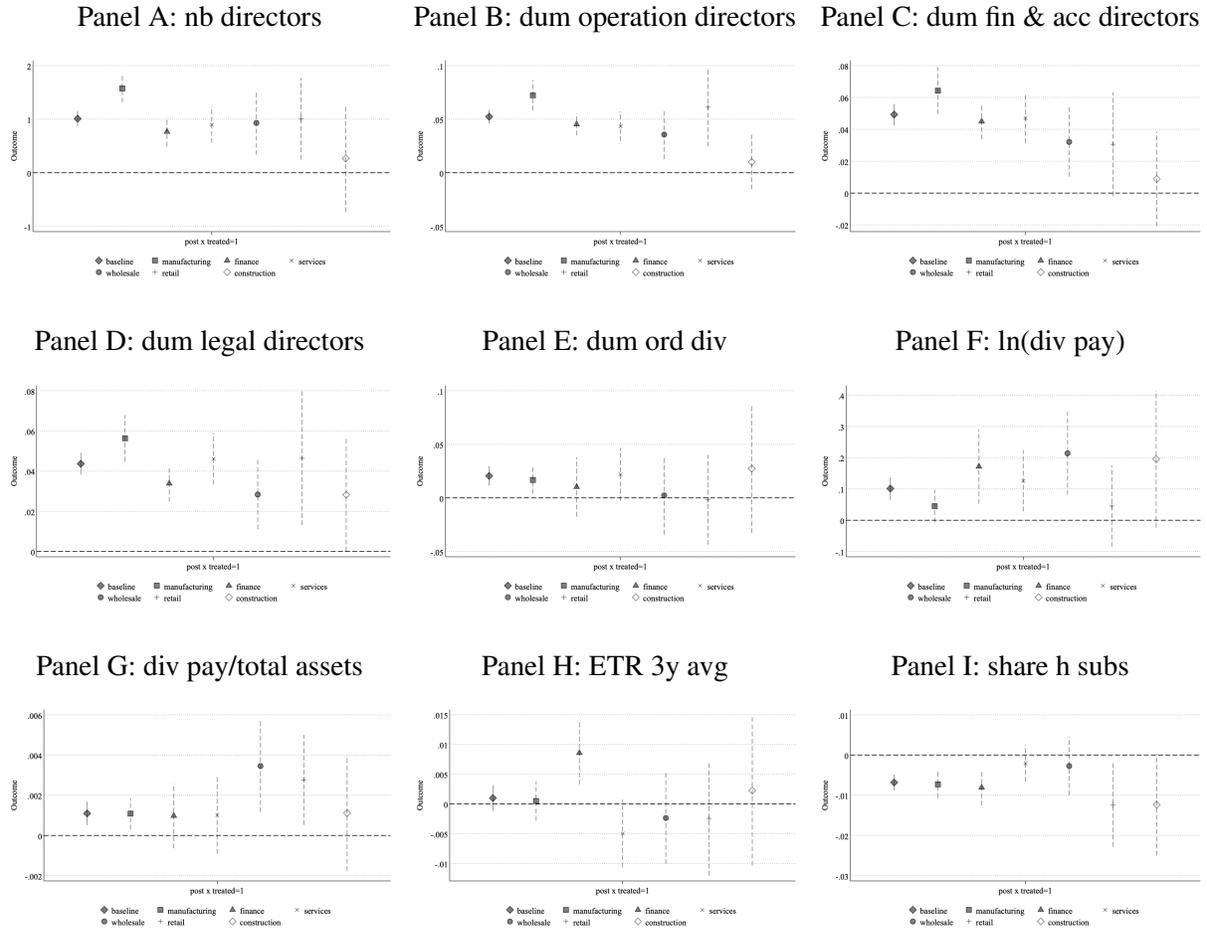
Table B6a: Heterogeneous effects of offshore data leaks across US vs non-US headquartered firms

Panel A: Director results									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	nb dirs	dummy oper	share oper	dummy finacc	share finacc	dummy legal	share legal	dummy audit	share audit
$post_t \times leaked_i$	0.163* (0.085)	0.020*** (0.003)	0.002*** (0.001)	0.022*** (0.004)	0.003*** (0.001)	0.015*** (0.003)	0.001*** (0.000)	0.007*** (0.002)	0.004*** (0.000)
$post_t \times leaked_i$ $\times UShqed=1$ (0.001)	5.820*** (0.242)	0.215*** (0.206)	0.021*** (0.015)	0.190*** (0.003)	0.009*** (0.015)	0.190*** (0.003)	0.004 (0.015)	-0.003 (0.003)	0.002*** (0.003)
Observations	725521	725521	725521	725521	725521	725521	725521	725521	725521
# Firms	45491	45491	45491	45491	45491	45491	45491	45491	45491
Mean	6.116	0.060	0.017	0.088	0.023	0.030	0.005	0.061	0.034
R-squared	0.952	0.884	0.896	0.870	0.865	0.845	0.813	0.985	0.979
Panel B: Other outcomes									
	dummy ordinary div	l(div payable)	div payable/ta	ETR: 3-yr avg	share h subs	share dot h subs			
$post_t \times leaked_i$	0.020*** (0.006)	0.100*** (0.022)	0.001*** (0.000)	0.007*** (0.001)	-0.008*** (0.001)	-0.003*** (0.001)			
$post_t \times leaked_i$ $\times UShqed=1$	0.024* (0.013)	0.031 (0.054)	0.000 (0.001)	-0.047*** (0.003)	0.006*** (0.002)	0.002* (0.001)			
Observations	344703	338639	351060	520791	1082364	1082364			
# Firms	20028	19742	20415	40897	74039	74039			
Mean	0.422	14.942	0.022	0.256	0.091	0.026			
R-squared	0.581	0.832	0.672	0.830	0.911	0.894			
Cohort \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cohort \times Firm FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sector \times Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓

This table presents heterogeneity results across main outcome variables for US vs non-US headquartered firms. The outcome variables are listed in the column titles and number of all directors, number of finance and accounting directors, dummy for a finance and accounting director, share of finance and accounting directors in all directors, dummy for dividends ordinary dividends, log of dividends payable, dividends payable scaled by total assets, share of tax haven subsidiaries and effective tax rate (ETR). $leaked_i$ denotes firms that had at least one subsidiary implicated in the leaks, $post_t$ is equal to 1 in all years after the leak occurred, $UShqed_i$ is equal to 1 for US firms and 0 for firms headquartered in all other countries. Variables are defined in the Appendix. Each specification includes cohort times years FE, cohort times firm FE, and sector times year FE, and cluster standard errors at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

B.7 Sectoral variation

Figure B7a: Sectoral variation



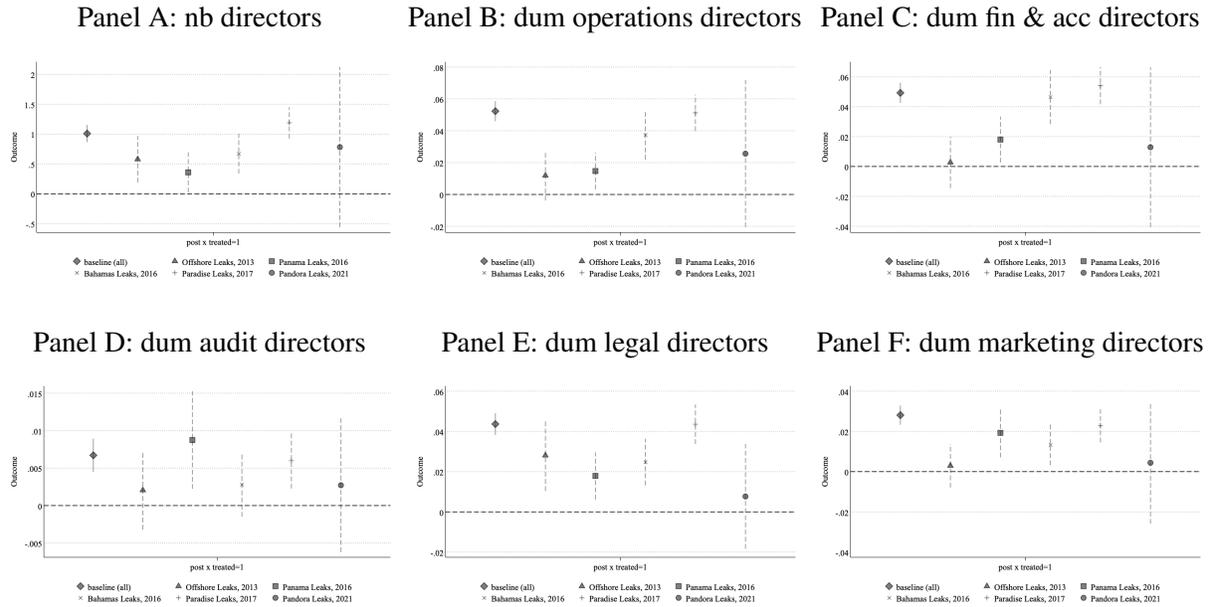
This figure shows the effects of offshore data leaks across sectors. Each panel shows results for a different dependent variable across different sectors. Each symbol represents a different sector and each estimation is done within the sector, so it compares treated firms to control firms only in that sector. Different symbols represent coefficient estimates; the vertical dashed lines show 95% confidence intervals. Variables are defined in the Appendix. Each specification includes cohort times year FE, cohort times firm FE, and sector times year FE and cluster standard errors at the firm level.

C Differences between leaks

Table C1: Descriptive statistics: comparison of treated firms across leaks

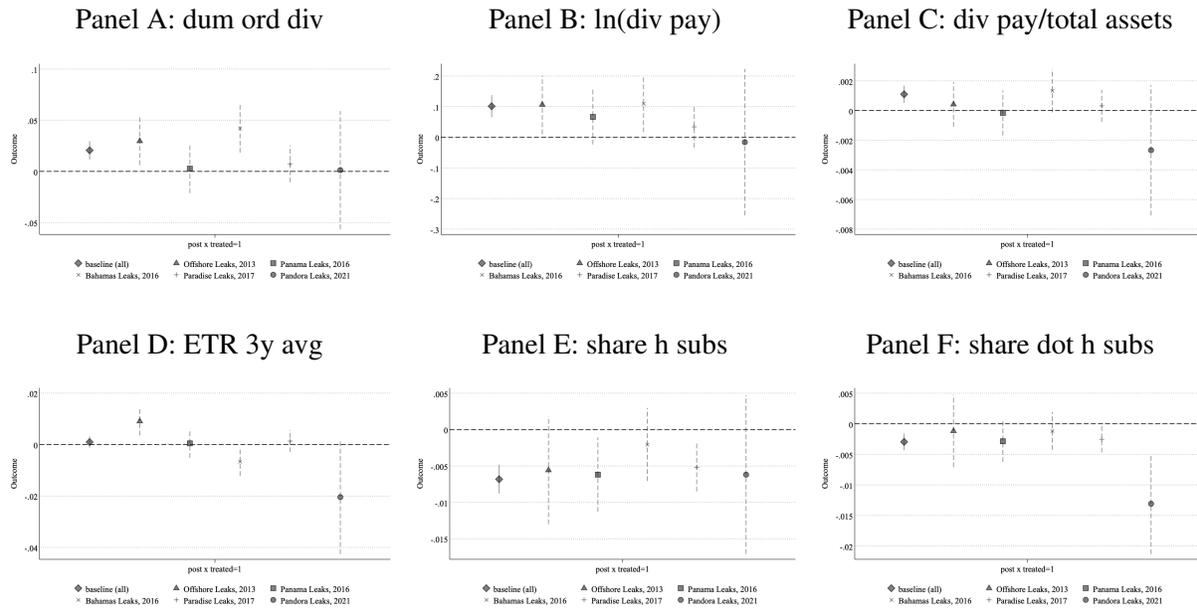
	(1) Offshore	(2) Panama	(3) Bahamas	(4) Paradise	(5) Pandora
nb directors	12.577	13.854	13.591	12.891	15.438
nb BoD	6.899	7.585	7.668	7.128	8.688
nb operations directors	2.183	2.031	2.040	1.725	2.308
nb audit directors	0.237	0.364	0.272	0.464	0.510
nb fin & acc directors	1.765	1.352	1.394	0.982	0.423
nb legal directors	0.360	0.281	0.352	0.298	0.370
nb marketing directors	1.102	0.971	1.016	0.923	1.899
nb CSR directors	0.021	0.0400	0.044	0.048	0.1390
nb HR directors	0.295	0.295	0.325	0.264	0.409
nb admin directors	0.035	0.042	0.040	0.039	0.077
nb IT directors	0.363	0.305	0.281	0.249	0.365
nb governance directors	0.006	0.004	0.003	0.004	0.005
nb nom & remun directors	0.021	0.026	0.014	0.009	0.010
nb other board directors	0.178	0.152	0.131	0.184	0.260
nb risk directors	0.005	0.004	0.000	0.006	0.005
dum ord div	0.647	0.592	0.629	0.569	0.645
ln(ord div)	16.914	17.306	17.482	17.337	17.815
ord div/total assets	0.024	0.019	0.019	0.018	0.023
dum abn ord div	0.420	0.397	0.432	0.402	0.464
dum div pay	0.814	0.814	0.797	0.780	0.882
ln(div pay)	16.325	16.596	16.721	16.421	16.854
div pay/total assets	0.030	0.026	0.023	0.023	0.030
dum abn div pay	0.531	0.530	0.503	0.523	0.533
nb subs	343.613	372.126	395.984	312.941	546.513
share f subs	0.516	0.469	0.434	0.445	0.461
share h subs	0.180	0.145	0.118	0.137	0.134
share large h subs	0.094	0.087	0.070	0.063	0.086
share dot h subs	0.079	0.050	0.038	0.054	0.035
share pref subs	0.030	0.045	0.048	0.058	0.044
ETR	0.240	0.246	0.249	0.248	0.251
ETR 3y avg	0.235	0.245	0.252	0.252	0.239
reprisk news	0.291	0.263	0.290	0.267	0.291
reprisk tax	0.103	0.110	0.126	0.107	0.115
ln(turnover)	19.640	19.812	19.982	19.732	20.274
ln(employees)	7.617	7.621	7.622	7.447	7.965
ln(total assets)	20.299	20.423	20.530	20.331	20.825
ln(fixed assets)	19.111	19.305	19.430	19.280	19.613
firm age	40.222	42.635	43.428	41.325	43.207
publicly listed	0.715	0.634	0.633	0.618	0.664

Figure C1: Differences between leaks, governance outcomes



This figure shows the effects on the main variables of interest across the leaks. Each symbol corresponds to a coefficient estimate, while dashed vertical lines are 95% confidence intervals. Dependent variables are indicated in the Panel titles, while each marker corresponds to coefficient estimates using different sub-samples. Each leak is compared to the control group, excluding firms that had leaked subsidiaries in other leaks. Variables are defined in the Appendix. In each specification, we include firm and sector-year fixed effects. Standard errors are clustered at the firm level.

Figure C2: Differences between leaks, other outcomes



This figure shows the effects on the main variables of interest across the leaks. Each symbol corresponds to a coefficient estimate, while dashed vertical lines are 95% confidence intervals. Dependent variables are indicated in the Panel titles, while each marker corresponds to coefficient estimates using different sub-samples. Each leak is compared to the control group, excluding firms that had leaked subsidiaries in other leaks. Variables are defined in the Appendix. In each specification, we include firm and sector-year fixed effects. Standard errors are clustered at the firm level.