# Watching the Watchdogs: The Information Content of SEC Interactions

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#### Abstract

Using smartphone geolocation data, we provide systematic evidence of physical regulatory interactions at SEC offices and corporate headquarters across all stages of oversight. Prior research has focused on formal investigations and enforcement actions due to their observability. Our methodology reveals many interactions occur outside these proceedings, challenging assumptions that dates of formal investigations fully capture oversight activity. On average, interactions predict abnormal returns of -3.9% over three months, with larger effects when followed by enforcement actions. Although insiders typically reduce selling around interactions, those who continue trading avoid substantial losses. These effects are concentrated among C-suite officers and opportunistic traders.

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#### 1. Introduction

Securities markets depend on the timely flow of information about regulatory concerns to function efficiently, yet early signals of potential enforcement actions are often difficult for investors to observe. When the Securities and Exchange Commission (SEC) identifies possible securities violations, the regulatory process typically unfolds over months or years through multiple stages: preliminary inquiries, formal investigations, and ultimately enforcement actions (GAO, 2007). While extensive research has examined the market impact of publicly announced enforcement actions (Karpoff et al., 2008a,b) and, more recently, formal SEC investigations obtained through Freedom of Information Act requests (Blackburne et al., 2021; Blackburne and Quinn, 2023), these studies necessarily focus on advanced stages of the regulatory process where potential violations have already been formally identified. This focus on observable final regulatory outcomes creates a fundamental gap in our understanding of when markets first learn about regulatory concerns and how information flows during the earliest stages of SEC oversight.

This gap exists because the SEC's early-stage process remains largely opaque. Before opening formal investigations, SEC staff conduct preliminary inquiries known as Matters Under Inquiry (MUIs) to evaluate whether potential violations warrant further investigation (SEC, 2011). These preliminary interactions can include document requests, voluntary meetings with management, or on-site examinations, but they generally are not publicly disclosed and leave limited documentary trails. According to a 2011 Office of Inspector General report, nearly half of all MUIs conclude without escalating to formal investigations, meaning substantial regulatory oversight activity remains completely unobservable to researchers and market participants (SEC, 2011). Even when preliminary inquiries do progress to formal investigations, Blackburne et al. (2021) document that formal proceedings begin an average of two years before any public disclosure, suggesting that meaningful regulatory interactions likely occur well before the official investigation dates studied in prior literature. As Rajgopal and White (2017) note, "even for those cases that are made public eventually, identifying the trigger event and the date on which such event was publicly known is difficult."

We provide the first systematic evidence of SEC oversight across all stages, revealing extensive regulatory activity that traditional data sources cannot capture. To accomplish this, we use de-identified smartphone geolocation data covering 26 major metropolitan areas that encompass most SEC offices and public firm headquarters. We identify devices regularly present at SEC offices and firm headquarters during 2019 and early 2020, enabling us to construct a novel measure of physical regulatory interactions (henceforth "Firm-SEC Interactions"). Because regulated entities such as registered investment advisers (RIAs) face routine examinations that differ from investigative visits, we analyze both the full sample and a refined sample of reporting companies excluding financial and utility firms. This granular approach reveals previously hidden aspects of regulatory oversight: preliminary contact before formal investigations begin, ongoing interactions during active investigations, and regulatory contact that never escalates to formal proceedings.

Our analysis of SEC interactions confirms expected patterns of regulatory oversight while documenting previously unobservable aspects of regulatory activity. In the full sample, we find regulated financial entities, such as RIAs subject to routine examinations, are more than five times as likely to interact with the SEC, consistent with established supervisory procedures. Beyond these expected supervisory interactions, we observe substantial SEC activity with non-regulated entities. Moreover, we document two previously unobservable patterns of SEC interactions. First, the majority of interactions occur outside the timeline of formal SEC investigations. Second, we observe "cross-regional" activity, with interactions sometimes occurring between firms and SEC offices located in different jurisdictions. This pattern suggests that regulatory oversight may be less geographically constrained than previously assumed.

We next study whether interactions with the SEC are associated with changes in firm value and insider behavior. Given that interactions may signal increased regulatory scrutiny or potential enforcement actions, we examine stock returns around these events. Though these interactions with the SEC are typically not publicized, sophisticated investors are adept at uncovering signs of firm misconduct (Karpoff and Lou, 2010; Fang et al., 2016), and recent evidence shows they can extract information about SEC investigations from indirect sources such as denied FOIA requests (Coleman et al., 2023) suggesting there is potential for information leakage. We find a significant decline in stock prices following an interaction, with three-month abnormal returns around -1.42% for the full sample and -3.93% for reporting companies. This decline is more pro-nounced for firms that are part of an ongoing SEC formal investigation and for firms that sub-sequently have an SEC enforcement action brought against them. Notably, we observe negative returns even for firms that are not part of a formal SEC investigation, suggesting that interactions convey material information beyond the subset of cases resulting in explicit regulatory proceedings.

Given the materiality of these SEC interactions, a natural question arises regarding how firm insiders react. Insiders are presumably aware of SEC interactions with their firms, whether these occur at the firm's headquarters or at SEC offices. Under the established legal principle of "disclose or abstain," corporate insiders must either publicly disclose material non-public information or refrain from trading when they possess knowledge that could materially impact the company's stock price. This creates competing incentives: insiders may avoid transactions to comply with legal obligations and avoid the appearance of impropriety, or they may be tempted to sell shares to limit losses from these typically negative regulatory events that are not publicly released. Kacperczyk and Pagnotta (2024) demonstrate that insiders facing regulatory scrutiny rationally internalize legal risks, trading less aggressively when prosecution probability increases, suggesting substantial deterrent effects of regulatory oversight. Consistent with legal compliance taking precedence, we find insiders, especially C-suite officers most aware of SEC interactions and who face higher scrutiny regarding trading decisions, are less likely to sell around SEC interactions. Specifically, insiders are 17.5% less likely to sell in the two weeks surrounding an SEC interaction relative to periods with no interactions.

Despite the overall reduction in insider trading, some insiders still transact around SEC interactions. When they do sell, these insiders avoid substantial losses, with three-month abnormal returns of -3.2% (-6.3% for reporting companies) following their sales. This suggests that insiders who choose to trade despite legal risks possess particularly negative private information about regulatory outcomes. The magnitude of these avoided losses varies systematically with insider proximity to regulatory information. Officer sales around SEC interactions are followed by larger negative returns than comparable sales by non-executive insiders such as directors and 10% blockholders, consistent with officers' superior knowledge of the firm's regulatory exposure. Similarly, abnormal losses are concentrated among opportunistic (nonroutine) traders<sup>1</sup>, whose trading patterns suggest they time transactions around private information, whereas routine traders show little evidence of superior timing around SEC interactions

A central challenge in studying regulatory oversight is distinguishing whether market reactions reflect information revealed through regulatory interactions versus correlation with underlying firm problems that attract both SEC attention and negative returns. Several patterns support an information revelation interpretation. The precise timing of negative returns immediately following interactions, without any pre-existing trends, suggests these events accelerate information discovery rather than simply coinciding with pre-existing concerns. Moreover, we observe significant return effects even for firms outside formal SEC investigations, indicating our measure captures information beyond established cases. The stronger return patterns when corporate officers, who most directly observe regulatory interactions, trade around these events further suggests that physical SEC presence conveys incremental information. While underlying firm conditions likely influence both regulatory attention and future performance, the evidence indicates these interactions represent important moments when negative information flows to markets.

Our study contributes to the growing forensic finance literature, which develops investigative methods to uncover misconduct in financial settings (Griffin et al., 2024). We advance this literature by developing geolocation-based methods to study SEC interactions with firms across all stages of the regulatory process. Prior research has primarily examined market reactions around SEC enforcement actions (Karpoff et al., 2008a,b), with evidence that information begins leaking

<sup>&</sup>lt;sup>1</sup>We classify insiders as routine or nonroutine following Cohen et al. (2012).

to markets months before these public announcements through sequential revelation processes (Dechow et al., 1996; Griffin et al., 2004). Recent work has expanded the observable timeline by studying formal SEC investigations through Freedom of Information Act requests (Blackburne et al., 2021; Blackburne and Quinn, 2023; Holzman et al., 2024; Bonsall et al., 2024), and Coleman et al. (2023) demonstrate that even denied FOIA requests provide information signals to sophisticated investors. However, because these approaches require formal proceedings, they miss preliminary activity at the Matter Under Inquiry stage and interactions that never advance to formal investigations. Our novel contribution is to observe a more complete view of this previously unobservable "black box" of regulatory oversight. We find that most SEC interactions occur outside formal investigation timelines, challenging the assumption that formal proceedings capture most economically meaningful regulatory activity. When interactions precede formal investigations, market reactions begin well before investigations officially open, suggesting markets learn of regulatory concerns well before the formal investigation dates studied in prior work. Our findings also suggest that modern oversight is less constrained by geographic proximity than previously documented (Kedia and Rajgopal, 2011), providing new insights into how the SEC allocates attention and oversees firms in practice.

This paper also contributes to research examining how insiders trade around corporate events. While extensive work has studied trading around public disclosures such as earnings announcements (Jagolinzer et al., 2011) and restatements (Badertscher et al., 2011), we examine trading around private regulatory events. Our setting is unique because, unlike mergers (Heitzman and Klasa, 2021) or auditor communications (Arif et al., 2022) where insiders may have discretion over eventual public disclosure, SEC investigations create a period where insiders possess material private information but likely face significant legal risk from trading. Kacperczyk and Pagnotta (2024) demonstrate that insiders facing regulatory scrutiny rationally internalize legal risks, trading less aggressively when prosecution probability increases. Our evidence that some insiders continue to trade and profit substantially during these periods adds to understanding of how executives navigate regulatory scrutiny and benefit from corporate misconduct (Beneish, 1999; Karpoff et al., 2008a).

Our findings also extend the growing body of literature employing high-frequency "digital footprints" to illuminate otherwise hard-to-observe economic interactions. Bushee et al. (2018) used corporate jet flight data to uncover previously unobservable private meetings between managers and institutional investors. Taxi ridership data covering New York City has been used to study interactions between the Federal Reserve and banks (Bradley et al., 2024), sell-side analysts and firms (Choy and Hope, 2023), and institutional investors and firms (Cicero et al. 2021; Kirk and Piao 2024). Smartphone GPS data has been used to study acquisitions (Testoni et al., 2022), patenting activity (Atkin et al., 2022), and geographic mobility (Chen and Pope, 2020). Our use of geolocation data is novel in that we systematically characterize nationwide interactions between regulators and public firms, providing insights into a crucial but previously unobservable relationship in financial markets.

#### 2. Data

#### 2.1. Geolocation Data

To create a proxy for SEC interactions with firms, we use de-identified smartphone geolocation data for a sample of US phones from January 2019 to February 2020<sup>2</sup> for the top 26 major metropolitan statistical areas (MSAs). We obtain this data from an online data vendor that provides data commercially to businesses, governments, and researchers. The data vendor works with numerous mobile application providers that track "pings" of the location of a phone while the application is either currently in use or is running in the background.<sup>3</sup> Reassuringly, prior research has shown that this data is representative of the demographics of the US population, with the exception of a skew towards wealthier individuals (Chen and Pope, 2020). The frequency of pings captured in the data is also reliant on the popularity of the applications that the data vendor has access to, which may vary over time. To mitigate this concern, we include day-level

<sup>&</sup>lt;sup>2</sup>We choose this endpoint as the SEC transitioned to remote work arrangements in March 2020 due to COVID-19.

<sup>&</sup>lt;sup>3</sup>The data does not give continuous location positioning, but it is possible to estimate within-day movement for each device using intermittent ping signals.

fixed effects in all regressions that analyze reactions to on-site interactions. While the geolocation data may contain noise due to individuals lending out their phones, powering off devices while at work, using work-approved devices with limited tracking abilities, or choosing not to bring personal phones into the workplace, such scenarios would only attenuate our findings. Importantly, we never attempt to identify specific individuals and only analyze aggregate patterns of firm-SEC interactions. Moreover, the data captures approximately 10% of phones pinging each day and 50% pinging each month, suggesting our estimates likely represent a lower bound given that not all interactions are captured in the dataset.

We retrieve historical corporate headquarters addresses from the 2019 10-X header data obtained from the Notre Dame Software Repository for Accounting and Finance and addresses for SEC offices from an archived version of the SEC's regional offices webpage.<sup>4</sup> Using this data, we utilize the Bing Maps Locations API to geolocate the latitude and longitude of each address. To further improve precision and accuracy, we manually verify the geolocated coordinates for each firm, ensuring they are within the boundaries of the corresponding building shapes.<sup>5</sup> The building shapes primarily originate from the Microsoft US Building Footprint dataset, featuring over 125 million rooftop shapes generated through computer vision. To enhance this dataset, we incorporate a more precise city-level shapefile for locations where local governments provide open data on building shapes, including Boston, Chicago, Los Angeles, New York City, Washington DC, and San Francisco.

To identify potential interactions, we must first identify devices likely associated with firms and the SEC. We first use the *spatial join* algorithm from python-geopandas to compile the universe of phones that ever appear in a corporate headquarters or SEC office building during our sample period. Subsequently, we retrieve all corresponding pings of these phones and keep those that appear within the corporate headquarters and SEC buildings' shapefiles. Incorporat-

<sup>&</sup>lt;sup>4</sup>The addresses are shown in Table IA1 and the archived website ensures the addresses are accurate as of our sample period. The page is available here: https://web.archive.org/web/20190325164116/https://www.sec.gov/page/sec-regional-offices.

 $<sup>^5 \</sup>rm We$  find that the accuracy of the Bing API is about 80%.

ing shapefiles of the actual physical buildings allows us to use the exact geometry of the building shape to identify devices that ping *inside* the building. While prior use of geospatial data in finance has typically relied on centroids with radii ranging from 30 to 200 meters or more, the use of shapefiles drastically reduces the potential for Type I errors that would arise when using centroids that overlap with roads and other nearby buildings.<sup>6</sup>

A limitation of our data is that we cannot definitively determine whether a device belongs to firm personnel or SEC staff.<sup>7</sup> To mitigate this concern, we implement a conservative two-step procedure designed to isolate on-site, work-related interactions between firms and the SEC.

First, we classify a device as associated with a specific work location—either a corporate headquarters or an SEC office—only if it exhibits regular and sustained presence during business hours. A device-month pair qualifies as linked to a given work location only if it satisfies all three of the following conditions: (1) the device records at least 20 unique workday hours within the location during the month, (2) the cumulative time spent at that location exceeds time spent in any other building during the same month, and (3) the location is the device's modal work location across all observed months. This stringent filter reduces the risk of capturing temporary visitors such as outside legal counsel, consultants, or other short-term guests.

Second, to further ensure we are capturing true engagement with the SEC rather than incidental proximity, we require each device associated with a work location to record at least one on-site visit to a building of the other type (i.e., firm or SEC), located at least 1 km away, during business hours. For example, a device classified as associated with Firm XYZ must also appear inside an SEC office located more than 1 km from the firm's headquarters. This distance requirement reduces the risk of misclassifying devices that happen to frequent neighboring buildings or mixed-use developments near an SEC office.<sup>8</sup> Moreover, qualifying visits must occur within

<sup>&</sup>lt;sup>6</sup>Prior research using the taxi ridership data has used 30-80 meter radii (Cicero et al., 2021; Kirk and Piao, 2024) as well as census blocks (Choy and Hope, 2021; Bradley et al., 2024), which in New York City would have an equivalent radius of approximately 340 meters. Fu (2024) uses similar smartphone data to study interactions between venture capitalists and startups and uses a 200 meter radius for the main estimate.

<sup>&</sup>lt;sup>7</sup>We also cannot distinguish between personal cell phones and employer-issued devices.

<sup>&</sup>lt;sup>8</sup>Because of the heightened risk of false positives due to geographic proximity, we exclude firms headquartered within 1 km of an SEC office from our analysis. We also require devices for firms between 1 km and 5 km from an SEC office

verified firm or SEC building shapefiles during business hours. Devices that do not meet both the location-association and cross-location visit criteria are excluded from the analysis. For the remaining devices, we disregard all pings that fall outside verified building boundaries and are not considered on-site visits.

While this conservative approach likely underestimates the true extent of engagement with the SEC, it ensures the events we capture reflect deliberate, on-site, and work-related engagement between firms and the SEC.<sup>9</sup> We define a *Firm-SEC Interaction* as any instance in which a firm-associated device appears inside an SEC office, or an SEC-associated device appears inside a firm's headquarters, during business hours and within verified building boundaries.

Figure 1 illustrates how devices associated with the SEC and firms are captured in our data. In Panel A, we display the spatial distribution of building visits by SEC devices (in magenta), by firm devices (in green), and by other devices (in blue) over a typical day from 7 am–7 pm, aggregated into hexagons with a 1-kilometer radius. This figure demonstrates our method's effectiveness in reducing visit misattribution as the hexagons that flag SEC device pings are typically clustered around the SEC office (yellow marker) or firm headquarters (black markers). In Panel B, we zoom into the Atlanta region to show how the use of building shapefiles allows us to precisely capture when a phone pings *within* a building (red markers), rather than at a nearby building, road, or parking lot (blue markers). This figure also demonstrates how we can differentiate pings in headquarters buildings (yellow shapefile) from other buildings not associated with the firm (grey shapefiles).

Figure 1 Panel C illustrates our building-level device assignment. We map observed devices to specific buildings using high-precision building shapefiles and associate each device with the building in which it spends the majority of working hours in a month. Panel C(a) shows a device assigned to the Atlanta SEC office; Panel C(b) illustrates a non-SEC example — a device that pings

to ping in multiple hours to qualify as a visit. Our results are robust to including visits with geographically-close firms.

<sup>&</sup>lt;sup>9</sup>Another limitation with our data is that we cannot determine whether the relevant devices belong to executives, associates, or other categories of staff.

within the SEC building but spends most work hours at Resurgens Plaza, the business center across the street. Precise building polygons separate neighboring buildings, filter location noise, and reduce misclassification in dense areas. After assigning devices to SEC offices and to firm headquarters, we construct location-based measures which capture on-site interaction intensity at both locations over time.

#### 2.2. SEC Investigations

The SEC's investigative process follows a structured sequence of stages. Investigations can be initiated through multiple channels including the Tips, Complaints, and Referrals (TCR) system, which allows the SEC to receive information from whistleblowers, investors, and market participants. Investigations also originate from the SEC's own market surveillance activities, analysis of public filings, and referrals from other regulatory bodies (GAO, 2007).

Many of these interactions never proceed to formal proceedings and remain unobservable to researchers. Nearly half of the SEC's Matters Under Inquiry conclude without escalating to a formal SEC investigation (SEC, 2011). Moreover, until 2011, the SEC's Division of Enforcement adhered to a policy of disposing of all documents obtained during MUIs upon closure.<sup>10</sup> This systematic removal of records has historically prevented researchers from studying these early-stage regulatory interactions. To obtain reliable and accurate information, the SEC may request information from the company which may include voluntary document requests or on-site exams. Inspections can be for-cause if the SEC believes a firm is not in compliance or has received a tip, and other investigations are part of an industry sweep. Regulated entities, such as investment advisers, often receive routine on-site examinations, whereas visits with public companies are typically conducted as part of a specific investigation.

If warranted, the SEC may escalate the investigation into an informal investigation or, with Commission approval, a formal SEC investigation that grants staff subpoena power to compel

<sup>&</sup>lt;sup>10</sup>For example, the OIG investigation documented instances of destroyed records, including an email from an Enforcement Division attorney stating: "I received approval to close a MUI last week and I shredded the documents and deleted e-mails yesterday (Monday). Is that a problem?"

document production and testimony. For example, a public firm in the "Home Furniture, Furnishings, and Equipment Stores" industry posted an 8-K in April of 2019 detailing their ongoing interactions with the SEC. The 8-K stated that the firm was requested to supply information to the SEC regarding the accuracy of their historical quarterly earnings per share calculations. The firm also stated that they received a series of subpoenas in 2018. Our smartphone geolocation data show a visit from the SEC to this firm in early April 2019, likely in relation to the aforementioned investigation. While anecdotal, this piece of evidence corroborates the notion that our measure of *Firm-SEC Interactions* picks up meaningful interactions between publicly traded firms and the SEC.

Firms are not legally required to report formal SEC investigations. Blackburne et al. (2021) find that only 19% of SEC investigations are initially disclosed, despite the material significance of these investigations. Blackburne et al. (2021) further show that formal SEC investigations begin an average of two years before any public disclosure of the investigation, highlighting the opacity of early-stage SEC monitoring activities. To determine which firms were formally investigated, we utilize Freedom of Information Act (FOIA) requests to obtain comprehensive details on formal SEC investigations.<sup>11</sup> Our dataset encompasses all *closed* investigations between 2000 and March 2022. Over this 23-year period, the SEC conducted more than 17,000 investigations into both public and private firms. On average, the SEC closed approximately 770 cases per year; however, the number of cases closed in any given year ranged from just over 200 in 2003 and 2005 to a peak of more than 1,300 cases in 2012.<sup>12</sup> We map these investigations to firms and cross-reference the investigation data with data used in Holzman et al. (2024) and Blackburne et al. (2021).<sup>13</sup>

The geographic distribution of investigations and regional offices may impose constraints on the SEC's ability to deploy resources optimally. While industry sweeps enable the efficient de-

<sup>&</sup>lt;sup>11</sup>We refer to the investigations obtained through FOIA as "formal SEC investigations" throughout this paper. <sup>12</sup>For more details on a similar dataset, see Blackburne et al. (2021) and Blackburne and Quinn (2023).

<sup>&</sup>lt;sup>13</sup>We thank Terrance Blackburne, Eric Holzman, and Brian Miller for sharing investigation data. Holzman and coauthors acquired the SEC investigation dates and classifications via FOIA requests and manually identified corresponding Compustat identifiers (GVKEYs). They also credit Blackburne and coauthors in the matching process, as their data was cross-referenced to ensure consistency and maximum sample size.

ployment of resources by focusing on specific industries or misconduct types, the spatial dispersion of investigations and locations of regional offices can introduce inefficiencies. SEC regional offices primarily focus on oversight within their territories, but staff may conduct investigations across regions. As noted by the GAO, cross-regional investigations can lead to higher travel and related expenses, such as an instance where staff from the San Francisco regional office conducted investigations in Atlanta (GAO, 2007, p.16). The SEC also provides travel budgets to either fly witnesses to SEC offices or to allow staff to travel to witness locations. To our knowledge, our study is the first systematic examination of this cross-regional work.

#### 2.3. Financial Firms and Routine Examinations

Financial firms, and in particular Registered Investment Advisers (RIAs), are subject to more intensive and routine regulatory oversight than other public firms. These inspections often involve information requests, document submissions, or routine and risk-based compliance examinations which are unrelated to the other type of engagements we intend to study. To avoid inadvertently capturing SEC activity tied to these scheduled regulatory examinations, we construct a comprehensive database of over 12,000 RIAs using address-level data from Form ADV filings. We geocode each RIA headquarters to the building level and identify all public firms that share a building with one or more RIAs.

For completeness, we present separate results for the "Full Sample" and for the "Reporting Companies Sample" which excludes firms in the financial (including RIAs) and utilities sectors. This check ensures that our findings are not driven by the increased regulatory scrutiny associated with proximity to these more frequently regulated entities.

#### 2.4. SEC Enforcement Actions

After the SEC concludes the investigative inquiries, the SEC Division of Enforcement presents evidence to the SEC's Commissioners who vote to determine whether to pursue further action. If further action is warranted, the SEC can pursue an enforcement action either in federal court (civil action) or internally through administrative proceedings.<sup>14</sup> We collect information on enforcement actions from the Securities Enforcement Empirical Database (SEED) which tracks SEC enforcement actions filed by the SEC.<sup>15</sup> The database covers enforcement actions against public firms and subsidiaries starting in 2009 and is updated through 2023. The data includes significant allegations against firms and excludes low-cost actions such as delinquent filings and follow-on actions brought after an initial primary action against a defendant. For instance, in a notable case, the SEC alleged that AmTrust failed to adequately disclose material information regarding its methods for estimating insurance losses and revenues. On June 17, 2020, these allegations were made public, and two days later, on June 19, 2020, AmTrust agreed to pay a fine of \$10.5 million to settle the SEC's charges.<sup>16</sup> We map all cases to firms in our sample and count the number of enforcement actions by year using the first document date.

#### 2.5. Measurement of Insider Trading Activity

We collect insider trading transaction information from the WRDS Insider Database. This database aggregates and compiles SEC Insider filings from the EDGAR platform. Following prior literature (i.e., Cohen et al. 2012; Goldie et al. 2023), we limit our sample to Form 4s filed by corporate insiders involving open market transactions of common stocks. We identify the direction of the trade (purchase or sale), the amount traded, and the role of the insider (Officer, Director, 10% Owner, or "Other" from Form 4 in field #5).

Consistent with Fich et al. (2023), we focus on overall insider trades and insider selling behavior as insider purchases are infrequent in our sample.<sup>17</sup> For each trading day in our sample, we identify how many insiders, if any, trade stock. We aggregate this information at the firm-level on a rolling two-week window basis. *Ins*  $Trade_{-5,+5}$  (*Ins*  $Sell_{-5,+5}$ ) is equal to one if a firm insider

<sup>&</sup>lt;sup>14</sup>In June 2024 the Supreme Court ruled in a 6-3 decision that the SEC's longstanding practice of using administrative proceedings to impose civil penalties infringed upon the right to a jury trial guaranteed by the Seventh Amendment. Supreme Court Curbs SEC's Enforcement Powers. Wall Street Journal, June 27, 2024. Accessed August 15, 2024

<sup>&</sup>lt;sup>15</sup>The SEED database is created by the NYU Pollack Center for Law & Business and Cornerstone Research. For more details about the database and cases included, see Choi (2020).

<sup>&</sup>lt;sup>16</sup>Details about the case can be found here: https://research.seed.law.nyu.edu/Search/ActionDetail/3333/5336.

<sup>&</sup>lt;sup>17</sup>During our sample period, sales occur approximately three times as often as purchases and the median dollar value of a sale is seven times as large as purchases.

traded (sold) shares in the previous five trading days or will trade (sell) shares in the subsequent five trading days, zero otherwise;  $Num Ins Trade_{-5,+5}$  ( $Num Ins Sell_{-5,+5}$ ) is equal to the number of times an insider traded (sold) shares during the time frame.

#### 3. SEC Interactions

We combine the insider trading records with financial data from Compustat and daily stock return data from CRSP using CRSP/Compustat Merged. Our sample construction requires firms to be included in our geolocation data which covers 26 MSAs, and to be located at least 1 km from the nearest SEC office. We also require the firm to have insider transaction data and quarterly financial data for our firm-level control variables.<sup>18</sup> Table 1 presents the geographic distribution of our sample of 2,367 firms at the MSA level. The results in Table 1 display the percent of firms within the MSA that had at least one firm-SEC interaction inside a firm HQ or SEC office during work hours, after excluding weekends and federal holidays. We observe considerable variation in the likelihood of an SEC interaction. For each region, we also document the nearest SEC office and the median distance between firm headquarters and their nearest SEC office.<sup>19</sup>

#### 3.1. Sample Characteristics

Our main independent variable of interest is *Firm-SEC Interaction*, which equals one if a corporate device from firm *i* pings inside an SEC office or an SEC device pings in firms *i*'s headquarters during work hours on a given day. Panel A of Table 2 documents the relatively infrequent nature of SEC interactions, which occur on only 0.3% of trading days. Conditional on having at least one SEC interaction, the average firm interacts with the SEC on four days during our sample period. However, we observe substantial heterogeneity across entity types. As discussed in Section 2.3 and further explored in Gerken et al. (2025), SEC regulated entities subject to routine oversight

<sup>&</sup>lt;sup>18</sup>Roughly 60% of the firms that meet this criteria are included in our geolocation data and located further than 1 km from the nearest SEC office.

<sup>&</sup>lt;sup>19</sup>There are 11 regional offices in addition to the headquarters office located in Washington, DC. Our geolocation data does not include coverage in Utah; therefore, we do not observe any interactions at the Salt Lake Regional Office or by devices associated with the office.

are expected to exhibit significantly higher interaction frequencies. Consistent with this regulatory framework, we find that financial firms experience significantly more frequent interactions, as these entities are more than five times as likely to have an SEC interaction. To mitigate concerns that our findings are driven by these SEC regulated entities, we report results both for the full sample and for a subsample of reporting firms that excludes financial firms in all subsequent analyses.

Consistent with prior literature, insider trading is also relatively infrequent, as evidenced by the median of both insider trading measures equaling zero. The two-week probability that insiders trade at least once is 22.6%, with over three quarters of these corresponding to insider sales. Firm-specific control variables include *Size* (natural logarithm of total assets), *Leverage* (ratio of long-term debt to total assets), *Book-to-market* (book value of equity divided by market value of equity), *Turnover* (natural logarithm of the total shares traded in a quarter divided by common shares outstanding), and *Distance to nearest SEC office* (natural logarithm of the distance in kilometers from firm headquarters). On average, firms are located about 40 km from the nearest SEC office, although as displayed in Table 1, this widely varies by region.

#### 3.2. Univariate Differences

Panel B of Table 2 presents univariate comparisons of firm characteristics and observable SEC actions between firms with SEC interactions and those without. On average, firms with SEC interactions are larger, more indebted, and are located closer to SEC regional offices. Notably, these firms are, on average, twice as likely to have a history of SEC enforcement actions (7% versus 3%) and have a greater number of prior SEC enforcement actions (0.25 versus 0.06) relative to firms without SEC interactions. We do not observe a statistical difference in the number of prior formal SEC investigations.

We next examine whether SEC interactions are related to regulatory outcomes. This investigation serves two purposes: it validates our main *Firm-SEC Interaction* measure as a meaningful indicator of SEC interactions and assesses whether on-site interactions predict subsequent formal SEC investigations or enforcement actions. We find that firms with SEC interactions face a substantially higher likelihood of formal SEC investigation. Specifically, firms with SEC interactions are 44% more likely to be under an active formal SEC investigation during our sample period than non-connected firms (13% versus 9%). Further, firms with SEC engagement are 38% more likely to have a formal SEC investigation conclude in the two years after the sample period ends (11% versus 8%). Notably, while firms with SEC interactions are more likely to be involved with a formal SEC investigation, the vast majority of our interactions occur at firms that are not under active investigation (as discussed further in Section 4.2).

We also analyze the relationship between interactions and SEC enforcement actions using data from SEED through 2023. While significant SEC-imposed enforcement actions are rare, our findings reveal that firms with SEC interactions are twice as likely to face SEC enforcement actions compared to their counterparts without interactions (2% versus 1% during the sample period and 6% versus 3% after the sample period). The intensity of enforcement actions is also greater for firms with an SEC interaction (0.03 versus 0.01 during the sample period; 0.10 versus 0.04 in the post-sample period). These findings may represent a lower bound, as interactions may likely be associated with ongoing investigations that take more than two years to conclude, or enforcement actions that had not materialized by the end of 2023 when our sample period ends.

#### 3.3. Cross-Regional Interactions

We further explore nationwide interactions and examine the extent of cross-regional work in Figure 2. Panel A depicts the MSAs for which we have geolocation coverage (shaded yellow), SEC office locations (red markers), and the interactions between SEC and firm headquarters that are captured in our data (lines connecting red markers with blue markers). Though the majority of interactions happen between firms and SEC offices within the same MSA, a substantial proportion of cross-regional interactions occur. Approximately 17.7% of the interactions in our data are cross-regional, defined as a firm interacting with an SEC office other than the regional office which has jurisdiction over the firm. Panel B zooms into the smartphone pings for one month of our sample for the Atlanta MSA, with blue markers indicating firms with SEC interactions. This figure illustrates several key features of our data. First, interactions between the Atlanta SEC office and firm headquarters occur both within and beyond the Atlanta region. Second, some firm headquarters are shown to interact with multiple SEC offices, as evidenced by the black line entering from the lower left in Panel B. Third, not all firms in the area have SEC interactions during our sample period (as evidenced by highlighted shapefiles without blue markers). Together, these findings suggest that the SEC's modern enforcement activities may be less constrained by geographic distance than previously suggested.

#### 4. The Materiality of Firm-SEC Interactions

Having documented the prevalence of *Firm-SEC Interactions* and correlational patterns with observable SEC outcomes, we now assess whether these interactions convey economically meaningful information to market participants. Because preliminary regulatory interactions are typically undisclosed and generate noisy signals with nearly half concluding without formal action, we expect any market effects to emerge gradually rather than immediately. We structure this analysis as follows. First, we examine stock price reactions around all instances of firm-SEC engagement. Second, we refine our focus to reporting companies. Third, we explore whether these interactions have a differential impact for firms subject to active formal SEC investigations and whether they remain informative even in the absence of such investigations and other regulatory events. This latter analysis allows us to determine whether our measure of SEC interactions captures information beyond that contained in traditional regulatory indicators.

#### 4.1. All Firm-SEC Interactions

Prior research establishes information content throughout observable stages of SEC oversight. Dechow et al. (1996) document significant market reactions to public enforcement announcements, Blackburne et al. (2021) find effects around formal investigation openings, and Coleman et al. (2023) show denied FOIA request can send signals about ongoing investigations. However, these studies examine regulatory activities after formal proceedings have begun, leaving the preliminary stage unexplored. Research also shows that sophisticated investors can identify signs of potential misconduct through various channels (Karpoff and Lou, 2010; Fang et al., 2016), suggesting that information about regulatory concerns may leak through multiple mechanisms. Moreover, our univariate evidence suggests these interactions often precede more serious regulatory actions. We therefore examine stock returns around firm-SEC interactions to test whether they represent economically meaningful events. This analysis serves two purposes: it validates the importance of monitoring activities that fall outside formal proceedings, and it provides insight into how quickly information about regulatory oversight diffuses into market prices.

To test the relationship between SEC interactions and abnormal stock returns, we exploit the granularity of our data and estimate the following regression model at the daily level:

$$Abn Ret_{i,0 \text{ to } t} = \beta_1 Firm\text{-}SEC Interaction_{i,0} + \sum_k \beta_k Firm \ controls_{i,q} + \gamma' FE + \epsilon$$
(1)

where *Abn Ret*<sub>*i*,0 *to t*</sub> is the stock return of firm *i* in excess of the CRSP value-weighted return from the day of an SEC interaction until trading day *t*, which varies in length from 10 trading days (two weeks) to 63 trading days (3 months) after the interaction. We include firm-level controls for size, leverage, book-to-market, turnover, and distance to the nearest SEC office. We include *Date* and *Industry* fixed effects, or alternatively *Date* and *Firm* fixed effects, and cluster standard errors at the MSA-date level.

Table 3 documents the effect of *Firm-SEC Interactions* on a firm's abnormal returns. Results using both the *Industry* and *Date* fixed effects model and the *Firm* and *Date* fixed effects model are shown for the full sample in Panel A, and results focusing on reporting companies and excluding financial firms in Panel B. In both samples, we find an increasingly negative return following SEC interactions. Referring to the *Firm* fixed effects model for the full sample, on average, a firm's return is 9 basis points lower in the two trading weeks (*Abn Ret*<sub>0,10</sub>) after an interaction and -1.42% lower after three months (*Abn Ret*<sub>0,3mo</sub>). When we focus on reporting companies, the effect is even greater: we find an average abnormal return of -3.93% three months after the interaction. This monotonic decrease in the stock price over longer windows is consistent with gradual information leakage to market participants and suggests that interactions with the SEC do signal

an increased likelihood of future regulatory costs for firms. The similar or greater magnitude relative to those documented at later stages (Coleman et al., 2023; Blackburne et al., 2021) suggests that regulatory information content may be crucial at the earlier stages of oversight, yet this preliminary stage has remained unexamined in prior research.

An important caveat in interpreting our findings is the potential for endogeneity: *Firm-SEC Interactions* may not be the sole *cause* of negative returns but could instead be associated with underlying firm conditions or misconduct that could independently be driving negative returns. We do not claim that interacting with the SEC solely causes negative returns, but rather these interactions signify a critical juncture in the flow of negative information to markets. Several patterns in our data support this interpretation. First, while pre-existing concerns may drive both correspondence with the SEC and returns, the precise timing of significant negative returns following interactions suggests these regulatory interactions accelerate information discovery. Second, we find negative returns even for interactions that are absent formal SEC investigation (see Section 4.2), indicating our results capture more than just the market gradually learning about potential serious misconduct. Third, the stronger return patterns for officer sales compared to non-officer sales around interactions (see Section 6) suggests the physical presence of SEC personnel conveys incremental information beyond underlying firm conditions.

One concern regarding the empirical framework used in equation 1 is that the stock return for firm *i* prior to the interaction may influence the probability that the interaction occurs. To better visualize how the stock price changes around the interactions, we estimate a series of expanding regressions using the following framework:

Abn Ret<sub>i,-21 to t</sub> = 
$$\beta_1$$
Firm-SEC Interaction<sub>i,0</sub> +  $\sum_k \beta_k$ Firm controls<sub>i,q</sub> +  $\gamma'$ FE +  $\epsilon$  (2)

where  $Abn Ret_{i,-21 to t}$  represents the cumulative abnormal return for firm *i* from 21 trading days (one month) prior to the interaction up to day *t*. The key difference is that we begin our measure of abnormal returns 21 trading days prior to the interaction. We estimate equation 2 for every window from day -21 to day 63, incrementally extending the window by one day for each subsequent estimation.

The resulting coefficients for  $\beta_1$  from these expanding regressions, visualized in Figure 3, provide compelling insights into the temporal dynamics of the market reaction. We report the results for both the full sample and for the reporting companies sample. Across all four panels using either *Industry* and *Date* fixed effects or *Firm* and *Date* fixed effects, we find no evidence of abnormal returns in the pre-window. Consistent with Table 3, we observe a progressively negative decline in abnormal returns following the *Firm-SEC Interaction*. The absence of significant abnormal returns prior to the interactions across all specifications provides reassuring evidence that pre-existing trends are not systematically driving the results. Further, the observed negative returns are greater for the reporting companies sample, presumably because interactions with the financial firms include industry-specific regulatory activity as opposed to genuine investigations and firm-specific issues. Taken together these results provide evidence that interactions with the SEC signal a negative outlook for future performance for the average firm.

#### 4.2. Formal SEC Investigations

Prior literature has typically relied on the publicly disclosed date of enforcement actions (Karpoff et al., 2008b) or, more recently, the conclusion dates of formal investigations that precede these enforcement actions (Blackburne et al., 2020, 2021; Holzman et al., 2024; Bonsall et al., 2024). We demonstrate that SEC interactions, as measured through geolocation data, represent a distinct and previously unexplored channel of regulatory monitoring with material market implications that extend beyond formal proceedings. However, a limitation of our data is the inability to observe the precise nature of each interaction. While some may be related to serious concerns such as suspected securities law violations or misconduct tips, other interactions may be for more benign reasons such as voluntary document provision, regulatory correspondence, or industry sweeps.

To provide further insight into the heterogeneous nature of SEC interactions and to facilitate a comparison with prior research, we undertake several analyses. First, we examine the stock price reaction for firms *simultaneously* under formal SEC investigation. These investigations, which have exceeded the threshold for converting a MUI to a formal investigation and have advanced beyond the initial inquiry stage, likely involve closer regulatory scrutiny. Consequently, we suspect that any negative information revealed through SEC interactions will be more rapidly incorporated into market prices, resulting in stronger negative abnormal returns. To formally test this conjecture, we estimate the following equation:

$$Abn \ Ret_{i,-21 \ to \ t} = \beta_1 Firm-SEC \ Interaction_{i,0} + \beta_2 Active \ Investigation_{i,0} + \beta_3 Firm-SEC \ Interaction_{i,0} \times Active \ Investigation_{i,0} + \sum_k \beta_k Firm \ controls_{i,q} + \gamma' FE + \epsilon$$
(3)

where *Active Investigation*<sub>*i*,0</sub> equals one if firm *i* is currently under active investigation, as determined by the opening and closing dates of formal SEC investigations obtained from FOIA logs. *Active Investigation* varies at the firm-level, reflecting the ongoing commencement and conclusion of cases.<sup>20</sup>

Table 4 presents the results. We document statistically significant negative stock market reactions in the three months following firm-SEC interactions. Notably, this adverse market response extends to firms not currently under formal SEC investigation, suggesting that these interactions impose negative costs beyond those directly associated with ongoing enforcement actions. For the full sample (reporting companies), stock prices decline by approximately 1% (2.4%) following SEC interactions absent formal SEC investigations. For firms subject to an ongoing formal investigation, the market reaction is substantially more pronounced. Specifically, the coefficient on the interaction term is -3.89% and -10.48% in columns (4) and (8), respectively, suggesting that these interactions are associated with particularly severe regulatory concerns.

We also examine pre-trends in stock prices leading up to SEC interactions, with results visu-

<sup>&</sup>lt;sup>20</sup>Although the measure uses the closing date of individual formal SEC investigations, which is only granted after an investigation concludes, firms are aware of their status as recipients of an ongoing investigation, mitigating concerns about look-ahead bias.

alized in Figure 4. The coefficients on  $\beta_1$  from equation 3 are represented by the dotted line, and the cumulative effect ( $\beta_1 + \beta_3$ ) is shown with the solid line. Consistent with the results in Table 4, we find a substantially larger negative market reaction to SEC interactions for firms subject to formal investigation. Importantly, we find no evidence of pre-existing abnormal returns.

Second, as detailed in Section 3.2, the majority of identified SEC interactions involve firms not subject to formal investigation. Approximately three-quarters of our observed *Firm-SEC Interactions* are to firms without a formal SEC investigation. Because our formal investigation data is limited to closed cases through March 2022, this estimate likely overstates the proportion of interactions unrelated to formal investigations. To better approximate the number of interactions with firms not under formal investigation, we incorporate historical SEC investigation data and estimate the number of ongoing cases closed within two years. This analysis suggests that close to half of the interactions we observe are likely unaffiliated with a formal SEC investigation.

Third, to shed light on the timing of interactions relative to the initiation of formal SEC investigations (which typically is the only date available when studying SEC investigative work), we focus on a subset of 20 firms for which a formal SEC investigation began during our sample period (and ended by March 2022). Among these firms, 70% interacted with the SEC *prior* to the formal investigation opening date, which is often assumed to mark the commencement of the investigative process.<sup>21</sup> These firms interacted with the SEC on 54 separate days, and over half (57%) of these interactions were *prior* to the formal SEC investigation opening date. This finding highlights a potential shortcoming of assumptions about start dates commonly used in the literature and suggests substantial correspondence likely occurs before a formal SEC investigation officially begins.

Finally, we examine whether the market anticipates the information content of these early interactions that precede the initiation of formal investigations. We find that interactions preceding formal SEC investigations are associated with a negative market reaction well before the official case opening date. Specifically, the average (median) three-month abnormal returns for these

<sup>&</sup>lt;sup>21</sup>Our data reveals one firm-SEC interaction the same day a formal investigation began.

early interactions is -5.7% (-4.8%). Thus, prior research that relies on the timing of formal proceedings likely lags the actual information content. These findings indicate that SEC interactions, as captured by our geolocation data, represent a distinct regulatory monitoring mechanism that provides earlier signals of potential concerns and affects a broader range of firms than previously documented.

#### 5. SEC Interactions and Insider Trading

In this section, we examine whether firm insiders modify their trading behavior when the firm has interactions with the SEC. The SEC states that investigating unlawful trades by corporate insiders is a high priority, as minimizing these trades will "strengthen investor protection and the integrity of our securities markets."<sup>22</sup> Ex ante, it is unclear how insiders may respond to an interaction with a regulator. One might expect insiders to increase sales of their holdings in the firm as interactions may be indicative of future enforcement actions and a decline in the stock price. Consistent with this prediction, Li (2024) shows that insiders have successfully traded around the revelation of financial misconduct, suggesting they may also attempt a similar trade around interactions with the SEC. Alternatively, the SEC presence may act as a deterrent, discouraging insiders from making trades which could garner scrutiny as these interactions may represent material non-public information. To test these competing hypotheses, we employ the following regression specification:

Ins 
$$Trade_{i,-5 \ to \ +5} = \beta_1 Firm-SEC \ Interaction_{i,0} + \sum_k \beta_k Firm \ controls_{i,q} + \gamma' FE + \epsilon$$
(4)

where *Ins Trade*<sub>*i*,-5</sub> *to* +5</sub> is equal to one if firm *i* had one or more insider trade in the five trading days before or after the SEC interaction. We also examine the number of insiders who trade (*Num Ins Trade*<sub>-5,+5</sub>) and analogous insider trading measures that solely look at insider selling (*Ins Sell*<sub>-5,+5</sub>; *Num Ins Sell*<sub>-5,+5</sub>). When we turn to the count-like measure of *Num Ins Trade*<sub>-5,+5</sub>,

<sup>&</sup>lt;sup>22</sup>Strengthening Insider Trading Rules for Corporate Insiders. Commissioner Jaime Lizárraga, Dec. 14, 2022. Accessed March 21, 2024.

we are faced with the question of how to handle the distribution of the count-based outcome variable. Although the natural log of 1 plus the outcome variable as a dependent variable is common in corporate finance research, Cohn et al. (2022) document that this practice produces estimates without a natural interpretation which can even have the wrong sign. Thus, we follow the recommendation to estimate a fixed-effects Poisson model which alleviates these concerns. Due to the infrequency of insider trades, we aggregate insider transactions on a rolling two-week window basis around the interactions. We include firm characteristics (firm size, leverage, bookto-market, turnover, and distance to the nearest SEC office), Fama-French 12 industry and date fixed effects, and cluster standard errors at the MSA-date level.

The results in Table 5 reveal that interactions with the SEC have a chilling effect on insider trades, and specifically on insiders' sales. During the two-week window surrounding an SEC interaction, insiders demonstrate a 3.06% (Table 5, column 3) lower probability of selling their firm's shares. In terms of economic magnitude, this represents a decrease of 17.5% relative to the unconditional average of 17.5%. Notably, this effect is again more pronounced when we examine the reporting companies sample; the probability of insiders selling is 4.1% lower (Table 5, column 7) surrounding a *Firm-SEC Interaction*. The results also show that these results are robust to looking at overall trading or the number of insiders rather than the indicator variables.<sup>23</sup> This finding suggests that the on-site interactions with the SEC, on average, deters insiders from selling shares.

We next examine whether the observed chilling effect varies systematically across different categories of insiders. Using Form 4 field #5 classifications, we distinguish between officers and other insiders (including Director, 10% Owners, and "Other" categories). This distinction is particularly relevant because executives typically are closer in proximity to corporate headquarters and possess greater awareness of SEC inquiries than other insiders. In addition, it is plausible that executives face higher scrutiny regarding timely trades around SEC investigations than do

<sup>&</sup>lt;sup>23</sup>Results are also robust if we instead follow the prior literature and use the natural log of 1 plus the outcome variable for our count-like measures and estimate with ordinary least squares instead of the fixed-effects Poisson model.

other investors. Given these factors, we expect that the observed trading reduction would be more pronounced among officers compared to other insiders.

Given the results shown in Section 4, insiders with access to this inside information have a likely profitable trading opportunity but may fear detection and punishment. Prior literature has identified nonroutine traders (Cohen et al., 2012) tend to make particularly opportunistic trades, although these trades are less likely to be made during periods of intense scrutiny by the SEC.<sup>24</sup> Similarly, Del Guercio et al. (2017) find that an increase in litigation risk as proxied by aggressive SEC enforcement activity also deters insider trading. Therefore, we follow Cohen et al. (2012) and distinguish between opportunistic and routine traders, where routine traders are defined as an insider who placed a trade in the same calendar month for at least three consecutive years.

Table 6 reports the results. In Panel A, we see that the chilling effect is more pronounced for officers than non-officers in terms of both the economic magnitude and statistical significance. Comparing columns (1) and (3), officers have a 2.94% lower propensity to sell around an SEC interaction whereas non-officers are 0.86% less likely to sell. This pattern persists when we examine the number of insiders selling as our dependent variable, as well as when we focus on the sample of reporting companies. In Panel B, we observe large and comparable effects for both opportunistic and routine traders, suggesting that physical SEC interactions serves as a deterrent for both groups of traders.

#### 6. Do Corporate Insiders who Sell around Interactions Avoid Abnormal Losses?

While our results to this point demonstrate that *Firm-SEC Interactions* generally deter insider selling, we observe numerous instances where insiders execute sales around these interactions. This pattern suggests that certain SEC interactions may signal particularly negative information, creating strong incentives for informed trading, despite heightened scrutiny. Insider sales around regulator interactions are also a potential channel through which stock price declines manifest; several studies have shown that price revelation can occur when insiders trade on news that is

 $<sup>^{\</sup>overline{24}}$ Akbas et al. (2020) also finds short-horizon investors are also more informed than long-horizon investors.

not yet public (Cornell and Sirri 1992; Meulbroek 1992; Ahern 2017; Akey et al. 2022). This section examines whether insiders who choose to trade around *Firm-SEC Interactions* successfully avoid significant losses. This provides useful insights into both the information content of *Firm-SEC Interactions* and insiders' ability to capitalize on this information.

To empirically test this idea, we estimate the following regression model:

4

Abn Ret<sub>i,-21 to t</sub> = 
$$\beta_1$$
Sale Around Firm-SEC Interaction<sub>i,0</sub>  
+  $\sum_k \beta_k$ Firm controls<sub>i,q</sub> +  $\gamma'$ FE +  $\epsilon$ , (5)

where our primary variable of interest is *Sale Around Firm SEC Interaction*<sub>*i*,0</sub>, an indicator variable equal to one if an insider sells during the two-week window surrounding a *Firm-SEC Interaction*. The dependent variable, *Ab n Ret*<sub>*i*,-21 to t</sub> is measured relative to the sale date (t = 0). The model includes the same host of firm controls and fixed effects with standard errors clustered at the MSA-date level. In these tests, we restrict the sample to instances when an insider sells so that the results can be interpreted as the abnormal returns avoided by an insider who sells around an SEC interaction relative to an insider who sells when there is no associated interaction.

Figure 5 presents the results comparing the differential performance of sales around SEC interactions compared to other insider sales. The results show sales around *Firm-SEC Interactions* are highly informative and are followed by significant stock declines. Relative to other sales, the abnormal returns decline by 3.5% three months following the sale. Importantly, we do not observe any significant pre-trends prior to the sale. Table 7 reports consistent results when using *Abn Ret*<sub>0,t</sub> as the dependent variable for both the full sample and reporting company sample which excludes financial firms.

We next examine how returns vary when a sale is made by an officer of the firm versus an insider who is a non-officer (e.g., board member or blockholder). Because officers are more likely to be informed of any potential interactions and likely face higher scrutiny around timely trades, we expect their sales around these interactions to be more informative than those of non-officers.

To test this conjecture, we modify equation 5 so that the main variable of interest is an officer (non-officer) sale around a *Firm-SEC Interaction*.

We present the results for the performance of sales by officers and non-officers around SEC interactions in Figure 6. Panel A compares the results using the expanding regressions with pretrends. Consistent with our hypothesis, we find a strong negative stock response when officers of the firm sell around an interaction. The solid line depicts returns around an officer sale and shows the response occurs within a month of the sale and is -4.6% after three months. The dotted line represents returns around non-officer sales and shows a downward but much noisier trend that is statistically indistinguishable from zero. These results lend further support to the idea that a subset of *Firm-SEC Interactions* convey negative information about a firm's future performance and suggest this information is transmitted through face-to-face communication.

Finally, while we do not observe a clear distinction in the propensity to trade among opportunistic versus routine traders, we consider the informativeness of these traders around SEC interactions. Sales made by routine traders around *Firm-SEC Interactions* may be coincidental whereas a sale by an opportunistic trader is more likely to be a negative signal. The results are shown in Figure 7. In Panel A, the solid (dotted) line depicts returns when an opportunistic (routine) trader makes a sale around an SEC interaction. We find that abnormal losses only occur when opportunistic insiders make a sale and find no evidence of a stock price drop when routine traders make a sale. Specifically, the three-month abnormal returns for opportunistic sales around SEC interactions is -7.3% and for routine sales it is a statistically insignificant -0.9%. We find consistent results when using *Ab n Ret*<sub>0,t</sub> as the dependent variable in Panel B. Together, our analyses in Section 6 document that insiders avoid significant losses when trading around *Firm-SEC Interactions*, particularly those insiders most likely to know the nature of the interaction.

The relationship between *Firm-SEC Interactions*, insider trading, and returns presents complex identification challenges. The underlying issues that attract SEC scrutiny likely affect both trading decisions and future returns. However, several patterns suggest our analysis captures meaningful information flow around regulatory oversight rather than simply reflecting pre-existing

negative information. First, the chilling effect on insider sales around SEC interactions indicates that the physical presence of SEC personnel influences trading decisions beyond any effects of underlying firm conditions. Second, the differential trading patterns between officers (who likely directly observe SEC interactions) and other insiders suggest the interactions themselves convey meaningful information. Third, the concentration of profitable trading among opportunistic traders rather than routine traders aligns with the strategic use of case-specific information. Finally, our granular data allowing precise identification of interaction timing enables us to rule out pre-trends, helping establish the sequence of information flow from regulatory oversight to market prices.

#### 7. Extended Analysis

This section extends our primary analysis to address potential concerns and examine how different trading arrangements affect our main findings.

#### 7.1. Synthetic Office Placebo Tests

While geolocation data allow us to bring precision to the measurement of on-site interactions between firms and regulators, potential measurement error remains when assigning a device to organizations located in high-rise, multi-tenant office buildings, as is common for regional SEC offices. The most likely outcome of this measurement error is to induce noise, biasing our estimates toward zero. However, there are potentially other establishments operating out of the same building as a regional SEC office that (1) interact in-person with public firms and (2) their interactions trigger investor reactions that mimic those associated with SEC scrutiny. To the extent that these co-located establishments exist, our methodology could lead to a type 1 error.

To address this concern, we conduct placebo tests using synthetic SEC office locations. For each actual SEC office building, we identify a ring of candidate buildings located between 500 and 1,000 meters away. From this set, we select the five buildings most similar to the true SEC office building based on two building-level criteria: (i) the total number of unique points of interest (POIs) and (ii) the share of POIs in key NAICS 2-digit sectors.<sup>25</sup> Appendix Figure IA1 illustrates the construction of synthetic SEC offices for the Chicago SEC.

We then apply the same device classification methodology used in our main analysis Section 2.1 to identify devices associated with each placebo building. Using these assignments, we construct *Firm-Placebo Interaction*, an indicator equal to one if either an HQ-associated device visits a placebo-SEC building or a placebo-SEC device visits a firm HQ. By design, these placebo interactions capture general patterns of business mobility within dense commercial districts but should not reflect regulatory oversight nor trigger firm-level information events that affect stock returns. We then examine the effect of these placebo interactions, substituting *Firm-Placebo Interaction* for our main independent variable of interest. Specifically, we test whether these placebo interactions are followed by negative abnormal returns and whether interactions that coincide with insider sales are associated with subsequent stock price declines. Both tests parallel the specifications used in our primary analysis.

Results from the placebo tests are shown in Table IA2 Panel A and Panel B. Across both settings, we find no evidence that placebo interactions are associated with negative future returns, either on their own or when coinciding with insider sales. This evidence suggests that our main findings are unlikely to be driven by device misclassification or by incidental proximity to non-SEC tenants.

More broadly, these placebo results help address measurement concerns arising from our inability to definitively identify device ownership. Any noise in our data would bias our estimates toward zero rather than create false positive results. Our conservative device classification methodology, requiring sustained workplace presence and cross-location visits, is designed to minimize false positives even if it means missing some true interactions. The absence of effects for placebo interactions, combined with the economically significant patterns we observe for actual SEC offices, suggests that measurement error does not systematically compromise our

<sup>&</sup>lt;sup>25</sup>We consider POI shares in Finance, Insurance, and Real Estate; the Professional, Management, and Administrative Services; and Public Administration and Other Services.

findings.

#### 7.2. Leave-One-Region-Out Tests

As an additional robustness check, we conduct leave-one-region-out tests, where we sequentially exclude key metropolitan areas. In particular, we exclude the MSAs that include Washington, DC—home to the SEC's headquarters—and New York, which contains a high concentration of firms and SEC activity. The results, reported in Table IA3 Panel A and B, show that our core findings remain consistent and statistically significant across all specifications. Notably, the results become even stronger when New York is excluded, suggesting that the main effects are not confined to or disproportionately influenced by the largest or most active markets.

#### 7.3. Standalone Headquarters

Another potential concern is that many corporate headquarters are located in high-rise office buildings that may include other businesses. As a result, a device we classify as headquartersassociated may actually belong to another tenant, creating a false positive if it later appears at an SEC office (or vice versa for a SEC-associated device entering a corporate headquarters).

To address this concern, we restrict the sample to firms located in standalone buildings not shared with other public companies. We identify firms headquartered in shared buildings and exclude them for this test. As shown in Table IA4, our results persist with comparable economic magnitudes in this more conservative sample. Moreover, the findings become stronger when focusing on standalone buildings, suggesting that any measurement error from shared buildings likely attenuates, rather than drives, our results.

#### 7.4. Rule 10b5-1 Trading Plans

We next examine whether the informativeness of insider trades around *Firm-SEC Interactions* differs between sales executed under Rule 10b5-1 trading plans and those conducted outside such plans. This analysis is motivated by recent work from Fich et al. (2023) documenting that executives can exploit Rule 10b5-1 plans opportunistically by strategically canceling planned trades to

profit from private information.<sup>26</sup> If Rule 10b5-1 plans provide a "safe harbor" for informed trading around *Firm-SEC Interactions*, we would expect larger abnormal returns for trades executed under such plans.

Table IA5 presents the results. Panel A diplays abnormal returns following 10b5-1 officer sales around SEC interactions, while Panel B reports returns following non-10b5-1 officers sales. We find that both types of sales predict significant declines in future returns relative to sales that occur when no *Firm-SEC Interaction* occurs, suggesting that opportunistic trading persists regardless of the trading mechanism. The magnitude of losses avoided is greater for 10b5-1 sales compared to non-10b5-1 sales, though this difference is not statistically significant at conventional levels.

These findings complement recent work on the strategic use of 10b5-1 plans (Fich et al., 2023) by suggesting that insiders may view these plans as providing cover for informed trading around regulatory events. However, the lack of statistical significance in the difference between plan and non-plan trades indicates that both methods can be used to exploit private information about SEC oversight activities.

# 8. Conclusion

This paper provides the first systematic evidence of physical regulatory interactions between the SEC and public companies, revealing regulatory activity that occurs outside formal proceedings. We address a fundamental challenge in understanding regulatory oversight, the tendency to observe only formal outcomes, typically negative ones, much like Wald (1943)'s analysis of surviving aircraft missing crucial patterns of vulnerability. By tracking devices that visit SEC offices and firm headquarters, we reveal that firm-regulatory interaction is more dynamic and geographically dispersed than previously thought. Although many of these interactions never progress to formal investigations, on average they represent economically significant events firms experience significant market value declines following SEC interactions, with losses par-

<sup>&</sup>lt;sup>26</sup>See also Jagolinzer (2009) for early evidence that Rule 10b5-1 plans can facilitate strategically timed trades.

ticularly pronounced for those ultimately subject to enforcement actions. Our analysis of insider trading around these interactions provides novel evidence of how corporate executives respond to regulatory scrutiny. Although most insiders curtail their selling activity around regulator interactions, suggesting greater caution in the possession of potentially material information, those who continue to trade avoid substantial losses by selling before negative information becomes public. These findings show that studying only formal proceedings misses important aspects of how regulators monitor markets and how firms and insiders respond to regulatory oversight. More broadly, our work demonstrates the value of examining regulatory activities through novel data sources, offering a more complete picture of how regulators interact with firms and how firms and insiders respond to oversight.

Our findings raise important questions about current disclosure requirements for regulatory oversight. The substantial market reactions we document suggest that preliminary regulatory inquiries create meaningful information asymmetries between corporate insiders and external shareholders. The fact that some insiders continue to trade profitably around these undisclosed regulatory events indicates that policymakers might consider whether earlier or more comprehensive reporting requirements would better serve investor protection and market efficiency.

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# Figures

# Figure 1: Illustrative Examples of Device Pings

Panel A illustrates the spatial distribution of visits to buildings during a typical workday from 7 am to 7 pm in the Atlanta MSA. The magenta hexagonal bins represent pings from SEC devices, the green hexagonal bins represent pings from Firm devices, while the light blue hexagonal bins represent pings from other devices, with darker blue shades indicating a higher concentration of pings inside buildings within each 1-kilometer radius bin. Black markers indicate the locations of Corporate Headquarters, and the yellow marker in the center of the figure denotes the location of the Atlanta SEC office. This panel highlights the amount of noise we filter out. Panel B illustrates how pings are captured for an example firm's headquarters. All gray shapes are buildings that do not house firm headquarters. Cellphone pings must be within 5 meters of the HQ shapefile to be captured. In this particular example, we capture pings appear inside the HD Supply Holdings Headquarters building polygon. Panel C displays the spatial distribution of median total unique working hours at the building level for two groups of devices over a typical calendar month. For the purpose of this illustration, we focus on buildings within a 200-meter perimeter of the SEC building. Panel C (a) includes all devices mapped to the Atlanta SEC building, and Panel C (b) includes all devices mapped to the Resurgens Plaza building. The height of each building polygon corresponds to the median total unique hours, with taller polygons indicating more hours. We select the building with the highest total unique hours and map the devices' work location to that building.





Panel B: Example of Pings inside Building Shapefiles



Panel C: Determination of Device-Building Mapping



#### Figure 2: SEC Interactions

The figures illustrate observed interactions between the SEC and firms in our sample. Panel A presents nationwide *Firm-SEC Interactions* over the full sample period. Red markers denote SEC offices, blue markers indicate firm headquarters, and dark gray lines represent observed interactions between them. Lines spanning different regions reflect cross-regional interactions. Panel B zooms in on the Atlanta MSA, showcasing the *Firm–SEC Interaction* network during a typical month. Blue markers highlight firms that had an interaction with the SEC during the one-month period.



#### Panel A: Nationwide Interactions between SEC and Firm Headquarters

Panel B: SEC Interactions – Atlanta 1-Month Example



Figure 3: Abnormal Returns around SEC Interactions

This figure presents coefficients and 95% confidence intervals for  $\beta_1$  from the following regression framework:

$$Abn Ret_{i,-21 to t} = \beta_1 Firm-SEC Interaction_{i,0} + \sum_k \beta_k Firm \ controls_{i,q} + \gamma' FE + \epsilon,$$

where  $Abn Ret_{i,-21 to t}$  is the cumulative abnormal return of the stock for firm *i* from 21 trading days prior to an *Firm-SEC Interaction* until trading day *t*, which ranges from -21 (one month before the interaction) to +63 (three months after). Panels A and B report results using *Industry* and *Date* fixed effects while Panel C and D use *Firm* and *Date* fixed effects. Panels A and C include the full sample while panels B and D exclude financial firms and firms that share a building with an RIA. We cluster standard errors at the MSA-date level.





Panel B: Industry FE - Reporting Companies Sample

Figure 4: Abnormal Returns around SEC Interactions for Firms with Active SEC Investigations This figure presents coefficients and 95% confidence intervals for  $\beta_1$  and  $\beta_3$  from the following expanding regression series:

$$Abn Ret_{i,-21 to t} = \beta_1 Firm-SEC Interaction_{i,0} + \beta_2 Active Investigation_{i,0} + \beta_3 Firm-SEC Interaction_{i,0} \times Active Investigation_{i,0} + \sum_k \beta_k Firm controls_{i,q} + \gamma' FE + \epsilon$$

where *Active Investigation*<sub>*i*,0</sub> is equal to one for firms that are currently in an ongoing formal SEC investigation. All other variables are as described in previous figures and tables. The regressions use *Firm* and *Date* fixed effects. We cluster standard errors at the MSA-date level.



Figure 5: Abnormal Returns around Firm-SEC Interactions that Coincide with Insider Sales This figure presents coefficients and 95% confidence intervals for  $\beta_1$  from the following expanding regression series:

Abn Ret<sub>i,-21 to t</sub> = 
$$\beta_1$$
Sale Around Firm-SEC Interaction<sub>i,0</sub> +  $\sum_k \beta_k$ Firm controls<sub>i,q</sub> +  $\gamma'$ FE +  $\epsilon$ ,

where *Sale Around Firm SEC Interaction*<sub>*i*,0</sub> is equal to one if a firm insider sells shares within five trading days before or after a Firm-SEC Interaction. All other variables are as described in previous figures and tables. We restrict the sample to instances when an insider sale takes place. The regressions use *Firm* and *Date* fixed effects. We cluster standard errors at the MSA-date level.



Figure 6: Abnormal Returns around Firm-SEC Interactions that Coincide with Officer and Non-officer Sales

Panel A presents coefficients and 95% confidence intervals for  $\beta_1$  from the following expanding regression series:

Abn 
$$Ret_{i,-21 \ to \ t} = \beta_1 Sale Around Firm-SEC Interaction_{i,0} + \sum_k \beta_k Firm controls_{i,q} + \gamma' FE + \epsilon$$
.

We present two sets of regressions in Panel A: the solid line represents returns when officers of the firm sell and the dotted line represents insiders who are not officers of the firm. We restrict the sample to instances when an insider sale takes place. Panel B reports results for various return windows starting on the day of an officer or non-officer sell (t = 0). The regressions use *Firm* and *Date* fixed effects. We cluster standard errors at the MSA-date level.

# Panel A: Expanding Regressions with Pre-Trends



Panel B: Regression Coefficients, *Abn Ret*<sub>0,t</sub>

	Abn Ret <sub>0,10</sub> (1)	Abn Ret <sub>0,1mo</sub> (2)	Abn Ret <sub>0,2mo</sub> (3)	Abn Ret <sub>0,3mo</sub> (4)
Officer Sale Around Firm-SEC Interaction	-0.0049	-0.0240***	-0.0281***	-0.0437***
	(0.0045)	(0.0077)	(0.0095)	(0.0114)
R <sup>2</sup>	0.248	0.280	0.370	0.449
Observations	21,417	21,401	21,328	21,273
Non-Officer Sale Around Firm-SEC Interaction	-0.0003	0.0165*	-0.0122	-0.0112
	(0.0064)	(0.0085)	(0.0118)	(0.0141)
R <sup>2</sup>	0.248	0.280	0.370	0.449
Observations	21,417	21,401	21,328	21,273

Figure 7: Abnormal Returns around Firm-SEC Interactions that Coincide with Opportunistic and Routine Insider Sales

Panel A presents coefficients and 95% confidence intervals for  $\beta_1$  from the following expanding regression series:

Abn 
$$Ret_{i,-21 \ to \ t} = \beta_1 Sale Around Firm-SEC Interaction_{i,0} + \sum_k \beta_k Firm controls_{i,q} + \gamma' FE + \epsilon$$
.

We present two sets of regressions in Panel A: the solid line represents returns when opportunistic insiders of the firm sell and the dotted line represents returns for insiders who are routine traders. We restrict the sample to instances when an insider sale takes place. Panel B reports results for various return windows starting on the day of an opportunistic or routine sell (t = 0). The regressions use *Firm* and *Date* fixed effects. We cluster standard errors at the MSA-date level.

#### Panel A: Expanding Regressions with Pre-Trends



Panel B: Regression Coefficients, Abn Ret<sub>0,t</sub>

	Abn Ret <sub>0,10</sub> (1)	Abn Ret <sub>0,1mo</sub> (2)	Abn Ret <sub>0,2mo</sub> (3)	Abn Ret <sub>0,3mo</sub> (4)
Opp. Sale Around Firm-SEC Interaction	-0.0142* (0.0077)	-0.0144 (0.0116)	-0.0386*** (0.0144)	-0.0665*** (0.0181)
$R^2$	0.281	0.311	0.419	0.496
Observations	11,134	11,123	11,080	11,054
Rout. Sale Around Firm-SEC Interaction	-0.0017	-0.0110	-0.0091	-0.0079
	(0.0049)	(0.0078)	(0.0102)	(0.0114)
$R^2$	0.245	0.282	0.334	0.416
Observations	11,209	11,203	11,173	11,144

# Tables

# Table 1: Regional Distribution

This table presents summary statistics by MSA for the 2,367 firms included in our sample. For each MSA, we report the proportion of firms with at least one firm-SEC interaction, the total number of firms headquartered, the nearest SEC location, and the median distance (km) to the nearest SEC office among firms headquartered in the region.

MSA	% with SEC Interaction	Firms	Nearest SEC Office	SEC Distance
Atlanta-Sandy Springs-Roswell, GA	47.4	76	Atlanta	9.8
Austin-Round Rock, TX	5.1	39	Fort Worth	277.1
Baltimore-Columbia-Towson, MD	14.8	27	SEC Headquarters	55.0
Boston-Cambridge-Newton, MA-NH	13.5	222	Boston	16.8
Charlotte-Concord-Gastonia, NC-SC	9.4	32	Atlanta	354.2
Chattanooga, TN-GA	0.0	6	Atlanta	152.7
Chicago-Naperville-Elgin, IL-IN-WI	33.7	104	Chicago	31.4
Dallas-Fort Worth-Arlington, TX	26.6	139	Fort Worth	50.5
Denver-Aurora-Lakewood, CO	13.1	61	Denver	18.2
Detroit-Warren-Dearborn, MI	7.7	39	Chicago	371.2
Houston-The Woodlands-Sugar Land, TX	11.0	173	Fort Worth	377.0
Los Angeles-Long Beach-Anaheim, CA	15.4	169	Los Angeles	26.1
Miami-Fort Lauderdale-West Palm Beach, FL	20.6	68	Miami	39.8
Minneapolis-St. Paul-Bloomington, MN-WI	3.3	60	Chicago	573.1
New York-Newark-Jersey City, NY-NJ-PA	45.0	451	New York	6.5
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	21.9	105	Philadelphia	27.7
Phoenix-Mesa-Scottsdale, AZ	8.2	49	Los Angeles	587.7
Pittsburgh, PA	7.7	39	SEC Headquarters	309.4
Portland-Vancouver-Hillsboro, OR-WA	0.0	22	San Francisco	859.6
Riverside-San Bernardino-Ontario, CA	0.0	4	Los Angeles	68.0
San Diego-Carlsbad, CA	1.1	90	Los Angeles	159.6
San Francisco-Oakland-Hayward, CA	13.3	181	San Francisco	28.0
Seattle-Tacoma-Bellevue, WA	11.3	53	San Francisco	1091.8
St. Louis, MO-IL	0.0	24	Chicago	426.0
Tampa-St. Petersburg-Clearwater, FL	8.0	25	Miami	337.8
$Washington-Arlington-Alexandria, {\rm DC-VA-MD-WV}$	35.8	109	SEC Headquarters	19.8

# Table 2: Descriptive Statistics

This table presents descriptive statistics for variables used in the analysis. Panel A presents the distribution of key variables used in our panel regression setting. Panel B reports univariate comparisons firms with an SEC interaction and those without. See Appendix for definitions of variables.

	Median	Mean	SD
Firm-SEC Interaction	0.000	0.003	0.059
# Firm-SEC Interactions (Conditional 1+)	2.000	4.235	6.227
Ins Trade <sub>-5,+5</sub>	0.000	0.226	0.418
# Ins Trade <sub>-5,+5</sub>	0.000	0.059	0.332
Ins Sell_5,+5	0.000	0.175	0.380
# Ins Sell <sub>-5,+5</sub>	0.000	0.487	1.617
Active Investigation	0.000	0.074	0.263
Size	6.934	6.851	2.259
Leverage	0.259	0.304	0.323
Book-to-market	1.446	2.271	2.364
Turnover	12.902	12.820	0.997
Log(Distance to nearest SEC office) [km]	3.624	3.712	1.691

Panel A: Descriptive Statistics

# Panel B: Univariate Differences

	Firm-S	SEC Interaction	No Int	eraction	Difference	
	Ν	Mean	Ν	Mean	Mean	p-value
Firm Characteristics						
Size	524	7.38	1843	6.57	0.81	0.00
Leverage	524	0.30	1843	0.26	0.04	0.00
Book-to-market	524	2.14	1843	2.23	-0.09	0.46
Turnover	524	12.84	1843	12.85	-0.01	0.77
Distance to nearest SEC office	524	2.57	1843	4.01	-1.44	0.00
Prior to Sample						
# of SEC Investigations	524	0.53	1843	0.45	0.08	0.16
SEC Enforcement	524	0.07	1818	0.03	0.04	0.00
# of SEC Enforcements	524	0.25	1818	0.06	0.19	0.00
During Sample						
SEC Investigation	524	0.13	1843	0.09	0.04	0.00
SEC Enforcement	524	0.02	1843	0.01	0.01	0.01
# of SEC Enforcements	524	0.03	1818	0.01	0.02	0.02
Post Sample						
SEC Investigation	524	0.11	1843	0.08	0.03	0.02
SEC Enforcement	524	0.06	1843	0.03	0.03	0.00
# of SEC Enforcements	524	0.10	1818	0.04	0.06	0.00

### Table 3: Materiality of Firm-SEC Interactions

This table reports tests of whether Firm-SEC Interactions have a material effect on the firm's stock price. Panel A includes the full sample and Panel B reports the results for Reporting Companies which excludes regulated entities such as financial firms and also firms that share buildings with Registered Investment Advisers (RIAs). *Abn Ret*<sub>0,t</sub> is the stock's return relative to the CRSP value-weighted index from the day of an SEC interaction until day *t*. The regressions include controls for firm size, leverage, book-to-market, turnover, and distance to the nearest SEC office. Standard errors, clustered at the MSA-date level, are reported in parentheses. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

#### $Abn Ret_{0.10}$ $Abn Ret_{0.1mo}$ $Abn Ret_{0.2mo}$ $Abn Ret_{0.3mo}$ $Abn Ret_{0,10}$ $Abn Ret_{0,1mo}$ $Abn Ret_{0,2mo}$ $Abn Ret_{0.3mo}$ (8) (1)(2)(3)(4)(5)(6) (7)-0.0142\*\*\* **Firm-SEC Interaction** 0.0006 0.0009 -0.0018 $-0.0099^{*}$ -0.0009 -0.0014 -0.0064 (0.0027)(0.0033)(0.0045)(0.0054)(0.0027)(0.0032)(0.0041)(0.0047)Controls Yes Yes Yes Yes Yes Yes Yes Yes Date FE Yes Yes Yes Yes Yes Yes Yes Yes Industry FE Yes Yes Yes Yes Firm FE Yes Yes Yes Yes $R^2$ 0.027 0.058 0.106 0.180 0.235 0.018 0.023 0.027 Observations 642,063 640,949 638,421 635,828 642,063 640,948 638,421 635,826

#### Panel A: Full Sample

Panel B: Reporting Companies Sample

	$\begin{array}{c} Abn \ Ret_{0,10} \\ (1) \end{array}$	$\begin{array}{c} Abn \ Ret_{0,1mo} \\ (2) \end{array}$	$Abn Ret_{0,2mo}$ (3)	$\begin{array}{c} Abn \ Ret_{0,3mo} \\ (4) \end{array}$	$\begin{array}{c} Abn \ Ret_{0,10} \\ (5) \end{array}$	$Abn Ret_{0,1mo}$ (6)	Abn Ret <sub>0,2mo</sub> (7)	$Abn Ret_{0,3mo}$ (8)
Firm-SEC Interaction	-0.0080 (0.0050)	-0.0136** (0.0060)	-0.0208** (0.0095)	-0.0341*** (0.0118)	-0.0096* (0.0049)	-0.0162*** (0.0057)	-0.0269*** (0.0084)	-0.0393*** (0.0098)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes				
Firm FE					Yes	Yes	Yes	Yes
$R^2$	0.021	0.024	0.026	0.028	0.063	0.110	0.182	0.241
Observations	414,913	414,193	412,505	410,726	414,913	414,192	412,505	410,724

# Table 4: Formal SEC Investigations

This table reports tests of whether Firm-SEC Interactions have a differential effect on firms that are under a formal investigation. Columns (1) - (4) include the full sample; columns (5) - (8) focus on Reporting Companies. *Ab n Ret*<sub>0,t</sub> is the stock's return relative to the CRSP value-weighted index from the day of an SEC interaction until day *t. Active Investigation* is an indicator variable equal to one for firms that are currently in an ongoing formal SEC investigation, and zero otherwise. Firm-level control variables from Table 3 are included. Standard errors, clustered at the MSA-date level, are reported in parentheses. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

	Full Sample					Reporting Co	npanies Samp	le
	$     Abn Ret_{0,10}     (1) $	$Abn Ret_{0,1mo}$ (2)	$Abn Ret_{0,2mo}$ (3)	$\begin{array}{c} Abn \ Ret_{0,3mo} \\ (4) \end{array}$	$\frac{Abn Ret_{0,10}}{(5)}$	$Abn Ret_{0,1mo}$ (6)	Abn Ret <sub>0,2mo</sub> (7)	Abn Ret <sub>0,3mo</sub> (8)
Firm-SEC Interaction	0.0002	0.0006	-0.0019	-0.0098**	-0.0064	-0.0082	-0.0120	-0.0241**
	(0.0029)	(0.0034)	(0.0043)	(0.0049)	(0.0055)	(0.0061)	(0.0085)	(0.0099)
Active Investigation	0.0036**	0.0026	0.0018	0.0059**	0.0067***	0.0079***	0.0086**	0.0095**
	(0.0016)	(0.0022)	(0.0027)	(0.0029)	(0.0021)	(0.0028)	(0.0033)	(0.0037)
Firm-SEC Interaction x Active Investigation	-0.0094	-0.0175**	-0.0410***	-0.0389***	-0.0225*	-0.0564***	-0.1051***	-0.1048***
	(0.0060)	(0.0081)	(0.0098)	(0.0106)	(0.0125)	(0.0170)	(0.0240)	(0.0255)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
$R^2$	0.058	0.106	0.180	0.235	0.063	0.110	0.182	0.241
Observations	642,063	640,948	638,421	635,826	414,913	414,192	412,505	410,724

#### Table 5: Insider Trades around SEC Interactions

This table reports tests of SEC Interactions on the propensity of firm insiders to sell shares in their firm. Columns (1) - (4) include the full sample; columns (5) - (8) focus on Reporting Companies. *Ins*  $Trade_{-5,+5}$  (*Ins*  $Sell_{-5,+5}$ ) is an indicator variable equal to one if a firm insider trades (sells) shares in the two week period, and # *Ins*  $Trade_{-5,+5}$  (# *Ins*  $Sell_{-5,+5}$ ) is the number of days insiders trade (sell) shares. Firm-level control variables from Table 3 are included. Standard errors, clustered at the MSA-date level, are reported in parentheses. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

		Full San	nple		Reporting Companies Sample			
	$ \frac{1}{1 \text{ Ins } Trade_{-5,+5}} $ (1)	# Ins Trade <sub>-5,+5</sub> (2)	Ins Sell <sub>-5,+5</sub> (3)	# Ins Sell <sub>-5,+5</sub> (4)	Ins Trade <sub>-5,+5</sub> (5)	# Ins Trade <sub>-5,+5</sub> (6)	Ins Sell <sub>-5,+5</sub> (7)	# Ins Sell <sub>-5,+5</sub> (8)
Firm-SEC Interaction	-0.0219** (0.0086)	-0.2927*** (0.0528)	-0.0306*** (0.0075)	-0.4057*** (0.0590)	-0.0165 (0.0186)	-0.3190*** (0.0971)	-0.0410*** (0.0154)	-0.3759*** (0.1114)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
$R^2$	0.083	0.076	0.113	0.128	0.093	0.094	0.125	0.148
Observations	642,937	642,937	642,937	642,937	415,462	415,462	415,462	415,462

### Table 6: Insider Trading – Heterogeneous Effects

This table reports the results from regressing our insider trading variables on *Firm-SEC Interaction* for officers and non-officers separately and for opportunistic vs routine traders following Cohen et al. (2012). Columns (1) - (4) include the full sample; columns (5) - (8) focus on Reporting Companies. Firm-level control variables from Table 3 are included. Standard errors, clustered at the MSA-date level, are reported in parentheses. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

		Full S	Sample			Reporting Con	npanies Samp	le
	Officers		Non-Officers		Officers		Non-Officers	
	Ins Sell <sub>-5,+5</sub> (1)	# Ins Sell <sub>-5,+5</sub> (2)	Ins Sell <sub>-5,+5</sub> (3)	# Ins Sell <sub>-5,+5</sub> (4)	Ins Sell <sub>-5,+5</sub> (5)	# Ins Sell <sub>-5,+5</sub> (6)	Ins Sell <sub>-5,+5</sub> (7)	# Ins Sell <sub>-5,+5</sub> (8)
Firm-SEC Interaction	-0.0294*** (0.0070)	-0.4272*** (0.0687)	-0.0086* (0.0047)	-0.3470*** (0.1034)	-0.0464*** (0.0143)	-0.5510*** (0.1137)	0.0071 (0.0115)	0.0119 (0.1789)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
$R^2$	0.109	0.149	0.040	0.064	0.120	0.164	0.043	0.077
Observations	642,937	642,937	642,937	642,937	415,462	415,462	415,462	415,462

Panel A: Insider Sales - Officers vs Non-Officers

Panel B: Insider Sales – Opportunistic vs Routine Traders

		Full S	Sample			Reporting Con	npanies Sampl	le
	Opportunistic		Routine		Opportunistic		Routine	
	Ins Sell <sub>-5,+5</sub> (1)	# Ins Sell <sub>-5,+5</sub> (2)	Ins Sell <sub>-5,+5</sub> (3)	# Ins Sell <sub>-5,+5</sub> (4)	Ins Sell <sub>-5,+5</sub> (5)	# Ins Sell <sub>-5,+5</sub> (6)	Ins Sell <sub>-5,+5</sub> (7)	# Ins Sell <sub>-5,+5</sub> (8)
Firm-SEC Interaction	-0.0238*** (0.0060)	-0.5354*** (0.0905)	-0.0177*** (0.0063)	-0.3065*** (0.0758)	-0.0358*** (0.0120)	-0.2907* (0.1677)	-0.0247* (0.0130)	-0.4824*** (0.1397)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
$R^2$	0.066	0.104	0.090	0.150	0.072	0.118	0.102	0.168
Observations	642,937	642,937	642,937	642,937	415,462	415,462	415,462	415,462

# Table 7: Abnormal Returns around SEC Interactions that Coincide with Insider Sales

This table examines the stock price reaction around *Firm-SEC Interactions* that coincide with insider sales. *Sale Around Firm – SEC Interaction* is an indicator variable equal to one if a firm insider sells shares within five trading days of a *Firm-SEC Interaction*. Columns (1) - (4) include the full sample; columns (5) - (8) focus on Reporting Companies. *Ab n Ret*<sub>0,t</sub> is the stock's return relative to the CRSP value-weighted index from the day of an SEC interaction until day *t*. Firm-level control variables from Table 3 are included. Standard errors, clustered at the MSA-date level, are reported in parentheses. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

		Full Sample				Reporting Co	mpanies Samp	le
	$     Abn Ret_{0,10}     (1) $	$Abn Ret_{0,1mo}$ (2)	$Abn Ret_{0,2mo}$ (3)	$Abn Ret_{0,3mo}$ (4)	$     Abn Ret_{0,10}     (5) $	$Abn Ret_{0,1mo}$ (6)	$Abn Ret_{0,2mo}$ (7)	$Abn Ret_{0,3mo}$ (8)
Sale Around Firm-SEC Interaction	-0.0053 (0.0041)	-0.0134** (0.0065)	-0.0233*** (0.0082)	-0.0321*** (0.0099)	0.0009 (0.0065)	0.0009 (0.0114)	-0.0542*** (0.0149)	-0.0628*** (0.0185)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
$R^2$	0.248	0.280	0.370	0.449	0.267	0.287	0.376	0.455
Observations	21,376	21,360	21,287	21,232	15,294	15,289	15,231	15,184

Internet Appendix for "Watching the Watchdogs: The Information Content of SEC Interactions"

# Figure IA1: Synthetic SEC Buildings

This figure illustrates the construction of synthetic SEC buildings. We first identify building polygons (shown in blue) within 500 to 1,000 meters of the actual SEC building (shown in yellow), in this case, the Chicago office. Using building-level Points of Interest (POIs) from SafeGraph, we perform one-to-five matching, pairing each SEC building with ten nearby buildings that are most similar based on key characteristics. Matching features include the number of unique POIs and the distribution of POI shares across key 2-digit NAICS sectors: (1) Finance, Insurance, and Real Estate; (2) Professional, Management, and Administrative Services; and (3) Public Administration and Other Services. Red markers within the blue polygons indicate the locations of the matched synthetic buildings.



# Table IA1: SEC Office Locations

Office	Address
Atlanta Regional Office	950 East Paces Ferry, N.E., Atlanta, GA 30326
Boston Regional Office	33 Arch Street, 24th Floor, Boston, MA 02110
Chicago Regional Office	175 W. Jackson Boulevard, Chicago, IL 60604
Denver Regional Office	1961 Stout Street, Denver, CO 80294
Fort Worth Regional Office	801 Cherry Street, Fort Worth, TX 76102
Los Angeles Regional Office	444 South Flower Street, Los Angeles, CA 90071
Miami Regional Office	801 Brickell Ave., Miami, FL 33131
New York Regional Office	200 Vesey Street, New York, NY 10281
Philadelphia Regional Office	1617 JFK Boulevard, Philadelphia, PA 19103
Salt Lake Regional Office	351 S. West Temple St., Salt Lake City, UT 84101
San Francisco Regional Office	44 Montgomery Street, San Francisco, CA 94104
SEC Headquarters	100 F Street NE, Washington, DC 20549

# Table IA2: Placebo Test: Synthetic SEC Offices

This table reports placebo tests using synethic SEC offices locations—nearby non-SEC buildings selected to match the characteristics of actual SEC offices. Panel A reports results replicating the specification from Table 3. Panel B reports placebo tests replicating the specification from Table 7. Firm-level controls from Table 3 are included. Standard errors, clustered at the MSA-date level, are reported in parentheses. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

	$Abn Ret_{0,10}$ (1)	$Abn Ret_{0,1mo}$ (2)	$Abn Ret_{0,2mo}$ (3)	$\begin{array}{c} Abn \ Ret_{0,3mo} \\ (4) \end{array}$
Firm-Placebo Interaction	-0.0020 (0.0047)	-0.0052 (0.0063)	0.0036 (0.0092)	0.0147 (0.0136)
Controls	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
$R^2$	0.064	0.111	0.185	0.245
Observations	429,013	428,189	426,306	424,358

Panel A: Abnormal Returns

Panel B: Insider Sale Performance

	$\begin{array}{c} Abn \ Ret_{0,10} \\ (1) \end{array}$	$Abn Ret_{0,1mo}$ (2)	$Abn Ret_{0,2mo}$ (3)	$Abn Ret_{0,3mo}$ (4)
Sale Around Firm-Placebo Interaction	-0.0009 (0.0074)	0.0164 (0.0123)	0.0291 (0.0178)	0.0177 (0.0226)
Controls	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
$R^2$	0.038	0.041	0.045	0.064
Observations	16,052	16,044	15,985	15,937

#### Table IA3: Leave-One-Region-Out Robustness

This table reports tests when excluding either Washington, DC (columns (1) - (4)) or New York from the sample (columns (5) - (8)). Firm-level control variables from Table 3 are included. Standard errors, clustered at the MSA-date level, are reported in parentheses. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

	Exclude Washington, DC					Exclude	New York	
	$\frac{Abn Ret_{0,10}}{(1)}$	$Abn Ret_{0,1mo}$ (2)	$Abn Ret_{0,2mo}$ (3)	$Abn Ret_{0,3mo}$ (4)	$     Abn Ret_{0,10}     (5) $	$Abn Ret_{0,1mo}$ (6)	$Abn Ret_{0,2mo}$ (7)	Abn Ret <sub>0,3mo</sub> (8)
Firm-SEC Visit	-0.0007 (0.0029)	-0.0007 (0.0034)	-0.0063 (0.0043)	-0.0147*** (0.0049)	-0.0072** (0.0031)	-0.0088** (0.0045)	-0.0164*** (0.0063)	-0.0279*** (0.0070)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
$R^2$	0.058	0.107	0.180	0.236	0.062	0.111	0.186	0.245
Observations	612,541	611,483	609,093	606,621	519,450	518,516	516,418	514,280

# Panel A: Abnormal Returns

# Panel B: Insider Sale Performance

		Exclude Washington, DC				Exclude New York		
	$     Abn Ret_{0,10}     (1) $	$Abn Ret_{0,1mo}$ (2)	$Abn Ret_{0,2mo}$ (3)	$Abn Ret_{0,3mo}$ (4)	$     Abn Ret_{0,10}     (5) $	$Abn Ret_{0,1mo}$ (6)	Abn Ret <sub>0,2mo</sub> (7)	$Abn Ret_{0,3mo}$ (8)
Sale around Firm-SEC Interaction	-0.0059 (0.0043)	-0.0145** (0.0069)	-0.0258*** (0.0087)	-0.0348*** (0.0105)	-0.0087 (0.0056)	-0.0195** (0.0096)	-0.0415*** (0.0118)	-0.0595*** (0.0134)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
$R^2$	0.249	0.280	0.372	0.452	0.252	0.280	0.372	0.449
Observations	20,579	20,563	20,492	20,443	18,464	18,453	18,394	18,341

# Table IA4: Analysis of Standalone Headquarters

This table reports presents robustness tests when we focus on firms with standalone headquarters. Panel A reports results replicating the specification from Table 3. Panel B reports placebo tests replicating the specification from Table 7. Firm-level controls from Table 3 are included. Standard errors, clustered at the MSA-date level, are reported in parentheses. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

	$\begin{array}{c} Abn \ Ret_{0,10} \\ (1) \end{array}$	$Abn Ret_{0,1mo}$ (2)	$Abn Ret_{0,2mo}$ (3)	$\begin{array}{c} Abn \ Ret_{0,3mo} \\ (4) \end{array}$
Firm-SEC Interaction	-0.0021 (0.0035)	-0.0028 (0.0043)	-0.0115** (0.0057)	-0.0147** (0.0065)
Controls	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
<i>R</i> <sup>2</sup> Observations	0.057 478,919	0.102 478,067	0.176 476,180	0.240 474,216

Panel A: Abnormal Returns

Panel B: Insider Sale Performance

	$Abn Ret_{0,10}$ (1)	$Abn Ret_{0,1mo}$ (2)	$Abn Ret_{0,2mo}$ (3)	$Abn Ret_{0,3mo}$ (4)
Sale around Firm-SEC Interaction	-0.0097* (0.0051)	-0.0217** (0.0087)	-0.0478 <sup>***</sup> (0.0110)	-0.0588*** (0.0129)
Controls	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
$R^2$	0.231	0.258	0.339	0.409
Observations	17,733	17,717	17,657	17,615

#### Table IA5: Sales under a Rule 10b5-1 Plan

This table compares the performance of officer stock sales under Rule 10b5-1 trading plans based on whether the sale occurs around a *Firm-SEC Interaction*. Panel A reports results for sales under a Rule 10b5-1 Plan. Panel B reports results for sales not under a Rule 10b5-1 Plan. We require all sales in Panel A (B) to be 10b5-1 (non-10b5-1) plan sales. Firm-level controls from Table 3 are included. Standard errors, clustered at the MSA-date level, are reported in parentheses. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

	$\begin{array}{c} AbnRet_{0,10}\\ (1)\end{array}$	Abn Ret <sub>0,1mo</sub> (2)	$Abn Ret_{0,2mo}$ (3)	$\begin{array}{c} Abn \ Ret_{0,3mo} \\ (4) \end{array}$
10b5-1 Plan around Firm-SEC Interaction	-0.0047 (0.0069)	-0.0226* (0.0120)	-0.0299** (0.0147)	-0.0505*** (0.0178)
Controls	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
$R^2$	0.231	0.284	0.360	0.460
Observations	11,192	11,189	11,165	11,142

Panel A: Rule 10b5-1 Plan Sales

Panel B: Sales not under a Rule 10b5-1 Plan

	$\begin{array}{c} AbnRet_{0,10}\\ (1)\end{array}$	Abn Ret <sub>0,1mo</sub> (2)	$Abn Ret_{0,2mo}$ (3)	$Abn Ret_{0,3mo}$ (4)
Non-10b5-1 Plan around Firm-SEC Interaction	-0.0041 (0.0061)	-0.0197** (0.0097)	-0.0187 (0.0128)	-0.0307* (0.0162)
Controls	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
$R^2$	0.372	0.407	0.492	0.537
Observations	10,037	10,024	9,977	9,943