

Undisclosed SEC Investigations

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Abstract:

One of the hallmarks of the SEC's investigative process is that it is shrouded in secrecy—only the SEC staff, high-level managers of the company being investigated, and outside counsel are typically aware of active investigations. We obtain novel data on the targets of all SEC investigations closed between 2000 and 2017—data that was heretofore non-public—and find that such investigations portend economically meaningful declines in firm performance. Despite the materiality of these investigations, firms are not required to disclose them, and only 19% of targeted firms initially disclose the investigation. We examine whether corporate insiders exploit the undisclosed nature of these investigations for personal gain. We find a pronounced spike in insider trading at the outset of the investigation; that the increase in trading is attributable to corporate officers but not to independent directors; and that abnormal trading activity appears highly opportunistic and earns significant abnormal returns. Our results suggest that SEC investigations are often material non-public events, and that insiders trade based on private information about these events.

JEL Classification: G34; G38; J38; K14; K15; K22; M41; M48

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“[The Division of] Enforcement conducts investigations into possible violations of the federal securities laws and litigates the Commission’s civil enforcement proceedings in the federal courts and in administrative proceedings. The ongoing efforts made by Enforcement to deter misconduct and punish securities law violators are critical to safeguarding millions of investors and instilling confidence in the integrity of our markets.”

- *Oversight of the SEC: Wall Street’s Cop on the Beat*, SEC Commissioners’ Joint Testimony Before the U.S. House of Representative Committee on Financial Services (September 24, 2019)

1. Introduction

The U.S. Securities and Exchange Commission (SEC) has a three-part mission to protect investors; maintain fair, orderly, and efficient markets; and facilitate capital formation. SEC investigations and enforcement actions play a critical role in carrying out each of these objectives. One of the hallmarks of the investigative process is that it is shrouded in secrecy, as the SEC explicitly seeks to protect the identity of those under investigation (SEC, 2017; SEC, 2019). With respect to corporate malfeasance, only SEC staff, senior managers of the company being investigated, and outside counsel are aware of active investigations. While some companies choose to disclose active investigations, they are not required to do so—even in the extreme case when an enforcement action is likely (e.g., Bartholomew and Baisinger, 2012; Solomon and Soltes, 2019).¹

Thus, although a key purpose of SEC investigations is “safeguarding millions of investors and instilling confidence in the integrity of markets,” (*supra*) because disclosing these investigations is not mandatory, an unintended consequence of the investigative process is that it potentially endows corporate insiders with a significant information advantage. In some cases, senior managers and counsel will be aware of the investigation well in advance of shareholders;

¹ For example, on January 22, 2016, the Southern District of New York ruled, *In re Lions Gate Entertainment*, that corporations are under no obligation to disclose SEC investigations or the receipt of a Wells Notice. The court held, “the defendants did not have a duty to disclose the SEC investigation and Wells Notices because the securities laws do not impose an obligation on a company to predict the outcome of investigations. There is no duty to disclose litigation that is not ‘substantially certain to occur.’” <https://corpgov.law.harvard.edu/2016/04/09/do-you-have-to-disclose-a-government-investigation/>.

and in most cases, shareholders will *never* be aware of the investigation. In this study, we examine whether corporate insiders exploit this information advantage and trade based on private information about ongoing investigations.

Figure 1 illustrates the timeline of a typical investigation. The SEC’s investigation process begins when a “lead” (e.g., whistleblower tip, press report, surveillance activity, etc.) suggests the possibility of a securities law violation. To the extent that a lead is promising, a preliminary inquiry is opened internally at the SEC.² If the staff believe the internal inquiry reveals circumstances that justify further use of SEC resources, a formal investigation is opened. The opening of a formal investigation provides the Commission with subpoena power and typically entails obtaining documents from the firm and conducting interviews. If the staff intends to recommend an enforcement action, they present the case to the SEC’s five-person Commission, which votes in a closed meeting on whether to pursue an enforcement action. Targeted firms are required to disclose the investigation only in the final stage—if and when the SEC proceeds with an enforcement action.

We obtain novel data on the targets of all formal SEC investigations closed between 2000 and 2017. The data cover 12,861 investigations and provide useful and novel insights into the breadth and scope of the Commission’s investigative process. Strikingly, we find that 10% of publicly-listed firms are targets of an investigation in the average year. This indicates a much broader scope of SEC investigations than suggested by the rate of enforcement actions and

² This is known as a “matter under inquiry” or MUI. The threshold for opening a MUI is low, and in many instances, MUIs are closed without opening a formal investigation—once it become clear that the matter is insufficient to justify expending SEC resources. Between 1992 and 2010, the SEC closed roughly 45% of MUIs without ever opening an investigation (SEC, 2011).

shareholder class action suits.³ We find the average investigation lasts three years, and the SEC's headquarters opens the most investigations (23%), followed by New York (14%) and Los Angeles (10%). The industry distribution of investigations largely mirrors that of the universe of publicly listed firms, suggesting that no one industry is (unduly) targeted by the Commission. In contrast, 20% (6%) of investigations pertain to the largest (smallest) 10% of firms. This suggests a tendency by the Commission to target large firms: potentially those violations that have the largest scope of malfeasance and victims, but also those firms capable of mounting a well-resourced defense.

In terms of firm performance, we find that these investigations portend economically meaningful declines in firm performance and increased volatility. Consistent with the confidential nature of the investigation, these declines are marked by a persistent downward drift, and are not quickly impounded into prices. For example, the median market-adjusted return one-year (two-years) *after* the opening of an investigation is -5.73% (-9.35%). Despite substantial declines in performance, only 19% of targeted firms disclose the investigation at the outset, and 44% disclose the investigation by its conclusion. The undisclosed nature of the vast majority of these investigations, coupled with material, long-lived declines in performance, suggest insiders privy to the details of the investigation have a substantial information advantage.

We examine whether corporate insiders exploit this information advantage using a standard short-window event study around the investigation open date. The open date signifies the official start of the formal investigation and serves as a reasonable proxy for when senior managers are made aware of the investigation through subpoenas or other official correspondence (e.g., McLucas et al., 1997). This does not imply senior managers are not trading on private information

³ Enforcement actions typically pertain to less than 1% of firm-years, and shareholder class action suits less than 5% of firm-years. See Karpoff et al. (2017) and Huang et al. (2019) for a review of the literature that examines SEC enforcement actions, restatements, and class action litigation.

about the investigation at other points in time—e.g., as the investigation progresses and potentially escalates—merely that the open date is unambiguously an important date in the lifecycle of the investigation and is readily identifiable for all SEC investigations in our sample. Evidence of a change in insider trading activity in a short window after the start of the investigation—*when the investigation is known to insiders but not to the market*—suggests insiders are trading based on private information about the investigation itself.⁴

We find no evidence of abnormal trading around the opening of an SEC investigation for the average firm. However, we find a pronounced spike in insider selling activity among firms with extreme negative outcomes (e.g., firms that subsequently restated their financials due to fraud). Moreover, we find that the suspicious trading activity in these firms is attributable to corporate officers, and no evidence of abnormal trading among independent directors in these firms. Highlighting the non-public nature of the information around the investigation open date, we find no evidence of a capital market reaction around this date—suggesting our results are not attributable to confounding disclosures or other corporate news. The absence of a capital market reaction, in conjunction with a spike in insider trading activity is consistent with a significant *internal* information event occurring around the open of the SEC investigation—and insiders trading based on this event.

Finally, we find that abnormal selling activity at the outset of the investigation allows insiders to avoid significant losses. Those executives with abnormal trading activity at the outset of the investigation earn significant abnormal returns—whether measured relative the trading of their industry peers or their own historical trading returns. Collectively, our results suggest the

⁴ To ensure all investigations are undisclosed during the period we measure abnormal insider trading activity, we remove those investigations that become public within ten trading days of the investigation open from our sample (19% of investigations).

absence of mandatory disclosure surrounding SEC investigations provides insiders with an information advantage, and that insiders opportunistically time their trades to exploit this advantage.

Our findings should be of interest to regulators, boards, and academics. With respect to regulators, our results provide novel evidence that insiders exploit their information advantage regarding confidential regulatory investigations. We encourage regulators to scrutinize securities trading during the investigative process, even when the investigations themselves are not related to securities trading. In addition we encourage the SEC to consider issuing a set of rules on whether and when a regulatory investigation is considered a “material” event that would trigger mandatory disclosure. In the absence of such rules, our evidence suggests insiders are not disclosing the investigation and simultaneously exploiting their information advantage for personal gain.

With respect to boards, our results suggest the “disclose or abstain” rule that governs officers’ and directors’ fiduciary duty is not being consistently applied as it relates to active regulatory investigations. Our results suggest that as soon as the general counsel is aware of an investigation, either the investigation should be disclosed, or those officers and directors with knowledge of the investigation should be precluded from trading. Our findings highlight the need for insider trading policies that restrict the trades of key personnel during ongoing investigations.

With respect to academics, our results provide novel insights into the scope of SEC investigations and their consequences. For instance, our results appear to highlight an exception to the materiality threshold that typically governs mandatory disclosure—namely that firms do not have to disclose SEC investigations—and suggest that this exception has important consequences. Our findings add to the growing body of literature on financial misconduct, and how executives benefit from this misconduct (e.g., Dechow et al., 1996; Beneish, 1999; Karpoff et al., 2008(a, b);

Dechow et al., 2015). In addition, by making our data publicly available, our study enables future research to answer a host of other important, novel questions related to SEC investigations.⁵

The remainder of this paper proceeds as follows. Section 2 describes our data. Section 3 describes our research design and presents results. Section 4 provides concluding remarks.

2. Sample Construction and Descriptive Statistics

2.1. Sample

Through formal requests and direct communications with the FOIA office of the SEC, we obtain 299 pages of data on the targets of all formal SEC investigations closed between January 1, 2000 and August 2, 2017. The investigations pertain to exchanged-listed companies, registered investment advisers, broker-dealers, mutual funds, exchanged-traded funds, and other entities under the Commission's purview. Each record in the data provides information about the originating SEC office, whether the investigation was related to securities trading (e.g., insider trading), the target of the investigation, and the open and close dates of the investigation. The data covers 12,861 investigations ongoing across 18 years, with the name of some targets being redacted. One limitation of this dataset is that the SEC declined to provide data on the nature of each investigation, the investigation's outcome, the dates of communications with the target of the investigation, and the dates of any associated Wells Notices.

Panel A of Figure 2 plots the number of formal investigations closed each year and Panel B of Figure 2 plots the investigations by office location. While the SEC's headquarter office in Washington, D.C. is responsible for 23% of investigations, the SEC's eleven regional offices

⁵ For example, Blackburne and Quinn (2018) use the data to examine the determinants of the speed of disclosure; Blackburne et al. (2018) use the data to examine firm's accrual quality and conservatism; Coleman et al. (2019) use the data to validate that FOIA denials predict active investigations; Bonsall et al. (2019) use the data to examine the effect of SEC backlog on restatements.

conduct the majority of investigations , with the New York (14%), Los Angeles (10%), and Chicago offices (8%) investigating the next three highest number of cases.

For the remainder of the paper, we focus on entities listed on the three major U.S. exchanges. Of the 12,861 investigations of all entities under the Commission’s purview that were closed between January 1, 2000 and August 2, 2017, 3,948 investigations pertain to 2,814 unique exchange-listed entities appearing on CRSP/Compustat.⁶ Restricting attention to the 2000-2017 period, there are 87,122 firm-years in the CRSP/Compustat universe, 9,079 of which are under investigation.

Panel A of Figure 3 plots the industry distribution of 9,079 firm-years under investigation. Panel B of Figure 3 plots the industry distribution of 87,122 firm-years on CRSP/Compustat universe.⁷ The distributions are roughly similar, the only exception being banking and finance (Fama-French industry = “Money”), which comprises 20% of the CRSP/Compustat universe but only 15% of the investigation sample. Panel C of Figure 3 plots the size decile for the firm-years under investigation (size is measured using total assets). If investigations were evenly distributed across size deciles, roughly 10% of the investigations should appear in each size decile. Instead, 20% (6%) of investigations pertain to firms in the largest (smallest) size decile. Interestingly, the rate of investigation is monotonically increasing in firm size (from 6% in the 1st decile, to 9% in the 5th decile, to 20% in the 10th decile).

Table 1 presents descriptive statistics. Panel A presents summary statistics for the 3,948 unique investigations. Panel A reveals that the average investigation lasts slightly over three years

⁶ Most investigations involve individuals, broker-dealers, or other non-publicly traded entities, and we remove investigations concerning securities trading. Two research assistants (RAs) independently matched company name in the SEC file to that in the CRSP/Compustat database and recorded the corresponding PERMNO. In cases where the RAs disagree, a third RA and one of the coauthors made the appropriate determination.

⁷ To be included in our sample, we require data on net income, total assets, total liabilities, the book-to-market ratio, and monthly returns over the fiscal year.

and that 44% of investigations are disclosed.⁸ However, the vast majority of these investigations are not immediately disclosed—only 19% of investigations are disclosed by the tenth trading day after the investigation open. The notion that so few firms would disclose the investigation at the outset is consistent with Solomon and Soltes (2019) who examine 587 firms under investigation for fraud between 2002 and 2005, find that 54% of firms disclose such investigations, and among those firms that do disclose, the average (median) time from investigation open until disclosure is 165 (64.5) days.

Panel B of Table 1 presents descriptive statistics for our pooled sample of firm-years from 2000 to 2017. We create an indicator for whether the firm was the target of an SEC investigation during the year, *SECInvestigation*. Strikingly, we find that from 2000 to 2017, 10% of the Compustat population is under investigation by the SEC (mean *SECInvestigation* = 0.10). Panel C presents differences in means and medians between firms with (and without) an ongoing SEC investigation. Panel C shows that firms targeted by the SEC tend to be larger, have lower book-to-market ratios, and are more highly levered. Because firms under SEC investigation may subsequently restate their financials, all financial statement variables are constructed using Compustat Unrestated.

2.2 Firm Performance

Figure 4 plots median market-adjusted returns over the two-years following the opening of an SEC investigation.⁹ Consistent with the non-public nature of the investigation, on the day the

⁸ Following Soltes and Soloman (2019), we measure disclosure by searching firm EDGAR filings, press releases, and media articles for evidence of the investigation. Specifically, we use the Factiva search algorithm, “[firm name] and (“Securities and Exchange Commission” or SEC) w/10 (investigat* or inquir* or wells notice or settlement or subpoena or probe or complaint or cooperat*)”. The search begins one year before the investigation begins and ends on the date the investigation closes. We identify the earliest disclosure of an investigation by any source (e.g., the firm, the SEC, anonymous source), and each disclosure of an investigation is reviewed by one of the coauthors for accuracy.

⁹ We plot median returns to minimize the effect of extreme returns on the plot.

investigation is opened, the median market-adjusted return is approximately zero (−0.07%). However, 100 trading days after the open, the median market-adjusted return is −2.09%. By 250 trading days, it is −5.73%, and by 500 trading days it is −9.35%. This suggests not only that most investigations portend meaningful declines in economic performance, but also that the decline in performance is a persistent downward drift that is not quickly impounded into prices.

Table 2 presents results from estimating the correlation between SEC investigations and various measures of firm performance in a regression framework:

$$Performance = \alpha + \beta_1 SECInvestigation + \theta Controls + \Omega Fixed\ Effects + \varepsilon, \quad (1)$$

where *Performance* is either: (i) net income scaled by total assets (*NetInc*), (ii) market-adjusted returns over the fiscal year (*AbnReturn*), (iii) the standard deviation of the residual from a market model of monthly returns estimated over the fiscal year (*IdioVol*). *Controls* is a vector of control variables including *Size*, *BM*, *Leverage*, and *Loss*. All variables are defined in Table 1. To control for differences in firm performance across time, industries, and firms, we include either (i) industry and year or (ii) firm and year fixed effects when estimating Eq. (1).

Across all specifications, Table 2 shows that firms under investigation by the SEC exhibit poor performance. Columns (1), (3), and (5) suggest firms targeted by SEC investigations experience 0.9% lower return on assets (relative to a mean of −4%), 3% lower abnormal returns (relative to a mean of 5%), and 0.01 higher idiosyncratic volatility (relative to a mean of 0.12). Columns (2), (4), and (6) report results after including firm fixed effects. In the presence of firm fixed effects, the regressions exploit exclusively *within-firm* variation in SEC investigations and performance: these regressions compare, *within a firm*, performance in periods where the firm *was under* investigation to performance in periods where the firm *was not* under investigation. Inferences are generally unaffected by this alternative specification.

3. Event Study Tests

We examine whether corporate insiders exploit their information advantage and trade on private information about these investigations using a standard short-window event study around the investigation open date. Ideally, we would observe all of the dates during the course of the investigation in which the SEC privately communicates with insiders, and examine short-window trades around those dates. However, this detailed information is not publicly available. Instead, we focus on the SEC investigation open date because our private correspondence with SEC staff suggests this date is a reasonable proxy for the date at which corporate insiders become aware of the investigation through official correspondence and subpoenas. We acknowledge the presence of measurement error in this date: there are other dates in an investigation on which insiders may have other opportunities to trade based on private information (e.g., comment letters, as in Dechow et al., 2015). In this regard, *the absence of trading* around the open of the investigation does not imply insiders do not trade on private information about the investigation—only that they do not trade based on private information around that date. In contrast, empirical evidence of a spike in insider trading around the SEC investigation open validates that the date measures (with noise) a significant internal information event.

3.1. Descriptive statistics

Our event study analysis focuses only on those firms under investigation by the SEC that did not disclose the investigation by the tenth trading day following the open of the investigation (81% of targeted firms). Panel A of Table 3 shows how we construct our event study sample. We begin with the full sample of SEC investigations (12,861). We then eliminate those investigations of individuals or entities not on CRSP (8,913); eliminate those entities without data on our control

variables or Form 4 data on Thomson-Reuters (459); and eliminate those investigations that are disclosed by the tenth day following the open (718). The resulting sample consists of 2,771 investigations. For each investigation, we collect daily trading data from CRSP and Thomson-Reuters for the $[-20, +20]$ trading-day window around the investigation open ($t = 0$), resulting in 108,393 unique firm-days and 2,130 unique firms.¹⁰

Panel B of Table 3 presents descriptive statistics for our event study sample. Panel B indicates that the daily probability that insiders are net sellers is 3% (mean *InsiderSeller* = 0.03) and that 11% of the sample is attributable to firms that subsequently experienced extreme negative outcomes (mean *Severe* = 0.11). We measure “severe investigations” as those where the firm subsequently restated their financial statements due to fraud or where market-adjusted stock returns over the investigation are in the bottom fifth percentile.¹¹

Figure 5 plots insider trading activity during the $[-20, +20]$ day window around the investigation. For firms without severe investigations (i.e., *Severe* = 0), we find no detectable change in either the probability of trade or trading volume around the opening of an SEC investigation. In contrast, for the firms with severe investigations (i.e., *Severe* = 1), we find sharp increase in the probability of trading in the ten trading days following the opening of an investigation. Panel A shows that while the probability of an insider trade on the day of the investigation open is 4.00%, the probability of an insider trade on day +1 is 5.28%, the probability on day +5 is 6.29%, and the probability on day +10 is 7.47%. Panel B shows similar results for the

¹⁰ For each transaction on Thomson-Reuters we require the trade price, the number of shares traded, and the date of the trade and restrict our analyses to open market purchases and sales of common stock and exclude option exercises, option grants, and equity gifts. We find only a small fraction of trades in our short-window event study tests are routine and occur in the same month three-years in a row (2.9%) (e.g., Cohen et al., 2012) or are flagged as pre-planned 10b5-1 trades (3.8%). Excluding these trades does not affect our inferences. We obtain data on restatements from Audit Analytics.

¹¹ Among those firms investigated, the bottom fifth percentile of market-adjusted returns over the investigation is -115%. Results are unaffected if we consider only those firms that restated due to fraud.

standardized volume of insider trades, which is relative to the sample mean. Notably, during this entire time, the investigation has not been disclosed.

3.2. Event study tests

We use a short-window event study design to examine whether insiders change their trading activity immediately following the opening of an SEC investigation. In particular, we estimate the following regression pooling across all firm-days in the $[-20, +20]$ trading day window around the investigation open:

$$\begin{aligned} \text{TradingActivity} = & \alpha + \beta_1 \text{Day}[0,+10] * \text{Severe} + \beta_2 \text{Day}[0,+10] \\ & + \beta_3 \text{Severe} + \theta \text{Controls} + \Omega \text{Fixed Effects} + \varepsilon. \end{aligned} \quad (2)$$

TradingActivity is one of four measures of trading activity: the probability of an insider trade (*InsiderTrade*), insider trading volume (*InsiderVolume*), the buy-sell imbalance (*InsiderBSI*), or the probability of an insider sale (*InsiderSeller*). *Day* $[0,+10]$ is an indicator variables that equals one in the $[0,+10]$ window relative to the investigation open date and zero otherwise. *Controls* is a vector of firm-level controls including *BlackoutPd*, *DailyAbReturn*, *DailyVolatility*, *Size*, *BM*, *Surprise*, *AbReturn*, and *Volatility*, and all other variables are defined in Table 3.

Similar to Arif et al. (2019), we estimate two versions of Eq. (2). We estimate the first version using pooled regressions, and the second version after including firm-quarter and date fixed effects. The latter specification focuses exclusively on within firm-quarter and within date variation in insider trading. The use of date fixed effects (e.g., a fixed effect for December 5, 2010) subsumes any common time trends or macroeconomic shocks. The use of firm-quarter fixed effects (e.g., a fixed effect for Coca-Cola's Q4 2010) subsumes all variables that do not vary within a given firm-quarter (e.g., Coca-Cola's Q4 2010 earnings surprise).

The latter specification should alleviate concerns that our results are attributable to omitted firm-quarter characteristics. To the extent that an omitted variable does not vary *within a given firm-quarter* (e.g., within Coca-Cola's Q4 2010), this analysis controls for such an omitted variable. This design choice is important because it controls for many of the firm characteristics that might be associated with the decision to open the SEC investigation or the incidence of corporate malfeasance (e.g., growth opportunities, financial distress, executive compensation, accounting quality, business complexity, corporate governance).

The coefficient of interest in Eq. (2) is β_I , which represents the increase in the difference in insider trading activity between firms with and without severe investigations during the event window (i.e., β_I is analogous to a “difference-in-difference” estimate). If insiders at firms with severe investigations sell based on private information about the opening of an investigation, we predict $\beta_I > 0$ when the dependent variable is *InsiderTrade*, *InsiderVolume*, and *InsiderSeller* and $\beta_I < 0$ when the dependent variable *InsiderBSI* (as negative buy-sell imbalance represent sales).

Table 4 presents results from estimating Eq. (2) for measures of unsigned trading activity (i.e., *InsiderTrade* and *InsiderVolume*). Across all specifications, for the *average* investigation, we find no detectable change in unsigned trading activity during the [0,+10] window relative to the investigation opening (i.e., coefficients on *Day[0,+10]* are insignificant at conventional levels). In contrast, across all specifications, we find a statistically and economically significant increase in trading activity among firms with the most severe investigations (i.e., coefficients on *Day[0,+10]* * *Severe* are highly significant at conventional levels). Results suggest that the average probability of trade is 1.4% to 1.6% larger during the [0,+10] window—relative to a baseline probability of 4% (Table 3). This suggests insiders are approximately 40% more likely to trade shortly after the open of a severe SEC investigation relative to the unconditional average probability of trade.

Table 5 presents results from estimating Eq. (2) for measures of signed trading activity—(i.e., *InsiderBSI* and *InsiderSeller*). Across all specifications, for the *average* investigation, we find no detectable change in selling activity during the [0,+10] window relative to the investigation opening. In contrast, across all specifications, we find a statistically and economically significant increase in selling activity among firms with the most severe investigations (i.e., coefficients on *Day[0,+10] * Severe* are highly significant at conventional levels). Results suggest that the average probability of a sale is 1.3% to 1.7% larger during the [0,+10] window—relative to a baseline probability of 3% (Table 3). Relative to the baseline probability, this suggests insiders are approximately 50% more likely to sell shortly after the open of a severe SEC investigation.

3.3. Identifying which insiders trade

To sharpen empirical identification, we next focus on those individuals who are most likely aware of the investigation. Top executives (e.g., CEOs, CFOs, COOs, general counsels) are more likely to be apprised of any subpoenas or correspondence with the SEC than independent directors. Accordingly, we examine insider trading activity separately for each of these two categories of insiders around the investigation open.

Table 6 presents results from re-estimating Eq. (2) for the trades of individuals in each category. Panels A and B present results for officers and independent directors, respectively. Across all specifications, we consistently find a statistically and economically significant increase in selling activity among officers in firms with severe investigations, and no evidence of increased insider selling among independent directors, regardless of the severity of the investigation.

The results suggest that the pronounced spike in insider trading is attributable to corporate officers at affected firms—those individuals who are most likely to be aware of the investigation at the outset. Although we cannot definitively rule out the possibility of a correlated omitted

variable, to explain our collective results, an omitted variable would have to vary with (i) the timing of insider trades within a given firm-quarter, (ii) the timing of the investigation open within the firm-quarter, (iii) the severity of the investigation, and (iv) the individual's position in the corporate management hierarchy (i.e., affect officers differently than independent directors in the same firm).

3.4. *Public reaction to SEC investigations*

Recall that we focus our event study on investigations that are undisclosed, and thus known only to insiders, outside counsel, and SEC staff at the time of the investigation open. Consequently, we do not expect a capital market reaction on the investigation open date. However, an alternative explanation for our results is that other *public* events systematically occur in the 10-day window around the SEC investigation and insiders are trading in response to these *public* events. To the extent that confidential SEC investigations become public, or a systematic change in firm news occurs, we expect a change in stock price and an increase in trading volume in the $[0,+10]$ interval.

We test for a capital market reaction by estimating Eq. (2) after replacing our measures of insider trading activity with daily public trading volume (*PublicVolume*) and absolute value of returns ($|Return|$). We measure *PublicVolume* as the daily CRSP trading volume as a percentage of shares outstanding for firm i on day t , and measure $|Return|$ as the absolute value of percentage stock return for firm i on day t . Table 7 presents results. Consistent with the undisclosed, non-public nature of SEC investigations in our sample, we find no evidence of a capital market reaction around the investigation open. The coefficients on $Day[0,+10]$ are negative, suggesting less than average news is released in the $[0,+10]$ interval and the coefficients on $Day[0,+10] * Severe$ are not significantly different from zero at conventional levels. These results highlight the non-public nature of the investigations.

3.5. Profitability of insider trades around SEC investigations

We next examine whether those trades suspiciously timed to coincide with the opening of an SEC investigation are opportunistic (i.e., earn abnormal returns). Given that the average investigation portends economically significant declines in performance, we would expect insider sales at the outset of these investigations to avoid considerable losses. We formally test this conjecture using two distinct approaches to measure trade-specific abnormal returns.

First, following Ravina and Sapienza (2010), we measure trade-specific abnormal returns as the market-adjusted return over the 180 days after the trade, multiplying by -1 for sales.¹² Second, following Jagolinzer et al. (2011), we measure trade-specific abnormal returns as the intercept (or alpha) from the four factor Fama-French model estimated over the 180 days following the trade:

$$(R_i - R_f) = \alpha + \beta_1 (R_{mkt} - R_f) + \beta_2 SMB + \beta_3 HML + \beta_4 UMD + \varepsilon, \quad (3)$$

where R_i is the daily return to firm i 's equity, R_f is the daily risk-free interest rate; R_{mkt} is the CRSP value-weighted market return, SMB , HML , and UMD are the size, book-to-market, and momentum factors, and α ($-\alpha$) is the average daily abnormal return to purchases (sales). We estimate these two measures of trade-specific abnormal returns for all 743 trades of the 715 unique executives that trade in $[0,+10]$ interval around the opening of an SEC investigation.

A considerable body of prior research suggests insider trades are informed, and that average abnormal returns to their trades are expected to be non-zero (e.g., Ravina and Sapienza, 2009; Jagolinzer et al., 2011; Cohen et al., 2012). Thus, to judge the *relative* opportunism of these

¹² Prior research generally computes abnormal returns over a six-month horizon, since the “short-swing rule” penalizes insiders for profits earned on trades with horizons shorter than six-months.

trades, we compare the trade-specific abnormal returns to two benchmarks: (i) the trade-specific abnormal returns of all other officers within the same industry-year (“Industry Benchmark”), and (ii) the trade-specific abnormal returns on the executive’s own trades over the prior three years (“Own Trades Benchmark”).

Table 8 presents results. Panel A (Panel B) presents results for market-adjusted returns (four factor alphas). We find trades in the [0,+10] window around the opening of the investigation earn economically and statistically significant abnormal returns. Not only are these abnormal returns reliably different from zero, but they are much larger than the trades of other executives in the same industry-year (p -value < 0.01) and much larger than the trades of the same officers just three years prior (p -value < 0.01). Evidence of a spike in insider trading at the outset of the investigation, in conjunction with a spike in trade-specific abnormal returns suggests these trades are highly opportunistic. Officers appear to be exploiting the absence of mandatory disclosure regarding SEC investigation for personal gain.

4. Conclusion

One of the hallmarks of the SEC’s investigative process is that it is shrouded in secrecy—only the SEC staff, high-level managers of the company being investigated, and outside counsel are typically aware of active investigations. We obtain novel data on the targets of all formal SEC investigations closed between 2000 and 2017. We find that such investigations portend economically meaningful declines in firm performance, and despite the seeming materiality of these investigations, only 19% of targeted firms initially disclose the investigation. The undisclosed nature of the vast majority of these investigations, coupled with material, long-lived

declines in performance, suggest insiders privy to the details of the investigation have a substantial information advantage.

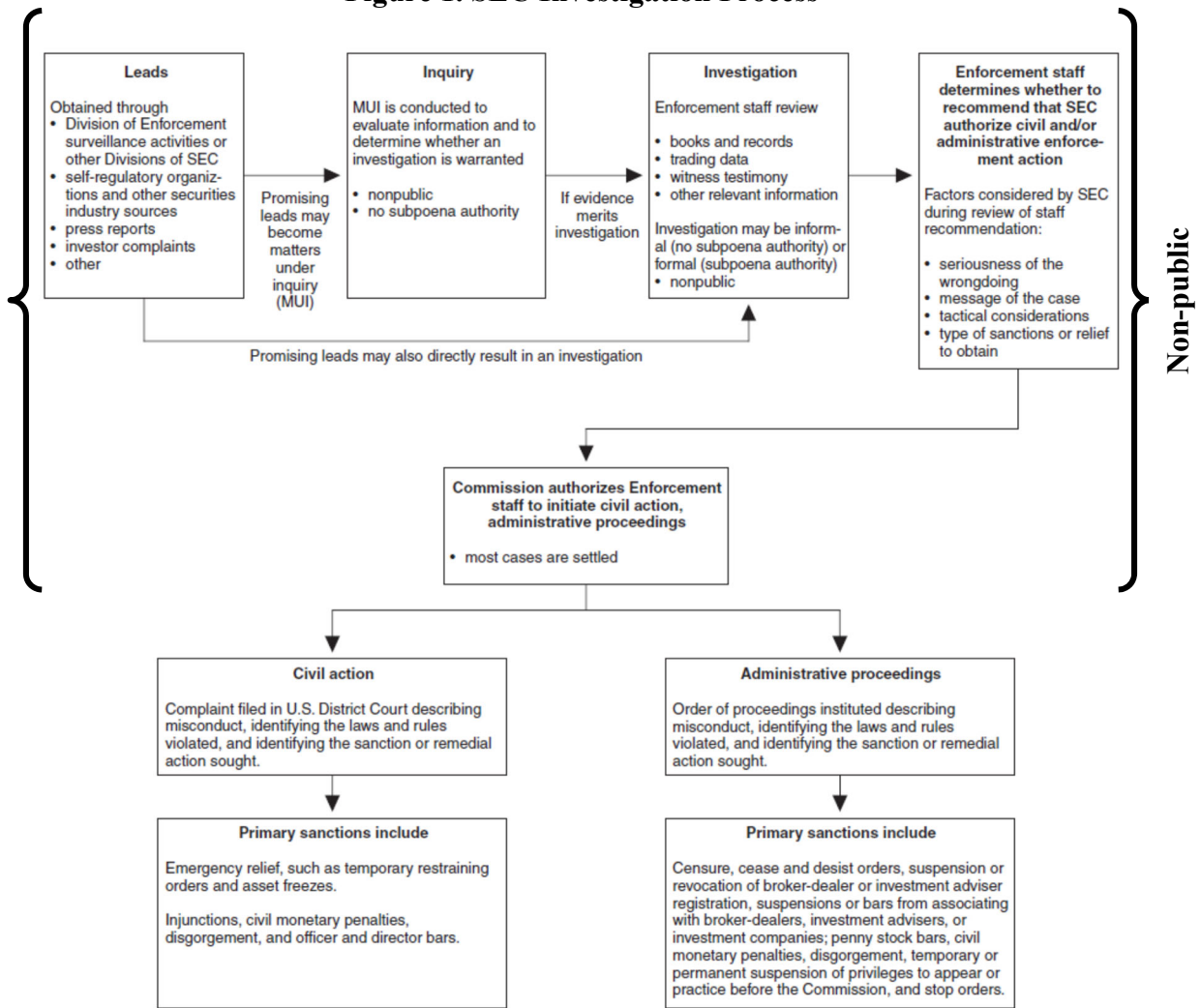
We examine whether corporate insiders exploit this information advantage and trade based on private information about confidential SEC investigations. We focus our analysis on insider trading in a short window around the opening of the formal investigation. We find a pronounced spike in insider trading at the outset of severe investigations and that the increase in trading is attributable to officers. In contrast, we find no evidence of abnormal trading by independent directors, and no evidence of a capital market reaction around the investigation open. In addition, we find officers' abnormal trading activity at the outset of the investigation appears highly opportunistic. These trades earn substantial abnormal returns, and these returns are larger than those of industry-peers and larger than would be suggested by the officers' own trading history.

The absence of a capital market reaction in conjunction with a spike in insider trading activity is consistent with a significant internal information event occurring around the investigation open, and insiders trading based on this event. Collectively, our results suggest SEC investigations are often material non-public events; that the absence of mandatory disclosure surrounding SEC investigations provides insiders with an information advantage; and that insiders opportunistically time their trades to exploit this advantage.

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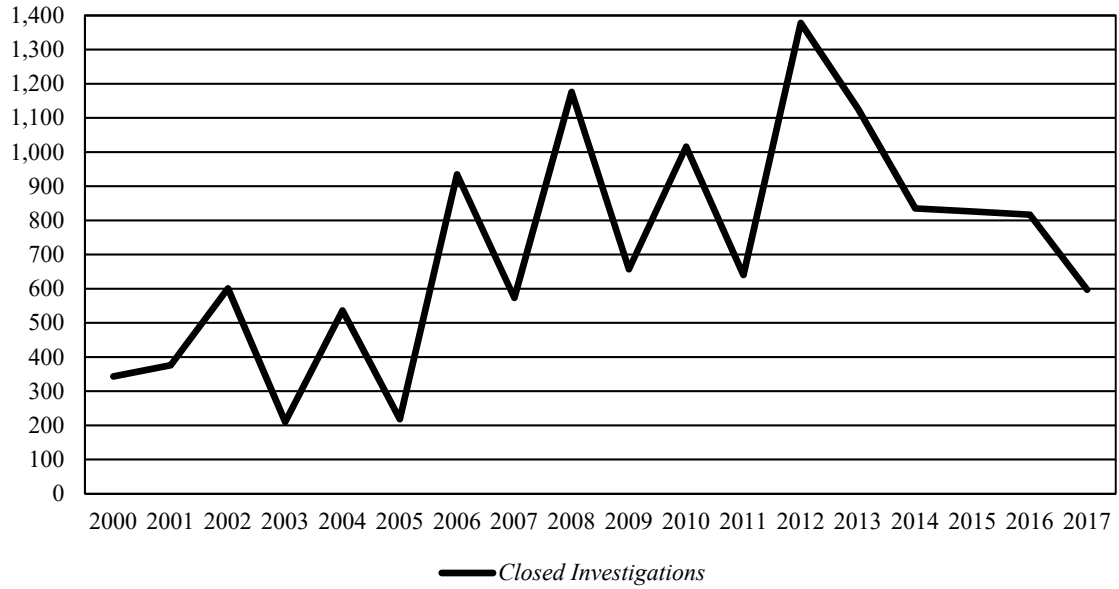
Figure 1. SEC Investigation Process



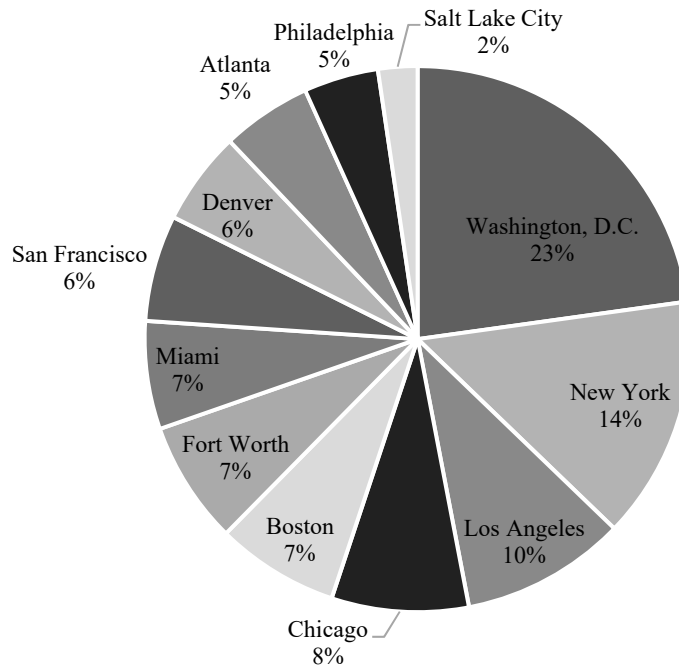
This figure is excerpted from GAO (2007): *Additional Actions Needed to Ensure Planned Improvements Address Limitations in Enforcement Division Operations*. Brackets added to denote non-public activities.

Figure 2. SEC Investigations

Panel A. SEC Investigations Over Time



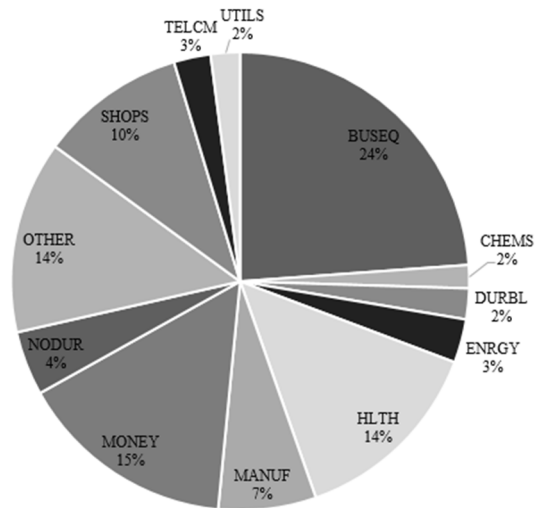
Panel B. SEC Investigations By Office



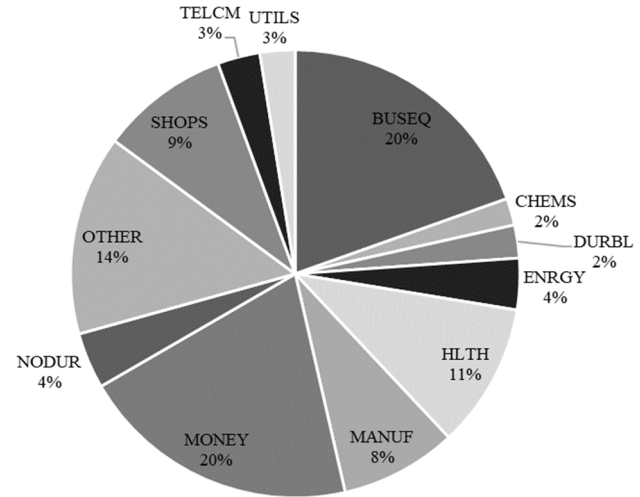
Panel A plots the number of SEC investigations closed each year. Panel B plots the percentage of investigations by office. Sample of 12,861 total investigations closed between January 1, 2000 and August 2, 2017.

Figure 3. SEC Investigations of Publicly Traded Entities on CRSP/Compustat

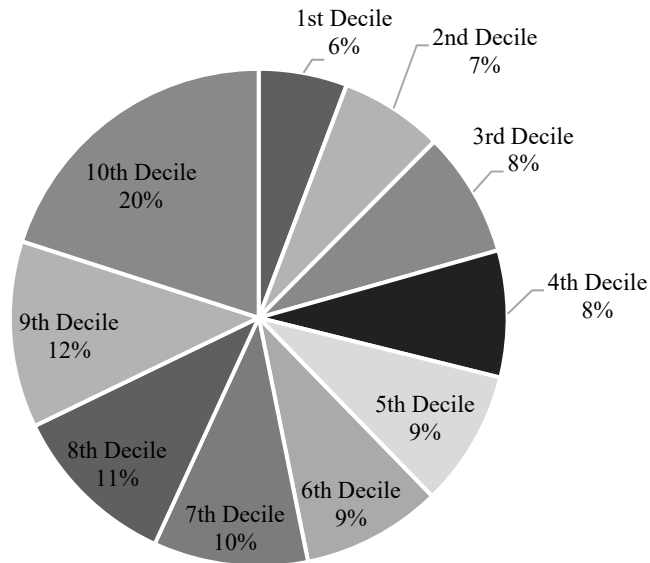
Panel A. Industry Distribution of Investigations of Traded Entities



Panel B. Industry Distribution of CRSP/Compustat Universe

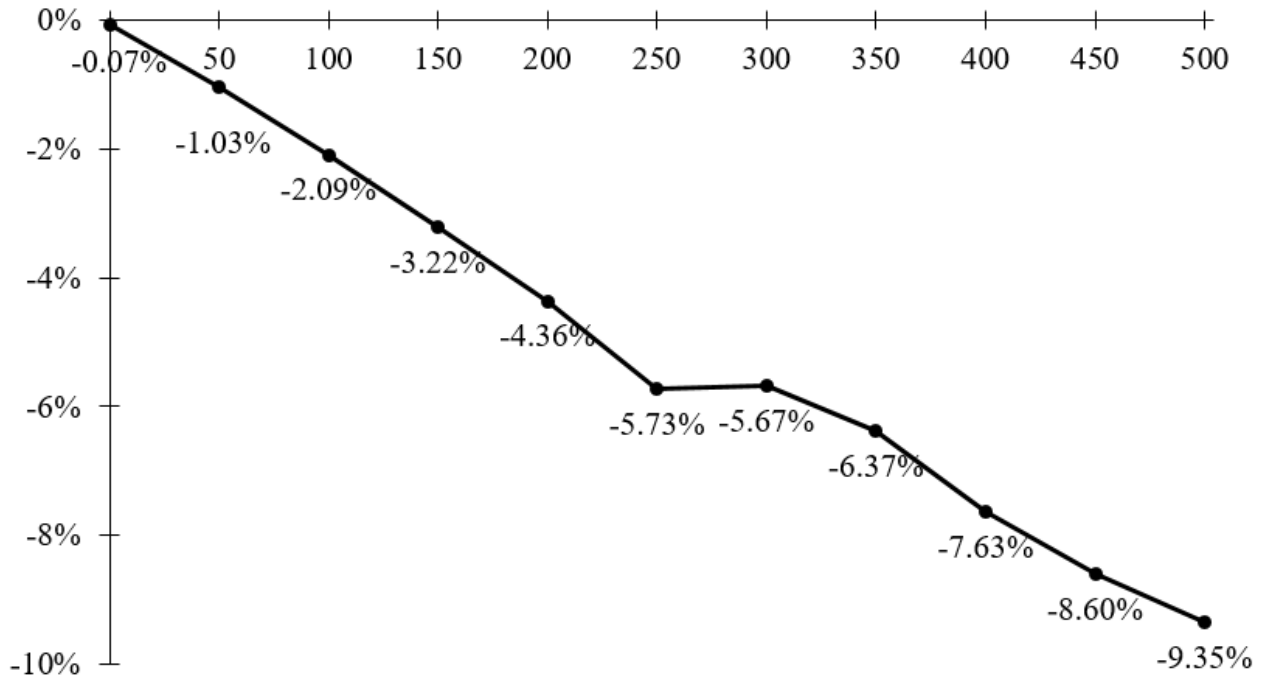


Panel C. Distribution of SEC Investigations by Size Decile



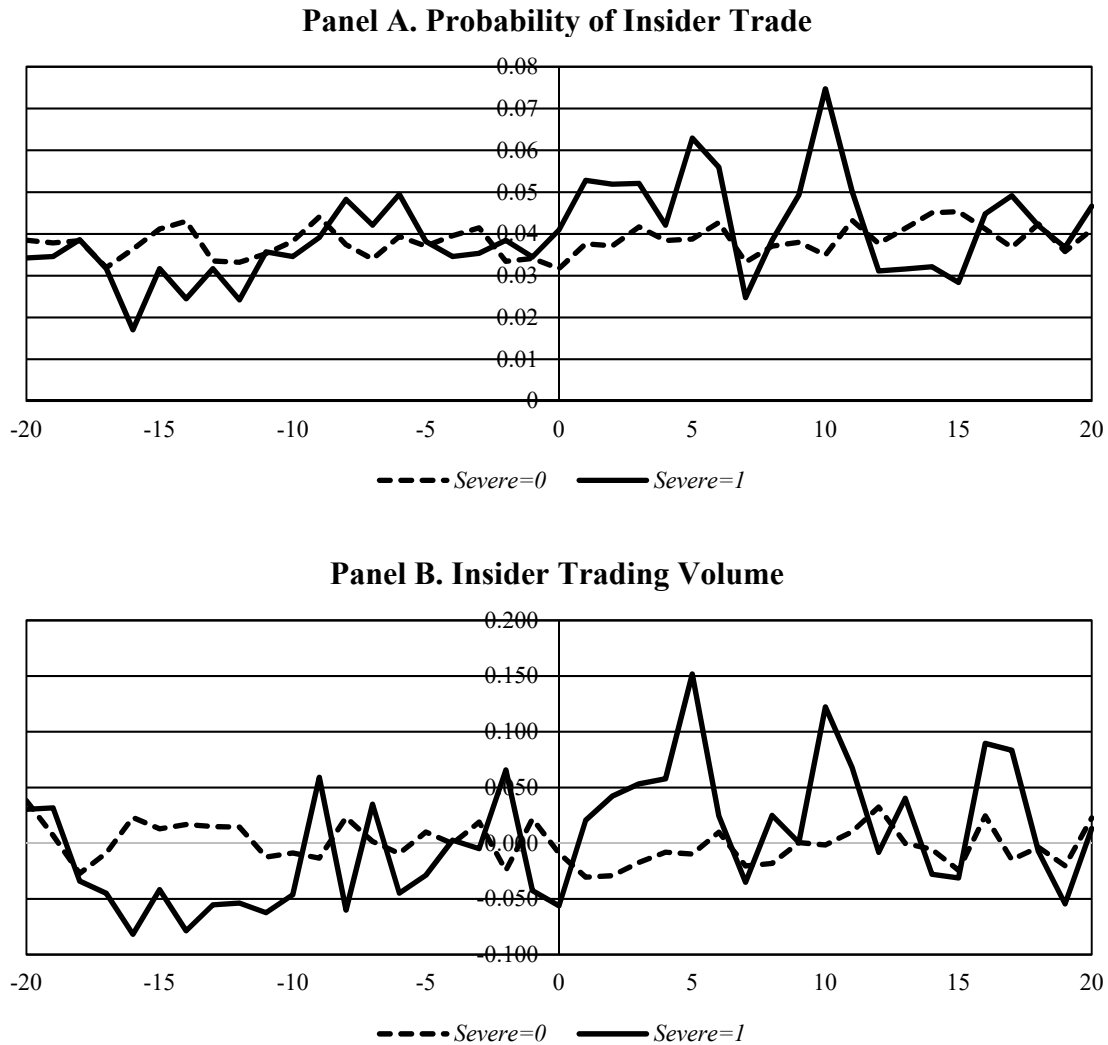
Panel A presents the industry distribution of 9,079 firm-years with investigations in our sample that appear on CRSP/Compustat. Panel B presents the industry distribution of the CRSP/Compustat population during our sample period (87,122 firm-years from 2000-2017). We use the Fama-French 12 industry portfolios to measure industry membership. Panel C presents the percentage of 9,079 firm-years with investigations in our sample that appear on CRSP/Compustat by size decile (e.g., 20% of investigations are in the largest 10% of firms, measured using total assets).

Figure 4. Abnormal Stock Returns Following Investigation Openings



This figure plots median market-adjusted returns over the two-years following the opening of an SEC investigation. Market-adjusted return appears on the *y*-axis and number of trading days since the investigation open (holding period) appears on the *x*-axis. Sample of 3,948 unique SEC investigations.

Figure 5. Insider Trading around Investigation Openings



This figure plots average insider trading activity in the $[-20, +20]$ window around the investigation open date separately for firms with and without severe investigations (*Severe*). Panel A presents the daily probability of an insider trade (*InsiderTrade*). Panel B presents daily insider trading volume scaled by shares outstanding and normalized using the sample average and standard deviation (*InsiderVolume*). All variables are as defined in Table 3. Sample of 2,771 investigations, and 108,393 unique firm-days in the $[-20, +20]$ window.

Table 1. SEC Investigation Descriptive Statistics

Panel A. Matched Investigations						
Variable	Mean	Median	Std	N-obs		
<i>Duration_Years</i>	3.19	2.25	2.91	3,948		
<i>Disclosed_Ever</i>	0.44	0.00	0.50	3,948		
<i>Disclosed_ShortWindow</i>	0.19	0.00	0.39	3,948		

Panel B. Pooled Sample				
Variable	Mean	Median	Std	N-obs
<i>SECInvestigation</i>	0.10	0.00	0.31	87,122
<i>NetInc</i>	-0.04	0.02	0.25	87,122
<i>AbnReturn</i>	0.05	-0.03	0.56	87,122
<i>IdioVol</i>	0.12	0.09	0.09	87,122
<i>Size</i>	6.46	6.43	2.21	87,122
<i>BM</i>	0.68	0.52	0.72	87,122
<i>Leverage</i>	0.55	0.54	0.28	87,122
<i>Loss</i>	0.33	0.00	0.47	87,122

Panel C. Differences in Characteristics for Investigated Firms						
Variable	<i>SECInvestigation</i> = 0 (N-Obs = 78,043)		<i>SECInvestigation</i> = 1 (N-Obs = 9,079)		Diff. in means	Diff. in medians
	Mean	Median	Mean	Median		
<i>NetInc</i>	-0.05	0.02	-0.04	0.02	0.01	0.01***
<i>AbnReturn</i>	0.05	-0.03	0.01	-0.06	-0.04***	-0.03***
<i>IdioVol</i>	0.12	0.09	0.12	0.10	0.00	-0.01**
<i>Size</i>	6.36	6.35	7.27	7.19	0.91***	0.84***
<i>BM</i>	0.69	0.53	0.58	0.46	-0.11***	-0.07***
<i>Leverage</i>	0.54	0.53	0.57	0.56	0.03***	0.03***
<i>Loss</i>	0.33	0.00	0.34	0.00	0.01	0.00

This table presents descriptive statistics on SEC investigations. Panel A presents statistics from our raw data received from our FOIA requests. *Duration_Years* is the number of years the SEC investigation lasted, *Disclosed_Ever* is an indicator equal to one if the SEC investigation was ever publically disclosed. *Disclosed_ShortWindow* is an indicator equal to one if the SEC investigation was publically disclosed within ten trading days after the investigation open. Panel B presents descriptive statistics for the variables used in our pooled regression analysis. Panel C presents descriptive statistics separately for whether the firm is under an SEC investigation during the year. *, **, *** indicate statistical significance (two-sided) at the 0.1, 0.05, and 0.01 levels, respectively, based standard errors clustered by firm. Sample of 87,122 unique firm-years from 2000 to 2017. *SECInvestigation* is an indicator variable that equals one if the firm is under an SEC investigation during the year and zero otherwise. *NetInc* is net income scaled by total assets. *AbReturn* is the firm's market-adjusted buy-and-hold return over the fiscal year. *IdioVol* is the standard deviation of the residual from a market model of monthly returns estimated over the fiscal year. *Size* is the

natural log of total assets. *BM* is book value of equity scaled by market value of equity. *Leverage* is total liabilities scaled by total assets. *Loss* is an indicator variable equal to one if net income is negative and zero otherwise. All financial statement variables are from Compustat Unrestated, and all continuous variables are winsorized at the 1st and 99th percentiles.

Table 2. SEC Investigations and Future Performance

Variable	Dependent Variable: <i>NetInc</i>		Dependent Variable: <i>AbnReturn</i>		Dependent Variable: <i>IdioVol</i>	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>SECInvestigation</i>	-0.009*** (-2.82)	-0.003 (-1.22)	-0.030*** (-5.23)	-0.034*** (-4.40)	0.013*** (12.87)	0.004*** (4.15)
Controls						
<i>Size</i>	0.029*** (32.04)	0.057*** (21.95)	-0.007*** (-6.92)	-0.070*** (-15.22)	-0.013*** (-60.36)	-0.011*** (-14.72)
<i>BM</i>	0.019*** (11.41)	-0.008*** (-4.74)	-0.170*** (-53.97)	-0.295*** (-56.80)	0.003*** (4.91)	0.001* (1.87)
<i>Leverage</i>	-0.177*** (-24.54)	-0.285*** (-31.46)	-0.134*** (-14.55)	-0.295*** (-16.67)	0.035*** (20.62)	0.042*** (15.93)
<i>Loss</i>	-0.246*** (-86.26)	-0.158*** (-65.33)	-0.232*** (-47.17)	-0.193*** (-30.43)	0.045*** (51.96)	0.019*** (22.72)
Fixed Effects	industry, year	firm, year	industry, year	firm, year	industry, year	firm, year
<i>F</i>	1848	1380	1484	1143	2004	235.0
<i>N-obs</i>	87,122	87,122	87,122	87,122	87,122	87,122

This table presents results from estimating Eq. (1). *t*-statistics appear in parentheses and are clustered by firm. *, **, *** indicate statistical significance (two-sided) at the 0.1, 0.05, and 0.01 levels, respectively.

Table 3. Event Study Sample Descriptive Statistics

Panel A. Sample Selection	
12,861	Raw FOIA SEC Investigations (Table 1 Panel A)
(8,913)	Those missing PERMNO match
(459)	Those without necessary Compustat/CRSP/Thomson data
(718)	Those that disclose the investigation before day +10 (relative to the investigation opening)
2,771	Final Count
108,393	Unique firm-days in [-20,+20] days around investigation opening

Panel B. Descriptive Statistics				
Variable	Mean	Median	Std	N-obs
<i>InsiderTrade</i>	0.04	0.00	0.19	108,393
<i>InsiderVolume</i>	0.00	-0.09	1.00	108,393
<i>InsiderBSI</i>	-0.02	0.00	0.19	108,393
<i>InsiderSeller</i>	0.03	0.00	0.17	108,393
<i>BlackoutPd</i>	0.11	0.00	0.31	108,393
<i>DailyAbReturn</i>	0.00	0.00	0.07	108,393
<i>DailyVolatility</i>	0.03	0.02	0.03	108,393
<i>Severe</i>	0.11	0.00	0.31	108,393
<i>Size</i>	6.96	6.75	2.33	108,393
<i>BM</i>	0.54	0.41	0.59	108,393
<i>Surprise</i>	-0.01	0.00	0.19	108,393
<i>AbReturn</i>	0.08	-0.05	0.69	108,393
<i>Volatility</i>	0.16	0.13	0.10	108,393

This table presents descriptive statistics for the variables used in our analysis. Panel A outlines our event study sample selection. Panel B presents the distribution of key variables from our tests. *InsiderTrade* is an indicator variable equal to one if an insider at the firm traded that day. *InsiderVolume* is insider trading volume scaled by shares outstanding and normalized using the sample average and standard deviation. *InsiderBSI* is the number of shares bought by insiders minus the number of shares sold by insiders scaled by insider trading volume. *InsiderSeller* is an indicator variable equal to one if insiders at the firm are net sellers on that day and zero otherwise. *Severe* is an indicator variable equal to one if the firm either restated its financial statements due to fraud during the period of the SEC investigation or experienced market-adjusted returns during the investigation that were below the fifth percentile for all investigations (-115%). *BlackoutPd* is an indicator variable equal to one if the day falls within [-46, +1] days of the firm's quarterly earnings announcement and zero otherwise. *DailyAbReturn* is the firm's market adjusted buy-and-hold return over the [-3,0] days around the firm-day. *DailyVolatility* is the standard deviation of daily stock returns during the [-3,0] days around the firm-day. *Size* is the natural log of total assets. *BM* is book value of equity scaled by market value of equity. *Surprise* is the seasonal random walk earnings surprise scaled by total assets. *Volatility* is the standard deviation of monthly stock returns over the fiscal year. All financial statement variables are from Compustat Unrestated for the fiscal quarter immediately prior to the investigation open, and all continuous variables are winsorized at the 1st and 99th percentiles.

Table 4. Unsigned Insider Trading Activity around Undisclosed Investigations

Variable	Dependent Variable: $Pr(InsiderTrade_{i,t})$		Dependent Variable: $InsiderVolume_{i,t}$	
	Pooled	Within firm- quarter and date	Pooled	Within firm- quarter and date
	(1)	(2)	(3)	(4)
<i>Day[0,+10]* Severe</i>	0.014*** (2.76)	0.016*** (2.98)	0.063** (2.33)	0.064** (2.19)
<i>Day[0,+10]</i>	-0.001 (-0.77)	-0.002 (-0.95)	-0.017* (-1.84)	-0.015 (-1.48)
Controls				
<i>Severe</i>	0.001 (0.28)	.	-0.013 (-0.86)	.
<i>BlackoutPd</i>	-0.021*** (-7.11)	-0.051*** (-8.98)	-0.057*** (-5.33)	-0.140*** (-4.27)
<i>DailyAbReturn</i>	0.050*** (3.42)	0.024* (1.91)	0.032 (0.52)	-0.028 (-0.42)
<i>DailyVolatility</i>	0.066 (1.59)	0.114*** (2.91)	-0.102 (-0.52)	-0.232 (-1.19)
<i>Size</i>	0.004*** (4.40)	.	-0.016*** (-6.62)	.
<i>BM</i>	-0.014*** (-7.19)	.	0.003 (0.32)	.
<i>Surprise</i>	0.011 (1.13)	.	-0.033 (-1.24)	.
<i>AbReturn</i>	0.007*** (2.87)	.	0.014 (1.60)	.
<i>Volatility</i>	0.003 (0.19)	.	-0.163*** (-2.72)	.
Fixed Effects	none	firm-quarter, date	none	firm-quarter, date
<i>F</i>	13.06	20.71	6.801	4.460
<i>N-obs</i>	108,393	108,393	108,393	108,393

This table presents results from estimating Eq. (2) using *InsiderTrade* and *InsiderVolume* to measure insider trading activity. Firm-quarter fixed effects subsume the coefficients on all of our control variables except for *BlackoutPd*, *DailyAbReturn*, and *DailyVolatility*. All variables are defined in Table 3. *t*-statistics appear in parentheses and are clustered by firm and date. *, **, *** indicate statistical significance (two-sided) at the 0.1, 0.05, and 0.01 levels, respectively.

Table 5. Signed Insider Trading around Undisclosed Investigations

Variable	Dependent Variable: <i>InsiderBSI_{i,t}</i>		Dependent Variable: <i>Pr(InsiderSeller_{i,t})</i>	
	Pooled	Within firm- quarter and date	Pooled	Within firm- quarter and date
	(1)	(2)	(3)	(4)
<i>Day[0,+10]* Severe</i>	-0.012** (-2.40)	-0.017*** (-3.26)	0.013*** (3.00)	0.017*** (3.67)
<i>Day[0,+10]</i>	-0.000 (-0.06)	0.001 (0.63)	-0.001 (-0.38)	-0.002 (-0.87)
Controls				
<i>Severe</i>	0.007 (1.38)	.	-0.003 (-0.62)	.
<i>BlackoutPd</i>	0.009*** (3.14)	0.025*** (4.37)	-0.015*** (-5.42)	-0.038*** (-7.42)
<i>DailyAbReturn</i>	-0.102*** (-6.89)	-0.069*** (-5.53)	0.076*** (6.26)	0.047*** (4.65)
<i>DailyVolatility</i>	0.223*** (5.30)	0.099** (2.51)	-0.077** (-2.38)	0.009 (0.31)
<i>Size</i>	-0.004*** (-4.74)	.	0.004*** (4.73)	.
<i>BM</i>	0.015*** (7.34)	.	-0.014*** (-8.01)	.
<i>Surprise</i>	-0.004 (-0.38)	.	0.008 (0.79)	.
<i>AbReturn</i>	-0.008*** (-3.35)	.	0.008*** (3.27)	.
<i>Volatility</i>	-0.034* (-1.86)	.	0.019 (1.10)	.
Fixed Effects	none	firm-quarter, date	none	firm-quarter, date
<i>F</i>	15.59	11.50	14.94	16.20
<i>N-obs</i>	108,393	108,393	108,393	108,393

This table presents results from estimating Eq. (2) using *InsiderBSI* and *InsiderSeller* to measure signed insider trading activity. Firm-quarter fixed effects subsume the coefficients on all of our control variables except for *BlackoutPd*, *DailyAbReturn*, and *DailyVolatility*. All variables are defined in Table 3. *t*-statistics appear in parentheses and are clustered by firm and date. *, **, *** indicate statistical significance (two-sided) at the 0.1, 0.05, and 0.01 levels, respectively.

Table 6. Who Trades Around Undisclosed Investigations

Panel A. Officers				
	Dependent Variable: <i>InsiderBSI_Officer_{i,t}</i>		Dependent Variable: <i>Pr(InsiderSeller_Officer_{i,t})</i>	
Variable	(1)	(2)	(3)	(4)
<i>Day[0,+10]* Severe</i>	-0.008* (-1.83)	-0.011** (-2.40)	0.010** (2.42)	0.013*** (3.11)
<i>Day[0,+10]</i>	-0.001 (-0.71)	-0.000 (-0.17)	-0.000 (-0.02)	-0.001 (-0.49)
Controls	yes	yes	yes	yes
Fixed Effects	none	firm-quarter, date	none	firm-quarter, date
<i>F</i>	15.02	10.18	13.68	12.43
<i>N-obs</i>	108,393	108,393	108,393	108,393
Panel C. Independent Directors				
	Dependent Variable: <i>InsiderBSI_IndepDir_{i,t}</i>		Dependent Variable: <i>Pr(InsiderSeller_IndepDir_{i,t})</i>	
Variable	(1)	(2)	(3)	(4)
<i>Day[0,+10]* Severe</i>	-0.002 (-0.48)	-0.004 (-1.19)	0.003 (1.25)	0.005 (1.56)
<i>Day[0,+10]</i>	0.000 (0.37)	0.001 (0.76)	-0.000 (-0.23)	-0.000 (-0.41)
Controls	yes	yes	yes	yes
Fixed Effects	none	firm-quarter, date	none	firm-quarter, date
<i>F</i>	5.480	4.288	7.326	6.183
<i>N-obs</i>	108,393	108,393	108,393	108,393

This table presents results from estimating Eq. (2) for our signed measures of insider trading activity after differentiating between trades placed by officers and independent directors. Panel A presents results for all officers. Panel B presents results for independent directors. For parsimony, we do not tabulate coefficients on control variables or main effects. *t*-statistics appear in parentheses and are clustered by firm and date. *, **, *** indicate statistical significance (two-sided) at the 0.1, 0.05, and 0.01 levels, respectively.

Table 7. Stock Market Reaction around the SEC Investigation Opening

Variable	Dependent Variable: $ Return_{i,t} $		Dependent Variable: $PublicVolume_{i,t}$	
	Pooled	Within firm- quarter and date	Pooled	Within firm- quarter and date
	(1)	(2)	(3)	(4)
<i>Day[0,+10]* Severe</i>	-0.012 (-0.29)	-0.016 (-0.35)	-0.039 (-1.08)	-0.030 (-0.83)
<i>Day[0,+10]</i>	-0.022* (-1.70)	-0.030** (-2.09)	-0.023** (-2.02)	-0.023** (-2.12)
Controls	yes	yes	yes	yes
Fixed Effects	none	firm-quarter, date	none	firm-quarter, date
<i>F</i>	1984	1522	43.56	213.9
<i>N-obs</i>	108,393	108,393	108,392	108,392

This table presents results from estimating Eq. (2). In columns (1) and (2) the dependent variable is the absolute value of percentage daily return for firm i on date t . In columns (3) and (4) the dependent variable is public trading volume as a percent of shares outstanding for firm i on date t (in percent). t -statistics appear in parentheses and are clustered by firm and date. *, **, *** indicate statistical significance (two-sided) at the 0.1, 0.05, and 0.01 levels, respectively.

Table 8. Abnormal Returns to Insider Trades around SEC Investigations

Panel A. Trade-Specific Market-Adjusted Returns					
Market-adjusted buy-and-hold return over the 180-days after the trade x (-1) for sales	[0,+10] Window Trades (1)	Industry-Year Benchmark (2)	Diff. <i>p</i> -val (1) – (2)	Own Trades Benchmark (3)	Diff. <i>p</i> -val (1) – (3)
All Officers	4.10 (2.83)	1.84 (3.71)	[0.12]	-2.80 (-1.97)	[<0.01]
Officers; <i>Severe</i> = 0	2.05 (1.32)	1.82 (3.69)	[0.88]	-3.00 (-2.02)	[0.01]
Officers; <i>Severe</i> = 1	15.63 (4.90)	1.90 (1.11)	[<0.01]	-1.50 (-0.36)	[<0.01]

Panel B. Trade-Specific Fama-French Alphas					
Fama-French α estimated over the 180-days after the trade x (-1) for sales	[0,+10] Window Trades (1)	Industry-Year Benchmark (2)	Diff. <i>p</i> -value (1) – (2)	Own Trades Benchmark (3)	Diff. <i>p</i> -value (1) – (3)
All Officers	0.02 (1.70)	0.01 (3.91)	[0.32]	-0.04 (-3.86)	[<0.01]
Officers; <i>Severe</i> = 0	0.01 (0.43)	0.01 (2.68)	[0.94]	-0.03 (-3.13)	[0.01]
Officers; <i>Severe</i> = 1	0.10 (3.80)	0.02 (3.51)	[<0.01]	-0.08 (-2.96)	[<0.01]

This table presents trade-specific abnormal returns for 743 trades of 715 officers during the [0,+10] window. In Panel A, trade-specific abnormal returns are measured as the market-adjusted return over the 180-days after each trade, multiplied by -1 for sales. Column (1) presents average abnormal returns for trades in the [0,+10] interval. Column (2) presents average abnormal returns for all trades of officers in the same industry-year, “Industry-Year Benchmark.” Column (3) presents average abnormal returns for all trades made by the same officer over the prior three years, “Own-Trades Benchmark.” Panel B presents a similar analysis measuring trading-specific abnormal returns using the four-factor Fama-French alpha estimated over the 180-days after the trade, multiplied by -1 for sales. *t*-statistics (*p*-values) appear in parentheses (brackets) and are clustered by executive.