Stock Picking Skills of SEC Employees

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Abstract:

We examine the profitability of stock trades executed by SEC employees. We find that a hedge portfolio mimicking such trades earns a positive abnormal return of about 8.5% per year in U.S. stocks, driven solely by avoiding losses on the sell-side. That is, SEC employees are using luck, skill, or private information to get out of U.S. stocks before prices fall. The SEC claims that this result stems in part from employees being forced to sell stocks in a firm when they are assigned to secret investigations. We question whether this policy is reasonable.

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1.0 Introduction

In this study, we exploit newly available data to investigate whether trades by SEC employees earn abnormal profits. This analysis relies on a data set, provided by the SEC under a Freedom of Information Act (FOIA) request filed by us, which documents trades of its 3,500 employees (names redacted) during late 2009 and for all of 2010 and 2011.

The mission of the Securities and Exchange Commission (SEC) is to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation. During the conduct of this mission, SEC employees undoubtedly come across a substantial amount of non-public information about publicly traded companies. Given that the SEC is tasked by Congress with enforcing insider trading regulations against corporate officers and other market participants, our findings indicating abnormal risk adjusted profits on trades by SEC employees are noteworthy.

In March 2009, H. David Kotz, then Inspector General (IG) of the SEC, released a report outlining the questionable trading activity of two lawyers employed by the SEC's enforcement division. IG Kotz admitted in subsequent testimony before Congress that the SEC lacked a compliance system capable of tracking and auditing employees' trades (Barlyn (2009)). This report and testimony, as well as the accompanying public outrage, spurred Mary Shapiro, then SEC Chairman, to impose new, stricter internal rules, beginning 2009, whereby SEC employees (i) must refrain from buying or selling stocks of firms under SEC investigation; (ii) have their transactions pre-approved, and; (iii) must order their brokers to provide transaction-level information to the SEC. The incident also motivated the SEC (i) to contract with a third party to monitor SEC employee trades for impropriety; and (ii) to create a new internal position to monitor compliance with the newly imposed rules (SEC (2009)).

This improved record keeping enabled us to obtain information about SEC employees' trades for the years 2009 (partial), 2010, and 2011 after filing a request under the Freedom of Information Act. We document that a hedge portfolio mimicking SEC buys and sells, covering 7,197 trades, earns positive risk adjusted abnormal returns, beyond the four factor Fama-French model, of about 4% per year for the securities covered by the CRSP universe and 8.5% per year for US common stocks.

To calibrate the magnitude of these returns, it is worth noting that Jeng, Metrick, and Zeckhauser (2003) and Wang, Shin, and Francis (2012) find that a hedge portfolio mimicking

corporate insider trades earns risk adjusted abnormal returns of about 6% per year. The decomposition of returns earned by SEC employees suggests that the abnormal returns are earned in the sell portfolio. In particular, the 12 month ahead (252 trading days) abnormal returns, using the four factor Fama-French model as the model of expected returns, of U.S. common stocks that SEC employees buy (sell) is 0.56% (-7.97%). Hence, SEC employees' stock purchases look no different from those of uninformed individual investors (Barber et al. (2009)), but their sales appear to systematically dodge the revelation of bad news in the future. These results related to U.S. common stocks are generally robust to the use of calendar time event study methods and Monte Carlo simulations when dates of SEC employees' transactions are randomized over our sample period.[1]

There are three potential explanations for the abnormal returns we document. First, the results could be attributable to luck or the particular time period we investigate. We cannot rule out this possibility but we note that systematic data on SEC employees' trades was not tracked by the agency before 2009. Second, SEC employees are usually knowledgeable about corporate law, accounting, and finance and could potentially be skilled traders. While this is certainly possible, the skills explanation would lead us to expect abnormal returns on both the buys and sell transactions of SEC employees. It is unclear why we should only find abnormal returns on sells. Finally, the abnormal returns are *prime facie* consistent with the greater informational advantage related to potential enforcement activities that employees of a regulator are likely to enjoy over other market participants.

A thorough investigation of the non-public information hypothesis is difficult, if not impossible, because a lion's share of the SEC's inquiries is conducted in secret. Hence, it is hard to identify specific events around which we could examine abnormal returns for a short time window. And, the number of such events, almost by definition, will be small in number opening us to the charge of relying on small samples. Having said that, we document that SEC employees are much more likely to sell a security in the run-up to 12 SEC enforcement actions during the 2010-11 time period relative to an average market participant. Although these events represent a small portion of the total trades, these data suggest that at least some of SEC employees' sales of stock occur ahead of costly SEC sanctions and on apparently privileged non-

[1] See the appendix for the results of calendar time and Monte Carlo tests.

public information. In further tests, we also document disproportionate sales of stock by SEC employees in the 90 day period following 11 whistle blowing tips filed by employees alleging financial misconduct with the Office of Occupational Safety and Health Administration (OSHA), the federal agency tasked with collecting such tips (and passing them on to the SEC) by the Sarbanes-Oxley Act.

The SEC's spokesman has issued a statement that, "each of the transactions was individually reviewed and approved in advance by the Ethics office," and, "most of the sales were required by SEC policy. Staff had no choice. They were required to sell."[2] We offer four reactions. First, it seems to us that the policy is not reasonable considering that the very act of initiating an inquiry, which is usually not known to the market, against a firm can cause the firm's stock price to fall. Hence, requiring staff to sell stock in the targeted firm more or less ensures that the staff exits the stock before the bad news related to the inquiry becomes public. Almost all of the SEC's inquiries are conducted in private and the average investor is likely to find out about such an inquiry only after a substantial lag. This is particularly applicable given that SEC employees' trades are not easily observable, but for a FOIA request, or even reported in timely manner, unlike those of corporate insiders. On top of that, the SEC's response does not appear to explain systematic negative returns to a reasonably large number of sell transactions but seems to narrowly cover trading around their enforcement actions. Second, given the SEC's stated policy enacted in 2009 is to not allow any employee trading in securities under investigation, we are not sure how the SEC can mandate employee divestment before that employee is assigned to an ongoing investigation.

Third, even if all the documented returns are legal, we conjecture that a regulator would want to seek independence in appearance and in fact. That is, even an appearance of financial impropriety potentially undermines the credibility of the SEC. Finally, it is not obvious to us that the staff of the key securities regulator in the U.S. should be allowed to hold individual stocks (as opposed to ETFs or mutual funds). Even if these trades are perfectly legal, holding individual stocks always leaves the SEC's employees vulnerable to charges of potential conflict of interest.

[2] http://www.washingtonpost.com/blogs/wonkblog/wp/2014/02/27/the-incredible-stock-picking-ability-of-sec-employees/

There is a vast literature on issues related to insider trading by corporate officers. However, as Khwaja and Mian (2011) point out, rent extraction by civil servants and bureaucrats is not widely studied.[3] To our knowledge, we provide some of the first evidence of abnormal profits from trades of government bureaucrats in the U.S. We also find evidence suggesting plausible channels via which SEC employees could potentially exploit their informational advantage.

The rest of the paper is organized as follows. Section 2 predominantly discusses the institutional background leading up to the availability of trade data for SEC employees and outlines plausible empirical tests designed to detect potential rent extraction. Section 3 describes the data and the research design. Section 4 reports the results from our empirical tests, section 5 discusses the SEC's response, and section 6 concludes.

2.0 Background and Related Literature

2.1. Select literature on insider trading

Trading by corporate insiders, such as officers and directors, is closely monitored and highly regulated. Insiders file open market transaction records with the SEC within two business days after their trade and are prohibited from profiting from gains derived from positions held for less than six months. Analysis of corporate insider trading suggests that these trades are abnormally profitable, such that a hedge portfolio earns risk adjusted abnormal returns of about 6% per year (Jeng, Metrick, and Zeckhauser (2003)).

While evidence of profitable trading by corporate insiders is perhaps unsurprising, Ziobrowski et al., (2004, 2011) find that a hedge portfolio mimicking the transactions of members of the U.S. Senate and the House of Representatives beats the market by about 10% per year. The study generated public indignation and wide press coverage (Chaddock (2004); Kim (2004)) and culminated in a 2012 law, known as the STOCK Act (Stop Trading on Congressional Knowledge), which prohibits Congressmen, as well as their families and staffs, from trading on privileged information obtained in the course of Congressional service.

Follow up work finds that profitable trading by Congressmen had already declined prior to the passage of the STOCK Act (Ovide (2010); Eggers and Hainmueller (2013)), especially after the year 2004. Eggers and Hainmueller (2013) reevaluate the results of Ziobrowski et al.

[3] Also, Henry Manne, while largely an advocate for the benefits of insider trading, dedicates a chapter in his seminal book to discussing his opposition to insider trading by government officials (Manne (1966), Manne (2008)).

(2004) and find that while Congressmen's trades earn abnormal returns, the individual portfolios of the constituent members (as opposed to trades) of Congress exhibit modest returns and fail to beat the market on the whole.

The STOCK Act, and the public outrage that preceded it, did not address potential insider trading by the other 2.8 million civilian federal government officials serving in posts outside of Congress and the White House and by potentially many more government contractors (U.S. Office of Personnel Management (2012)).[4] While these officials are subject to general federal laws prohibiting insider trading, as well as various branch-specific laws and guidelines, their personal financial transactions are subject to little oversight.[5] This lack of oversight is potentially problematic, given their access to substantial amounts of privileged, value-relevant information. It is not difficult to envision a situation in which an official working for the SEC, the Environmental Protection Agency (EPA), or the Department of Justice (DOJ) would be tempted to sell the stocks of a firm they own with advance knowledge that the firm faces a fine or a serious investigation by their agency. Alternatively, an employee of the Federal Drug Administration (FDA) could potentially buy pharmaceutical stocks in advance of an FDA drug approval decision.[6]

2.2 SEC employees' alleged suspicious trading

While many bureaucratic government positions provide opportunities for access to privileged information on which the bureaucrat can trade profitably, few agencies provide such opportunities with the regularity of the SEC. To protect against such self-dealing, prior to 2009, the 3,500 employees of the SEC were prohibited from shorting stocks, participating in the markets for options and futures, using EDGAR (the SEC's public database of corporate filings) to research personal trades, and trading in stocks in which they obtained private information through involvement with an investigation. While such prohibitions are expected, trading in securities the SEC was investigating was allowed, as long as the employee in question was not

[4] The STOCK Act, as passed by Congress, would have forced compliance by senior executive branch officials (perhaps including SEC officials). This portion of the law was repealed by President Obama over national security concerns (Vardi (2013)).

[5] For instance, Daniel M. Hawke, Chief of the SEC's Market Abuse Unit, has stated, "The insider trading laws apply to employees of the federal government just as they do to Wall Street traders, corporate insiders, or hedge fund executives. Federal employees who misappropriate such information to engage in insider trading risk exposing themselves to potential civil and criminal charges for violating the federal securities laws." See http://www.sec.gov/news/press/2011/2011-76.htm

[6] For an example of such an instance, see http://www.sec.gov/news/press/2011/2011-76.htm.

involved in, or informed about, the investigation. Also, the pre-2009 system relied on self-reporting, in which there were often lapses and delays (delays of up to 18 months were not uncommon) (Keteyian and Strickler (2009)).

In early 2009, the Inspector General of the SEC, H. David Kotz, released evidence suggesting that some SEC employees were at best circumventing, and at worst ignoring, the guidelines limiting their trading activity (Scannell (2009)). The IG's report focused on the activities of two career SEC attorneys, Glenn Gentry and Nancy McGinley, who were both in their fifties with over 25 years of SEC experience at the time. The report concentrated on several troubling transactions, notably McGinley's liquidation of a holding two months prior to a coworker opening a formal investigation into the firm, one which eventually led to the CEO's dismissal and a nine-figure fine. IG Kotz also identified a case in which McGinley liquidated a holding as the SEC opened an investigation into the firm for suspected bribery, and multiple cases of her accessing EDGAR for personal use.

The IG's office documented several lapses, some systematic to the SEC as a whole, and others specific to attorneys Gentry and McGinley. These are summarized below.

2.2.1 Enforcement attorneys failed to comply with Rule 5

The Commission Conduct Rule 5 governs the securities transactions of SEC employees and prohibits, "employees from purchasing any security which, to his or her knowledge, is involved in any pending investigation by the Commission, or in any proceeding pending before the Commission, or to which the Commission is a party." Rule 5 goes on to mandate that "all securities purchased by a member or employee must be held for a minimum of six months." Employees are also prohibited from purchasing or selling a security which is the subject of a registration statement filed under the Securities Exchange Act of 1934. An exception to that rule is allowed if the employee can certify that he or she has no information about the registration and the employee's supervisor can certify the employee has not participated in the registration process. Other restrictions on employee securities' transactions involve purchasing or selling of an option, future contract, carrying securities on margin, selling short, having a beneficial interest in any broker dealer or investment advisor, and purchasing stock of any company which is in a receivership or bankruptcy proceeding.

Under Rule 5, there are exceptions for holding securities for a minimum of six months, including for money market funds, transfer of funds held as shares in a registered investment

company, debt securities with a term of less than six months, and a stop/loss order entered at time of purchase.

The IG investigation found the following lapses associated with a failure to comply with Rule 5: (i) these two attorneys shared long term social friendships; (ii) they traded regularly in the stock market; (iii) the SEC had no system to track compliance of employees with Rule 5; (iv) these employees consistently failed to file Form 681, which directs employees to inform the SEC of any purchase or a sale of a security within five business days; (v) they failed to clear stock transactions with the Ethics office of the SEC; (vi) they failed to report transactions to the Ethics office in a timely manner; (vii) they improperly checked the SEC's EDGAR database for personal trading purposes; and (viii) they improperly shared with one another the reasons for which the SEC had denied them permission to trade securities in the past.

2.2.2. Discussions and access to nonpublic information

The IG report goes on to argue that (i) these enforcement attorneys had widespread access to nonpublic information; (ii) they discussed enforcement matters and stock tips in their weekly "bagel" meetings with colleagues and other SEC staff; (iii) there was lack of awareness of the Enforcement division's confidentiality policies among the SEC staff; (iv) enforcement attorneys engaged in frequent and regular discussions about stock transactions and work in their long standing regular weekly lunches; (v) there were frequent email discussions about stocks during the work day; (vi) enforcement attorneys recommended stocks to family using their SEC email addresses; (vii) they traded in a company that their coworker told them was under investigation on three separate occasions; (viii) enforcement attorneys were never questioned by the SEC about their stock holdings; and (ix) there was effectively no true compliance system to enforce Rule 5 among the SEC's staff.

Despite these findings, formal charges were never filed against attorneys McGinley and Gentry, and both are still employed at the SEC. The Department of Justice found no case against the attorneys and failed to bring charges due to a lack of evidence. The SEC was spared further scandal and quickly implemented a new set of trading rules for their employees (SEC (2009)). The new rules, set out in a May, 2009 SEC press release, (i) require employees to have trades authorized ahead of time; (ii) forbid trades in firms under SEC investigation, regardless of whether the employee wishing to trade is affiliated with the investigation; (iii) require brokers to report to the SEC transaction records of SEC employees; and (iv) forbid the trading in the

securities of exchanges, broker-dealers, or other financial market parties directly regulated by the SEC. The SEC also hired an outside firm to provide the SEC's Ethics Office with the technology necessary to monitor and pre-clear employees' trades.[7] An additional compliance position, Chief Compliance Officer, was created in the Ethics Office to oversee the system.

2.3 Empirical tests

We examine whether the employees of the SEC trade profitably in U.S. stock markets after the implementation of these new rules and monitoring regime. Ideally, we would like to examine SEC employee trading profits before and after the scandals that led to increased monitoring, but the SEC was unable to provide extensive data on the period prior to summer of 2009 because such data was not systematically monitored and tracked. Given that Congressmen significantly reduced their trading activity in the aftermath of, and the public blowback from, the Ziobrowski et al. (2004) study, it is certainly possible that SEC employees did the same after IG Kotz brought the suspicious trading activity of SEC attorneys Gentry and McGinley to the attention of the public and US Congress. Also, Scannell (2009) mentions that in an effort to avoid the appearance of impropriety, many current and former SEC employees avoid transacting in individual stocks. This suggests that the activity of Gentry and McGinley may potentially represent an aberrant deviation from a more usual SEC employee pattern of indexing or investing in mutual funds.

The data, which we discuss in the following section, documents the trades of SEC employees, but not their portfolios. This is because the SEC refused to share portfolio holding data with us. As such, we are limited to building hedge portfolios and investigating whether these hedge portfolios (that go long on stocks SEC employees buy and short on stocks SEC employees sell) earn abnormal returns. Hence, we examine whether a zero investment hedge portfolio mimicking SEC employee buys and sells earns positive abnormal returns after the summer of 2009, when stricter rules and monitoring are put into place.

2.4 Tests of potential channels

Khwaja and Mian (2011) point out the value of uncovering the actual rent-seeking mechanism to make the tests of the above kind more convincing. Following Khwaja and Mian

[7] This task was soon brought in house, as the SEC was concerned with outside contractors having access to employees' private information. The SEC claims that their internal monitoring system is comparable to that provided by outside monitors (Ensign and Matthews (2013)).

(2011), we attempt to identify potential avenues via which SEC employees potentially exploit non-public information that they come across. A close reading of the OIG's report (2009) suggests the following allegations with respect to potential channels in which SEC employees could potentially front-run the market. It is worth noting that the names of individuals involved and the stocks they discussed have been redacted in the report.

(i) Enforcement actions:

The OIG report mentions several instances where SEC employees sold shares before the beginning or the conclusion of an SEC investigation. For instance, OIG (2009, 2) states "the OIG investigation disclosed that approximately two months before an investigation of a large health care company was opened in her group, [redacted] sold all of her shares of stock in the company. We also found that [redacted] purchased additional shares of a global oil company's stock both a few days and a couple of weeks after a formal investigation was opened by her friend who occupies the office next to her. [Redacted] also sold shares of that company's stock two days before an inquiry was opened in that matter. We also found that both [redacted] and [redacted] traded in the stock of a large financial services company, even though their fellow Enforcement attorney [redacted] became aware of three separate enforcement investigations of that company. [Redacted] credibly testified that she had told [redacted] during their regular weekly lunches that she could not purchase additional stock in this company because she had become aware of these investigations."

According to the OIG report (2009, 25), at the Office of the Chief Counsel (OCC) at the SEC, there are around 4,000 investigations ongoing at any point in time. Note that the OCC has about 20 employees when it is fully staffed. Further, OIG (2009) reads, "matters assigned by subject [redacted's] group reviews insider trading, regulated entities, and municipal securities; [redacted's] staff reviews financial fraud, FCPA, and corporation finance issues. "

The OIG report (2009, 44) narrates an instance where an attorney stops buying stocks in a company as soon as she becomes aware of open investigations against that company. "She said she learned in Fall 2005, then Spring 2006, and then June 2007 of the three separate [redacted] investigations. According to [redacted] her position is that 'she cannot now purchase additional stock in [redacted].' [Redacted] testified that she had planned to buy a lot of [redacted]'s stock but 'that just did it, as soon as I heard that' as to her additional purchases of [redacted's] stock."

These quotes suggest SEC employees' trades before the announcement of an enforcement action, broadly defined to cover several violations, could potentially be associated with abnormal returns. Selling these firms is a potentially profitable strategy for informed parties (such as SEC employees), as such investigations offer little but downside risk (the possibility of hefty fines and penalties).

(ii) Whistle blower tips

The SEC receives frequent tips about corporate misreporting and wrongdoing from the public. The SEC's annual report states that during the fiscal year 2013, the Office of the Whistleblower program returned 2,810 phone calls from the members of the public.[8] Prior work shows that publicly observable whistle blowing complaints can lead to several negative future outcomes for the firm such as lower stock returns, earnings restatements, and litigation (Bowen, Call, and Rajgopal (2010)). Hence, employees of the SEC that learn about these tips could potentially sell stock in the company before such bad news gets incorporated into the stock price, either via a public compliant by the whistle blower or via an inquiry by the SEC.

We obtain an updated sample of whistleblowing allegations submitted to OSHA from Bowen, Call, and Rajgopal (2010). As mentioned in that paper, whistle blowing allegations about financial impropriety made by employees against their employer, after the passage of the Sarbanes Oxley Act (and before the passage of the Dodd-Frank Act), are required to be filed with Office of Occupational Safety and Health Administration (OSHA). The SEC enforcement manual suggests that several federal agencies share information about alleged financial misconduct with the SEC. Assuming that the whistle blowing tips received by OSHA are shared with the SEC, we investigate the pattern of sales and purchases of stock subject to such tips by the SEC employees subsequent to the date on which such tips were received by OSHA.

Beside the above, we report employees' trades and the profitability thereof in specific industries and specific stocks given that the OIG report (2009) suggests that (i) employees are interested in stocks of specific sectors (oil, financial services, and health care) and; (ii) many employees owned the same stocks.

3.0. Data and Research Design

3.1 Data

[8] http://www.sec.gov/about/offices/owb/annual-report-2013.pdf

The data used in this study was obtained via a Freedom of Information Act (FOIA) request filed by us in October 2012. The SEC took about a year to give us the data. As mentioned earlier, the SEC shared data on their employees' transactions beginning in 2009, presumably because such data was not compiled in a systematic manner before that date. The data ends in December 2011. In particular, we were given information for the following data fields: (i) broker's name; (ii) trade date; (iii) security type (e.g., open-end fund, ETF, equity, option, unlisted security, fixed income securities, closed-end fund or a money market fund); (iv) CUSIP number of the security; (v) ticker; (vi) security name; (vii) security issuer; (viii) quantity; (ix) price per share; (x) post-date (date the transaction was posted by the brokerage house); (xi) confirmed-date (date the transaction was confirmed by the brokerage house); and (xii) transaction type (e.g., buy, sell, split, transfer; spin-off, reverse split, direct reinvestment plan, redemption, and others).

The data have several limitations. First, we were not given access to trades identified by employee. That is, we have access to a list of transactions without any knowledge of how many trades were conducted by a specific employee. Hence, we cannot compute the extent of profits earned by individual employees nor can we ascertain whether employees with certain profiles (e.g., higher-up in the SEC or those that work in the enforcement office) earn greater profits than others. Second, as mentioned before, we have no data on the identity and the level of securities held by employees in their portfolios. That is, we only know about the changes in their portfolios (trades). Third, we are not sure of whether the third party or internal SEC monitors actually audit the accuracy of these reported trades (Ensign and Matthews (2013)).

Initially, we begin with 29,081 transactions, of which 15,690 are buys and 10,737 are sells.[9] We exclude securities traded outside of the NYSE, NASDAQ, and ASE, transactions without dollar volume and valid tickers, and firms with short or sporadic trading histories for which we are unable to estimate expected returns. This leaves us with a sample of about 7,200 transactions. The vast majority of the dropped transactions are from securities without valid ticker symbols. Further analysis of these dropped observations confirms that most are transactions involving mutual funds that are not traded on stock markets.

[9] We exclude other transaction types (e.g., donations, transfers, redemptions, direct reinvestments) from our analysis, but note that our results hold when we code these as buys (e.g., direct reinvestments) and sells (e.g., donations, transfers, redemptions).

We tabulate our sample of transactions in Table 1. Panels A, B, C, and D report summary statistics (number and total dollar volume of trades) for the securities traded by employees that can be found in the CRSP universe, type of security, by industry, and by most popular common stock, respectively. Panel A reports that our sample of 7,197 trades maps to about $66 million in dollar volume. The number of buys slightly exceeds the number of sells (3,738 v/s 3,459), and this tilt is also reflected in dollar volumes ($34 million of buys v/s $31.7 million of sales).

Panel B reports that trades of U.S. common stock are responsible for about two-thirds of this volume, measured by both number of trades and dollar volume. In particular, they account for 4,806 transactions and a dollar volume of $41 million. Interestingly, the number and dollar volume of sell transactions (2,502 trades for $22.1 million) outnumber buys for U.S. stocks (2,304 trades for $18.9 million).

Exchange Traded Funds (ETFs) are the second most popular security class and constitute about 20% of volume by number of trades and dollar volume (1,221 trades and $15.7 million in dollar volume). However, buys outnumber sells by a factor of two to one (803 buys for $10.3 million v/s 418 sells for $5.3 million). ETF trades are unlikely to be based on non-public information. It is interesting to note the preponderance of buys among ETFs relative to common stocks. ADRs and foreign stock trades barely account for 10.3% (742/7,197) of trades.

Panel C reveals that SEC employees trade heavily in the high tech sector. In particular, the chips industry, business services, and the computer industry (labeled with the 48 industry classification scheme of Fama and French (1997)) account for 463, 406, and 312 trades and dollar volumes of $2.2 million, $3.8 million and $5.9 million respectively. The pharmaceutical industry (390 trades and $4.9 million in dollar volume) and the banking sector (379 trades for $2.8 million in dollar volume) are also popular among SEC employees.

Buy and sell transactions are not equally distributed in these sectors. Panel C shows that sells heavily outweigh buys in (i) banking ($0.3 million of buys v/s $2.4 million of sales); (ii) financial services ($0.2 million of buys v/s $1.7 million of sales); (iii) insurance ($0.2 million of buys v/s $0.73 million of sales); (iv) pharmaceuticals ($1.7 million of buys v/s $3.1 million of sales); and (v) machinery ($0.8 million of buys v/s 1.3 million of sales). In contrast buys dominate sells in the following sectors: (i) computers ($3.8 million of buys v/s $2.1 million of

sales); (ii) chemicals ($0.51 million of buys v/s $0.29 million of sales); and (iii) paper ($0.27 million of buys v/s $0.06 million of sales).

Panel D reports data on the stocks that are popular with SEC employees. Apple is by far the most popular common stock (142 trades for $4.1 million in dollar volume). Moreover, the buys and sells are again not equally distributed. SEC employees are big net buyers of (i) Apple ($3.1 million of buys v/s $1 million of sales); and (ii) Johnson and Johnson ($0.58 million of buys v/s $0.1 million of sales). They are heavy net sellers in (i) General Electric ($0.38 million of buys v/s $0.75 million of sells); and (ii) Bristol Myers ($0.11 million of buys v/s $0.36 million in sales).

Panel E reports the number of trades by size (transaction value). Notably, about half of SEC employee trades are for less than $5,000 and about 1% are for more than $100,000. While comparable samples for similar subject pools are unavailable, the overall distribution of Panel E does not seem abnormal given the salaries of educated, well-paid civil servants.

It is worth noting that we observe about two dozen SEC employee sells of publicly traded exchanges (NDAQ, NYX, ICE). Trading in these firms is forbidden under the SEC internal rules that went in place before the start of our sample. We assume that these transactions represent SEC employees divesting their positions taken before the rules went into place. However, these sells were scattered all over our sample window. Hence, divestment was not immediate or clustered around a date, as would be expected if the sales were conducted purely to comply with the new SEC's rules. We also observe a single buy, for NDAQ on December 31, 2010, for over $5,000. This transaction appears to violate the SEC's new rules.

3.2 Research design considerations

Without any knowledge of the actual type of information that the SEC employees have access to (although we conjecture what these channels might be previously in section 2.4), we cannot assume that the abnormal returns in the traded stock would be observed within a few weeks or months. This is especially important because the SEC never publicly announces the opening of an informal investigation to protect the privacy of the charged firm or executive. An SEC employee can potentially profit from the non-public information during the long time period (usually several months or even years) covering the several steps that occur from the beginning of an investigation to the public announcement of the inquiry. These steps are briefly discussed below.

SEC investigations can be triggered in many ways, including (i) the review of forms filed with the SEC; (ii) routine inspections of persons or entities regulated by the SEC; (iii) tips from members of the public; (iv) referrals from other government agencies; (v) news reports, and; (vi) information received in other SEC investigations. Regardless of how they are triggered, SEC investigations are almost always conducted privately.

The first stage of an SEC action is typically an informal investigation. At this stage, the Commission staff has no formal subpoena power, and hence must rely on the cooperation of the relevant individuals and entities to gather information. At the conclusion of an informal investigation, SEC staff may recommend that the Commission undertake (i) an enforcement action seeking sanctions; (ii) seek a formal order of investigation from the Commission, or (iii) conclude the investigation without recommending an enforcement action.

When the SEC staff request and receive a formal order, the next stage is a formal investigation. The Commission approves requests for formal orders when it finds that it is likely that a securities law violation has occurred. The formal order grants designated SEC staff the ability to issue subpoenas and to administer oaths.

When the staff has concluded its investigation, it may recommend to the Commission that enforcement proceedings be commenced, or it may determine to take no further action. If the staff has determined to recommend that the Commission commence an enforcement proceeding, it typically gives prospective defendants a Wells notice informing them of the staff's intent. The recipient of a Wells notice has a period of time, generally one month, to provide the staff with a Wells submission, which is essentially a brief arguing why an enforcement proceeding is not merited. Upon reviewing the Wells submission, the staff may elect to modify or reverse its recommendation to the Commission.

Upon the staff's recommendation to bring an enforcement action, the Commission has several options. It may authorize a civil action in federal court, an administrative proceeding before an administrative law judge, or no enforcement proceeding at all. A civil action or an administrative action is usually accompanied by public announcement of such activity on the SEC's website.

Given the potentially large time lag (two to three years) that can elapse between the beginning of an informal investigation and the public announcement of an enforcement action,

we have chosen to compute abnormal returns for the full calendar year after the purchase/sale of the stock by an SEC employee.

In particular, we measure abnormal performance via 12 month (252 trading days) buy and hold abnormal returns (BHAR) calculated from the transaction date on which the employee buys or sells the security. We exclude securities that lack at least 45 trading days of prior returns data on which to base our expected returns. The estimation window ends five trading days prior to the event (transaction) date, and lasts at most one year (for firms with a long time series of prior returns, we base our expectation on the past 252 trading days of data). We detect abnormal returns using the CAPM market model (Sharpe (1964)), a market adjustment, a Fama-French three factor model (Fama and French (1993)), a Fama-French four factor model that adds to the original Fama-French model the momentum factor (Carhart (1997)), a Fama-French five factor model that includes a liquidity factor (Eckbo and Norli (2005)), and a companion portfolio approach that matches firms into buckets (5x5) based on size and market-to-book ratios (Wang, Shin, and Francis (2012)). These additional factors exclude the possibility that SEC employees earn their profits via a strategy not based on information advantages (i.e., trading on momentum or liquidity). Finally, we weight trades by transaction value, such that larger trades are more influential in our hedge portfolios. Un-tabulated tests confirm the robustness of our findings to alternate methods. Notably, using the liquidity factor of Pástor and Stambaugh (2003), the value weighted index, equally weighted trades, and monthly event studies all yield results generally consistent with those reported.

4.0 Empirical results

4.1 Abnormal returns

Table 2 reports abnormal returns results for our sample of SEC employee trades. Panel A reports the full sample results for the CRSP universe of securities traded by the SEC employees, including ADRs, foreign stocks traded in U.S markets, ETFs, and U.S. common stocks. The data indicates that 252 trading day buy-and-hold abnormal return for the hedge portfolio (SEC Buys-SEC Sells) is between 9.9% and 3.9%, depending on the asset pricing model used. These results are statistically significant and suggest that SEC employees earn abnormal returns of a similar magnitude as corporate insiders (Jeng, Metrick, and Zeckhauser (2003), Wang, Shin, and Francis (2012)).

SEC employees differ from corporate insiders in the pattern of their trading returns, however, and appear unable to capture gains in their buy portfolios. Rather, buy portfolio returns are statistically indistinguishable from zero (or lower than zero) in all versions of risk adjusted abnormal returns. However, sell portfolios of SEC employees earn strong negative risk adjusted abnormal returns, ranging from about -4% (Fama-French three factor model) to -11% (5x5 companion portfolio). If SEC employees are trading on privileged information, it appears to offer insight on downside risk rather than upside potential, which would be expected of an agency tasked with investigating potential malfeasance in corporate governance and financial reporting.[10] In that sense, the SEC employees seem no different from naïve individual investors in terms of the securities they pick to buy.

These results get much sharper when we restrict our attention to U.S. common stocks (see panel B). The positive hedge portfolio returns in Panel A (CRSP universe) appear to be driven by trades in U.S. common stocks. Panel B reports the results for U.S. common stock trades by SEC employees, where hedge returns are between 16.7% and 5.7%, depending on the model used to compute normal returns. Again the buy side is associated with statistically insignificant abnormal returns but the sell side abnormal returns are typically negative and significant. Systematic evidence of an asymmetry in the abnormal returns on the buys relative to sells casts doubt on a skills based explanation of these results. That is, if SEC employees are simply good stock pickers, given their background and experience, we would expect to observe abnormal returns on their buys as well.

Panel C computes abnormal returns for SEC employees' trades in securities other than U.S. common stocks.[11] Hedge portfolio abnormal returns are statistically indistinguishable from zero for most other types of securities such as (i) bond funds (t-statistic ranges from -0.7 to -1.05); (ii) closed end funds (t-statistic ranges from -1.09 to -1.51); (iii) REITs (t-statistic ranges from -0.1 to -0.74); and (iv) units of beneficial trusts (t-statistic ranges from -0.27 to -0.52). This

[10] This finding raises a natural question of information leakage, perhaps by the broker handling the SEC employees' sale transactions. To evaluate this possibility, we computed the three day CAR centered around SEC employees' sales. A negative CAR around the sale would suggest information driven trading. We actually observe a small positive return around SEC sales in the three day window (about 30 basis points). Hence, we are unable to find any evidence of information leakage, on average, around the SEC employees' sales.

[11] For brevity, we limit analyses of these subsamples to raw returns, CAPM, Fama-French three factor, and Fama-French four factor models. However, including market adjusted returns, Fama-French five factor models, or 5x5 companion portfolio adjustments yields similar results.

unremarkable performance is consistent with the expectation that SEC employees are unlikely to possess non-public information related to these securities.

SEC employees seem to lose heavily on trades in (i) foreign common stocks, with a minimum hedge portfolio abnormal return of -20.1% (t-statistic = -2.77); (ii) ADRs, with a minimum hedge portfolio abnormal return of -12% (t-statistic = -1.42); and (iii) ETFs, with a minimum hedge portfolio abnormal return of -4.3% (t-statistic = -5.34). A closer look reveals that with both foreign common stocks and ADRs, the losses are primarily attributable to the buy side. That is, the buy side abnormal return for foreign common stocks is -19.7% (t-statistic = -2.88) and the sell side abnormal return is 0.4% (t-statistic = 0.18). Similarly, for ADRs, the buy side abnormal return is -20.6% (t-statistic = -2.54) while the sell side loses much less at -8.6% (t-statistic = -3.78). We do not expect SEC employees to possess any differential advantage in trades of ETFs. With the caveat that these are small samples, one way to interpret this data is to argue that employees make poor buying decisions while transacting in foreign stocks. Moreover, their sell decisions are not likely to be heavily influenced by foreknowledge about impending investigations given that the SEC exercises considerably less oversight and influence on foreign stocks as compared to US common stocks (Siegel (2005); Shnitser (2009)). The wildly disparate returns for foreign and US common stocks suggest that SEC employees are not adept stock pickers.

Panel D of Table 2 reports the abnormal returns of SEC employees sorted by industry. For this analysis, we only consider domestic common stocks in which at least 25 trades take place in our sample. We define 48 industries as in Fama and French (1997). We discuss hedge portfolio returns of notable industries below. Hedge portfolios with the most profitable abnormal returns, computed using the Fama-French four factor model, accompanied by statistically significant coefficients are found in the following industries: (i) drugs (hedge return = 66.8%, t-statistic = 4.06); (ii) computers (hedge return = 22.6%, t-statistic = 7.84); and (iii) steel (hedge return = 14.6%, t-statistic = 2.92). In two out of these three cases, these returns are primarily made on the sell-side. For instance, the return on the sell side is -65.4% (t-statistic = -4.07) for drugs and -8.6% (t-statistic = -2.18) for steel.[12]

[12] Deletion of SEC employees' sales in the drug industry, as a robustness test, results in much smaller, but statistically significant, return from the remaining sales transactions. For example, the 12 month alpha in the BHAR hedge portfolio using the five factor Fama French model drops from 6.5% ($p < 0.001$) to 3.1% ($p = 0.03$) when we delete the trades related to the drug industry.

The least profitable hedge portfolios are found in the following industries: (i) -87.7% (t-statistic = -4.53) in the entertainment industry; (ii) -46.7% (t-statistic = -2.61) in the medical equipment industry; (iii) -20.7% in banks (t-statistic = -4.14); and (iv) -19.3% in autos (t-statistic = -1.88). It is again interesting to note that these losses stem mostly from buy side. For instance, the return on the buy side for the above industries is as follows: (i) -79.5% (t-statistic = -4.23) for the entertainment industry; (ii) -47.7% (t-statistic = -2.74) for the medical equipment industry; (iii) -12.8% (t-statistic = -2.65) for banks; and (iv) -32.5% for autos (t-statistic = -5.69). These results again suggest that the buy decisions of SEC employees do not appear to be particularly profitable but the sell decisions often are.

Reeb, Zhang, and Zhao (2012) suggest that regulated industries see more informed trading as a function of increased government oversight exposing civil servants to value relevant information. Our results partially confirm this prediction as SEC employees earn substantial profits in pharmaceuticals (252 trading day hedge portfolio BHAR > 66%), however, there is no evidence that SEC employees engage in profitable widespread trading of firms in banking, insurance, utilities, or oil. The SEC OIG's report (2009) on Gentry and McGinley's trades notes that the two concentrated their transactions in financial services, healthcare, and oil firms. The trading practices of these two enforcement attorneys appear to be indicative of the broader pattern of trades among SEC employees, at least in pharmaceuticals. We note that this finding is not based on a small sample, and that in addition to being profitable, pharmaceuticals were also popular stocks to transact among SEC staff, with 447 trades (third highest among industries) and $4.9 million in transacted volume (second highest among industries) occurring in our sample.

The SEC OIG's (2009) report indicates that not only did Gentry and McGinley appear to trade in the same industries, but also that they held many of the same stocks. Panel E of Table 2 reports the hedge portfolio returns of the most actively traded domestic common stocks by SEC employees in our sample. Each of the tabulated securities is traded at least 25 times between August 2009 and December 2011 by SEC employees. Popular, profitable common stocks for SEC employees include Apple, Exxon Mobil, and Coca Cola.

In sum, the results of Table 2 indicate that SEC employees earn positive abnormal returns on their investments in U.S. securities markets, that such returns are driven wholly by U.S. common stocks, and at least partially by returns in regulated industries. Most of these returns stem from the timely sale of these stocks. SEC employees lose heavily when they trade ADRs

and foreign common stocks, presumably because they are less likely to have access to non-public information about these stocks. They also tend to lose money on their buy decisions, which can again be interpreted as a setting where they are not likely to have incremental insights beyond the market as a whole. The employees' trades in securities where they are unlikely to enjoy an information advantage, such as bond funds and ETFs, are either unremarkable or unprofitable.

4.2 Trading in the run-up to SEC enforcement actions

Perhaps the most incredulous portion of the SEC OIG's report (2009) and Congressional testimony was the suggestion that SEC employees were trading on knowledge of impending SEC enforcement actions. The monitoring systems put into place after the initial scandals of summer 2009 (Keteyian and Strickler (2009); Scannell (2009)) were supposed to have strictly prohibited such activity. However, a 2013 article in *The Wall Street Journal* documenting a recent probe into the holdings of certain SEC employees in the New York office suggests that not all such monitoring mechanisms have been implemented or enforced (Ensign and Matthews (2013)).

Specifically, the 2013 probe is thought to involve the trading of an SEC employee ahead of an enforcement action, similar to the accusations made against Gentry and McGinley four years prior. We investigate whether a pattern of such behavior exists in the overall sample of SEC employee trades.

If the new SEC regulations were successful in prohibiting employee trades during investigations, we should have found no trades by SEC employees in the 90 day period preceding the public announcement of an SEC action. In particular, we rely on enforcement action data from a database provided by Labaton Sucharow, a securities law firm that markets its services to potential whistleblowers. We examine trading around enforcement actions that led to sanctions in excess of $1 million for offering fraud, trading & pricing, Foreign Corrupt Practices Act (FCPA), municipal securities, financial fraud, and market manipulation. However, of the 56 such enforcement actions against publicly traded firms announced in 2010 and 2011, SEC employees appear to trade in the run-up to twelve actions (see panel A of Table 3). Panel B of Table 3 reports the pattern of trades in various run-up periods before these enforcement actions are announced. Some of these trades take place on the day before the announcement, in clear violation of the rules announced by the SEC in July 2009 (SEC (2009)).[13]

[13] The mean and median abnormal returns on the announcement of the SEC enforcement actions we use are significantly positive (~1.5%). Hence, it appears as though the announcement resolves uncertainty. Word about

For firms where an SEC enforcement action occurs in the near future, sells make up the vast majority of trades executed by SEC employees. In the 45 days prior to the announcement of the enforcement actions listed in Panel A of Table 3, for example, SEC employees execute 30 sells of the involved firms and only eight buys (79% of transactions are sells). The observed percentage of sells is greater than the expectation (50%) in all cases. We use a binomial test to confirm that these deviations from the expected rate are all statistically significant from the observed distribution of overall market trades in the tabulated windows ($p < 0.03$). We derive the distribution of trades across the entire market for the periods in question using the Lee and Ready (1991) algorithm with a tick test to sign trades as buyer or seller initiated.[14]

Panel C of Table 3 reports the dollar volumes of SEC employee trades observed in the run-up to the announcement of an enforcement action against the firm in question. The variance introduced by the dollar amounts results in slightly weaker tests, but the pattern of results is consistent with Panel B, which indicates that SEC employees sell more of a firm's stock than they buy in the run-up to the announcement that said firm is subject to an SEC enforcement action. We use a simple t-test to determine whether the ratio of dollar volume sold to total dollar volume transacted differs between SEC employees and the broader market (Lee and Ready (1991)). In the 45 day run-up window, for example, SEC employees buy $52,000 and sell $147,000 of stock in firms with forthcoming enforcement actions. These transactions result in 73.75% of observed dollar volume being sells related for SEC employees, which is significantly greater than the expectation, 49.92% ($p < 0.01$), the proportion of dollar volume emanating from seller-initiated transactions across the entire market for the stocks in question during the run-up periods.

In general, these results suggest that in at least these twelve cases, SEC employees appear to front-run the announcement that a firm is subject to costly SEC penalties (associated with the

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the impending SEC enforcement action has perhaps leaked to the market 90 days before the actual issuance of such action. However, we document trades leading up to the SEC enforcement actions more to highlight potential violations of the SEC's internal rules rather than to argue that the staff pocketed abnormal gains ahead of such actions. As mentioned earlier, the SEC claims that sale transactions before such actions merely represent sales of stock by employees assigned to investigate these firms. Even if one were to fully accept this explanation, it is not obvious why (i) we should observe "buys" or purchases of stock ahead of SEC's enforcement actions; and (ii) we should observe negative abnormal returns, in general, after sales of stock by SEC employees.

[14] A trade is classified as seller-initiated if it occurs below the spread midpoint and as buyer-initiated if it occurs above the midpoint. Trades occurring at the spread midpoint are classified as seller-initiated (buyer-initiated) if the trade price is lower (higher) than the price of the previous trade.

enforcement action). In particular, they seem to overwhelming divest holdings of these tarnished firms prior to such announcements. These sales appear to violate current SEC rules (SEC (2009)) that forbid employees from transacting in firms under SEC investigation.

4.3 Trading after whistle blowing tips

Data on whistle blowing tips about financial impropriety is obtained from Bowen, Call, and Rajgopal (2010). In particular, those authors collect information about whistleblowing allegations submitted to OSHA through a written request to OSHA's national office in Washington D.C. citing the Freedom of Information Act (FOIA). They requested information about the date the complaint was filed with OSHA, the name of the firm in question, and the nature of the underlying financial allegation (if available) for every whistleblowing allegation ever filed with OSHA. Because OSHA handles other types of employee complaints (e.g., workplace safety), the authors specifically requested information only about whistleblowing allegations that fall under the purview of SOX. These cases represent employee complaints of discrimination in the workplace for having been a whistleblower, and each of the underlying allegations relates to some form of financial misconduct.

Those authors submitted their request in July of 2010 and received the whistleblowing data separately from each of OSHA's ten regional offices from September of 2010 to June of 2011. In total, they received data on 934 unique whistleblowing complaints (relating to 619 unique firms) filed from October of 2002 through December of 2010. These allegations represent the universe of whistleblowing allegations filed with OSHA, except for any cases still under investigation, which OSHA is not permitted to disclose.

We examine SEC trading around OSHA whistleblowing tips. We find 108 OSHA whistleblowing events from August 2009 to March 2010, the period for which we have SEC employee trading data. In particular, we investigate SEC employee trading in the 90 days following these 108 events. As mentioned earlier, the SEC enforcement manual suggests that several federal agencies share information about financial improprieties with the SEC. For the purposes of our tests, we assume that the OSHA whistle blowing tips are shared with the SEC. Evidence of asymmetric selling in the aftermath of such whistleblowing would suggest that SEC employees divest at the onset of investigations likely to result in reduced firm value.

We find evidence of SEC employees trading in the 90 days following 11 of these 108 events. These 11 events are described in panel A of Table 4. We observe 49 trades following

these 11 events. Of these 49 trades, 14 are SEC employee buys and 35 are SEC employee sells. Non-informed SEC employee investing behavior would suggest at 50/50 split between buying and selling. Our observed ratio of 71.4% sell transactions is significantly different from the naïve expectation of 50% at the $p<0.01$ level (see panel B of Table 4). Likewise, we observe $338,515 worth of SEC employee sells and $123,605 worth of SEC employee buys. A t-test confirms that these amounts are significantly different at the $p<0.01$ level (see panel C of Table 4).

Both the number and dollar volume of SEC employee stock trades in the weeks following an OSHA tip are heavily tilted towards sells. This small sample evidence again raises questions about whether SEC employees potentially relied on private information, as opposed to skill or luck, to earn abnormal returns in U.S. stock markets.

4.4 Covariates of SEC employee trading returns

As a final analysis, we model the returns of SEC employee trades as a function of trade characteristics (Table 5). The primary objective of this exercise is to assess whether the abnormal returns are concentrated among prominent stocks (proxied by S&P 500 Index) or stocks with potential corporate misconduct (proxied by short interest). In particular, we include indicators for inclusion in the S&P 500 Index, local firms (HQ within 50 miles of an SEC office), December trades (perhaps tax motivated, as in Barber and Odean (2004), Ivković, Poterba, and Weisbenner (2005)), and block trades (trades over $10,000). We also include continuous measures for last quarter's abnormal return and trading volume, percent short interest, and the dollar amount traded in the same stock by SEC employees over the past quarter. This analysis is exploratory in nature, and we estimate models of the returns to both buys and sells in an effort to uncover any previously hidden explanations behind our results.

Panels A and B (Table 5) report the summary statistics for the buy and sell transactions of U.S. common stocks transacted by SEC employees in our sample. Panel C reports the models predicting abnormal returns (estimated using Fama-French 4 factor models), with Model 1 (2) estimating the abnormal returns to the SEC employee buys (sells). The models do not reveal any terribly insightful results. SEC employees suffer when chasing returns and volume in their buys, but avoid losses when chasing volume in their sells. Furthermore, SEC employee buys of local firms (headquartered within 50 miles of an SEC office) outperform other buys by about 8%,

suggesting that SEC employees, like investors in general (Ivković and Weisbenner (2005)), benefit from local information.

In general, these results do not explain the ability of SEC employees to dodge losses in domestic public companies. Rather, these SEC employees seem well informed about downside risk not revealed through local sources (for sells) or short interest.

5.0 The SEC's response

In response to media stories about our paper, an SEC spokesperson, John Nester, offered the following explanation, "each of the transactions was individually reviewed and approved in advance by the Ethics office. Most of the sales were required by SEC policy. Staff had no choice. They were required to sell." Nester explained that before staff can work on an issue that involves a company, they have to sell any holdings of stock in that firm. As a result, he said, there shouldn't be any surprise that a sale would precede the announcement of an enforcement action.[15]

We offer four responses to the SEC's statement. First, to us, the policy of requiring staff assigned to an investigation to sell stocks almost ensures that the staff exits before stock prices fall. This is especially important because, as according to the OIG report (2009, 25), the SEC has, "about 4,000 investigations ongoing at any point in time," and almost all of them are conducted in private. Hence, the stock market, as a whole, is unlikely to be aware of the inquiry before the SEC staff, especially because trades of SEC staff are not observable, unlike those of corporate insiders. Moreover, the SEC's response is specific to employee sells before enforcement actions, which are almost, by construction, limited in number. The response does not address the future negative abnormal returns that appear to follow the more numerous sale transactions of employees.

Second, the SEC's statement prima facie contradicts their own policy enacted in 2009 (SEC (2009)). Given the SEC's stated policy that no employee trading is to occur in securities under investigation, it is not obvious how the SEC can mandate employee divestment before assigning a staff member to an ongoing investigation. Third, it is not obvious that the SEC's staff should be allowed to hold individual stocks. Even if each trade was approved and perfectly

[15] http://www.washingtonpost.com/blogs/wonkblog/wp/2014/02/27/the-incredible-stock-picking-ability-of-sec-employees/

legal, owning individual stocks always exposes the staff to charges of potential conflict of interest. Arguably, ETFs and mutual funds provide adequate investment opportunities to the employee. Alternatively, employees could place their individual stock holdings in blind trusts where the employee cannot intervene in the trust's investing activities. Having said that, we acknowledge that placing such restrictions on SEC employees could (i) potentially alter the type of employee the SEC attracts (e.g., employees not knowledgeable about stock markets); or (ii) lead to a demand for greater compensation from the employees to overcome this restriction.

Finally, the SEC's response covers only sell transactions. The new rules adopted in 2009 prohibit employees from buying stocks subject to an investigation as well. Hence, the buy transactions we document in panel B of Table 3 before enforcement actions appear to violate these rules.

6.0 Conclusions

We examine the trading strategies of SEC employees in 2009-2011, a period during which the SEC has pledged to dedicate substantial resources to restrict opportunistic employee trading. Our findings indicate that SEC employees appear to still trade profitably during this period, with trading profits (about 4 % per year for all securities) similar to those earned by corporate insiders (Jeng, Metrick, and Zeckhauser (2003)). These profits are driven by trades in US common stocks (about 8.5% abnormal return per year), over which the SEC holds the most influence and private information (relative to funds and foreign securities).

There is small sample evidence to suggest that SEC employees divest their holdings in the run-up to 12 SEC enforcement actions and after 11 whistle blowing tips received by OSHA during our sample period. In regard to the trades front-running the enforcement actions, the SEC has issued a statement claiming that these trades were approved by their Ethics office and are required as a matter of policy in that staff is forced to sell their holdings in a company in which the SEC initiates an inquiry. We argue that this is tantamount to forcing employees to sell stock on non-public information given that virtually all investigations initiated by the SEC are private. Moreover, this response does not address why we observe buys before enforcement actions, given that all trades in stocks affected by enforcement actions are banned by the SEC. We also question why SEC employees should be allowed to hold individual stocks. Even if these trades were perfectly legal, they open the SEC to allegations of compromised integrity.

Our result should interest policy makers who bear responsibility for monitoring SEC employee trades, as well as the US taxpayers and investors for whom the SEC (and its employees) serve as agents. Finally, we note that, with the exception of Congress, the SEC has the federal government's strongest compliance system in relation to monitoring and restricting employees' financial transactions (Ensign and Matthews (2013)). In ongoing work, we plan on investigating whether the employees of other government offices engage in similar trading strategies. Towards that end, we have filed FOIA requests for trading data of employees of several government agencies. We intend to compile and analyze that data, if and when it becomes available, in future work.

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Table 1

Table 1 reports the summary statistics of the trades included in the data set provided by the SEC. We screen the trades to require a nonzero quantity, price > $5, a valid ticker, and an execution date of post summer 2009, when the SEC implemented a new regulatory regime to restrict and monitor employee trading.

Panel A

Panel A reports summary statistics for the entire universe of CRSP securities traded by SEC employees during our sample period. *Sample Description* refers to the security class for which summary statistics are reported. *Trades* refers to the number of transactions of SEC employees for which our data includes a nonzero quantity, a valid ticker, an execution date in our sample period, and a stock price > $5. *Trans $ Vol* refers to the dollar volume of SEC employee stock market transactions in our sample. *Buys* (*Sells*) refers to the number of transactions in which SEC employees act as buyer (seller). *Buy $ Vol* (*Sell $ Vol*) refers to the dollar volumes for the transactions in which SEC employees act as buyer (seller).

Sample Description	Trades	Trans $ Vol	Buys	Buy $ Vol	Sells	Sell $ Vol
CRSP Universe	7,197	65,787,867.38	3,738	34,085,673.99	3,459	31,702,193.39

Panel B

Panel B reports summary statistics for the securities traded by SEC employees by security type during our sample period. *Sample Description* refers to the security class for which summary statistics are reported. *Trades* refers to the number of transactions of SEC employees for which our data includes a nonzero quantity, a valid ticker, an execution date in our sample period, and a stock price > $5. *Trans $ Vol* refers to the dollar volume of SEC employee stock market transactions in our sample. *Buys* (*Sells*) refers to the number of transactions in which SEC employees act as buyer (seller). *Buy $ Vol* (*Sell $ Vol*) refers to the dollar volumes for the transactions in which SEC employees act as buyer (seller).

Sample Description	Trades	Trans $ Vol	Buys	Buy $ Vol	Sells	Sell $ Vol
ADRs	413	2,683,141.27	237	1,604,087.20	176	1,079,054.07
Bond Funds	73	1,092,761.96	27	300,042.69	46	792,719.28
Closed-end Funds	98	910,962.28	57	450,973.16	41	459,989.11
Common Stocks (Foreign)	329	2,175,184.41	139	1,008,753.32	190	1,166,431.10
Common Stocks (US)	4,806	41,065,073.06	2304	18,937,058.93	2502	22,128,014.13
ETFs	1,221	15,737,010.84	803	10,380,607.78	418	5,356,403.06
REITs	88	854,667.14	55	511,367.02	33	343,300.12
Units (Mostly Partnerships)	130	1,010,777.98	95	750,930.47	35	259,847.51

Panel C

Panel C reports summary statistics for the securities traded by SEC employees by industry during our sample period (Fama-French 48 industry, US common stocks only). *Sample Description* refers to the security class for which summary statistics are reported. *Trades* refers to the number of transactions of SEC employees for which our data includes a nonzero quantity, a valid ticker, an execution date in our sample period, and a stock price > $5. *Trans $ Vol* refers to the dollar volume of SEC employee stock market transactions in our sample. *Buys* (*Sells*) refers to the number of transactions in which SEC employees act as buyer (seller). *Buy $ Vol* (*Sell $ Vol*) refers to the dollar volumes for the transactions in which SEC employees act as buyer (seller).

Sample Description	Trades	Trans $ Vol	Buys	Buy $ Vol	Sells	Sell $ Vol
AERO	69	490,385.79	30	222,892.58	39	267,493.21
AUTOS	78	468,139.49	48	250,632.34	30	217,507.16
BANKS	379	2,820,324.12	49	376,691.47	330	2,443,632.65
BUSSV	406	3,826,006.55	194	1,795,807.63	212	2,030,198.92
CHEM	103	809,526.41	67	512,666.70	36	296,859.71
CHIPS	463	2,210,106.98	220	1,045,791.81	243	1,164,315.18
CLTHS	29	156,751.27	16	89,614.61	13	67,136.66
CNSTR	30	560,034.11	12	281,086.00	18	278,948.11
COAL	26	236,336.50	16	164,912.00	10	71,424.50
COMPS	312	5,933,960.72	177	3,822,895.46	135	2,111,065.26
DRUGS	390	4,938,315.79	199	1,783,377.39	191	3,154,938.41
ELCEQ	27	274,541.75	10	84,971.15	17	189,570.60
FIN	147	1,973,232.26	25	245,828.65	122	1,727,403.61
FOOD	59	425,515.47	40	284,332.14	19	141,183.33
FUN	69	339,393.00	31	197,680.09	38	141,712.91
GOLD	28	145,357.82	14	75,528.86	14	69,828.96
HSHLD	85	574,187.42	50	343,130.52	35	231,056.90
INSUR	153	999,310.85	36	259,435.76	117	739,875.09
MACH	312	2,187,914.01	158	853,418.99	154	1,334,495.03
MEALS	96	955,292.81	63	533,870.41	33	421,422.40
MEDEQ	62	342,634.91	28	128,878.86	34	213,756.05
MINES	25	147,645.67	13	73,785.20	12	73,860.47
OIL	270	2,875,417.11	147	1,484,380.52	123	1,391,036.59
OTHER	27	183,895.60	22	158,511.15	5	25,384.45
PAPER	43	341,991.63	29	277,238.99	14	64,752.63
PERSV	26	387,131.97	3	5,283.60	23	381,848.37
RTAIL	223	1,040,104.56	109	449,854.61	114	590,249.96
SMOKE	59	315,668.57	34	227,211.80	25	88,456.77
SODA	84	456,090.73	56	327,180.20	28	128,910.53
STEEL	96	451,031.03	52	227,567.29	44	223,463.73
TELCM	178	1,288,040.81	105	719,152.74	73	568,888.07
TRANS	93	614,555.17	46	299,543.17	47	315,012.00
UTIL	199	1,228,365.96	118	734,353.23	81	494,012.72
WHLSL	53	312,350.65	32	136,816.08	21	175,534.57

Panel D

Panel D reports summary statistics for the securities traded by SEC employees by security during our sample period (US common stocks only). *Sample Description* refers to the security class for which summary statistics are reported. *Trades* refers to the number of transactions of SEC employees for which our data includes a nonzero quantity, a valid ticker, an execution date in our sample period, and a stock price > $5. *Trans $ Vol* refers to the dollar volume of SEC employee stock market transactions in our sample. *Buys* (*Sells*) refers to the number of transactions in which SEC employees act as buyer (seller). *Buy $ Vol* (*Sell $ Vol*) refers to the dollar volumes for the transactions in which SEC employees act as buyer (seller).

Sample Description	Trades	Trans $ Vol	Buys	Buy $ Vol	Sells	Sell $ Vol
AT&T Inc	55	245,176.72	34	171,284.54	21	73,892.18
Altria Group Inc	46	262,963.66	28	202,451.34	18	60,512.32
Apple Inc	142	4,198,440.78	104	3,173,252.47	38	1,025,188.31
Boeing Co	26	199,064.53	13	110,943.50	13	88,121.03
Bristol Myers Squibb Co	30	488,770.55	19	119,093.97	11	369,676.58
Caterpillar Inc	32	256,558.37	10	71,448.81	22	185,109.56
Centurylink Inc	26	192,665.26	16	117,257.00	10	75,408.26
Cisco Systems Inc	61	255,206.13	37	163,399.26	24	91,806.87
Coca Cola Co	40	201,144.17	24	130,156.01	16	70,988.17
Deere & Co	36	324,622.76	26	206,364.34	10	118,258.42
Disney Walt Co	25	80,790.43	12	31,896.93	13	48,893.49
Exxon Mobil Corp	63	931,181.82	34	445,190.99	29	485,990.82
Ford Motor Co Del	54	231,770.08	37	163,230.85	17	68,539.23
Frontier Communications	30	90,864.85	10	62,932.68	20	27,932.17
General Electric Co	155	1,058,769.54	74	308,026.58	81	750,742.96
Intel Corp	93	576,133.01	54	297,852.36	39	278,280.65
Johnson & Johnson	61	690,172.73	38	582,332.21	23	107,840.51
Mcdonalds Corp	42	328,036.39	30	254,291.15	12	73,745.24
Merck & Co Inc New	45	205,892.60	22	121,989.83	23	83,902.77
Microsoft Corp	90	662,500.09	44	298,676.75	46	363,823.34
Pfizer Inc	51	436,362.87	28	276,857.35	23	159,505.52
Procter & Gamble Co	41	279,269.06	26	172,732.51	15	106,536.54
Target Corp	28	166,206.17	14	64,998.00	14	101,208.17
Verizon Communications	66	704,551.21	43	379,808.04	23	324,743.17
Wal Mart Stores Inc	29	134,425.65	14	62,846.30	15	71,579.35

Panel E

Panel E reports the frequency of trades by size in our sample (by US common stocks, securities other than US common stocks, and all securities). Lower bounds of these categories are inclusive (≥).

	Trades of US Common Stocks	Trades of securities other than US Common stocks	All Trades
Less than $5k	2,776	1,257	4,033
Between $5k and $20k	1,648	847	2,495
Between $20k and $50k	284	230	514
Between $50k and $100k	66	33	99
Greater than $100k	32	24	56
Total	4,806	2,391	7,197

Table 2

Table 2 reports the abnormal returns earned by SEC employees according to various asset pricing models. Raw returns are unadjusted and provided for completeness.

Panel A

Panel A reports the trading returns earned by SEC employees across all traded securities covered by CRSP from August 2009 to December 2011. *Sample Description* refers to the security class for which summary statistics are reported. *Return Type* refers to the asset pricing model used to derive abnormal returns, except in the case raw returns. *Trades* refers to the number of transactions of SEC employees for which our data includes a nonzero quantity, a valid ticker, an execution date in our sample period, and a stock price > $5. *Trans $ Vol* refers to the dollar volume of SEC employee stock market transactions in our sample. *Buy Ret. (t)* refers to the 12 month buy-and-hold abnormal return of securities purchased by SEC employees. *Sell Ret. (t)* refers to the 12 month buy-and-hold abnormal return of securities sold by SEC employees. *Hedge Ret. (t)* refers to the abnormal returns of a hedge portfolio that goes long on stocks that SEC employee purchase and short on stocks that SEC employee sell. T-statistics are in parentheses following the buy, sell, and hedge portfolio returns.

Sample Description	Return Type	Trades	Trans. $ Vol	Buy Ret. (t)	Sell Ret. (t)	Hedge Ret. (t)
CRSP Universe	Raw	7,197	65,787,867.38	14.7% (31.06)	9.2% (21.01)	5.5% (8.6)
CRSP Universe	Market Adjusted	7,197	65,787,867.38	3.9% (8.48)	-1.0% (-2.42)	4.5% (7.95)
CRSP Universe	CAPM	7,197	65,787,867.38	0.2% (0.26)	-9.7% (-4.44)	9.9% (4.2)
CRSP Universe	Fama-French 3 Factor	7,197	65,787,867.38	0.4% (0.43)	-4.1% (-3.06)	4.6% (2.72)
CRSP Universe	Fama-French 4 Factor	7,197	65,787,867.38	-1% (-1.03)	-4.9% (-3.65)	3.9% (2.32)
CRSP Universe	Fama-French 5 Factor	7,197	65,787,867.38	-6.9% (-7.93)	-11.2% (-13.44)	4.3% (3.61)

Panel B

Panel B reports the trading returns earned by SEC employees in US common stocks from August 2009 to December 2011. *Sample Description* refers to the security class for which summary statistics are reported. *Return Type* refers to the asset pricing model used to derive abnormal returns, except in the case raw returns. *Trades* refers to the number of transactions of SEC employees for which our data includes a nonzero quantity, a valid ticker, an execution date in our sample period, and a stock price > $5. *Trans $ Vol* refers to the dollar volume of SEC employee stock market transactions in our sample. *Buy Ret. (t)* refers to the 12 month buy-and-hold abnormal return of securities purchased by SEC employees. *Sell Ret. (t)* refers to the 12 month buy-and-hold abnormal return of securities sold by SEC employees. *Hedge Ret. (t)* refers to the abnormal returns of a hedge portfolio that goes long on stocks that SEC employee purchase and short on stocks that SEC employee sell. T-statistics are in parentheses following the buy, sell, and hedge portfolio returns.

Sample Description	Return Type	Trades	Trans. $ Vol	Buy Ret. (t)	Sell Ret. (t)	Hedge Ret. (t)
Common Stock (US)	Raw	4,806	41,065,073.06	19.3% (26.7)	9.7% (17.51)	9.6% (10.6)
Common Stock (US)	Market Adjusted	4,806	41,065,073.06	8.5% (12.3)	-0.3% (-0.61)	8.8% (10.24)
Common Stock (US)	CAPM	4,806	41,065,073.06	1.3% (0.99)	-15.4% (-5.05)	16.7% (5.05)
Common Stock (US)	Fama-French 3 Factor	4,806	41,065,073.06	2.1% (1.63)	-7.6% (-4.04)	9.7% (4.24)
Common Stock (US)	Fama-French 4 Factor	4,806	41,065,073.06	0.6% (0.42)	-8% (-4.26)	8.5% (3.72)
Common Stock (US)	Fama-French 5 Factor	4,806	41,065,073.06	-7.4% (-6.69)	-13.8% (-12.92)	6.5% (4.19)
Common Stock (US)	5x5 Companion Port.	4,806	41,065,073.06	4.3% (6.73)	-1.5% (-2.79)	5.7% (6.97)

Panel C

Panel C reports the trading returns earned by SEC employees by security type, other than US common stock, from August 2009 to December 2011. *Sample Description* refers to the security class for which summary statistics are reported. *Return Type* refers to the asset pricing model used to derive abnormal returns, except in the case raw returns. *Trades* refers to the number of transactions of SEC employees for which our data includes a nonzero quantity, a valid ticker, an execution date in our sample period, and a stock price > $5. *Trans $ Vol* refers to the dollar volume of SEC employee stock market transactions in our sample. *Buy Ret. (t)* refers to the 12 month buy-and-hold abnormal return of securities purchased by SEC employees. *Sell Ret. (t)* refers to the 12 month buy-and-hold abnormal return of securities sold by SEC employees. *Hedge Ret. (t)* refers to the abnormal returns of a hedge portfolio that goes long on stocks that SEC employee purchase and short on stocks that SEC employee sell. T-statistics are in parentheses following the buy, sell, and hedge portfolio returns.

Sample Description	Return Type	Trades	Trans. $ Vol	Buy Ret. (t)	Sell Ret. (t)	Hedge Ret. (t)
ADRs	Raw	413	2,683,141.27	0.1% (0.06)	-7.9% (-3.64)	8.1% (2.74)
ADRs	CAPM	413	2,683,141.27	-20.6% (-2.54)	-8.6% (-3.78)	-12% (-1.42)
ADRs	Fama-French 3 Factor	413	2,683,141.27	-25.5% (-2.57)	-8.3% (-3.84)	-17.2% (-1.69)
ADRs	Fama-French 4 Factor	413	2,683,141.27	-26.2% (-2.74)	-11.1% (-4.77)	-15.1% (-1.53)
Bond Funds	Raw	73	1,092,761.96	16.5% (6.98)	10.7% (5.1)	5.7% (1.81)
Bond Funds	CAPM	73	1,092,761.96	-3.2% (-0.76)	1.1% (0.24)	-4.3% (-0.7)
Bond Funds	Fama-French 3 Factor	73	1,092,761.96	-2.7% (-0.65)	2.5% (0.56)	-5.3% (-0.86)
Bond Funds	Fama-French 4 Factor	73	1,092,761.96	-4.1% (-1.07)	2% (0.46)	-6.1% (-1.05)
Closed-end Funds	Raw	98	910,962.28	5.8% (3.31)	8.5% (4.71)	-2.6% (-1.05)
Closed-end Funds	CAPM	98	910,962.28	-6.5% (-3.02)	-3.1% (-1.39)	-3.4% (-1.09)
Closed-end Funds	Fama-French 3 Factor	98	910,962.28	-6.7% (-3.12)	-2.1% (-0.95)	-4.6% (-1.51)
Closed-end Funds	Fama-French 4 Factor	98	910,962.28	-7.2% (-3.39)	-3.6% (-1.61)	-3.5% (-1.14)
Common Stock (Foreign)	Raw	329	2,175,184.41	0% (0.01)	6.4% (2.46)	-6.4% (-1.85)
Common Stock (Foreign)	CAPM	329	2,175,184.41	-20.4% (-3.25)	0% (0.01)	-20.5% (-3.04)
Common Stock (Foreign)	Fama-French 3 Factor	329	2,175,184.41	-19.7% (-2.88)	0.4% (0.18)	-20.1% (-2.77)
Common Stock (Foreign)	Fama-French 4 Factor	329	2,175,184.41	-23% (-3.02)	-1.1% (-0.41)	-21.9% (-2.72)
ETFs	Raw	1,221	15,737,010.84	10.6% (25.85)	10.8% (18.45)	-0.2% (-0.31)
ETFs	CAPM	1,221	15,737,010.84	4.7% (9.38)	9% (14.11)	-4.3% (-5.34)
ETFs	Fama-French 3 Factor	1,221	15,737,010.84	4.4% (8.47)	9% (14.22)	-4.6% (-5.58)
ETFs	Fama-French 4 Factor	1,221	15,737,010.84	3.3% (6.51)	7.7% (12.28)	-4.4% (-5.44)
REITs	Raw	88	854,667.14	7.1% (3.97)	16.6% (5.22)	-9.5% (-2.6)
REITs	CAPM	88	854,667.14	3.1% (1.41)	5.4% (2.6)	-2.3% (-0.74)
REITs	Fama-French 3 Factor	88	854,667.14	2.6% (1.24)	3.8% (1.68)	-1.2% (-0.37)
REITs	Fama-French 4 Factor	88	854,667.14	2.5% (1.12)	2.8% (1.21)	-0.3% (-0.1)
Units of Ben. Int.	Raw	130	1,010,777.98	16.2% (6.38)	6.3% (1.37)	9.9% (1.88)
Units of Ben. Int.	CAPM	130	1,010,777.98	-7.9% (-1.77)	-6.3% (-1.77)	-1.6% (-0.27)
Units of Ben. Int.	Fama-French 3 Factor	130	1,010,777.98	-8% (-1.69)	-5.2% (-1.39)	-2.7% (-0.45)
Units of Ben. Int.	Fama-French 4 Factor	130	1,010,777.98	-11.6% (-2.51)	-8.5% (-2.24)	-3.1% (-0.52)

Panel D

Panel D reports the trading returns earned by SEC employees by Fama-French 48 industry (across domestic common stocks covered by CRSP) from August 2009 to December 2011. *Sample Description* refers to the security class for which summary statistics are reported. *Trades* refers to the number of transactions of SEC employees for which our data includes a nonzero quantity, a valid ticker, an execution date in our sample period, and a stock price > $5. *Trans $ Vol* refers to the dollar volume of SEC employee stock market transactions in our sample. *Buy Ret. (t)* refers to the 12 month Fama-French Four Factor buy-and-hold abnormal return of securities purchased by SEC employees. *Sell Ret. (t)* refers to the 12 month Fama-French Four Factor buy-and-hold abnormal return of securities sold by SEC employees. *Hedge Ret. (t)* refers to the 12 month Fama-French Four Factor buy-and-hold abnormal return of a hedge portfolio that goes long on stocks that SEC employee purchase and short on stocks that SEC employee sell. T-statistics are in parentheses following the buy, sell, and hedge portfolio returns.

Industry	Trades	Trans $ Vol	Buy Ret. (t)	Sell Ret. (t)	Hedge Ret. (t)
AERO	69	490,385.79	4.8% (1.36)	4.3% (1.15)	0.5% (0.09)
AUTOS	78	468,139.49	-32.5% (-5.69)	-13.2% (-1.55)	-19.3% (-1.88)
BANKS	379	2,820,324.12	-12.8% (-2.65)	7.9% (6.07)	-20.7% (-4.14)
BUSSV	406	3,826,006.55	-11.8% (-3.46)	-14% (-3.7)	2.2% (0.43)
CHEM	103	809,526.41	-9.1% (-1.58)	-5.2% (-0.93)	-3.9% (-0.49)
CHIPS	463	2,210,106.98	-1.3% (-0.33)	-6.8% (-2.72)	5.4% (1.12)
CLTHS	29	156,751.27	16% (1.18)	-10.7% (-0.46)	26.8% (0.99)
CNSTR	30	560,034.11	-2.9% (-0.39)	2.9% (0.44)	-5.7% (-0.59)
COAL	26	236,336.50	-1.8% (-0.15)	-38.2% (-2.24)	36.4% (1.75)
COMPS	312	5,933,960.72	19% (9.47)	-3.6% (-1.76)	22.6% (7.84)
DRUGS	390	4,938,315.79	1.4% (0.4)	-65.4% (-4.07)	66.8% (4.06)
ELCEQ	27	274,541.75	-25.6% (-2.96)	-3.2% (-0.29)	-22.4% (-1.6)
FIN	147	1,973,232.26	7.5% (1.55)	13% (4.18)	-5.5% (-0.95)
FOOD	59	425,515.47	-10.1% (-1.58)	-2.7% (-0.34)	-7.4% (-0.72)
FUN	69	339,393.00	-79.5% (-4.23)	8.2% (1.72)	-87.7% (-4.53)
GOLD	28	145,357.82	-24.3% (-2.56)	-1.6% (-0.23)	-22.7% (-1.91)
HSHLD	85	574,187.42	-2.6% (-0.52)	1.6% (0.34)	-4.2% (-0.62)
INSUR	153	999,310.85	6.2% (0.99)	3.7% (1.76)	2.4% (0.36)
MACH	312	2,187,914.01	4.2% (1.74)	16.4% (3.85)	-12.2% (-2.48)
MEALS	96	955,292.81	-1.9% (-0.26)	-1.9% (-0.24)	0.1% (0.01)
MEDEQ	62	342,634.91	-47.7% (-2.74)	-1% (-0.26)	-46.7% (-2.61)
MINES	25	147,645.67	-448.6% (-2.55)	-12.5% (-0.68)	-436% (-2.47)
OIL	270	2,875,417.11	7.5% (2.13)	7.1% (2.2)	0.4% (0.08)
OTHER	27	183,895.60	5.8% (2.47)	-124.4% (-5.12)	130.2% (5.33)
PAPER	43	341,991.63	6.2% (1.94)	11.9% (2.18)	-5.7% (-0.9)
PERSV	26	387,131.97	11.1% (0.8)	-25.1% (-2.53)	36.2% (2.12)
RTAIL	223	1,040,104.56	4.6% (1.07)	12.8% (4.22)	-8.1% (-1.54)
SMOKE	59	315,668.57	1.1% (0.57)	9.1% (3.07)	-7.9% (-2.24)
SODA	84	456,090.73	6.4% (3.23)	5.2% (1.85)	1.2% (0.34)
STEEL	96	451,031.03	6% (1.96)	-8.6% (-2.18)	14.6% (2.92)
TELCM	178	1,288,040.81	9.8% (3.87)	2.5% (0.78)	7.3% (1.8)
TRANS	93	614,555.17	-2.1% (-0.6)	4.6% (1.49)	-6.7% (-1.43)
UTIL	199	1,228,365.96	0.8% (0.36)	5.1% (2.45)	-4.4% (-1.47)
WHLSL	53	312,350.65	3.8% (1.23)	11.2% (3.3)	-7.4% (-1.62)

Panel E

Panel E reports the trading returns earned by SEC employees in the most popular US common stocks from August 2009 to December 2011. *Sample Description* refers to the security class for which summary statistics are reported. *Trades* refers to the number of transactions of SEC employees for which our data includes a nonzero quantity, a valid ticker, an execution date in our sample period, and a stock price > $5. *Trans $ Vol* refers to the dollar volume of SEC employee stock market transactions in our sample. *Buy Ret. (t)* refers to the 12 month Fama-French Four Factor buy-and-hold abnormal return of securities purchased by SEC employees. *Sell Ret. (t)* refers to the 12 month Fama-French Four Factor buy-and-hold abnormal return of securities sold by SEC employees. *Hedge Ret. (t)* refers to the 12 month Fama-French Four Factor buy-and-hold abnormal return of a hedge portfolio that goes long on stocks that SEC employee purchase and short on stocks that SEC employee sell. T-statistics are in parentheses following the buy, sell, and hedge portfolio returns.

Firm	Trades	Trans. $ Volume	Buy Ret. (t)	Sell Ret. (t)	Hedge Ret. (t)
AT&T Inc	55	245,176.72	13.4% (8.13)	15.6% (5.95)	-2.2% (-0.7)
Altria Group Inc	46	262,963.66	1.1% (0.55)	2.2% (1.47)	-1.1% (-0.42)
Apple Inc	142	4,198,440.78	25.1% (12.1)	-1% (-0.34)	26.2% (7.31)
Boeing Co	26	199,064.53	3.3% (0.67)	0.1% (0.02)	3.2% (0.46)
Bristol Myers Squibb Co	30	488,770.55	-1.2% (-0.28)	4.6% (0.64)	-5.8% (-0.69)
Caterpillar Inc	32	256,558.37	16.2% (1.3)	35.4% (3.52)	-19.2% (-1.2)
Centurylink Inc	26	192,665.26	9.3% (2.16)	-8.3% (-9.47)	17.6% (4)
Cisco Systems Inc	61	255,206.13	10.9% (1.44)	-6.8% (-0.9)	17.7% (1.65)
Coca Cola Co	40	201,144.17	8.6% (3.74)	1.2% (0.76)	7.4% (2.64)
Deere & Co	36	324,622.76	-7.7% (-1.44)	31.1% (1.95)	-38.8% (-2.3)
Disney Walt Co	25	80,790.43	6.8% (1.23)	1.3% (0.31)	5.5% (0.8)
Exxon Mobil Corp	63	931,181.82	31.1% (12.34)	15.1% (3.92)	16% (3.49)
Ford Motor Co Del	54	231,770.08	-42.1% (-6.65)	-53.9% (-9.72)	11.8% (1.4)
Frontier Communications	30	90,864.85	-38.9% (-9.07)	-18% (-2.32)	-21% (-2.36)
General Electric Co	155	1,058,769.54	19.2% (12.59)	25.2% (10.8)	-6% (-2.16)
Intel Corp	93	576,133.01	19.3% (5.42)	11.6% (2.99)	7.7% (1.45)
Johnson & Johnson	61	690,172.73	8.4% (4)	7.5% (3.62)	0.8% (0.28)
Mcdonalds Corp	42	328,036.39	12.7% (3.26)	13.5% (3.77)	-0.8% (-0.16)
Merck & Co Inc New	45	205,892.60	-2.5% (-0.37)	0.4% (0.06)	-2.8% (-0.31)
Microsoft Corp	90	662,500.09	2.9% (0.81)	14.9% (3.2)	-11.9% (-2.03)
Pfizer Inc	51	436,362.87	20% (6.23)	12.4% (3.35)	7.6% (1.56)
Procter & Gamble Co	41	279,269.06	6.9% (5.96)	6.8% (3.48)	0.1% (0.03)
Target Corp	28	166,206.17	15.5% (2.6)	25.4% (5.63)	-9.9% (-1.33)
Verizon Communications	66	704,551.21	14.6% (4.26)	5.9% (1.37)	8.7% (1.58)
Wal Mart Stores Inc	29	134,425.65	14.3% (2.67)	30.8% (7)	-16.6% (-2.4)

Table 3

Table 3 reports evidence of trading by SEC employees in the run-up to the SEC announcement of a firm being subject to an enforcement action. We observe 56 SEC enforcement actions in our sample period. SEC employees execute trades in the run-up period prior to 12 of these enforcement actions.

Panel A

Panel A reports the SEC enforcement actions prior to which we observe SEC employee trades.

Firm	Enforcement Action Ann. Date
Alcatel-Lucent	Monday, December 27, 2010
Aon	Tuesday, December 20, 2011
Bank of America	Thursday, February 4, 2010
Citigroup	Thursday, July 29, 2010
Citigroup	Wednesday, October 19, 2011
Diageo	Wednesday, July 27, 2011
General Electric	Tuesday, July 27, 2010
General Electric	Friday, December 23, 2011
International Business Machines	Friday, March 18, 2011
Johnson & Johnson	Friday, April 8, 2011
JPMorgan Chase	Thursday, July 7, 2011
Wells Fargo	Thursday, December 8, 2011

Panel B

Panel B reports the numbers of SEC employee buys and sells in the run-up to a stock being subject to an SEC enforcement action. This panel also reports the number of total buys and sells observed in the market, as signed by the Lee and Ready (1991) algorithm using a tick test. The final row reports the results of a Chi-squared test that measures the difference between the rates of sales among SEC employees versus the total market. *, **, and *** indicate differences significant at the $p< 0.10$, $p<0.05$, and $p<0.01$ levels, respectively.

	30 Day Run-up Period	45 Day Run-up Period	60 Day Run-up Period	90 Day Run-up Period
SEC Employee Buy Trades	7	8	16	33
SEC Employee Sell Trades	20	30	39	54
SEC Employee Total Trades	27	38	55	87
SEC Employee Sell Trades %	74.1%	78.9%	70.9%	62.1%
Total Market Buy Trades	8.1 mil.	16.0 mil.	21.2 mil.	32.5 mil.
Total Market Sell Trades	8.0 mil.	16.0 mil.	21.2 mil.	32.6 mil.
Total Market Total Trades	16.1 mil.	32 mil.	42.4 mil.	65.1 mil.
Total Market Sell Trades %	50.6%	50.0%	50.0%	49.9%
χ^2 Test of H_o: SEC Sell Proportion = Total Market Sell Proportion	6.32 (0.012)***	12.73 (< 0.01)***	9.64 (< 0.01)***	4.97 (0.026)***

Table 3 (cont'd)

Panel C

Panel C reports the dollar volume of SEC employee buys and sells in the run-up to a stock being subject to an SEC enforcement action. This panel also reports the dollar volume of total buys and sells observed in the market, as signed by the Lee and Ready (1991) algorithm using a tick test. The final row reports the results of a t test that measures the difference between the ratio of sell dollar volumes to total dollar volumes for SEC employees versus the total market. *, **, and *** indicate differences significant at the $p< 0.10$, $p<0.05$, and $p<0.01$ levels, respectively.

	30 Day Run-up Period	45 Day Run-up Period	60 Day Run-up Period	90 Day Run-up Period
SEC Employee Buy $ Volume	43,249	52,279	120,744	199,469
SEC Employee Sell $ Volume	37,818	146,858	176,487	225,602
SEC Employee Trans. $ Volume	81,068	199,138	297,231	425,071
SEC Employee Sell %	46.65%	73.75%	59.38%	53.07%
Market Buy $ Volume	83,226,948,292	153,271,544,978	199,637,804,717	301,687,315,328
Market Sell $ Volume	82,314,652,443	152,803,561,476	198,953,867,733	301,701,099,378
Total Market Trans. $ Volume	165,541,600,735	306,075,106,454	398,591,672,450	603,388,414,706
Market Sell %	49.72%	49.92%	49.91%	50.00%
T Test of H_o: SEC Sell Vol % = Total Market Sell Vol %	-0.29 (0.77)	2.97 (< 0.01)***	1.29 (0.20)	0.53 (0.60)

Table 4
Table 4 reports evidence of trading by SEC employees after the receipt of a whistle blowing tip about financial impropriety by OSHA. We observe 108 OSHA whistle blowing events in our sample period. SEC employees execute trades after 11 of these tips.

Panel A
Panel A reports the OSHA whistleblowing tips after which we observe SEC employee trades.

Firm	OSHA Whistleblowing Date	Allegation Info
Microsoft Corporation	8/4/2009	Accounting irregularities
Wal-Mart Stores, Inc.	8/18/2009	Lack of compliance with internal control requirements
Wells Fargo Bank, N.A	9/28/2009	Fraud
Hewlett Packard Inc.	10/15/2009	N/A
JP Morgan & Chase Company	10/22/2009	Client involved in securities law violations
United Parcel Service, Inc.	12/3/2009	N/A
Boeing	1/19/2010	Fraudulent activities including tampering with internal audit
SanDisk Corporation	2/11/2010	Lack of internal controls
Jacobs Engineering Group	3/25/2010	Billing practices
Wells Fargo Bank, N.A	5/11/2010	Fraudulent and unethical banking practices
JP Morgan & Chase Company	7/29/2010	Kickback scheme

Panel B
Panel B reports the numbers of SEC employee buys and sells in a stock in the 90 days after OSHA receives a whistle blowing tip about a financial impropriety.

SEC Buys	SEC Sells	Proportion of Sells	Binom. Test of H0: Sell Pro. = 50%
14	35	71.43%	**3.00 (< 0.01)**

Panel C
Panel C reports the dollar volume of SEC employee buys and sells in a stock during the 90 day period following a whistle blowing tip received by OSHA.

SEC Buy Volume ($)	SEC Sell Volume ($)	SEC Sell Volume %	T Test of H0: Sell Vol %= 50%
123,605.64	338,515.30	73.25%	**3.64 (< 0.01)**

Table 5

Table 5 reports the summary statistics and OLS regression results of models predicting the 1 year Fama-French 4 factor abnormal returns to the trades of SEC employees. *S&P 500* is an indicator that equals 1 if the firm is in the index at the time of the trade. *Block Trade* is an indicator that equals 1 if the trade is for more than $10,000. *December* is an indicator variable that equals 1 if the trade takes place in the month of December. *Short Interest Percent* is a continuous variable that takes the value of the ratio of a firm's outstanding shares that were held short as of the most recent settlement date (within the last month). *Run-up return* refers to the excess return identified by the Fama-French 4 factor model for the 90 days prior to the trade date. *Run-up volume* refers to the excess volume identified by the market model for the 90 days prior to the trade date. *Recent SEC Emp. Transactions* refers to the dollar volume of trades in the same stock executed by SEC employees in the 90 days prior to the observation. *Local firm* is an indicator variable that equals 1 when the firm is headquartered within 50 miles of an SEC office.

Panel A
Summary statistics for SEC employee buy transactions.

Variable	n	Mean	Std. Dev.	1st Quartile	Median	3rd Quartile
Abnormal Return to trade (1 year, FF4)	2,293	-0.01	0.50	-0.17	0.05	0.25
S&P 500 (Dummy)	2,293	0.10	0.29	0.00	0.00	0.00
Block Trade (>$10k, Dummy)	2,293	0.20	0.40	0.00	0.00	0.00
Percent Short Interest	2,293	0.01	0.24	0.00	0.00	0.00
December (Dummy)	2,293	0.08	0.27	0.00	0.00	0.00
Run-up return	2,293	0.01	0.18	-0.08	0.00	0.08
Run-up volume	2,293	-0.71	18.90	-11.62	-2.50	6.71
Recent SEC Emp. Transactions	2,293	37,000	100,000	0	6,800	35,000
Local Firm (Dummy)	2,293	0.56	0.50	0.00	1.00	1.00

Panel B
Summary statistics for SEC employee sell transactions.

Variable	n	Mean	Std. Dev.	1st Quartile	Median	3rd Quartile
Abnormal Return to trade (1 year, FF4)	2,478	-0.03	0.84	-0.13	0.05	0.23
S&P 500 (Dummy)	2,478	0.12	0.32	0.00	0.00	0.00
Block Trade (>$10k, Dummy)	2,478	0.21	0.41	0.00	0.00	0.00
Percent Short Interest	2,478	0.02	0.13	0.00	0.00	0.00
December (Dummy)	2,478	0.13	0.33	0.00	0.00	0.00
Run-up return	2,478	0.03	0.17	-0.06	0.02	0.11
Run-up volume	2,478	-5.71	20.43	-15.95	-6.51	3.67
Recent SEC Emp. Transactions	2,478	33,000	83,000	0	3,900	32,000
Local Firm (Dummy)	2,478	0.57	0.50	0.00	1.00	1.00

Table 5 (cont'd)

Panel C

Panel C presents the regression results of models estimating the 1 year (252 trading days) buy and hold abnormal return (BHAR) of SEC employee trades (using the Fama-French 4 factor model, including momentum). T-statistics are included in brackets beneath coefficients. Standard errors are clustered in two dimensions by firm and trade date. Significance at the p<0.01, p<0.05, and p<0.10 levels is denoted by ***, **, and *, respectively.

DV: (0, +252) BHAR, Fama-French 4 Factor Model		
	Model 1	Model 2
S&P 500 (Dummy)	-0.017	0.0364
	[-0.5731]	[1.4814]
Block Trade (>$10k, Dummy)	-0.0278	-0.0454
	[-1.1119]	[-1.2366]
Percent Short Int.	-0.0299	0.0542
	[-1.3984]	[0.8870]
December (Dummy)	0.0097	0.0586
	[0.2445]	[1.5964]
Run-up return	-0.2084*	0.0155
	[-1.7601]	[0.0879]
Run-up volume	-0.0060***	-0.0042***
	[-4.0618]	[-3.5705]
Recent SEC Emp. Transactions	0.00001	-0.00001
	[1.5221]	[-0.0246]
Local Firm (Dummy)	0.0847**	0.0391
	[2.2612]	[0.8005]
Constant	-0.0549*	-0.0383
	[-1.7295]	[-0.8825]
Sample	Buys	Sells
Observations	2,293	2,478
R^2	0.1043	0.0521

Appendix

A.1 Monte Carlo analysis

While our analyses of SEC employee trades around information events (enforcement actions and OSHA tips) suggests that there is some degree of informed trading going on among SEC employees, a critic could charge that the results of our primary BHAR tests are potentially biased. Kothari and Warner (2007) offer a thorough review of the shortcomings of long run event studies, which in general centers on the issue of predicting what a firm's normal return would be over a long horizon. Fama (1998) further notes that many long run abnormal return results disappear with small changes to the estimation procedure. Our findings are further complicated by the SEC's statements that their employees had to divest stocks of financial firms after 2010 (Gandel (2014)). Our 2009-2011 sample coincides with the Great Recession, which was a bearish period for financial firms in general. It stands to reason that the positive hedge returns we observe for SEC employees, primarily driven by avoiding losses, could be an artifact of poorly specified models and an industry-specific divestment, as opposed to timely sales ahead of losses.

We attempt to rule out this explanation via a Monte Carlo analysis. Specifically, we randomize the date of every SEC employee trade in our sample over our sample period 150 times and estimate abnormal returns from portfolios mimicking these pseudo-trades. One of the limitations of this technique in our context is that randomizing trade dates within the roughly two year sample period, coupled with our one year holding period for computing abnormal returns, biases against differences in abnormal returns from the pseudo-trades as compared with the real trades (in that pseudo-holding periods largely overlap with actual holding periods). Despite this limitation, the results are encouraging. In particular, panel A of Table A1 tabulates results for the CRSP universe and panel B tabulates the results for U.S. common stocks. In both panels we report the abnormal return and t-statistics generated from our primary analysis (Table 2), as well as a Fisher p-value that indicates the proportion of pseudo-portfolios (built from randomizing SEC employee trading dates) in which a return as or more extreme was observed. By construction, these Fisher p-values are one-tailed, and correspond to the area in the left (right) tail for the SEC employee sell portfolio (buy and hedge portfolio) returns.

Panel A (Table A1) suggests that our results for the CRSP universe are not as strong. For example, about 18% (Fisher p-value = 0.18) of the Fama-French four factor returns in the hedge

pseudo-portfolios are greater than the 3.9% observed in the hedge portfolio of actual SEC employee trades. This is not entirely surprising given that most of the volume and abnormal return in the earlier tests stems from U.S. common stocks. The panel B data, however, generally confirm our original results related to U.S. common stocks. For instance, the Fisher p-value (p=0.06) associated with the hedge portfolio return for the Fama-French four factor model for U.S. common stocks (panel B) indicates that only 6% of the pseudo-portfolios (built from randomized trade dates) had abnormal returns higher than that observed in the actual sample of SEC employee trades.

In sum, our Monte Carlo analysis still suggests that a strategy mimicking the trades of SEC employees leads to positive abnormal returns in U.S. common stocks. Importantly, results of the observed magnitude are unlikely to result from randomly dated trades. We take this as further evidence that SEC employees display impressive foresight in divesting of U.S. common stocks ahead of price declines.

A.2 Calendar-time portfolio returns

Table A2 presents evidence using 12 month calendar-time portfolio methods of calculating abnormal returns from SEC employees' buys and sells. Specifically, we observe significantly negative calendar time abnormal returns in the SEC employee sells portfolio (adjusting for five factors) and insignificant negative returns in the corresponding SEC employee buy portfolio.[16] The difference in monthly returns (hedge portfolio return) is marginally significant (p=0.097), and annualizes to about 5.5% per year (calendar-time hedge portfolio alpha).[17] However, it is important to note that the reduction in power stems from the alpha related to the buy transactions (alpha = -1.2%, t-statistic = -0.63). The alpha related to the sell transactions, as before under the BHAR methods, is strong (-6.78%, t-statistic = -2.54).

Having said, we believe our data is poorly suited to calendar type methods, as we have a short time series, which leads to low power. In our 40 months of data for each portfolio, the first 12 are build-up periods, in which less than 12 months of existing trades are present, and the last 12 are wind-down periods, in which new trades are not taking place. This leaves us with only 16

[16] We only include U.S. common stocks in this analysis. Including all securities makes for a directionally consistent but statistically insignificant finding.

[17] As recommended by Fama (1998), we standardize monthly returns by the standard deviation of constituent trade returns. Also, to reduce the effects of build-up and wind-down periods, we drop monthly portfolios that have less than 500 constituent trades (which amounts to dropping the first and last seven or eight months).

months of data where new trades are taking place and trades from the (entire) past year enter the constituent portfolio.

This short time series is unique to our setting. By comparison, Ziobrowski et al. (2004) use six years of trades by U.S. senators, and Ziobrowski et al. (2011) use 17 years of trades by members of the U.S. House of Representatives. In the general literature on trading by corporate insiders, time series stretching over a decade are not uncommon (Jeng, Metrick, and Zeckhauser (2003); Wang, Shin, and Francis (2012)), given that the SEC Form 4 filings that report these trades are openly accessible via EDGAR (as well as re-packaged for researchers by Thomson Reuters).

In brief, we do not feel that calendar-time methods are well suited for our data, mostly as a factor of our short time series, and as such we refrain from centering our analyses on these methods. Despite these constraints, robustness tests confirm that our general result holds using calendar-time portfolio methods advocated by Fama (1998) for unusual data such as ours. Finally, we note that a thin time-series of data is more likely to be found in future tests of the trading profits of civil servants. If our experience is any indication, (1) data on this trading is difficult to acquire and process, and (2) monitoring systems accumulating this data are in their infancy. Both of these issues suggest that further studies will likely make use of short time series, and we believe that, as with our analysis, BHAR methods are likely better suited for such tests.

Table A1

Table A1 reports the results of a Monte Carlo simulation that randomizes the dates of SEC employee trades to create pseudo-returns. These pseudo-returns, and associated Fisher p-values, demonstrate the likelihood that the results we obtain in our primary BHAR analysis result from random chance.

Panel A

Panel A reports the Monte Carlo simulation results for the CRSP universe. The returns and t-statistics result from the original BHAR analysis presented in Table 2. The Fisher p-values indicate the likelihood that a return that extreme (right tail for buys and hedge returns, left tail for sells) is observed when the dates of SEC employee transactions are randomized over our sample period.

Return Type	Buy Ret. (t)	Fisher P-Val.	Sell Ret. (t)	Fisher P-Val.	Hedge Ret. (t)	Fisher P-Val.
Raw	14.7% (31.06)	0.25	9.2% (21.01)	0.16	5.5% (8.6)	0.15
CAPM	0.2% (0.26)	0.52	-9.7% (-4.44)	0.01	9.9% (4.2)	0.06
Fama-French 3 Factor	0.4% (0.43)	0.62	-4.1% (-3.06)	0.16	4.6% (2.72)	0.25
Fama-French 4 Factor	-1% (-1.03)	0.50	-4.9% (-3.65)	0.11	3.9% (2.32)	0.18
Fama-French 5 Factor	-6.9% (-7.93)	0.31	-11.2% (-13.44)	0.35	4.3% (3.61)	0.27

Panel B

Panel B reports the Monte Carlo simulation results for U.S. common stocks. The returns and t-statistics result from the original BHAR analysis presented in Table 2. The Fisher p-values indicate the likelihood that a return that extreme (right tail for buys and hedge returns, left tail for sells) is observed when the dates of SEC employee transactions are randomized over our sample period.

Return Type	Buy Ret. (t)	Fisher P-Val.	Sell Ret. (t)	Fisher P-Val.	Hedge Ret. (t)	Fisher P-Val.
Raw	19.3% (26.7)	0.18	9.7% (17.51)	0.16	9.6% (10.6)	0.10
CAPM	1.3% (0.99)	0.18	-15.4% (-5.05)	0.01	16.7% (5.05)	0.01
Fama-French 3 Factor	2.1% (1.63)	0.22	-7.6% (-4.04)	0.16	9.7% (4.24)	0.09
Fama-French 4 Factor	0.6% (0.42)	0.19	-8% (-4.26)	0.11	8.5% (3.72)	0.06
Fama-French 5 Factor	-7.4% (-6.69)	0.17	-13.8% (-12.92)	0.35	6.5% (4.19)	0.17
5x5 Companion Port.	4.3% (6.73)	0.10	-1.5% (-2.79)	0.69	5.7% (6.97)	0.20

Table A2

Table A2 reports the results of a calendar time event study using the Fama-French 5 factor monthly model. We transform returns as recommended by Fama (1998), such that the dependent variable is portfolio excess returns divided by the portfolio standard deviation of returns. We go long on US common stocks for 12 months after SEC employee purchases, and short on US common stocks (for 12 months) after SEC employee sells. We drop months with less than 500 securities (first 7 months of wind-up period and last 8 months of wind-down period) to reduce noise from sparsely populated monthly portfolios. T-statistics are included in brackets beside coefficients. Standard errors are corrected for heteroskedasticity.

	Model 1	Model 2	Hedge Portfolio Alpha
Alpha (Intercept)	-0.01259 [-0.63]	-0.06775 [-2.54]	0.055 [1.66]
Market Risk Premium	12.01585 [19.89]	14.7686 [17.56]	(approx. 44 bps per month, adjusting
Small-Minus-Big Return	-0.52261 [-0.52]	-0.89654 [-0.67]	for Fama (1998) corrections)
High-Minus-Low Return	0.02887 [0.03]	3.48714 [2.78]	
Momentum Factor	0.00030526 [0]	-0.32438 [-0.54]	
Traded liquidity factor	-0.76435 [-1.65]	-1.56356 [-2.99]	
Portfolio	Buys	Sells	
Observations	25	25	
Adj. R^2	0.97	0.97	