Stock Picking Skills of SEC Employees

Shivaram Rajgopal
Schaefer Chaired Professor of Accounting
Goizueta Business School
Emory University
1300 Clifton Road NE, Atlanta, GA 30030
Email: shivaram.rajgopal@emory.edu

Roger M. White
PhD Student in Accounting
J. Mack Robinson School of Business
Georgia State University
Email: rwhite42@gsu.edu

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Abstract:

We use a new data set obtained via a Freedom of Information Act request to investigate the trading strategies of the employees of the Securities and Exchange Commission (SEC). We find that a hedge portfolio that goes long on SEC employees' buys and short on SEC employees' sells earns positive and economically significant abnormal returns of (i) about 4% per year for all securities in general; and (ii) about 8.5% in U.S. common stocks in particular. The abnormal returns stem not from the buys but from the sale of stock ahead of a decline in stock prices. We find that at least some of these SEC employee trading profits are information based, as they tend to divest (i) in the run-up to SEC enforcement actions; and (ii) in the interim period between a corporate insider's paper-based filing of the sale of restricted stock with the SEC and the appearance of the electronic record of such sale online on EDGAR. These results raise questions about potential rent seeking activities of the regulator's employees.

Stock Picking Skills of SEC Employees

"It's hard to imagine a more serious violation of the public trust than for the agency responsible for protecting investors to allow its employees to profit from non-public information about its enforcement activities."

Senator Charles E. Grassley, R- Iowa

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 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. Hence, allegations that SEC employees exploit such non-public information for personal profit raise troubling questions about real and apparent conflicts of interest, especially among enforcement officials. Given that the SEC is charged 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 arguably troubling.

In March 2009, H. David Kotz, then Inspector General (IG) of the SEC, released a report outlining the insider 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

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(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 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, & Zeckhauser (2003) and Wang, Shin, & 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, Lee, Liu, & Odean, 2009), but their sales appear to systematically dodge the revelation of bad news in the future. This fact pattern is 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 closer analysis indicates that SEC employees are much more likely to sell a security (i) in the run-up to a costly SEC enforcement action against a firm relative to an average market participant; (ii) in the interim period between a corporate insider's paper-based filing of the sale of restricted stock with the SEC and the appearance of the electronic record of such sale online. These results suggest that SEC employees potentially trade profitably under the new rules, and that at least some of their profits potentially stem from trading ahead of costly SEC sanctions and on privileged non-public information. In short, it appears that SEC employees continue to take advantage of non-public information to trade profitably in stocks under their regulatory purview.

Khwaja & Mian (2011), in a review of the literature on rent seeking by state-related actors such as politicians, point out that rent extraction by civil servants and bureaucrats is not widely studied. To our knowledge, we provide some of the first evidence of abnormal profits from trades of government officials in the U.S. We also find evidence suggesting plausible channels via which SEC employees can 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 and section 5 offers an exploratory analysis of the employees' trades. 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 every month and are prohibited from profiting from gains derived from positions held for less than six months.

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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, & 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 (e.g. Chaddock, 2004 and 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 inside trading by Congressmen had already declined prior to the passage of the STOCK Act (Ovide, 2010; Eggers & Hainmueller, 2013), especially after the year 2004. Eggers & Hainmueller (2013) reevaluate the results of Ziobrowski et al. (2004) and find that while a hedge portfolio of Congressmen's trades earns abnormal returns, the individual portfolios of the constituent members 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 (U.S. Office of Personnel Management, 2012).[1] While these officials are subject to general laws prohibiting insider trading, as well as various branch-specific laws and guidelines, their personal financial transactions are subject to little oversight. This lack of oversight is potentially problematic, given their access to substantial amounts of privileged,

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[1] 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).

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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.

2.2 SEC employees' alleged insider 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 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 & 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

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.[2] 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

conduct a test similar to Eggers & Hainmueller (2013) and 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.

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[2] 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).

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, tabulates 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 & Mian (2011) point out the value of uncovering the actual rent-seeking mechanism to make the tests of the above kind more convincing. They go on to state that such an approach may often be feasible in financial markets because (i) it does not immediately identify the rent-seeking actors, who may be hard to observe; and (ii) one often has access to detailed transactional-level data. Armed with a hypothesis regarding the actual channel, such detailed transactional data may allow for identification of suspect patterns.

Following Khwaja & Mian (2011), we attempt to identify potential channels via which SEC employees potentially exploit non-public information that they come across. A close reading of the OIG's report 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 report, at the Office of the Chief Counsel (OCC) at the SEC, there are "about 4,000 investigations ongoing at any point in time." The OCC has about 20 employees when it is fully staffed. 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 around 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)   Industry emphasis:

The portions of the OIG report quoted above suggest that employees were interested in stocks of specific sectors: (i) financial services; (ii) health care and (iii) oil. Hence, we report abnormal returns of trades of SEC employees earned in specific industries.

(iii)   Clustering in stocks

One of the findings of the OIG report is that the two attorneys accused of insider trading owned many of the same stocks. We attempt to exploit this finding by investigating the clustering of SEC trades in certain securities.

(iv)   Insider sales of restricted stock

Beside the above channels, we also investigate whether SEC employees front-run information about corporate insiders' sales. For most inside trades, insiders must file Forms 3, 4, and 5 directly to EDGAR (giving SEC employees no early access to the information) to notify the SEC of the transaction. However, insiders must file Form 144 when they sell restricted stock, and unlike Forms 3, 4, and 5, Form 144 may be filed on paper. These paper filings never

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appear on EDGAR, and are only accessible to the public, with a lag, via subscription services (e.g., Thomson-Reuters). We examine whether SEC officials appear to trade on the knowledge that an insider is selling restricted stock before such information reaches the broader market.

3.0. Data and Research Design

3.1 Data

The data used in this study was obtained via a Freedom of Information Act request filed by us in October 2012. As mentioned earlier, the SEC shared data on their employees' transactions only 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, the data was made available to us in a pdf format and we have relied on computer programs to extract that data and organize it in a machine readable format fit for

statistical analysis. Third, as mentioned before, we have no data on the holdings of securities.

Fourth, we are not sure of whether the third party or internal SEC monitors actually audit the

accuracy of these reported trades (Ensign & Matthews, 2013).

Initially, we begin with 29,081 transactions, of which 15,690 are buys and 10,737 are

sells.[3] 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.

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 outnumber 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).

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[3] 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).

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 sales 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 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).

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 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. Lyon, Barber, & Tsai (1999) find this method to be the best approximation of abnormal returns experienced by investors employing an information-based trading strategy. 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), Fama-French three factor model (Fama & French, 1993), and a Fama-French four factor model that adds to the original Fama-French model the momentum factor (Carhart, 1997). This additional factor excludes the possibility that SEC employees earn their profits via a strategy not based on information advantages (i.e., trading on momentum). Finally, we weight trades by transaction value, such that larger trades are more influential in our hedge portfolios.

Untabulated tests confirm the robustness of our findings to alternate methods. Notably, using the liquidity factor (Pástor & Stambaugh, 2003), companion portfolios sorted on size and B/M ratio (Wang, Shin, & Francis, 2012), calendar time abnormal returns, 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 et al., 2003).

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 in all versions of abnormal returns (the t-statistics for buy side abnormal returns are 0.29, 0.47 and -1.1). However, sell portfolios of SEC employees earn strong negative abnormal returns, ranging from -4.14% when the Fama-French three factor model is considered (t-statistic = -3.31) to -9.7% (t-statistic = -4.8) when the CAPM is the model used to compute "normal" returns. 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. 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 8.5%, 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 range from -7.57% (t-statistic = -4.35) when

the Fama-French three factor model is used to -15.42% (t-statistic = -5.45) when the CAPM is used.

Panel C computes abnormal returns for SEC employees' trades in securities other than U.S. common stocks. 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 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. One way to interpret this data is to argue that employees take 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 suggests that SEC employees are not surprisingly adept stock pickers, but instead trade ahead of losses for securities over which they have more investigative powers and regulatory authority.

Panel D of Table 2 reports the abnormal returns of SEC employees sorted by industry. For this analysis, we only consider (i) domestic common stocks; and (ii) those among them in which at least 25 trades take place in our sample. We define 48 industries as in Fama & 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.

The least profitable hedge portfolios are found in the following industries: (i) -87.7% (t-statistic = -4.53) in the fun 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 fun 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. These data again suggest that the buy decisions of SEC employees do not appear to be particularly profitable but the sell decisions often are.

Reeb, Zhang, & 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 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 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, and 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, suggesting that a regulator's employees are most likely to know about sanctions against companies before the market as a whole. 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 and Congressional testimony was the suggestion that SEC employees were trading on knowledge of impending SEC enforcement actions. Such actions impose substantial costs to firms, and trading ahead of news of enforcement action announcement would allow informed traders (such as SEC employees) to earn abnormal profits (Karpoff, Lee, & Martin, 2008). The monitoring systems put into place after the initial scandals of summer 2009 (e.g., Keteyian & Strickler, 2009 and 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 & 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. However, of the 56 enforcement actions against publicly traded firms announced in 2010 and 2011, SEC employees appear to trade in the run-up to six (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). Moreover, this fact pattern indicates that the monitoring mechanisms the SEC planned to impose to discourage such practice are either weak or nonexistent, consistent with claims by Ensign and Matthews (2013).

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 six 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 & Ready (1991) algorithm using a tick test to sign trades.

Panel C of Table 3 reports the dollar volumes of SEC employee trades observed in the run-up 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

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volume transacted differs between SEC employees and the broader market (Lee & 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 six cases, SEC employees appear to front-run the announcement that a firm is subject to costly SEC penalties (associated with the enforcement action). In particular, they seem to overwhelming divest holdings of these tarnished firms prior to such announcements. These sales clearly violate current SEC rules (SEC, 2009) that forbid employees from transacting in firms under SEC investigation.

4.3 Insider sales of restricted stock (Form 144)

Table 4 reports the trades of SEC employees in the interim between the filings and announcements of Form 144. Corporate insiders are required to file Form 144 when they intend to sell restricted stock. Most corporate (10K, DEF13, etc.) and insider (Form 3, 4, 5, etc.) filings are filed electronically by the originator, directly to EDGAR, the SEC's public, online reporting system. SEC employees have no first mover advantage with regard to information contained in these filings.

Form 144, however, can be filed either electronically or on paper. However, in excess of 90% of filings in recent years have been paper-based. These paper filings never appear on EDGAR, and are only available through third party data providers (e.g., Thomson-Reuters) who collect the paper filings from the SEC and post them electronically. The SEC processes these

filings before releasing them to third party data providers. This creates a window between filing

and public availability, where SEC employees have an informational advantage over the market.

This is a valuable advantage, as Field & Hanka (2001) find that Form 144 filings are predictive

of future negative abnormal returns.

Panel A (B) of Table 4 reports the transaction (traded volume) imbalance in this interim

period between SEC receipt of the form and its publication through a third party (Thomson-

Reuters). Note that Thomson-Reuters does not indicate whether Form 144s are filed

electronically or on paper, which translates into our tests picking up some filings for which SEC

employees have no advantage (electronic filings, less than 10% of our sample). However, this

adds noise, not bias, to our results.

Panel A of Table 4 reports no significant imbalance in transactions in the interim during

which SEC employees have potential information advantage. Panel B results (traded volume),

on the other hand, are significantly weighted towards sales (p < 0.01). Of the $8.9 million in

aggregate traded volume, $4.7 million (54%) emanates from sales.

These results indicate that SEC employees appear to take advantage of private

information about insiders selling restricted stock and front-run the public announcement of such

sales. Paper based filings make such informed trading possible. Electronic filings, which would

make Form 144 available to the public and the SEC simultaneously (as is the case with most

filings), would probably eliminate such rent seeking behavior.

5.0 Additional Tests

The results reported thus far suggest that SEC employees earn abnormal returns trading

U.S. common stocks. In this section, we further explore our data to document more detailed

characteristics of SEC employees' transactions. Notably, we compare the transactions of SEC

employees to those of individual investors in general that have documented by prior literature. To be clear, the average individual loses money on their buy and sell trades, in general, both before and after costs (Barber and Odean 2013). Unlike the average individual, the SEC employees' sell transactions are significantly profitable. It is important to point out that we do not have the ideal set of data necessary to compare the trading behavior of SEC employees to that of an average investor. In particular, we do not have portfolio data and trades identified to a specific individual. Hence, we view our evidence on drawing parallels to the average individual investor behavior as preliminary in nature.

5.1 Geographical proximity

The average investor is influenced by where he/she works and lives (Grinblatt and Keloharju 2001; Ivkovich and Weisbenner 2005; and Seasholes and Zhu 2010). In Panel A of Table 5, we find that SEC employees' trades are concentrated in local stocks. That is, 56.4% (54.2%) of their trades (dollar volume of trades) of U.S. common stocks involve the security of a firm headquartered within 50 miles of a major SEC office (regional office or national HQ). However, the SEC's regional offices (Atlanta, Miami, New York, Philadelphia, Boston, San Francisco, Los Angeles, Ft. Worth, Chicago, Denver and Salt Lake City) and national headquarters (Washington, DC) are located in major metropolitan areas and are hence home to many publically traded companies. Hence, this data by itself cannot establish a local bias. To provide a benchmark, we evaluated the proportion of trades conducted by the stock market as a whole for these firms. As shown in Panel B of Table 5, it appears as though SEC employees' trades are not biased towards firms in their neighborhood. In particular, 72.1% of the dollar volume of trades is conducted by the market as a whole in firms located within a 50 mile radius of an SEC office relative to 54.2% of the dollar volume of trades transacted by SEC employees

in these local stocks. Hence, unlike an average individual investor, SEC employees' trades are not unduly concentrated in local stocks.

Massa and Simonov (2006), relying on Swedish Security Register Center data, find that investors earn strong returns on portfolio holdings that are professionally or geographically close to them. Ivkovic and Weisbenner (2005) use U.S. discount brokerage house data and document that individual investors tend to overweight local stocks and the returns on local stocks are strong. However, Seasholes and Zhu (2010) counter-argue that this result is not robust and relies on faulty statistical methodologies. Døskeland and Hvide (2011) document that, after excluding own-company stock holdings, individual investors in Norway overweight stocks in the industry in which they are employed despite the diversification disadvantages of doing so and earn negative abnormal returns on the stocks they buy in their industry of employment. SEC employees are perhaps more likely to be informed about local firms, both in their role of (i) individual investors (e.g. Coval & Moskowitz, 2001; Ivković & Weisbenner, 2005); and (ii) of proximate regulators (Kedia & Rajgopal, 2011).

To assess whether we observe strong returns for local stocks, we evaluate the profitability of SEC employees' trades. Detailed data on this issue is presented in Table 7, but the key finding is that buy transactions in companies proximate to SEC offices are profitable but sell transactions are not. This asymmetric return pattern is interesting in that we would not expect SEC employees' knowledge of impending enforcement events to vary with distance from their offices. However, it seems plausible to hypothesize that local knowledge facilitates profitable buy transactions, as it would for an average individual investor.

5.2 The disposition effect and attention based trades

Prior work, surveyed extensively in Barber and Odean (2013), also finds that individual investors are more likely to sell winning investments while holding on to losing investments ("the disposition effect;" see Odean, 2008). The disposition effect is considered an investment mistake because it is tax inefficient. For tax purposes, investors should postpone taxable gains by continuing to hold their profitable investments but they should capture tax losses by selling their investments. Barber and Odean (2004) find that the disposition effect is reversed in December in taxable, but not tax-deferred, accounts. However, Ivkovich, Poterba, and Weisbenner (2005) document that investors are more likely to realize losses in taxable accounts than in tax-deferred accounts, not just in December, but throughout the year.

The literature also finds that individual investors are more likely to buy rather than sell stocks when those stocks are in the news, proxied by abnormal returns or trading volume in the prior period (Barber and Odean 2008). Such behavior is often attributed to news or attention based buying.

Our ability to actually test for the presence of these regularities for SEC employees is limited because we do not have data on portfolio holdings nor do we have data identified to an individual trader. Hence, we cannot confidently evaluate whether SEC employees held on to their losing investments or whether they bought when the stock was in the news. The best we can do is to provide some tentative and preliminary pointers suggestive of these patterns.

Table 6 reports univariate data on the following characteristics of transactions made by SEC employees: (i) December trades, which is an indicator variable, designed to capture tax motivated selling; (ii), transaction dollar volume to measure trade size; (iii) the previous quarter's abnormal return, measured by the Fama-French four factor model, designed to account for momentum based trades; (iv) previous quarter abnormal volume designed to capture

information based trading, measured by the market model and an equally weighted index, as in Karafiath (2009); and (v) an indicator variable to identify US common stocks.

One of limitations of our data is that we cannot benchmark sales or purchases to the stocks that have been retained in the portfolio as we do not have access to portfolio data. Hence, we benchmark the characteristics of the sale transactions to the purchase transactions. We begin with an investigation of sales in December to evaluate whether SEC employees conduct tax motivated selling in that month similar to other individual investors (e.g. Ritter, 1988; Grinblatt & Keloharju, 2004; Barber & Odean, 2004). As can be seen from comparing Panels A and B of Table 7, the number of sale transactions in December outnumbers the number of purchase transactions (7.8% of buys in panel A relative to 12.1% of sales in panel B). However, the average dollar volume of December sales is no different from that of December purchases ($9.14 million for sales relative to $9.139 million for purchases) and the median volume of December buys are actually higher than the median volume of sales ($4.4 million in panel A v/s $ 3.758 million in panel B). Hence, there does not appear to be much support for the hypothesis that SEC employees are net sellers in the month of December.

There is mixed evidence on whether SEC employees are influenced by the disposition effect or the preference for realizing gains over losses. Average past quarter abnormal returns for SEC employee buys (0.7% in panel A) are significant lower than that of sells (2.3% in panel B). However, the median returns preceding buys is no different from those of sales. Dhar & Zhu (2006) find that financially experienced traders are the least likely to fall prey to the disposition effect. Our data is inconclusive on the question of whether SEC employees are affected by the disposition effect. Another limitation is that we do not have data on the unrealized gains and losses on unsold stocks in their portfolios.

A couple of other observations are interesting. First, abnormal trading volume in the preceding quarter before a buy is statistically higher than such volume before a sale transaction (-178.7% v/s -582.4%, suggesting that observed volume over the prior quarter was about 2 days' worth and 6 days' worth less than expected for buys and sells, respectively). Prima facie, this suggests that, unlike an average individual investor, SEC employees are more likely to sell after the stock has experienced a significant news event. Second, the dollar volume of trades executed by other SEC employees in the previous quarter is higher before an employee's buy transaction, as opposed to a sell transaction ($31.6 million v/s $28 million), suggesting mild evidence of potential herding in purchase decisions.

Finally, we model the abnormal performance of SEC employee transactions as a function of these discussed trade characteristics. These results are reported in Table 7. The dependent variable in these regressions is the 252 day (1 year) abnormal return, measured from the trade date, of SEC employee trades, the same measure used in the primary analysis of SEC employee trading returns (Table 2). Standard errors in these regressions are clustered in two dimensions, by security and trade date (Petersen, 2009). Model 1 predicts the abnormal returns of SEC employee buys. Abnormal prior quarter return and volume are negatively related to future return in buys (t-statistic = -1.84 and -3.7 respectively). This suggests that SEC employee purchases that chase return momentum and liquidity (or perhaps, news) tend to underperform, similar to results seen for individual investors. The past quarter SEC transactions variable, which measures the number of SEC employee trades in the same stock over the past 90 days, is positive and significant in one specification (t-statistic = 1.83 in Model 3) and weakly significant in other specifications (t-statistic = 1.45 in Model 1 and 1.6 in Model 2), suggesting that SEC employees herd or cluster in their profitable purchases. As mentioned earlier, buys of stocks in companies

located closer to the SEC offices (operationalized as less than 50 miles) are associated with superior return performance (t-statistic =2.12 in Model 1). Similarly, returns to the buy side are negatively associated with the distance from the closest SEC office (t-statistic = -2.43 in Model 3). These results suggest that either familiarity or informational advantages in local stocks fetch stronger returns.

Model 4-6 use the same set of explanatory variables to predict the abnormal returns of the SEC employee sell transactions. The only major significant predictor is prior quarter abnormal volume, which loads negatively (t-statistic = -3.2 in Model 4). The negative coefficient suggests that SEC employees that sell in times of high liquidity, or around news (which correlates with liquidity), avoid future losses. More notably, sales of stocks located close to SEC offices are not associated with abnormal performance, perhaps suggesting that knowledge about impending enforcement activity is not necessarily local.

In sum, the results of Tables 5, 6, and 7 suggest that SEC employees do not conform to the profile of an average individual investor in many respects. Unlike an average individual investor, SEC employees (i) are remarkably good at avoiding losses in US common stocks; and (ii) do not invest unduly in local stocks; (iii) do not sell unduly in December; and (iv) are more likely to sell, not buy, a stock that has been in the news in the recent past. Perhaps somewhat similar to an average investor, their purchases after past abnormal volume of returns in the stock lose money. SEC employees' local sales are not associated with strong returns, unlike their local purchase transactions. This behavior is consistent with the hypothesis that they use local knowledge to identify investment opportunities but perhaps possess non-public information about impending enforcement against companies or other offices, regardless of their location.

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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 trading. Our findings indicate that SEC employees still trade profitably during this period, with trading profits (about 4 % per year for all securities) similar to those earned by corporate insiders (Jeng et al., 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).

An investigation of potential mechanisms suggests that not all the abnormal returns earned by SEC employees are attributable to skill or luck. Rather, SEC employees overwhelming divest in the run-up to six SEC enforcement actions during our sample period. Moreover, SEC employees appear to sell stock ahead of the public announcement of the sale of restricted stock by insiders. SEC employees have information based advantages over other market participants in both cases, and they appear to exploit such advantages to potentially seek rents.

These findings suggest that the new regulatory regime that went into place in the summer of 2009 (SEC, 2009) has been relatively ineffective at eliminating informed trading by SEC employees. Rather, our results indicate that SEC employees appear to engage in trading on value-relevant, non-public information they may have uncovered during the course of their professional duties.

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 & Matthews, 2013). In ongoing work, we plan on investigating whether the employees of other government offices engage in similar trading strategies.

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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

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	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)

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)	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)

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 6 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
Bank of America	Thursday, February 04, 2010
General Electric	Tuesday, July 27, 2010
Citi	Thursday, July 29, 2010
Johnson and Johnson	Friday, April 08, 2011
JP Morgan	Thursday, July 07, 2011
General Electric	Friday, December 23, 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)***

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 officials in the interim between insiders filing Form 144 filing and Thomson-Reuters announcing the filing of Form 144.

Panel A
Panel A reports the numbers and ratios of buys and sells of a firm's stock by SEC employees in the interim between firm insiders filing Form 144 filing and Thomson-Reuters announcing the filing of Form 144. *SEC Buys (SEC Sells)* refers to the number of transactions of SEC employees in the interim period. *Proportion of Sells* is the proportion of SEC employee sells to SEC employee total transactions. *Binom. Test of H_0: Sell Pro. = 50%* refers to the test statistic (and p value in parentheses) that tests whether the ratio of SEC employee sells to SEC employee total transactions is different from the expectation of 50%.

SEC Buys	SEC Sells	Proportion of Sells	Binom. Test of H0: Sell Pro. = 50%
655	603	47.93%	-1.47 (0.15)

Panel B
Panel B reports the quantity and ratios of the dollar volumes of buys and sells of a firm's stock by SEC employees in the interim between firm insiders filing Form 144 filing and Thomson-Reuters announcing the filing of Form 144. *SEC Buy Volume (SEC Sell Volume)* refers to the transaction volumes of SEC employees in the interim period. *SEC Sell Volume %* is the proportion of SEC employee dollar volume sold to SEC employee total dollar volume. *T Test of H_0: Sell Pro. = 50%* refers to the test statistic (and p value in parentheses) that tests whether the proportion of sell dollar volume to total transaction dollar volume of SEC employees is different from the expectation of 50%.

SEC Buy Volume ($)	SEC Sell Volume ($)	SEC Sell Volume %	T Test of H0: Sell Vol % = 50%
4,121,144.60	4,768,273.84	53.64%	**2.40 (< 0.01)**

Table 5

Table 5 reports the breakdown of domestic common stock trades by distance from firm headquarters to the closest SEC regional office for the entire sample of US common stocks for which headquarters location is available. *# Trades* refers to the number of total trades that involve a US common stock in the distance bucket of interest. *% Trades* refers to the percentage of total trades that involve a US common stock in the distance bucket of interest. *Dol. Vol. Trades* refers to the dollar volume of SEC employee (total market) stock market transactions that involve a US common stock in the distance bucket of interest. *% Dol. Vol.* refers to the percentage of total traded dollar volume that involve a US common stock in the distance bucket of interest for the entire market for SEC employees (total market). Differences between the proportion of dollar volumes transacted in each distance bucket between SEC employees and the total market are denoted by asterisks with *, **, and *** indicating differences significant at the p< 0.10, p<0.05, and p<0.01 levels, respectively.

Distance to Nearest SEC Office	SEC Employees' Trades				Total Market Trades	
	# Trades	% Trades	Dol. Vol. Trades	% Dol. Vol.	Dol. Vol. Trades	% Dol. Vol.
SEC Office ≤ 25 Miles	1,474	30.8%	14,224,959.70	34.76%***	726,720,850,719.00	54.97%
25 Miles < SEC Office ≤ 50 Miles	1,226	25.6%	12,035,383.30	29.41%***	228,431,780,358.00	17.28%
50 Miles < SEC Office ≤ 100 Miles	331	6.9%	2,171,832.30	5.31%***	42,564,471,757.00	3.22%
100 Miles < SEC Office ≤ 250 Miles	937	19.6%	6,295,486.19	15.38%***	181,855,434,873.00	13.75%
250 Miles < SEC Office	815	17.0%	6,200,457.78	15.15%***	142,534,687,755.00	10.78%
Totals	4,783		40,928,119.27		1,322,107,225,462.00	

Table 6

Table 6 reports summary statistics for the characteristics of SEC employee transactions.

Panel A

Panel A reports summary statistics for buy transactions by SEC employees. *December* is an indicator variable that equals 1 if the trade takes place in the month of December. *Transaction $ Value* is a continuous variable that takes the value of the share price multiplied by the number of shares traded. *Previous Qtr. Abn. Ret.* refers to the excess return identified by the Fama-French 4 factor model for the 90 days prior to the trade date. *Previous Qtr. Abn. Vol.* refers to the excess volume identified by the market model for the 90 days prior to the trade date. *Previous Qtr. SEC $ Vol.* refers to the dollar volume of trades in the same stock executed by SEC officials in the 90 days prior to the observation. *Previous Qtr. SEC Trades* refers to the number of trades in the same stock executed by SEC employees in the 90 days prior to the observation. *US Common Stock* is an indicator that equals 1 when the security transacted is the common stock of a domestic corporation. Means and medians that differ from sell transactions (Panel B) by statistically detectable amounts are denoted with asterisks (*** for $p < 0.01$, ** for $p < 0.05$, * for $p < 0.10$).

Variable	Mean	Median	N	5th Pctl	95th Pctl
December	0.078***	0***	3,695	0	1
Transaction $ Vol	9139.99	4404***	3,695	463.96	27491
Previous Qtr. Abn. Ret.	0.007***	0.010	3,695	-0.214	0.215
Previous Qtr. Abn. Vol.	-1.787***	-3.05***	3,695	-31.687	31.049
Previous Qtr. SEC $ Vol	31629.86*	5731.5***	3,695	0	134217.22
Previous Qtr. SEC Trades	3.307	1***	3,695	0	14
US Common Stock	0.622***	1***	3,695	0	1

Panel B

Panel B reports summary statistics for sell transactions by SEC employees. *December* is an indicator variable that equals 1 if the trade takes place in the month of December. *Transaction $ Value* is a continuous variable that takes the value of the share price multiplied by the number of shares traded. *Previous Qtr. Abn. Ret.* refers to the excess return identified by the Fama-French 4 factor model for the 90 days prior to the trade date. *Previous Qtr. Abn. Vol.* refers to the excess volume identified by the market model for the 90 days prior to the trade date. *Previous Qtr. SEC $ Vol.* refers to the dollar volume of trades in the same stock executed by SEC officials in the 90 days prior to the observation. *Previous Qtr. SEC Trades* refers to the number of trades in the same stock executed by SEC employees in the 90 days prior to the observation. *US Common Stock* is an indicator that equals 1 when the security transacted is the common stock of a domestic corporation.

Variable	Mean	Median	N	5th Pctl	95th Pctl
December	0.121	0	3,445	0	1
Transaction $ Vol	9140.42	3758	3,445	267	32091.3
Previous Qtr. Abn. Ret.	0.023	0.015	3,445	-0.189	0.271
Previous Qtr. Abn. Vol.	-5.824	-6.736	3,445	-35.881	26.264
Previous Qtr. SEC $ Vol	28065.35	2303.55	3,445	0	148407.23
Previous Qtr. SEC Trades	3.214	1	3,445	0	15
US Common Stock	0.724	1	3,445	0	1

Table 7

Table 7 reports the OLS regression results of models predicting the 1 year Fama-French 4 factor abnormal returns to the trades of SEC employees. *December* is an indicator variable that equals 1 if the trade takes place in the month of December. *Transaction $ Value* is a continuous variable that takes the value of the share price multiplied by the number of shares traded. *Previous Qtr. Abn. Ret.* refers to the excess return identified by the Fama-French 4 factor model for the 90 days prior to the trade date. *Previous Qtr. Abn. Vol.* refers to the excess volume identified by the market model for the 90 days prior to the trade date. *Previous Qtr. SEC Trades* refers to the number of trades in the same stock executed by SEC employees in the 90 days prior to the observation. *Close SEC Office* is an indicator variable that equals 1 when the firm is headquartered within 50 miles of an SEC office. *Distance to SEC office* is the raw number of miles from the firm's HQ to an SEC office. *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: Buys Abn. Return (0, 252)			DV: Sells Abn. Return (0, 252)		
Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
December	0.0117	0.0121	0.0033	0.0937*	0.1040*	0.0924*
	[0.2891]	[0.2986]	[0.0803]	[1.6913]	[1.6657]	[1.7575]
Transaction $ Value	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
	[0.6855]	[0.9584]	[1.0102]	[-1.3135]	[-1.4060]	[-1.3353]
Previous Qtr. Abn. Ret.	-0.3290*	-0.3486*	-0.3455*	0.9554	0.9078	0.9512
	[-1.8455]	[-1.9473]	[-1.9190]	[1.2667]	[1.2645]	[1.2674]
Previous Qtr. Abn. Vol.	-0.0077***	-0.0076***	-0.0076***	-0.0053***	-0.0050***	-0.0050***
	[-3.7097]	[-3.6325]	[-3.6477]	[-3.2181]	[-3.2420]	[-3.1387]
Previous Qtr. SEC Trades	0.0001	0.0001	0.0001*	0.0001	0.0001	0.0001
	[1.4536]	[1.6085]	[1.8378]	[-0.4774]	[-0.4986]	[-0.4749]
Close SEC Office (< 50 miles)	0.0882**			0.1116		
	[2.1291]			[0.9959]		
Distance to SEC office		-0.0003			-0.0007	
		[-1.5251]			[-1.0350]	
Ln(Distance to SEC office)			-0.0252**			-0.0408
			[-2.4375]			[-1.1092]
Constant	-0.0718**	0.0094	0.0714*	-0.142	0.0066	0.0717
	[-2.0494]	[0.3350]	[1.8318]	[-1.2842]	[0.1133]	[0.6866]
Observations	2,293	2,293	2,278	2,478	2,478	2,422
R-squared	11.77%	11.71%	11.84%	5.52%	7.26%	5.84%