



Judge Ideology and Opportunistic Insider Trading

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Abstract

Although federal judges are the ultimate arbiters of insider trading enforcement, the role of their political ideology in insider trading is unclear. Using the partisanship of judges' nominating presidents to measure judge ideology, we first document that liberal judges are associated with heavier penalties in insider trading lawsuits than conservative judges. Next, we find that firms located in circuits with more liberal judges have fewer opportunistic insider sales. Cross-sectional analyses show that this deterrent effect is stronger when managers face a higher risk of insider trading lawsuits. Finally, we find that the Securities and Exchange Commission considers judges' ideology when selecting litigation forums.

1. Introduction

Insider trading based on material non-public information is a breach of fiduciary duty or other relationships of trust and undermines investors' confidence in the fairness and integrity of securities markets. Unsurprisingly, regulators and lawmakers pay substantial attention to insider trading, particularly allegations of illegal insider trading (Cohen, Malloy, and Pomorski (2012)). Federal judges are the ultimate arbiters of insider trading enforcement (Fisch (2018)), and their political ideology is a major determinant of rulings in securities lawsuits (Cross (2007), Fedderke and Ventoruzzo (2015)). On the conventional liberal-to-conservative

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continuum, liberals prefer stronger regulations on the free market, which usually manifest as stricter enforcement of securities laws, than conservatives (McCraw (2009)). However, given the uniqueness of insider trading, it is unclear whether the ideology of federal judges affects their rulings in insider trading lawsuits, and if so, whether insiders consider judge ideology when making trading decisions. Our paper answers these questions and offers valuable insights into insider trading regulation and enforcement.

Insider trading deterrence relies on federal legislation, Securities and Exchange Commission (SEC) regulations, and court rulings. The definition of illegal insider trading is ambiguous, leaving considerable room for regulators and corporate insiders to disagree on the legality of the latter group's actions (Prakash (1999)). Because such disagreements are settled in federal courts, federal judges can have a profound impact on insider trading enforcement outcomes.

Legal studies show that judges tend to advance their ideological preferences through court rulings (Staudt, Epstein, and Wiedenbeck (2006)). In economic cases, liberals usually consider investors to be susceptible to damages from securities fraud or a breach of fiduciary duties because they have less information than companies and financial institutions; in contrast, conservatives are more inclined to view the market as efficient and believe that investors do not need protection (McCraw (2009), Lind, Rankin, and Harris (2016)). For example, prior research finds that liberal judges are associated with higher risks of securities class action lawsuits for corporations (Huang, Hui, and Li (2019)). Following this intuition, as insiders use private information to benefit their trades and take advantage of uninformed traders, liberal judges should favor stricter enforcement of insider trading. However, unlike securities class action lawsuits, in which the defendants are companies owned by investors, the defendants in insider trading cases are well-informed and wealthy individuals accused of undermining the fairness and integrity of securities markets for personal gains, and thus even conservatives do not openly support insider trading.¹ Hence, it is worth investigating whether judges' ideology is associated with insider trading case outcomes.

Furthermore, even if liberal judge ideology is associated with more adverse outcomes for defendants in insider trading cases, insiders may ignore this factor in making trading decisions for several reasons. First, instead of directly filing insider trading cases in the federal courts, the SEC can pursue insiders through its internal administrative processes, in which the judicial branch plays a less direct role (see [Section III.E](#) for a detailed discussion). The SEC's option to choose administrative processes may therefore diminish the influence of federal court judge ideology on insiders' decisions. Second, because most opportunistic insider trading is not detected or prosecuted, the profits from opportunistic insider trading can far exceed the additional expected costs associated with liberal judges, thus reducing the importance of judge ideology in insiders' decision-making processes. Third, prior studies show that individuals' opportunistic behaviors are driven by personal ethics and integrity, which suggests that a cost-benefit trade-off analysis may have a

¹For example, in Dec. 2019, the U.S. House of Representatives passed the Insider Trading Prohibition Act, which prohibits certain securities trading by those who possess material and non-public information, with an overwhelming majority. See [Section II.C](#) for a detailed discussion.

limited effect on insider trading decisions (Soltes (2016), Akbas, Jiang, and Koch (2020)). Insiders may also underestimate the effect of judge ideology on enforcement outcomes due to bounded rationality and limited attention (e.g., Hirshleifer and Teoh (2003)). In brief, whether judge ideology affects insider trading decisions is an empirical question.

Of the three hierarchical levels in the federal court system that oversee insider trading lawsuits, we focus on circuit courts because lower-level trial courts heed their opinions and they are usually the final adjudicators of federal cases (see Section III.A.1 for a detailed discussion). We use exogenous and asynchronous variations in judge ideology across circuits in the U.S. due to judge departures (predominantly deaths or retirements) and appointments as the identification strategy of our empirical analyses. The ideology of a circuit court is measured using the probability that a 3-judge panel randomly selected from the court's judges is dominated by appointees of Democratic presidents. A higher probability indicates a more liberal judge ideology.

First, we test whether the ideology of circuit court judges affects the outcomes of insider trading enforcements. Using insider trading enforcement cases filed in district courts collected from the SEC website, we find that compared with conservative ideology, liberal circuit judge ideology is associated with more severe penalties for defendants. Specifically, a 1-standard-deviation increase in liberal judge ideology is associated with a 33% increase in the dollar amount of civil penalties, or a 48% increase in the penalty amount relative to illegal profits compared with the unconditional mean. This result provides direct evidence that liberal judge ideology is associated with higher costs for defendants in insider trading cases.

Next, we examine the effect of judge ideology on insiders' trading decisions. Our sample includes U.S. public firms covered by Thomson Reuters Insider Filing data from 1998 to 2018. We follow Cohen et al. (2012) in measuring the intensity of illegal insider trading using the magnitude of opportunistic insider trades (i.e., those that deviate from an insider's trading history). We use each firm's historical headquarters to identify the circuit court for which the judge's ideology influences the trading behavior of a firm's executives, because the majority of executives live near their company headquarters (Liu and Yermack (2012)) and the jurisdiction of an insider trading case is usually based on the insider's primary residence (15 U.S. Code § 78u-1 and 15 U.S. Code § 78aa). We find strong evidence that the executives of firms headquartered in more liberal circuits have fewer opportunistic insider sales, consistent with a deterrent effect of liberal judges. This result is economically significant: A 1-standard-deviation increase in liberal judge ideology is associated with a 18.6% reduction in opportunistic insider sales relative to the unconditional mean. In contrast, we find no effect on insiders' opportunistic purchases. The asymmetry in judge ideology's effect on sales and purchases is consistent with the higher investor and regulatory scrutiny of insider sales than purchases and Section 16(b) of the Securities Exchange Act of 1934 barring insiders from profiting from "short-swing" trades.

We then conduct cross-sectional tests to ascertain the mechanism of the observed effect. If judge ideology influences insiders' trading decisions via the expected costs of insider trading lawsuits, we expect to observe a stronger effect

when insider trading is more likely to result in lawsuits. We consider three settings with a high likelihood of insider trading lawsuits: Firms in financial distress, firms that commit accounting misconduct, and firms with strong corporate governance. In the first two scenarios, financial distress and accounting misconduct draw the scrutiny of investors and regulators and increase their suspicion that insider trades are based on material non-public information (e.g., Cox, Thomas, and Kiku (2003), Thevenot (2012)). In the third scenario, firms with strong corporate governance are more likely than other firms to have internal mechanisms, such as whistleblower protection, that facilitate regulators to collect evidence of illegal insider trading (Dyck, Morse, and Zingales (2010)). We find results consistent with our expectations.

Finally, we examine whether judge ideology affects the decisions of the SEC, which is the main regulatory agency enforcing insider trading laws. Specifically, we test whether the SEC considers judge ideology when it selects a forum to prosecute illegal insider trading. In an illegal insider trading case, the SEC Commissioner can either institute an internal administrative proceeding or bring the case to a federal court. As liberal federal judges are associated with a heavier penalty levied on the defendants in insider trading lawsuits and thus increase the efficacy of the SEC's enforcement, we predict—and find—that the SEC is more likely to file a case in a federal court when the overseeing circuit court judges are more liberal. This finding suggests that the SEC indeed considers judge ideology when enforcing insider trading.

Our paper contributes to several streams of literature. First, we contribute to the insider trading literature by documenting the importance of judge ideology in insiders' trading decisions. Although anecdotal observations suggest that political ideology in the legislative and executive branches influences legislation that deters insider trading, there is no empirical analysis on the role of political ideology in the judiciary. By exploiting the exogenous and asynchronous variations in judge ideology across circuit courts as the identification strategy, our study provides the first evidence that ideology in the judiciary influences corporate insiders' trading decisions. In addition, insider trading has significant effects on stock liquidity and cost of equity (Cornell and Sirri (1992), Bhattacharya and Daouk (2002), Christensen, Hail, and Leuz (2016), and Kacperczyk and Pagnotta (2019)). Therefore, our article adds new evidence of the effect of political ideology on financial markets and their participants.

Second, we contribute to the empirical legal studies on the relation between judge attributes and outcomes in the enforcement of securities laws. Although Fedderke and Ventoruzzo (2015) find that the political ideology of Supreme Court justices can affect their votes in securities regulation cases, there are only 3 insider trading cases in their sample. Using a comprehensive sample of insider trading cases in federal courts, we provide direct evidence that liberal judges are associated with higher monetary penalties to insiders, extending our understanding of judicial decision-making in securities laws.

Third, this paper provides new insights into the roles of government branches in insider trading enforcement. Because there is no clear statutory guidance, the development of insider trading enforcement involves all 3 government branches (i.e., judicial decisions, administrative regulations, and legislation) (Henning (2015)). Existing research on insider trading, however, focuses on each branch in

isolation (Bhattacharya and Daouk (2002), Correia (2014), deHaan, Kedia, Koh, and Rajgopal (2015), and Patel (2019)). By documenting that the SEC considers judge ideology when selecting a forum for its cases, our paper is among the first to show the interaction between the SEC and the federal courts—two important federal-level securities law enforcement entities. As such, our evidence not only demonstrates the importance of judges’ political ideology throughout the enforcement process but also reveals the full picture of government entities in terms of the enforcement of illegal insider trading.

II. Institutional Background and Literature Review

A. Enforcement of Illegal Insider Trading

Insider trading laws and enforcement activities are intended to deter insiders from trading based on material non-public information because such trades undermine investors’ confidence in the fairness and integrity of securities markets.² Enforcement of insider trading regulations involves all three branches of the U.S. government (legislative, executive, and judicial). The legislative branch passes the laws that govern securities markets. Currently, no single statute prohibits all insider trading in the U.S. (Henning (2015)).³ Most insider trading cases are based on violations of broad anti-fraud provisions in securities laws, including fraud in the sale of securities (Section 15 of the Securities Act of 1933) and fraud related to securities trading (Section 10(b) of the Securities Exchange Act of 1934).

Regulatory outcomes depend not only on legislation but also on how the executive branch enforces the legislation. The SEC, as an independent federal governmental agency, uses rules (primarily Rule 10b-5) and enforcement actions to prosecute illegal insider trading. Once the SEC collects sufficient evidence of wrongdoing, its commissioners file a case in a federal court or bring an administrative action against the insiders (see Section III.E for a detailed discussion of the SEC’s available forums for prosecuting insider trading cases). Although the SEC is the primary enforcer of insider trading violations, all of its enforcement actions and decisions are subject to review by the judicial branch. Through their rulings, the federal courts play a major role in defining illegal insider trading. For example, insider trading was first classified in 1968 as a violation of securities law (the Securities and Exchange Act of 1934) when the Second Circuit ruled in *SEC v. Texas Gulf Sulphur Co.*, which became the legal basis of almost all subsequent insider trading prosecutions (Fairfax (2018)).

²Prior studies (e.g., Demsetz (1986), Seyhun (1992), and Roulstone (2003)) argue that insider trading can be seen as a way to compensate the controlling shareholders and managers for firm-specific risks and specialized human capital. In this article, we only examine how judges’ political leanings affect insiders’ opportunistic trades and remain neutral about whether such insider trading should be illegal.

³The Insider Trading Sanction Act of 1984 and the Insider Trading and Securities Fraud Enforcement Act of 1988 have substantially increased the penalties for illegal insider trading; however, neither act clearly defines which trades are illegal. Section 16(b) of the Securities Exchange Act of 1934 prohibits directors, officers, and blockholders with 10% or greater ownership from making short-swing profits (i.e., profits from any purchase or sale within any 6-month period).

Despite the federal courts' important role in enforcement against illegal insider trading, the literature only examines how rulings in previous cases (i.e., legal precedents) influence insiders' trading decisions. For example, Jaffe (1974) and Allen (1990) find that district and circuit court rulings in the Texas Gulf Sulphur case reduce the number and profitability of insiders' trades on negative non-public information. Similarly, using the stock price run-ups of merger targets to capture the extent of insider trading, Patel (2019) finds that insider trading has intensified after the Second Circuit's 2014 ruling in *U.S. v. Newman*, which significantly weakened the threat of insider trading enforcement.

B. Ambiguity in Determining Illegal Insider Trading

Despite dozens of enforcement actions and court rulings in insider trading cases, the illegality of many insider trades remains ambiguous. One type of ambiguity involves whether non-public information held by insiders is material (Horwich (2000), Heminway ((2003), (2012)), and Langevoort (2010)). Courts have defined information as material if either i) "there is substantial likelihood that a reasonable shareholder would consider it important" in trading decisions, or ii) there is substantial likelihood that the information "would have been viewed by the reasonable investor as having significantly altered the 'total mix' of information made available" (see *TSC Industries, Inc. v. Northway, Inc.*, 426 U.S. 438 (1976) and *Basic Inc. v. Levinson* – 485 U.S. 224, 108 S. Ct. 978 (1988)). Given the diversity in investors, it is difficult to stipulate how a reasonable investor might view a piece of information (Heminway (2003)). Even SEC commissioners admit that regulators struggle with the meaning of materiality (Atkins (2008), Peirce (2022)). Indeed, as Langevoort ((2012), p. 9) observes, "Materiality is one of the hardest fact determinations in the securities laws." Another type of ambiguity stems from whether insiders *use* material non-public information in their trading decisions or simply *possess* the information while trading. Courts have ruled that although a defendant's possession of information strongly suggests the use of this information in trading, the defendant can rebut this inference by showing that the information is not used in trading (Langevoort (2012), *SEC v. Adler*, 137 F.3d 1325, 11th Cir. 1998). Such ambiguities give judges leeway to exercise personal discretion. As Henderson, Jagolinzer, and Muller (2014) comment, "The result of executive agency ambiguity layered on top of congressional ambiguity is judicial power to decide what is and what is not illegal." As such, judges' personal preferences can influence the expected costs and, in turn, insiders' trading decisions.

C. Judge Ideology and Opportunistic Insider Trading

Legal research defines ideology in U.S. politics along the conventional liberal-to-conservative continuum. Liberals generally believe that government should take actions to achieve equality for all and to protect civil liberties and individual rights. In economic cases, liberals are more protective of "have-nots" than of "haves," and tend to emphasize market failures and assert investors' inability to fend for themselves (Hutton, Jiang, and Kumar (2015), Lind et al. (2016)). Thus, liberals support increasing regulation of the free market (e.g., government intervention in the capital market) to protect "innocent" investors who might suffer damages as a result of

securities fraud or a breach of fiduciary duties. In contrast, conservatives generally believe in limited government and emphasize that individuals have the power to solve their own problems. They tend to view the market as efficient and advocate for less regulation (McCraw (2009)). Some also believe that allowing insiders to trade can improve price efficiency and enhance social welfare (Manne (1967), Leland (1992), Bernhardt, Hollifield, and Hughson (1995), and Kacperczyk and Pagnotta (2024)). Given such beliefs, conservatives are less likely than liberals to accept that investors i) hold less information than companies and financial institutions and ii) require the protection afforded by securities laws.

These ideological differences can manifest in the two groups' respective attitudes toward insider trading (Pritchard (2013), Murdock (2014)). As insiders benefit from private information and take advantage of uninformed traders, liberals should prefer stricter enforcement against insider trading than conservatives.⁴ However, defendants in insider trading lawsuits are usually well-informed and wealthy individuals who are accused of undermining the fairness and integrity of securities markets for personal gains. As a result, even conservatives do not openly advocate for more lenient enforcement. Anecdotal observations also suggest that ideological differences in attitudes toward insider trading are nuanced. The U.S. House's votes in the 2019 Insider Trading Prohibition Act (ITPA), which "codifies many current principles of insider trading jurisprudence while also expanding potential insider trading liability" (Quigley (2021)), provide one such example. The ITPA defines "trading securities while *aware of* material, nonpublic information" as illegal insider trading. During the debate on the ITPA, a Republican congressman proposed an amendment to narrow the definition of illegal insider trading by replacing the term "aware of" with "using." The amendment received support from 195 Republicans but was not adopted because it was opposed by 231 Democrats (<https://clerk.house.gov/Votes/2019648>). Nonetheless, the ITPA was still passed in the U.S. House with a final vote of 410–13, consistent with the notion that even conservatives do not openly support insider trading. If federal judges do have preferences in insider trading cases, we expect that these preferences are associated with case outcomes; that is, we expect that defendants in cases presided by liberal judges have more adverse outcomes than those in cases presided by conservative judges.

The expected adverse outcome associated with liberal judges should influence insiders' trading decisions. As argued in the seminal work by Becker (1968), the decision to commit a crime is based on an assessment of the expected benefits and costs of the commission. When faced with more liberal judges, insiders who wish to trade based on non-public material information should perceive high expected costs due to the potentially adverse outcomes of legal trials. Furthermore, because courts are the final arbiters of insider trading enforcement, liberal judges can increase these expected costs even if they do not handle cases personally. For example, during a settlement negotiation, the accused insider and the SEC each estimate their chances of a favorable court outcome and factor these chances into their willingness to settle

⁴Consistent with the importance of political ideology in insider trading enforcement, Cline and Posylnaya (2019) find that an SEC committee with a Democratic majority has a higher likelihood of detecting illegal insider trading than a committee with a Republican majority.

out of court. Judges' preferences are likely to play a role in these estimations (Waldfoegel (1995)). In addition, for insider trading cases resolved by settlement, all sanctions must be approved by the federal judge overseeing the case. Judges have routinely made remarks that they will not "rubber stamp" settlement agreements between the SEC and defendants (Raymond and Stempel (2013), Neumann (2015), and Velikonja (2016)) and have imposed post-judgment sanctions after settlements.⁵ Therefore, we conjecture that insiders are less likely to engage in illegal insider trading when facing judges with a more liberal ideology.

Furthermore, judge ideology may have different effects on insider sales than insider purchases. First, although both purchases and sales based on private information violate securities laws from a legal perspective, the public perception of insider sales ahead of private bad news is more negative than that of insider purchases before the release of good news, leading to higher scrutiny of insider sales from investors and regulators (Alldredge and Cicero (2015), Dai, Fu, Kang, and Lee (2016)). Hence, the litigation risk associated with insider sales is greater than that of insider purchases.⁶ Second, Section 16(b) of the Securities Exchange Act of 1934 bars insiders from profiting from "short-swing" trades, defined as a purchase followed by a sale within 6 months or vice versa (White 2020). This law makes it difficult for executives to profit from purchasing stocks before the release of private good news because they will have to hold the stock for more than 6 months before they sell. Meanwhile, as managers usually own stocks of their firms (e.g., from equity compensation), taking advantage of negative news only requires them to sell their existing stocks, which does not expose them to the short-swing rule (Akbas et al. (2020)). Consistent with this argument, Agrawal and Jaffe (1995) find that Section 16(b) deters managers of target firms in M&A transactions from purchasing stocks prior to merger announcements but has no effect on managers' pattern in selling stocks. Given these arguments, we expect that insider sales are more sensitive than insider purchases to the variation in expected litigation costs associated with judge ideology.

III. Empirical Analyses and Results

A. Definitions of Main Variables

1. Judge Ideology

The U.S. federal court system has three hierarchical levels: District courts, circuit courts, and the Supreme Court. We focus on circuit courts for two reasons. First, although all federal cases start at the district courts, their judges tend to follow

⁵For instance, the judge in the insider trading case *SEC v. Michael Van Gilder and Stephen Diltz* (No. 12-cv-02839) rejected proposed settlements because they included numerous "provisions and recitations that [he would] not endorse." In the cases of *SEC v. Gary S. Williky* (No. 15-civ-357) and *SEC v. Brent C. Bankosky* (No. 12-Civ-1012), following settlement, the judges imposed additional civil penalties and an officer-and-director bar against the defendants, respectively.

⁶In a sample of 151 enforcement actions filed in federal courts against the illegal insider trading of common stocks by corporate executives from 1995 to 2018 from the SEC website, we find that 29% targeted insider purchases; the remainder either targeted insider sales only (61%) or both insider sales and purchases (10%).

the ideologies of the corresponding circuit courts (Randazzo (2008)). This deference occurs because, according to the legal doctrine of *stare decisis*, circuit court rulings impose binding constraints on the district courts under their jurisdiction (Franke, Huang, Li, and Wang (2024)). Moreover, district court decisions are subject to mandatory and routine reviews by circuit courts. During a review, a circuit court may reverse a district court judge's decision and return the case to the district court. These reversals increase district court judges' workloads and damage their reputations. Accordingly, district court judges consider the positions of the overseeing circuit courts when making their decisions (Schanzenbach and Tiller (2007), Knight and Gulati (2018)).

Second, although the Supreme Court is the highest U.S. federal court and has the last word in federal lawsuits, it is selective in reviewing appeals due to its heavy caseload. Less than 1% of all appeals—and very few insider trading cases—are heard by the Supreme Court (Bowie and Songer (2009)). As observed by Cross ((2007), p. 2), “the circuit courts play by far the greatest legal policy-making role in the United States judicial system.” Therefore, we expect the ideology of circuit court judges to have the greatest impact on the outcomes of federal court cases and to be most relevant to the trading behavior of corporate insiders.

To measure the ideology of circuit court judges, we follow Huang et al. (2019) in using the probability that a 3-judge panel randomly selected from a court includes at least 2 judges who were appointed by Democratic presidents (LIBERAL_COURT).⁷ U.S. presidents have almost always appointed judges with an ideology similar to their own (Goldman (1999), Pinello (1999)). We obtain data on the composition of circuit court judges and the party of the appointing president from the Federal Judicial Center. We use the average monthly LIBERAL_COURT during a calendar year to measure the ideology of judges that the insiders face in that year.⁸

In firm-calendar year analysis, for each observation, we use the circuit where the firm's historical headquarters are located during that calendar year (hereafter, home circuit) for 2 reasons. First, in insider trading cases, the district in which the defendant resides has jurisdiction over the case (15 U.S. Code § 78u–1 and 15 U.S. Code § 78aa). Second, we assume that a company's executives reside in the same circuit as its headquarters. We base this assumption on the observation by Liu and Yermack (2012) that among S&P 500 firms, the median distance between a CEO's home and the company headquarters is 13.6 miles.⁹ We do not include

⁷As federal judge appointments must be confirmed by the U.S. Senate, the president may consider the partisan distribution in the Senate when nominating judges. As a sensitivity test, we follow Huang et al. (2019) and define an alternative judge ideology measure that uses both the President's party affiliation and the Senate's partisan makeup during appointment (Table IA13) and obtain similar results (tabulated in columns 1 and 2 in Table IA1 in the Supplementary Material).

⁸In robustness tests, we obtain consistent results when we use judge ideology at the beginning of the calendar year or during the next 1 or 2 calendar years to account for insiders' expectation of judge ideology during insider trading lawsuits (tabulated in columns 3–8 in Table IA1 in the Supplementary Material).

⁹We obtain a sample of 15 insider trading civil cases filed in federal courts involving trades of employees during 2017 and 2018 from the SEC website, and find that 13 (86.7%) of them were filed in the circuits corresponding to the firms' headquarters. Of the remaining 2 cases, one involved an employee not working at the firm's headquarters and the other involved a previous employee who had moved after leaving the company. We further note that if executives do not live in the home circuit,

non-executive directors in our analyses because they—especially independent directors—are more likely to live out of state, and thus we cannot determine their court jurisdiction.

2. Opportunistic Insider Trades

Insiders trade for various reasons, such as to fund personal expenditures, diversify their portfolios, or profit from material non-public information. We focus on trades that use material non-public information because they are the most likely to violate securities laws and thus be affected by judge ideology. To identify these trades, we look for deviations in the insiders' trading histories (hereafter, opportunistic trades), following research by Cohen et al. (2012) and others.¹⁰ Specifically, we classify a trade as opportunistic if the insider has not placed a trade in the same direction in the same month during each of the 3 preceding calendar years. We exclude insider-year observations in which the insider has not placed at least one trade in each of the 3 preceding calendar years. We define the nature of insider trading at the *trade* level to allow an insider to make both opportunistic and non-opportunistic (hereafter, routine) trades in a year (e.g., Billings and Cedergren (2015), Lin, Sapp, Ulmer, and Parsa (2020)).¹¹

We then aggregate the opportunistic trades in each firm-calendar year by both the number and dollar value of shares traded, with the aggregation performed separately for purchases and sales. Consistent with earlier studies (e.g., Billings and Cedergren (2015)), we scale the number and dollar value of shares traded by the number of shares outstanding and the market value of equity at the beginning of the calendar year, respectively.¹² From this procedure, we obtain four measures (#OPP_BUY, \$OPP_BUY, #OPP_SALE, and \$OPP_SALE) that capture the magnitude of opportunistic insider purchases or sales.

B. Judge Ideology and Insider Trading Penalty

Although political science and legal research provide the theoretical foundation for the influence of judges' political ideology on their decision-making, there is

this assumption introduces noise to our empirical measure and should bias our findings toward non-significant results.

¹⁰We do not use prosecuted insider trading cases for two reasons. First and most importantly, judge ideology is likely to affect both insider trading commission and detection; as a result, using prosecuted cases makes it difficult to disentangle the effect of judge ideology on the commission of insider trading. Second, the literature shows that the prevalence of illegal insider trading is significantly greater than the number of prosecuted cases (Patel and Putniņš (2023)). Thus, focusing only on prosecuted cases would severely underestimate the effect of judge ideology.

¹¹In a sensitivity test, we use a 2-step procedure to identify opportunistic trades. First, we classify an insider who trades in a given month but did not place a trade, regardless of direction, in the same month during any of the 3 preceding years as an opportunistic trader in that calendar year. Next, we label all trades placed by opportunistic traders during the year as opportunistic trades. Using this alternative definition of opportunistic trades, we obtain similar results to those in our main analyses (tabulated in columns 1 and 2 in Table IA2 in the Supplementary Material).

¹²Our results are robust if we scale the number of opportunistic trades by the total number of trades (i.e., the sum of opportunistic and routine trades) and the dollar value of opportunistic trades by the total dollar value of trades (i.e., the sum of opportunistic and routine trades) (tabulated in columns 3 and 4 in Table IA2 in the Supplementary Material).

no conclusive empirical evidence on whether this influence applies to insider trading cases. Therefore, as a first step, we examine whether liberal judges are associated with more adverse outcomes for defendants in insider trading cases than are conservative judges. As the majority of these cases are settled, with the courts determining the civil monetary penalties against the defendants in light of the facts and circumstances (15 U.S. Code § 78u-1), we use the monetary penalties levied against defendants to measure case outcomes (Gormley, Kaviani, and Maleki (2022)).

Following Kacperczyk and Pagnotta (2024), we retrieve all litigation releases from the SEC website and search for keywords related to insider trading in their text. We identify 527 unique insider trading cases filed in federal courts from 1998 to 2018 (from 846 enforcement releases). We collect information about the cases from the litigation releases, the Thomson Reuters Westlaw database, FJC website, and online databases such as CourtListener and Law360. After removing cases without the necessary information, our final sample comprises 379 insider trading cases. Table 1 provides the sample distribution of the cases by their year of district court filing dates and the circuit with jurisdiction. Panel A indicates a general decreasing trend in the number of insider trading cases from 1998 to 2018. As shown in Panel B, the Second and Eleventh circuits have more cases than other circuits.

To investigate whether judge ideology plays a role in the case outcomes for insiders, we estimate the following OLS regression:

$$(1) \ln(\text{PENALTY})_j = \beta_0 + \beta_1 \text{LIBERAL_COURT}_j + \beta_2 \ln(\text{ILLEGAL_PROFIT})_j \\ + \text{Controls} + \text{FEs} + \varepsilon_{i,t},$$

where PENALTY_j represents the total dollar amounts of civil penalties for case j . LIBERAL_COURT_j is the judge ideology of the circuit court that oversees the district court in which case j was filed. We expect liberal judges to result in more severe penalties against defendants (i.e., a positive coefficient on LIBERAL_COURT_j).

Given that penalties in insider trading cases are usually calculated based on the illegal profits that the insiders obtained (15 U.S. Code § 78u-1), we control for the amount of illegal profits (ILLEGAL_PROFIT_j , the total dollar amounts of profit disgorgement paid by defendants for case j). We also control for case characteristics that may affect the penalty amount, including the amount of prejudgment interest (PREJUDGE_INTEREST), the number of defendants (N_DEFENDANTS), whether the defendants included corporate executives (EXECUTIVE_CASE), whether the case went to trial (TRIAL), and whether there was any concurrent criminal investigation by the Department of Justice (CRIMINAL_CHARGE). We also include the state-level economic growth (GDP_GROWTH), the state-level unemployment rate (UNEMPLOYMENT), and the political leanings of the state of the district court where the case was filed (BLUE_STATE) as well as circuit and year fixed effects to control for the economic environment and other regional or temporal differences that could affect the severity of penalties. Standard errors are clustered by the state of the district court where the SEC filed the case.

TABLE 1
Sample Distribution of Insider Trading Cases

Table 1 presents the sample distribution of insider trading cases filed by the SEC in federal courts from 1998 to 2018. Starting from 527 unique insider trading cases filed in federal courts, we remove cases without outcome information (5 cases), cases that were dismissed (3 cases), cases in which the judgments were against the SEC (9 cases), and cases without civil penalty imposed on insiders because the insiders were financially incapable of paying the penalty or the civil penalty has been satisfied by the monetary fine in a related criminal case (131 cases). Panel A presents the distribution by year. Panel B presents the distribution by the circuit with jurisdiction of the case.

Panel A. Sample Distribution by Filing Year

Year	No. of Cases	% of All Cases
1998	26	6.86
1999	27	7.12
2000	18	4.75
2001	24	6.33
2002	21	5.54
2003	21	5.54
2004	16	4.22
2005	24	6.33
2006	19	5.01
2007	21	5.54
2008	15	3.96
2009	17	4.49
2010	12	3.17
2011	16	4.22
2012	32	8.44
2013	14	3.69
2014	18	4.75
2015	9	2.37
2016	8	2.11
2017	14	3.69
2018	7	1.85
Total	379	100

Panel B. Sample Distribution by the Circuit with Jurisdiction

Circuit	No. of Firm-Years	% of All Firm-Years
1 st	21	5.54
2 nd	97	25.59
3 rd	33	8.71
4 th	13	3.43
5 th	25	6.60
6 th	12	3.17
7 th	19	5.01
8 th	5	1.32
9 th	79	20.84
10 th	9	2.37
11 th	34	8.97
D.C.	32	8.44
Total	379	100

Panel A of Table 2 provides the descriptive statistics for the variables used in the analysis. The mean (median) penalty for illegal insider trading is U.S.\$527,915 (U.S.\$81,088). 36% of the cases involve corporate executives. Panel B presents the regression results. In column 1, we find that after controlling for illegal profits and other determinants, liberal circuit judge ideology is associated with increases in the penalties imposed for illegal insider trading, as the coefficient on LIBERAL_COURT is positive and significant at the 1% level. We also estimate a specification in which the dependent variable is the amount of penalty scaled by illegal profits (PENALTY/ILLEGAL_PROFIT_{*i*}) and draw the same inference (results tabulated in column 2). In terms of economic magnitude, a 1-standard-deviation increase in LIBERAL_COURT is associated with a 33% increase in the dollar amount of civil penalties (column 1), or a 48% increase in the penalty amount relative to illegal profits compared with the unconditional mean (column 2).

TABLE 2
 Judge Ideology and Civil Penalty for Insider Trading

Table 2 reports the results from estimating equation (1), which examines whether judge ideology affects the sensitivity of civil penalties to profit disgorgement for insider trading violations. Panel A presents the descriptive statistics for the variables used in the test. Panel B reports the regression results. Variable definitions are in the Appendix. For cases involving penalties levied in different years, usually against more than 1 defendant, we take the average of LIBERAL_COURT over the years of judgments. We are unable to label the ideology of the district court judge for 20 cases either because the judge's name is not available from various resources (9 cases) or the judge is a magistrate judge who was appointed by a majority vote of district judges of the court rather than the U.S. president (11 cases). All regressions include circuit and year-fixed effects. The *t*-statistics (in parentheses) are calculated using standard errors clustered by state. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A. Descriptive Statistics

	No. of Obs.	Mean	Std. Dev.	Percentile				
				10th	25th	50th	75th	90th
PENALTY (raw)	379	527,915	1,698,522	14,284	31,513	81,088	254,321	1,023,276
PENALTY (in log)	379	11.512	1.648	9.567	10.358	11.303	12.446	13.839
ILLEGAL_PROFIT (raw)	379	533,388	1,789,350	12,269	30,809	85,286	281,759	1,012,713
ILLEGAL_PROFIT (in log)	379	11.513	1.684	9.415	10.336	11.354	12.549	13.828
PENALTY/ILLEGAL_PROFIT	379	1.258	1.271	0.500	1.000	1.000	1.025	2.000
LIBERAL_COURT	379	0.440	0.175	0.191	0.279	0.445	0.594	0.684
LIBERAL_DISTRICT_JUDGE	359	0.591	0.492	0.000	0.000	1.000	1.000	1.000
PREJUDGE_INTEREST (in log)	379	8.394	3.483	0.000	7.317	8.985	10.611	11.944
N_DEFENDANTS	379	2.372	2.504	1.000	1.000	2.000	3.000	5.000
EXECUTIVE_CASE	379	0.359	0.480	0.000	0.000	0.000	1.000	1.000
TRIAL	379	0.061	0.239	0.000	0.000	0.000	0.000	0.000
CRIMINAL_CHARGE	379	0.095	0.294	0.000	0.000	0.000	0.000	0.000
GDP_GROWTH	379	0.044	0.026	0.014	0.031	0.045	0.062	0.074
UNEMPLOYMENT	379	6.192	1.854	4.200	4.900	5.700	7.100	9.000
BLUE_STATE	379	0.781	0.414	0.000	1.000	1.000	1.000	1.000

Panel B. Regression Results

Dependent Variables	PENALTY/ILLEGAL_PROFIT		PENALTY/ILLEGAL_PROFIT		PENALTY/ILLEGAL_PROFIT	
	1	2	3	4	5	6
LIBERAL_COURT	1.636*** (3.043)	3.490*** (2.806)			1.558** (2.485)	3.267** (2.376)
LIBERAL_DISTRICT_JUDGE			0.097 (1.429)	0.144 (1.029)	0.088 (1.344)	0.127 (0.956)
ILLEGAL_PROFIT	0.858*** (41.235)		0.857*** (36.362)		0.860*** (37.487)	
PREJUDGE_INTEREST	0.006 (0.603)	-0.031* (-1.717)	0.006 (0.603)	-0.030 (-1.562)	0.004 (0.406)	-0.033* (-1.825)
N_DEFENDANTS	-0.003 (-0.507)	-0.027*** (-4.207)	0.000 (0.046)	-0.022*** (-3.084)	-0.000 (-0.060)	-0.023*** (-3.618)
EXECUTIVE_CASE	0.071 (1.072)	0.119 (0.908)	0.109* (1.863)	0.175 (1.358)	0.108* (1.760)	0.175 (1.319)
TRIAL	0.483*** (3.184)	0.685** (2.139)	0.505*** (3.108)	0.772** (2.281)	0.488*** (3.069)	0.739** (2.171)
CRIMINAL_CHARGE	0.074 (1.115)	0.216 (1.051)	0.164** (2.603)	0.339 (1.426)	0.126* (2.025)	0.267 (1.166)
GDP_GROWTH	-0.630 (-0.486)	-0.952 (-0.313)	-0.225 (-0.140)	-0.218 (-0.079)	-0.422 (-0.287)	-0.657 (-0.203)
UNEMPLOYMENT	0.015 (0.813)	0.007 (0.150)	0.026 (1.380)	0.038 (0.797)	0.038 (1.174)	0.033 (0.778)
BLUE_STATE	-0.178 (-1.585)	-0.302** (-2.705)	-0.151 (-1.093)	-0.237 (-1.524)	-0.171 (-1.322)	-0.277* (-1.887)
Circuit-fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year-fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
SE clustered by	State	State	State	State	State	State
No. of obs.	379	379	359	359	359	359
Adj. R ²	0.855	0.053	0.850	0.039	0.852	0.055

As discussed in [Section III.A.1](#), district court judges tend to follow the ideologies of the corresponding circuit courts due to the legal doctrine of *stare decisis* and the mandatory and routine reviews of district court decisions by circuit courts (Randazzo (2008), Choi, Gulati, and Posner (2012)). To confirm the validity of this argument in insider trading cases and further corroborate our decision to measure judge ideology at the circuit-court level, we examine whether district court judges' ideology affects insider trading penalty. We first replace LIBERAL_COURT with the ideology of the district judge overseeing the case (LIBERAL_DISTRICT_JUDGE), which equals 1 if the district judge was appointed by a Democratic President, and 0 otherwise. Columns 3 and 4 of [Table 2](#) show that the coefficients on LIBERAL_DISTRICT_JUDGE are positive but not statistically significant. More importantly, when we include both LIBERAL_COURT and LIBERAL_DISTRICT_JUDGE in the regressions (reported in columns 5 and 6), only the coefficients on LIBERAL_COURT, but not those on LIBERAL_DISTRICT_JUDGE, are positive and statistically significant.¹³ In brief, the results suggest that the ideology of circuit courts plays a major role in the monetary penalties imposed on insiders.

Because circuit courts can have a more direct influence on appealed cases, we provide descriptive statistics on the prevalence of these cases in [Table IA4](#) in the Supplementary Material. Of the 522 insider trading civil cases filed in federal courts from 1998 to 2018 with outcome information, 385 were settled, and 137 were either dismissed, issued a summary judgment, or decided by trial, 60 of which were prosecuted only by the SEC in district courts. Of these 60 cases decided by district courts and eligible for appeal, 26 cases (or 43%) were appealed to the circuit courts. The proportion of appealed cases suggests that circuit courts have a direct influence on a considerable number of cases decided by district court judges.¹⁴

C. Effect of Judge Ideology on Insider Trading

1. Sample Selection

After documenting the impact of liberal judges on penalties issued in insider trading lawsuits, we turn to the effect of judge ideology on insiders' trading decisions. We report the sample selection procedure for this test in [Panel A of Table 3](#). Our sample begins with 60,388 firm-calendar years over the 1998–2018 period covered by Thomson Reuters Insider Filing data. We include trades made by executives through their own accounts and accounts that they control, including those held by

¹³We conduct an additional analysis to further explore the heeding behavior of district court judges (tabulated in [Table IA3](#) in the Supplementary Material). We find that circuit court ideology exerts a strong influence on insider trading penalty, while district court ideology has no significant effect, regardless of whether the two courts differ in ideology, consistent with district court judges heeding circuit court ideology in insider trading cases.

¹⁴We also explore whether the consistency of district and circuit court judges affects the likelihood of a circuit court reversing district court decisions in appeals. Of the 26 appealed cases, 11 were assigned to a panel with a consistent ideology with that of the district judge and 14 were assigned to a panel with an inconsistent ideology. We find that 42.9% of the district court decisions (6 out of 14) were reversed or vacated by the circuit court panels when their ideology was not consistent but only 18% (2 out of 11 cases) when their ideology was consistent.

family members and those related to retirement, foundations, and trusts. Following the literature (e.g., Huddart, Ke, and Shi (2007)), we limit the transactions to open market purchases and sales (i.e., we exclude option grants and exercises).¹⁵ We further eliminate firm-year observations of penny stocks (those with prices less than \$2 at the beginning of each calendar year), those that lack sufficient historical insider trading data to determine whether trades are opportunistic (see Section III.A.2 for details), and those without sufficient data to construct the control variables. Our final sample consists of 18,927 firm-year observations from 4,109 unique firms.

Panel B of Table 3 reports the sample distribution and mean judge ideology (LIBERAL_COURT) value across firm-years by circuit. A large proportion (24.93%) of firm-years are headquartered in the Ninth Circuit; relatively few are headquartered in the Tenth and D.C. Circuits (3.91% and 0.39%, respectively). The remaining circuits account for 6.4% to 10.0% of firm-years. The overall mean value of LIBERAL_COURT in all firm-years is 0.408, indicating a 40.8% chance that a 3-judge panel randomly selected from a firm's home circuit is dominated by liberal judges. Panels B and C show that LIBERAL_COURT varies greatly across circuits (ranging from 0.144 in the Eighth Circuit to 0.636 in the Ninth Circuit) and over time (increases from 0.384 in 1998 to 0.463 in 2001, decreases to 0.324 in 2009, then increases steadily to 0.490 in 2017).

Importantly, the judge ideologies of different circuits do not move in tandem. That is, during the same period, some circuits become more liberal while others become more conservative. These asynchronous variations are due to differences between circuits in judge turnovers that are arguably exogenous to firms, including i) the dates when judges leave the court (usually due to death or retirement), ii) the partisanship of the presidents who appointed the leaving judges, iii) the appointment dates of the new judges, and iv) the partisanship of the presidents appointing the new judges. For instance, in 2007, during the second term of President George W. Bush, a Republican, most circuits became more conservative; however, the Fourth Circuit became more liberal because 2 judges appointed by former Republican presidents left the court (one due to death and the other due to retirement) and their vacancies were not filled in that year.

2. Model Specification and Descriptive Statistics

To test the effect of judge ideology on insiders' opportunistic trading decisions, we estimate the following Tobit model at the firm-calendar year level¹⁶:

$$(2) \quad \text{OPP_TRADE}_{i,t} = \beta_0 + \beta_1 \text{LIBERAL_COURT}_{i,t} + \text{Controls} + \text{FEs} + \varepsilon_{i,t},$$

¹⁵Recent studies suggest that executives can use the initiation and termination of 10b5-1 plans, which instruct a third party to execute trades on their behalf according to a written plan, to trade on material non-public information (Jagolinzer (2009), Larcker, Lynch, Quinn, Tayan, and Taylor (2021)). Trades made pursuant to these 10b5-1 plans are reported in Form 4 and included in our data. However, executives are not required to label these trades, and thus we are not able to separate them from other trades.

¹⁶We use a Tobit model because the insider trading variables are left-censored at 0. We obtain consistent results when we use OLS regressions or estimate a logit model (tabulated in columns 1–3 in Table IA5 in the Supplementary Material).

TABLE 3
Sample Selection and Distribution

Table 3 presents the selection process and distribution of the sample used in the analysis on the effect of judge ideology on opportunistic insider trading. Panel A presents the sample selection procedure. Panel B presents the sample distribution and mean LIBERAL_COURT value by circuit. Panel C presents the sample distribution and mean LIBERAL_COURT value by year. Variable definitions are in the [Appendix](#).

Panel A. Sample Selection

	No. of Firm-Years
Open-market insider trades by officers from 1998 to 2018 from Thomson Reuters Insider Filings	60,388
(-) Firm-years without insider trades that can be defined as opportunistic or routine	(38,609)
(-) Firm-years missing data on historical headquarters location	(557)
(-) Firm-years missing data on control variables from Compustat and CRSP	(2,295)
Firm-years for the main test	18,927

Panel B. Sample Distribution by Circuit

Circuit	No. of Firm-Years	% of All Firm-Years	Mean LIBERAL_COURT
1st	1,211	6.40	0.266
2nd	1,907	10.08	0.582
3rd	1,628	8.60	0.313
4th	1,378	7.28	0.498
5th	1,769	9.35	0.231
6th	1,519	8.03	0.283
7th	1,482	7.83	0.173
8th	1,286	6.79	0.144
9th	4,719	24.93	0.636
10th	740	3.91	0.335
11th	1,214	6.41	0.431
D.C.	74	0.39	0.263
Total	18,927	100	0.408

Panel C. Sample Distribution by Year

Year	No. of Firm-Years	% of All Firm-Years	Mean LIBERAL_COURT
1998	223	1.18	0.384
1999	859	4.54	0.405
2000	852	4.50	0.448
2001	793	4.19	0.463
2002	767	4.05	0.442
2003	786	4.15	0.402
2004	900	4.76	0.367
2005	1,000	5.28	0.354
2006	1,114	5.89	0.346
2007	1,163	6.14	0.324
2008	1,030	5.44	0.318
2009	900	4.76	0.324
2010	889	4.70	0.358
2011	849	4.49	0.398
2012	887	4.69	0.422
2013	991	5.24	0.433
2014	1,089	5.75	0.458
2015	1,085	5.73	0.472
2016	1,034	5.46	0.475
2017	1,032	5.45	0.490
2018	684	3.61	0.478
Total	18,927	100	0.384

where OPP_TRADE includes #OPP_SALE, \$OPP_SALE, #OPP_BUY, and \$OPP_BUY as defined in [Section III.A.2](#). We predict a negative coefficient for LIBERAL_COURT. That is, a more liberal judge ideology should be associated with fewer opportunistic insider trades.

Controls includes firm- and macro-level variables that might confound the relation between judge ideology and insider trading. First, we control for firm-level characteristics following the literature on insider trading (e.g., Huddart et al. (2007), Thevenot (2012), and Mehta, Reeb, and Zhao (2021)). We include firm size (SIZE,

the natural logarithm of the market value of equity), because insiders at small firms tend to buy whereas insiders at large firms tend to sell; market-to-book ratio (M_TO_B), as insiders from growth firms tend to sell and insiders from value firms tend to buy; trading volume (TURNOVER, proportion of shares traded over the year), because a large trading volume increases the likelihood that an informed trade will go unnoticed; prior returns (PRIOR_RETURN, buy-and-hold abnormal returns over the previous year) to control for firm performance and insiders' tendency to be contrarians; and the natural logarithm of the total number of shares held by insiders at the end of the last year (SHARES_HELD). Second, we control for the intensity of the SEC's recent insider trading enforcement (SEC_ENFORCE), measured by the number of insider trading charges in the same SEC regional office in the previous 3 years (Kedia and Rajgopal (2011), Parsons, Sulaeman, and Titman (2018)). Third, we control for demographic variables that may be correlated with both judge ideology and insider trading: State-level economic growth (GDP_GROWTH), state-level unemployment rate (UNEMPLOYMENT), and the political leanings of the states where firms are headquartered (BLUE_STATE). Detailed definitions of these variables are provided in the [Appendix](#).

We include year-fixed effects to control for macroeconomic conditions and other time-varying market-wide factors, such as the regulatory environment associated with the president, the SEC, and the financial markets. We also include industry-fixed effects based on 2-digit SIC codes to control for time-invariant cross-industry variations, such as the availability of material non-public information. Last, we include circuit fixed effects to mitigate concerns about omitted correlated variables at the circuit level, and report *t*-statistics based on standard errors clustered by the historical state where the firm headquarters are located (Huang et al. (2019)).¹⁷

Panel A of [Table 4](#) reports the descriptive statistics for the variables used in our main analyses. On average, executives sell 0.195% and buy 0.021% of the outstanding shares of their firms (0.225% and 0.017% of the market value of equity, respectively). The relatively large proportion of insider sales compared with insider purchases is in line with the pattern documented in the literature (e.g., Lakonishok and Lee (2001), Cohen et al. (2012)) and consistent with insiders liquidating their equity compensation. Panel B of [Table 4](#) presents the Pearson and Spearman correlations of the variables. We observe low correlations between LIBERAL_COURT and firm characteristics, suggesting that variations in judge ideology are relatively exogenous to firm-level economic conditions. We similarly observe weak

¹⁷We obtain consistent results when we replace circuit fixed effects with firm fixed effects in the model (tabulated in columns 4 and 5 in Table IA5 in the Supplementary Material). We cluster standard errors by state rather than by circuit because a low number of clusters may bias the critical values used for rejecting the null hypothesis (Cameron, Gelbach, and Miller (2008)). We find similar results (untabulated) when standard errors are clustered by circuit. Our results are also robust to clustering standard errors by both state and year, by firm, or by both firm and year. In addition, we follow Conley, Gonçalves, and Hansen (2018) and take a Fama–MacBeth-style sample-splitting approach. Specifically, we first purge the year effects from variations in the variables used in [equation \(2\)](#). We then estimate the regression for each of the 12 circuits and test whether the 12 estimated coefficients differ from 0. We obtain consistent results using this approach (untabulated).

TABLE 4
Descriptive Statistics

Table 4 reports the descriptive statistics and correlations for the variables used in our main analyses. Panel A reports the descriptive statistics for the variables. Panel B reports the correlations among the variables. The lower (upper) diagonal presents Pearson (Spearman) correlation coefficients. Correlation coefficients that appear in boldface are significant at the 5% level. All continuous variables are winsorized at the 1% and 99% levels. Variable definitions are in the Appendix.

Panel A. Descriptive Statistics

	No. of Obs.	Mean	Std. Dev.	Percentile				
				10th	25th	50th	75th	90th
LIBERAL_COURT	18,927	0.407	0.198	0.156	0.240	0.390	0.593	0.692
#OPP_SALE	18,927	0.195	0.392	0.000	0.006	0.049	0.189	0.527
\$OPP_SALE	18,927	0.225	0.471	0.000	0.006	0.051	0.208	0.595
#OPP_BUY	18,927	0.021	0.093	0.000	0.000	0.000	0.000	0.027
\$OPP_BUY	18,927	0.017	0.078	0.000	0.000	0.000	0.000	0.022
SIZE	18,927	7.227	1.928	4.684	5.911	7.194	8.490	9.789
M_TO_B	18,927	3.580	4.683	1.013	1.519	2.435	4.102	7.195
TURNOVER	18,927	0.023	0.019	0.005	0.010	0.018	0.030	0.047
PRIOR_RETURN	18,927	0.105	0.499	-0.378	-0.175	0.026	0.267	0.604
SHARES_HELD	18,927	10.915	2.312	7.867	9.425	11.043	12.505	13.757
SEC_ENFORCE	18,927	9.215	8.345	0.000	2.000	8.000	14.000	20.000
GDP_GROWTH	18,927	0.043	0.027	0.013	0.029	0.043	0.060	0.074
UNEMPLOYMENT	18,927	5.938	2.015	3.900	4.600	5.400	6.800	8.900
BLUE_STATE	18,927	0.699	0.459	0.000	0.000	1.000	1.000	1.000
DISTRESS (before ranking)	15,126	5.545	6.226	1.136	2.287	3.858	6.462	11.474
FRAUD	15,092	0.016	0.127	0.000	0.000	0.000	0.000	0.000
CORP_GOV	11,119	-2.966	1.175	-4.000	-4.000	-3.000	-2.000	-1.000

Panel B. Correlation Table

	LIBERAL_COURT	SIZE	M_TO_B	TURNOVER	PRIOR_RETURN	SHARES_HELD	SEC_ENFORCE	GDP_GROWTH	UNEMPLOYMENT	BLUE_STATE
LIBERAL_COURT	1	0.04	0.06	0.08	0.01	0.10	0.31	0.13	0.11	0.32
SIZE	0.04	1	0.39	0.34	0.11	0.08	0.00	-0.02	-0.01	0.03
M_TO_B	0.07	0.21	1	0.28	0.23	0.13	0.08	0.11	-0.11	0.07
TURNOVER	0.10	0.19	0.16	1	0.10	0.16	-0.01	-0.02	0.09	0.03
PRIOR_RETURN	0.02	0.03	0.18	0.18	1	0.03	0.00	0.00	0.05	-0.02
SHARES_HELD	0.09	0.07	0.08	0.12	0.04	1	-0.00	0.02	0.06	0.03
SEC_ENFORCE	0.32	0.01	0.07	0.02	0.02	-0.00	1	0.12	0.05	0.39
GDP_GROWTH	0.12	-0.01	0.06	-0.03	0.05	0.01	0.10	1	-0.32	-0.09
UNEMPLOYMENT	0.13	-0.01	-0.07	0.08	0.02	0.06	-0.02	-0.38	1	0.16
BLUE_STATE	0.33	0.04	0.06	0.03	-0.01	0.03	0.38	-0.08	0.17	1

TABLE 5
Judge Ideology and Insider Trading

Table 5 reports the results from estimating equation (2), which tests the effect of judge ideology on the intensity of insider trading. The sample includes 18,927 firm-year observations from 1998 to 2018. Variable definitions are in the Appendix. All regressions include circuit, industry, and year-fixed effects. The *t*-statistics (in parentheses) are calculated using standard errors clustered by state. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Dependent Variables	#OPP_SALE	\$OPP_SALE	#OPP_BUY	\$OPP_BUY
	1	2	3	4
LIBERAL_COURT	-0.184*** (-3.769)	-0.231*** (-3.465)	0.016 (0.421)	0.014 (0.427)
SIZE	-0.014*** (-4.447)	-0.021*** (-4.753)	-0.064*** (-19.648)	-0.054*** (-20.751)
M_TO_B	0.003*** (3.847)	0.002*** (2.686)	-0.000 (-0.283)	-0.000 (-0.350)
TURNOVER	2.490*** (12.180)	3.636*** (14.620)	0.082 (0.496)	0.012 (0.088)
PRIOR_RETURN	0.106*** (15.230)	0.106*** (13.016)	-0.027*** (-6.469)	-0.023*** (-6.871)
SHARES_HELD	0.043*** (21.740)	0.048*** (19.452)	0.020*** (11.131)	0.016*** (11.636)
SEC_ENFORCE	0.001 (0.764)	0.001 (0.930)	-0.001** (-2.389)	-0.001** (-2.213)
GDP_GROWTH	0.307* (1.731)	0.481** (2.011)	-0.086 (-0.656)	-0.052 (-0.497)
UNEMPLOYMENT	0.002 (0.276)	0.005 (0.552)	0.001 (0.257)	0.001 (0.436)
BLUE_STATE	-0.009 (-0.627)	-0.017 (-0.946)	-0.006 (-0.497)	-0.003 (-0.282)
Circuit-fixed effects	Yes	Yes	Yes	Yes
Industry-fixed effects	Yes	Yes	Yes	Yes
Year-fixed effects	Yes	Yes	Yes	Yes
SE clustered by	State	State	State	State
No. of obs.	18,927	18,927	18,927	18,927
Pseudo R^2	0.126	0.100	0.398	0.469

correlations among the control variables, indicating that multicollinearity is not a significant concern in our regressions.

3. Regression Results

Table 5 reports the results from estimating equation (2). In columns 1 and 2, we use #OPP_SALE and \$OPP_SALE as the dependent variables, respectively. We find negative and significant coefficients (at the 1% level) on LIBERAL_COURT in both columns, consistent with our prediction that corporate insiders engage in fewer opportunistic sales when the judge ideology in their home circuit is more liberal.¹⁸ In terms of economic significance, a 1-standard-deviation increase in LIBERAL_COURT (i.e., a more liberal judge ideology) is associated with a 3.6% (0.198×0.184) reduction in #OPP_SALE, or approximately 18.6% of the unconditional mean of #OPP_SALE (0.195). Similarly, a 1-standard-deviation increase in LIBERAL_COURT is associated with a 4.6% (0.198×0.231) reduction

¹⁸In untabulated analyses, we find that liberal judges deter opportunistic selling in both insiders' own accounts and indirect accounts controlled by insiders (e.g., accounts owned by their relatives). This observation is consistent with a proposition in the literature (e.g., Goldie, Jiang, Koch, and Wintoki (2022)) that insiders use indirect accounts to camouflage information-based trading.

in \$OPP_SALE, or approximately 20.3% of the unconditional mean of \$OPP_SALE (0.225). We further illustrate this economic effect using an actual change in judge ideology in a circuit. Between 2009 and 2017, due to judge retirements and President Obama's appointments of 6 new judges, the Fourth Circuit became more liberal, with its LIBERAL_COURT value nearly doubling from 0.390 to 0.677 during this period. Based on the results shown in columns 1 and 2, insiders of an average firm in the Fourth Circuit would reduce their opportunistic selling by 35.7% (in shares in relative terms, or 0.053% of outstanding shares) or 39.9% (in dollars in relative terms, or 0.066% of the market value of equity).¹⁹

Next, we investigate the effect of judge ideology on insiders' opportunistic purchases. In columns 3 and 4, we use #OPP_BUY and \$OPP_BUY as the dependent variables, respectively, and observe nonsignificant coefficients on LIBERAL_COURT. The null result is consistent with higher investor and regulatory scrutiny of insider sales than of purchases and Section 16(b) of the Securities Exchange Act of 1934 barring insiders from profiting from "short-swing" trades. Based on this result and argument, we focus on the effect of judge ideology on insider sales in the subsequent analyses.

To ensure the robustness of our results, we perform three sets of sensitivity tests. In the first set, we include additional control variables that may confound the relation between judge ideology and opportunistic insider sales such as securities class action and state derivative litigation risks, district court judge ideology, executives' personal wealth, corporate donation to political parties, and the partisanship of the president, the SEC chairman, and the SEC commissioners. In the second set, we rule out the possibility that our results are driven by endogenous matching between firms and circuits, or firms in a subset of circuits or time period. The third set uses alternative research designs such as including only opportunistic insider sales that occur prior to large stock price declines to reduce the measurement error, using a change specification, performing the main test at the insider-year level, and measuring the intensity of illegal insider trading using the information content of insider sales (i.e., the predictability of insider sales with respect to future stock returns). The consistent results obtained across all robustness tests (tabulated in Tables IA6–IA12 in the Supplementary Material) enhance confidence in our main finding that liberal judge ideology is associated with fewer opportunistic insider sales.

D. Effect of Judge Ideology on Insider Trading: Cross-Sectional Analyses

In Section III.C, we document that insiders are less likely to trade opportunistically when they face judges who are more liberal, consistent with liberal judges increasing the expected litigation cost associated with insider trading. To support

¹⁹The relative reduction of 35.7% in shares is calculated as $(0.677 - 0.390) \times 0.184 / 0.148$, where 0.184 is the coefficient on LIBERAL_COURT in column 1 in Table 5 and 0.148 is the mean #OPP_SALE of firms in the Fourth Circuit in 2009. The reduction of 0.053% of outstanding shares is calculated as $(0.677 - 0.390) \times 0.184 / 100$. The 39.9% relative reduction in dollars is calculated as $(0.677 - 0.390) \times 0.231 / 0.166$, where 0.231 is the coefficient on LIBERAL_COURT in column 2 in Table 5 and 0.166 is the mean \$OPP_SALE of firms in the Fourth Circuit in 2009. The 0.066% reduction in the market value of equity is calculated as $(0.677 - 0.390) \times 0.231 / 100$.

this underlying mechanism, we identify three situations in which insiders are more likely to be sued for illegal insider trading and, as a result, judge ideology should have a greater influence. The first two situations concern firms in financial distress and firms with accounting misconduct. According to the literature, such firms attract attention from investors and regulators, and these firms' insider trades are more likely to be viewed as based on material non-public information, which increases the likelihood that opportunistic insider trading will be prosecuted (Cox et al. (2003), Thevenot (2012)). If corporate insiders in such firms expect to face an increased risk of insider trading lawsuits, they should put more weight on judge ideology when they make trading decisions. The third situation involves firms with stronger corporate governance. Governance mechanisms, such as internal investigations and whistleblower actions, can facilitate evidence collection and thus help regulators to prosecute illegal insider trading (Meisner (2004), Dyck et al. (2010), and Henning (2018)). We expect that stronger governance increases the likelihood of insider trading lawsuits and, consequently, the effect of judge ideology on insiders' trading decisions.

We use Altman's Z score (Altman (1968)) to measure financial distress. A low Altman's Z score indicates a high likelihood of bankruptcy. We define an indicator variable (DISTRESS) that equals 1 if a firm's Altman's Z score falls in the bottom decile, and 0 otherwise. To measure accounting misconduct, we define an indicator variable (FRAUD) that equals 1 if a firm has committed accounting misconduct in a given year that is later subject to enforcement actions by the SEC, as reported in the Accounting and Auditing Enforcement Releases. We capture corporate governance (CORP_GOV) using the entrenchment index (E-Index) introduced by Bebchuk, Cohen, and Ferrell (2009), which measures the restrictiveness of shareholder rights by counting the number of relevant governance provisions. We multiply the E-index by negative one such that a high value indicates strong corporate governance. We then re-estimate equation (2) by separately including the three variables and their interactions with LIBERAL_COURT, and expect to obtain negative coefficients on the interactions.

Table 6 reports the findings of the cross-sectional analyses. For each cross-sectional variable, we examine two dependent variables: #OPP_SALE and \$OPP_SALE. In columns 1 and 2, the coefficients on LIBERAL_COURT \times DISTRESS are negative and significant at the 5% level, suggesting that insiders in financially distressed firms view liberal court ideology as a strong deterrent to opportunistic trading behaviors. Economically, the effect of LIBERAL_COURT on #OPP_SALE is 72.29% (0.120/0.166) greater for financially distressed firms than for non-distressed firms. We obtain similar results in columns 3 and 4, which show that the effect of LIBERAL_COURT on #OPP_SALE is 2.6 times (0.588/0.227) greater for firms with accounting misconduct than for firms without such misconduct. In columns 5 and 6, which study the interaction effect of corporate governance and judge ideology, the effect of LIBERAL_COURT on #OPP_SALE is 14.81% (0.036/0.243) greater for firm-years involving stronger governance than for other firm-years. In sum, the results in this section are consistent with our prediction and suggest that insiders are more concerned with the heightened litigation costs of liberal judges when they are more likely to be sued for illegal insider trading.

TABLE 6
 Judge Ideology and Insider Trading: Cross-Sectional Tests

Table 6 reports the results from our cross-sectional tests, which examine whether the effect of liberal ideology on opportunistic insider sales is stronger when the firm is under greater scrutiny (i.e., when the firm is financially distressed, has an accounting misstatement, or has stronger corporate governance). Variable definitions are in the Appendix. All regressions include circuit, industry, and year-fixed effects. The *t*-statistics (in parentheses) are calculated using standard errors clustered by state. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Dependent Variables	#OPP_SALE	\$OPP_SALE	#OPP_SALE	\$OPP_SALE	#OPP_SALE	\$OPP_SALE
	1	2	3	4	5	6
LIBERAL_COURT × DISTRESS	-0.120** (-2.256)	-0.115** (-2.010)				
LIBERAL_COURT × FRAUD			-0.588** (-2.399)	-0.755** (-2.362)		
LIBERAL_COURT × CORP_GOV					-0.036* (-1.908)	-0.048** (-2.163)
LIBERAL_COURT	-0.166*** (-2.791)	-0.217*** (-2.769)	-0.227*** (-3.320)	-0.296*** (-3.204)	-0.243*** (-2.862)	-0.306*** (-2.880)
DISTRESS	-0.158*** (-5.622)	-0.212*** (-6.435)				
FRAUD			0.242* (1.849)	0.316* (1.856)		
CORP_GOV					0.019*** (2.738)	0.024*** (2.886)
SIZE	-0.027*** (-7.797)	-0.037*** (-7.418)	-0.013*** (-4.254)	-0.022*** (-4.849)	-0.045*** (-11.972)	-0.055*** (-10.750)
M_TO_B	0.003*** (4.051)	0.002*** (2.852)	0.003*** (3.613)	0.002** (2.121)	0.005*** (4.378)	0.005*** (4.115)
TURNOVER	2.498*** (11.258)	3.681*** (13.436)	2.758*** (11.504)	4.114*** (14.563)	0.786*** (4.109)	1.182*** (4.877)
PRIOR_RETURN	0.096*** (13.546)	0.094*** (12.165)	0.104*** (13.944)	0.102*** (11.583)	0.129*** (9.041)	0.122*** (7.414)
SHARES_HELD	0.046*** (21.379)	0.053*** (18.764)	0.045*** (17.850)	0.052*** (16.581)	0.042*** (23.609)	0.048*** (23.868)
SEC_ENFORCE	0.000 (0.691)	0.001 (0.845)	0.000 (0.358)	0.000 (0.492)	0.001* (1.794)	0.001 (1.522)
GDP_GROWTH	0.260 (1.218)	0.446 (1.551)	0.416* (1.825)	0.619** (2.118)	0.448** (2.170)	0.525** (2.164)
UNEMPLOYMENT	0.004 (0.598)	0.008 (0.936)	0.004 (0.561)	0.007 (0.820)	0.001 (0.256)	0.003 (0.442)
BLUE_STATE	-0.010 (-0.647)	-0.020 (-1.036)	-0.011 (-0.608)	-0.021 (-0.950)	-0.000 (-0.015)	-0.008 (-0.509)
Circuit-fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry-fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year-fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
SE clustered by	State	State	State	State	State	State
No. of obs.	15,126	15,126	15,092	15,092	11,119	11,119
Pseudo R^2	0.130	0.102	0.123	0.100	0.252	0.170

E. Effect of Judge Ideology on SEC Enforcement

In this section, we examine whether the SEC considers judge ideology in its choice of forum when pursuing insider trading cases to better understand the importance of judges' political ideology and how these two important federal-level securities law enforcement entities (i.e., the SEC and the federal courts) interact throughout the enforcement process.

As the main U.S. regulatory agency tasked with prosecuting illegal insider trading, the SEC strives to win the cases it brings and imposes severe penalties to

deter future offenders. Losing a case exposes the SEC to criticism from Congress and the media (GAO (2013)), damages the reputation and career prospects of the SEC attorney (deHaan et al. (2015)), and emboldens other insiders to pursue opportunistic trades.²⁰ The SEC can choose between two trial venues when it pursues insider trading cases: Administrative proceedings and the federal courts. Arguably, the most significant difference between the two trial venues is the judge.²¹ In administrative proceedings, each case is adjudicated by an administrative law judge (hereafter, ALJ) employed by the SEC, whereas in federal district court, each case is adjudicated by a federal judge. We posit that the SEC's choice of litigation forum is affected by federal judge ideology via the expected case outcome.²² That is, we predict that the SEC is more likely to prosecute violations in a federal court, as opposed to administrative proceedings, when the court is less favorable to the defendant (i.e., when the circuit court with jurisdiction is liberal).²³

To test this prediction, we collect all SEC insider trading enforcement actions from 2011 to 2018 from the SEC website, including 172 civil cases filed in federal courts and 115 administrative proceedings. Following Zheng (2021), we begin the sample period after the Dodd–Frank Act because this act allows the SEC to pursue civil penalties against executives in publicly traded companies through administrative proceedings, and thus gives the agency greater flexibility to choose between administrative proceedings and a federal court when prosecuting these executives for insider trading.²⁴ To determine the circuit court with jurisdiction over each defendant for administrative proceedings, we manually collect the residential location of each defendant from the proceedings. We removed 7 administrative cases without location information for the defendants and 36 cases in which the SEC pursued enforcement actions both in federal courts and through administrative

²⁰GAO, Securities Exchange Commission: Improving Personnel Management Is Critical For Agency's Effectiveness, GAO-13-621, July 2013 (<https://www.gao.gov/assets/660/655989.pdf>), p. 15: "senior officers and staff surveyed remarked that recent enforcement failures and related, sustained criticism ... has contributed to their unwillingness to take risk and innovate."

²¹See Zheng (2021) for a detailed discussion of other differences between the two venues. For example, administrative proceedings provide a quicker resolution because SEC rules mandate an initial decision within 300 days. In contrast, federal court cases can sometimes take years. However, federal courts can impose sanctions not available in administrative proceedings, such as barring individuals from serving as officers or directors of public companies (Zaring (2015)). Federal courts are also more visible than administrative proceedings and thus can better demonstrate the SEC's enforcement efforts and enhance its public image.

²²For example, Hume (2009) finds that federal administrators may be contemptuous of judges who might have ruled against them for ideological reasons. In his survey of federal administrators, one administrator showed disapproval of "conservatives on the D.C. Circuit who are critical of the agency with some consistency."

²³An ALJ decision can be appealed to the SEC commissioner and, if lost, to the circuit court with jurisdiction. However, unlike federal judges, who preside over a variety of civil and criminal case types, ALJs focus exclusively on SEC enforcement actions and thus have more expertise in this area. Therefore, compared with decisions from district courts, circuit courts are more likely to defer to the ALJ's ruling unless they find that the ALJ did not have "substantial evidence" to reach its conclusion.

²⁴Prior to the Dodd–Frank Act, the SEC could only issue civil penalties against entities and individuals under its direct regulation, including securities exchanges, brokers, dealers, investment companies, investment advisors, and auditors, according to the Securities and Enforcement Remedies and Penny Stock Reform Act of 1990. Most publicly traded companies (and their personnel) were not directly regulated by the SEC.

proceedings. Our final sample includes 136 civil cases filed in federal district courts and 72 administrative proceedings. We estimate the following probit model:

$$(3) \quad \text{FEDERAL_COURT}_{j,t} = \beta_0 + \beta_1 \text{LIBERAL_COURT}_{j,t-1} + \text{Controls} \\ + \text{FEs} + \varepsilon_{j,t},$$

where $\text{FEDERAL_COURT}_{j,t}$ is an indicator variable that equals 1 if an insider trading case is filed in a federal court and 0 if the case is submitted as an internal SEC administrative proceeding. $\text{LIBERAL_COURT}_{j,t-1}$ represents the judge ideology of the insiders' home circuits in the year preceding the public announcement of the enforcement.^{25,26} Consistent with our main test and the literature (e.g., Zheng (2021), Donelson, Kubic, and Toynbee (2024)), we control for the number of defendants in the case, the number of SEC enforcement actions initiated during the fiscal year, the year-over-year percentage change in the SEC's authorized budget, demographic variables (GDP_GROWTH, UNEMPLOYMENT, and BLUE_STATE), and circuit, calendar year, and calendar month fixed effects.

Panel A of Table 7 provides the descriptive statistics for the variables used in this test. About 67% of the cases were filed in federal courts, with the remaining cases adjudicated by an ALJ. Panel B reports the results from estimating equation (3).²⁷ In column 1, we control for case and SEC characteristics. Column 2 further includes demographic variables. Consistent with our prediction, we find in both columns that the SEC is more likely to pursue federal court actions than administrative proceedings when the circuit court is liberal (vs. conservative). In terms of economic magnitude, the results in column 2 indicate that an increase in LIBERAL_COURT from Q1 to Q3 (from 0.332 to 0.671) increases the odds of the SEC selecting a federal court as the prosecution venue from 55% to 97%. These findings suggest that judge ideology plays a significant role in the SEC's choice of the forum in which to pursue illegal insider trading. The evidence reinforces the notion that judges loom over the entire enforcement process.

IV. Conclusion

Illegal insider trading has long been an issue of concern for investors and regulators. Federal judges play an important role in the enforcement of securities law. Although there is evidence in the literature that judge ideology affects securities class action lawsuits, this finding may not apply to insider trading (Hirshleifer and Teoh (2003), Soltes (2016)). Our article fills the gap in the literature by

²⁵As discussed in the introduction, district court judges typically follow the ideology of the corresponding circuit court (Schanzenbach and Tiller (2007), Knight and Gulati (2018)). Therefore, we use circuit court ideology to measure the leaning of the district court in this test. Consistent with this argument, we obtain nonsignificant results when using district court judge ideology.

²⁶The median gaps between the final year when insider trading occurred and the SEC's filing of a civil lawsuit or administrative proceedings are 3 years and 2 years, respectively. Although we do not know the exact date when a forum for each case is determined, we believe it is reasonable to assume that the SEC makes its decision during the year before the lawsuit or administrative proceedings.

²⁷Note that two enforcement actions are dropped from the estimation because the inclusion of year and circuit fixed effects removes years and circuits without variation from the dependent variable.

TABLE 7
 Judge Ideology and SEC Enforcement on Illegal Insider Trading:
 Civil Action Versus Administrative Proceeding

Table 7 reports the results from estimating equation (3), which examines whether judge ideology affects the likelihood of SEC enforcement on illegal insider trading via civil actions brought in federal court, as opposed to administrative proceedings. Panel A presents the descriptive statistics for the variables used in the test. Panel B reports the regression results. Variable definitions are in the Appendix. All regressions include circuit-fixed effects, year-fixed effects, and month-fixed effects. The *t*-statistics (in parentheses) are calculated using standard errors clustered by state. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A. Descriptive Statistics

	No. of Obs.	Mean	Std. Dev.	Percentile				
				10th	25th	50th	75th	90th
FEDERAL_COURT	199	0.673	0.470	0.000	0.000	1.000	1.000	1.000
LIBERAL_COURT	199	0.500	0.187	0.232	0.332	0.542	0.671	0.706
N_DEFENDANTS	199	1.694	1.232	1.000	1.000	1.000	2.000	3.000
TOTAL_ENFORCE_CASES	199	755.678	36.849	686.000	734.000	754.000	784.000	821.000
CHG_SEC_BUDGET	199	5.284	4.353	0.000	2.195	2.928	11.111	11.477
GDP_GROWTH	199	0.040	0.019	0.018	0.028	0.038	0.055	0.066
UNEMPLOYMENT	199	7.212	2.147	4.800	5.300	6.700	8.500	10.200
BLUE_STATE	199	0.764	0.426	0.000	1.000	1.000	1.000	1.000

Panel B. Regression Results

Dependent Variable:	FEDERAL_COURT	
	1	2
LIBERAL_COURT	8.437** (2.235)	6.159** (2.013)
N_DEFENDANTS	1.048*** (6.095)	1.173*** (6.360)
TOTAL_ENFORCE_CASES	0.026*** (3.367)	0.034*** (3.162)
CHG_SEC_BUDGET	0.007 (0.167)	-0.019 (-0.450)
GDP_GROWTH		6.718 (0.989)
UNEMPLOYMENT		0.324*** (2.592)
BLUE_STATE		-1.069** (-2.237)
Circuit-fixed effects	Yes	Yes
Year-fixed effects	Yes	Yes
Month-fixed effects	Yes	Yes
SE clustered by	State	State
No. of obs.	199	199
Pseudo R^2	0.428	0.455

presenting the first large-sample evidence on the role of judge ideology in insider trading. As a result, our findings uncover an important deterrent of illegal insider trading, advance our understanding of the role of political ideology in securities law enforcement, and demonstrate the interactions between federal branches during such enforcement.

Broadly speaking, the study makes important contributions to the finance and legal studies literature and has practical implications for regulators and investors. With the recent Fifth Circuit ruling that the SEC's use of ALJs can be unconstitutional (*Jarkesy v. SEC, 5th Cir. 2022*), federal judges may become even more important in securities law enforcement. Although data availability limits our analyses to trades made by corporate executives, the deterrent role of liberal judge

ideology may affect other stakeholders who have access to material non-public information, including independent directors, non-executive employees, and external service providers such as consultants, lawyers, auditors, and investment bankers (Berkman, Koch, and Westerholm (2023)). The investigation of these stakeholders' trading patterns is a potential avenue for future research.

Appendix. Variable Definitions

Main Variables

LIBERAL_COURT: The probability that at least 2 of 3 judges randomly selected from a circuit court were appointed by Democratic presidents; that is, $[\mathcal{C}(x, 3) + \mathcal{C}(x, 2) \times \mathcal{C}(y - x, 1)] / \mathcal{C}(y, 3)$, where y is the total number of judges in the circuit court and x is the number of judges in the circuit court who were appointed by Democratic presidents. (a, b) is the number of combinations of b objects selected from a distinct objects. For each firm-calendar year observation, we use the average monthly LIBERAL_COURT measure of the circuit with jurisdiction over the firm's headquarters in the calendar year. Historical headquarters information is extracted from firms' 10-K filings. Circuit court judges' appointing presidents are from the website of the Federal Judicial Center.

#OPP_SALE (\$OPP_SALE): Total number (dollar value) of opportunistic insider sales in year t divided by the number of common shares outstanding (market value of equity) at the end of year $t-1$, multiplied by 100. We classify a sale as opportunistic if the insider has not sold stocks in the same calendar month in any of the 3 preceding years.

#OPP_BUY (\$OPP_BUY): Total number (dollar value) of opportunistic insider purchases in year t divided by the number of common shares outstanding (market value of equity) at the end of year $t-1$, multiplied by 100. We classify a purchase as opportunistic if the insider has not purchased stocks in the same calendar month in any of the 3 preceding years.

Control Variables in Equation (2)

SIZE: The natural logarithm of the market value of equity ($\text{PRCC_F} \times \text{CSHO}$) at the end of year $t-1$.

M_TO_B: The market-to-book ratio ($\text{PRCC_F} \times \text{CSHO} / \text{CEQ}$) at the end of year $t-1$.

TURNOVER: The total trading volume (VOL) scaled by the average number of monthly shares outstanding in year t .

PRIOR_RETURN: Buy-and-hold market-adjusted returns over year $t-1$. Market-adjusted returns are calculated as the raw monthly returns (RET) minus the value-weighted market holding period returns (VWRETD).

SHARES_HELD: The natural logarithm of the total number of shares held by insiders at the end of year $t-1$.

SEC_ENFORCE: The number of insider trading charges in the same SEC regional office in the previous 3 years.

GDP_GROWTH: The percentage change in real GDP from year $t-1$ to year t of the state where the firm's headquarters is located.

UNEMPLOYMENT: The unemployment rate of the state where the firm's headquarters is located in year t .

BLUE_STATE: An indicator variable that equals 1 if the state where the firm's headquarters is located voted for a Democratic candidate in the most recent presidential election prior to year t , and 0 otherwise.

Other Variables

PENALTY: The natural logarithm of the dollar amount of civil penalty paid by defendants. The dollar amount of civil penalty is inflation-adjusted and divided by 100.

ILLEGAL_PROFIT: The natural logarithm of the dollar amount of profit disgorgement of the enforcement. The dollar amount of profit disgorgement is inflation-adjusted and divided by 100.

PREJUDGE_INTEREST: The natural logarithm of the dollar amount of the prejudgment interest of the enforcement. The dollar amount of prejudgment interest is inflation-adjusted and divided by 100.

EXECUTIVE_CASE: An indicator variable that equals 1 if the defendants include corporate executives, and 0 otherwise.

N_DEFENDANTS: The number of defendants in the enforcement.

TRIAL: An indicator variable that equals 1 if the case went to trial, and 0 otherwise.

CRIMINAL_CHARGE: An indicator variable that equals 1 if there was a concurrent criminal investigation by the Department of Justice, and 0 otherwise.

LIBERAL_DISTRICT_JUDGE: An indicator variable that equals 1 if the district court judge presiding the case was appointed by a Democratic president, and 0 otherwise.

DISTRESS: An indicator variable that equals 1 if the firm's Altman's Z score is in the bottom decile of all firms in year t , and 0 otherwise. Altman's Z score (Altman (1968)) is computed as $3.3 \times \text{OIADP}/\text{AT} + 1.2 \times (\text{ACT} - \text{LCT})/\text{AT} + \text{SALE}/\text{AT} + 0.6 \times \text{PRCC}_F \times \text{CSHO}/(\text{DLTT} + \text{DLC}) + 1.4 \times \text{RE}/\text{AT}$.

FRAUD: An indicator variable that equals 1 if the firm engaged in an accounting misconduct in year t for which the SEC subsequently issues enforcement actions in Accounting and Auditing Enforcement Releases, and 0 otherwise.

CORP_GOV: The Entrenchment Index (E-Index) of Bebchuck, Cohen, and Ferrell (2009), multiplied by -1 .

FEDERAL_COURT: An indicator variable that equals 1 if the SEC files an insider trading case in a federal district court and 0 if the SEC institutes an administrative proceeding.

TOTAL_ENFORCE_CASES: The total number of SEC enforcement actions initiated in the current SEC fiscal year.

CHG_SEC_BUDGET: Percentage change in the authorized budget of the SEC from the previous to the current SEC fiscal year.

Supplementary Material

To view supplementary material for this article, please visit <http://doi.org/10.1017/S0022109024000164>.

References

- Agrawal, A., and J. F. Jaffe. "Does Section 16b Deter Insider Trading by Target Managers?" *Journal of Financial Economics*, 39 (1995), 295–319.
- Akbas, F.; C. Jiang; and P. D. Koch. "Insider Investment Horizon." *Journal of Finance*, 75 (2020), 1579–1627.
- Allredge, D. M., and D. Cicero. "Attentive Insider Trading." *Journal of Financial Economics*, 115 (2015), 84–101.
- Allen, S. A. "The Response of Insider Trading to Changes in Regulatory Standards." *Quarterly Journal of Business and Economics*, 29 (1990), 47–78.
- Altman, E. I. "Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy." *Journal of Finance*, 23 (1968), 589–609.
- Atkins, P. S. Speech by SEC Commissioner: Remarks to the "SEC Speaks in 2008" program of the Practising Law Institute. U.S. Securities and Exchange Commission. <https://www.sec.gov/news/speech/2008/spch020808psa.htm> (2008).
- Bebchuk, L.; A. Cohen; and A. Ferrell. "What Matters in Corporate Governance?" *Review of Financial Studies*, 22 (2009), 783–827.
- Becker, G. S. "Crime and Punishment: An Economic Approach." In *The Economic Dimensions of Crime*. London, UK: Palgrave Macmillan (1968), 13–68.
- Berkman, H.; P. Koch; and P. J. Westerholm. "The Other Insiders: Personal Trading by Brokers, Analysts, and Fund Managers." *Review of Asset Pricing Studies*, 13 (2023), 481–522.
- Bernhardt, D.; B. Hollifield; and E. Hughson. "Investment and Insider Trading." *Review of Financial Studies*, 8 (1995), 501–543.
- Bhattacharya, U., and H. Daouk. "The World Price of Insider Trading." *Journal of Finance*, 57 (2002), 75–108.
- Billings, M. B., and M. C. Cederghren. "Strategic Silence, Insider Selling and Litigation Risk." *Journal of Accounting and Economics*, 59 (2015), 119–142.
- Bowie, B. J., and D. R. Songer. "Assessing the Applicability of Strategic Theory to Explain Decision Making on the Courts of Appeals." *Political Research Quarterly*, 62 (2009), 393–407.
- Cameron, A. C.; J. B. Gelbach; and D. L. Miller. "Bootstrap-Based Improvements for Inference with Clustered Errors." *Review of Economics and Statistics*, 90 (2008), 414–427.
- Choi, S. J.; M. Gulati; and E. A. Posner. "What Do Federal District Judges Want? An Analysis of Publications, Citations, and Reversals." *Journal of Law, Economics, & Organization*, 28 (2012), 518–549.
- Christensen, H. B.; L. Hail; and C. Leuz. "Capital-Market Effects of Securities Regulation: Prior Conditions, Implementation, and Enforcement." *Review of Financial Studies*, 29 (2016), 2885–2924.
- Cline, B. N., and V. V. Poslylnaya. "Illegal Insider Trading: Commission and SEC Detection." *Journal of Corporate Finance*, 58(2019), 247–269.
- Cohen, L.; C. Malloy; and L. Pomorski. "Decoding Inside Information." *Journal of Finance*, 67 (2012), 1009–1043.
- Conley, T.; S. Gonçalves; and C. Hansen. "Inference with Dependent Data in Accounting and Finance Applications." *Journal of Accounting Research*, 56 (2018), 1139–1203.
- Cornell, B., and E. R. Sirri. "The Reaction of Investors and Stock Prices to Insider Trading." *Journal of Finance*, 47 (1992), 1031–1059.
- Correia, M. M. "Political Connections and SEC Enforcement." *Journal of Accounting and Economics*, 57 (2014), 241–262.
- Cox, J. D.; R. S. Thomas; and D. Kiku. "SEC Enforcement Heuristics: An Empirical Inquiry." *Duke Law Journal*, 53 (2003), 737–779.
- Cross, F. B. *Decision Making in the US Courts of Appeals*. Palo Alto, CA: Stanford University Press (2007).
- Dai, L.; R. Fu; J. K. Kang; and I. Lee. "Corporate Governance and the Profitability of Insider Trading." *Journal of Corporate Finance*, 40(2016), 235–253.
- DeHaan, E.; S. Kedia; K. Koh; and S. Rajgopal. "The Revolving Door and the SEC's Enforcement Outcomes: Initial Evidence from Civil Litigation." *Journal of Accounting and Economics*, 60 (2015), 65–96.

- Demsetz, H. "Corporate Control, Insider Trading, and Rates of Return." *American Economic Review*, 76 (1986), 313–316.
- Donelson, D. C.; M. Kubic; and S. Toynbee. "The SEC's September Spike: Regulatory Inconsistency with the Fiscal Year." *Journal of Accounting and Economics*, 77 (2024), 101636.
- Dyck, A.; A. Morse; and L. Zingales. "Who Blows the Whistle on Corporate Fraud?" *Journal of Finance*, 65 (2010), 2213–2253.
- Fairfax, L. M. "The Securities Law Implications of Financial Illiteracy." *Virginia Law Review*, 104 (2018), 1065–1122.
- Fedderke, J. W., and M. Ventrizzo. "Do Conservative Justices Favor Wall Street: Ideology and the Supreme Court's Securities Regulation Decisions." *Florida Law Review*, 67 (2015), 1211–1280.
- Fisch, J. E. "Constructive Ambiguity and Judicial Development of Insider Trading." *Penn Law: Legal Scholarship Repository*, 71 (2018), 749–766.
- Franke, B.; A. H. Huang; R. Z. Li; and H. Wang. "Securities Law Precedents, Legal Liability, and Financial Reporting Quality." *Review of Finance*, 28 (2024), 413–445.
- GAO. "Improving Personnel Management Is Critical For Agency's Effectiveness." <https://www.gao.gov/assets/660/655989.pdf> (2013).
- Goldie, B. A.; C. Jiang; P. D. Koch; and M. B. Wintoki. "Indirect Insider Trading." *Journal of Financial and Quantitative Analysis*, 58 (2022), 2327–2364.
- Goldman, S. *Picking Federal Judges: Lower Court Selection from Roosevelt Through Reagan*. New Haven, CT: Yale University Press (1999).
- Gormley, T. A.; M. Kaviani; and H. Maleki. "When Do Judges Throw the Book at Companies? The Influence of Partisanship in Corporate Prosecutions." Available at SSRN 3513177 (2022).
- Heminway, J. M. "Materiality Guidance in the Context of Insider Trading: A Call for Action." *American University Law Review*, 52 (2003), 1131–1212.
- Heminway, J. M. "Just do it—Specific Rulemaking on Materiality Guidance in Insider Training." *Louisiana Law Review*, 72 (2012), 999–1054.
- Henderson, M. T.; A. D. Jagolinzer; and K. A. Muller III. "Offensive Disclosure: How Voluntary Disclosure Can Increase Returns from Insider Trading." *Georgetown Law Journal*, 103(2014), 1275–1306.
- Henning, P. J. "What's So Bad About Insider Trading Law?" *Business Lawyer*, 70 (2015), 751–776.
- Henning, P. J. "Making Up Insider Trading Law as You Go." *Washington University Journal of Law & Policy Introduction*, 56 (2018), 101–120.
- Hirshleifer, D., and S. H. Teoh. "Limited Attention, Information Disclosure, and Financial Reporting." *Journal of Accounting and Economics*, 36 (2003), 337–386.
- Horwich, A. "The Neglected Relationship of Materiality and Recklessness in Actions Under Rule 10b-5." *Business Lawyer*, 55 (2000), 1023–1038.
- Huang, A.; K. W. Hui; and R. Z. Li. "Federal Judge Ideology: A New Measure of Ex Ante Litigation Risk." *Journal of Accounting Research*, 57 (2019), 431–489.
- Huddart, S.; B. Ke; and C. Shi. "Jeopardy, Non-Public Information, and Insider Trading Around SEC 10-K and 10-Q Filings." *Journal of Accounting and Economics*, 43 (2007), 3–36.
- Hume, R. J. *How Courts Impact Federal Administrative Behavior*. London, UK: Routledge (2009).
- Hutton, I.; D. Jiang; and A. Kumar. "Political Values, Culture, and Corporate Litigation." *Management Science*, 61 (2015), 2905–2925.
- Jaffe, J. F. "Special Information and Insider Trading." *Journal of Business*, 47 (1974), 410–428.
- Jagolinzer, A. D. "SEC Rule 10b5-1 and Insiders' Strategic Trade." *Management Science*, 55 (2009), 224–239.
- Kacperczyk, M., and E. S. Pagnotta. "Chasing Private Information." *Review of Financial Studies*, 32 (2019), 4997–5047.
- Kacperczyk, M., and E. S. Pagnotta. "Legal Risk and Insider Trading." *Journal of Finance*, 79 (2024), 305–355.
- Kedia, S., and S. Rajgopal. "Do the SEC's Enforcement Preferences Affect Corporate Misconduct?" *Journal of Accounting and Economics*, 51 (2011), 259–278.
- Knight, J., and G. M. Gulati. "Talking Judges." *Duke Law Journal*, 67 (2018), 163–173.
- Lakonishok, J., and I. Lee. "Are Insider Trades Informative?" *Review of Financial Studies*, 14 (2001), 79–111.
- Langevoort, D. C. "Global Securities Regulation After the Financial Crisis." *Journal of International Economic Law*, 13 (2010), 799–815.
- Langevoort, D. C. "What Were They Thinking? Insider Trading and the Scienler Requirement." In *Research Handbook on Insider Trading*. Cheltenham: Edward Elgar Publishing (2012).
- Larcker, D. F.; B. Lynch; P. J. Quinn; B. Tayan; and D. J. Taylor. "Gaming the System: Three 'Red Flags' of Potential 10b5-1 Abuse." Working Paper, Stanford University (2021).

- Leland, H. E. "Insider Trading: Should It Be Prohibited?" *Journal of Political Economy*, 100 (1992), 859–887.
- Lin, Z.; T. R. Sapp; J. R. Ulmer; and R. Parsa. "Insider Trading Ahead of Cyber Breach Announcements." *Journal of Financial Markets*, 50 (2020), 100527.
- Lind, N. S.; E. T. Rankin; and G. Harris. *Today's Economic Issues: Democrats and Republicans*. Santa Barbara, CA: ABC-CLIO (2016).
- Liu, C., and D. Yermack "Where Are the Shareholders' Mansions? CEOs' Home Purchases, Stock Sales, and Subsequent Company Performance." In *Corporate Governance*. Berlin, Germany: Springer (2012), 3–28.
- Manne, H. G. "What's So Bad About Insider Trading?" *Challenge*, 15 (1967), 14–42.
- McCraw, T. K. *Prophets of Regulation*. Cambridge, MA: Harvard University Press (2009).
- Mehta, M. N.; D. M. Reeb; and W. Zhao. "Shadow Trading." *Accounting Review*, 96 (2021), 367–404.
- Meisner, D. M. "Internal Investigations: An Essential Component to Cooperation in an SEC Inquiry." *Securities Regulation Law Journal*, 32(2004), 310–314.
- Murdock, C. W. "Janus Capital Group, Inc. v. First Derivative Traders: The Culmination of the Supreme Court's Evolution from Liberal to Reactionary in Rule 10B-5 Actions." *Denver Law Review*, 91 (2014), 369–440.
- Neumann, M. G. "Neither Admit Nor Deny: Recent Changes to the Securities and Exchange Commission's Longstanding Settlement Policy." *Journal of Corporation Law*, 40 (2015), 793.
- Parsons, C. A.; J. Sulaeman; and S. Titman. "The Geography of Financial Misconduct." *Journal of Finance*, 73 (2018), 2087–2137.
- Patel, M. S. "Does Insider Trading Law Change Behavior: An Empirical Analysis." *University of California Davis Review*, 53 (2019), 447–507.
- Patel, V., and T. J. Putniš. "How Much Insider Trading Really Happens in Stock Markets?" Available at SSRN 3764192 (2023).
- Peirce, H. M. Statement by Commissioner Peirce on In the Matter of Lloyd D. Reed. U.S. Securities and Exchange Commission (2022).
- Pinello, D. R. "Linking Party to Judicial Ideology in American Courts: A Meta-Analysis." *Justice System Journal*, 20 (1999), 219–254.
- Prakash, S. "Our Dysfunctional Insider Trading Regime." *Columbia Law Review*, 99 (1999), 1491.
- Pritchard, A. C. "Launching the Insider Trading Revolution: SEC v. Capital Gains Research Bureau." In *Research Handbook on Insider Trading*. Cheltenham: Edward Elgar Publishing (2013).
- Quigley, K. "The Insider Trading Prohibition Act: A Small Step Towards a Codified Insider Trading Law." *Fordham Journal of Corporate & Financial Law*, 26(2021), 183.
- Randazzo, K. A. "Strategic Anticipation and the Hierarchy of Justice in US District Courts." *American Politics Research*, 36 (2008), 669–693.
- Raymond, N., and J. Stempel. "U.S. Judge Won't Rubber-Stamp SAC Insider Trade Decision." <https://www.reuters.com/article/us-sac-charges-hearing/u-s-judge-wont-rubber-stamp-sac-insider-trade-decision-idUSBRE9A40QD20131105> (2013).
- Roulstone, D. T. "The Relation Between Insider-Trading Restrictions and Executive Compensation." *Journal of Accounting Research*, 41 (2003), 525–551.
- Schanzenbach, M. M., and E. H. Tiller. "Strategic Judging Under the US Sentencing Guidelines: Positive Political Theory and Evidence." *Journal of Law, Economics, & Organization*, 23 (2007), 24–56.
- Seyhun, H. N. "The Effectiveness of the Insider-Trading Sanctions." *Journal of Law and Economics*, 35 (1992), 149–182.
- Soltes, E. *Why They Do It: Inside the Mind of the White-Collar Criminal*. New York, NY: Public Affairs (2016).
- Staudt, N.; L. Epstein; and P. Wiedenbeck. "The Ideological Component of Judging in the Taxation Context." *Washington University Law Review*, 84 (2006), 1797.
- Thevenot, M. "The Factors Affecting Illegal Insider Trading in Firms with Violations of GAAP." *Journal of Accounting and Economics*, 53 (2012), 375–390.
- Velikonja, U. "Securities Settlements in the Shadows." *Yale Law Journal Forum*, 126 (2016), 124.
- Waldfogel, J. "The Selection Hypothesis and the Relationship Between Trial and Plaintiff Victory." *Journal of Political Economy*, 103 (1995), 229–260.
- White, R. M. "Insider Trading: What Really Protects US Investors?" *Journal of Financial and Quantitative Analysis*, 55 (2020), 1305–1332.
- Zaring, D. "Enforcement Discretion at the SEC." *Texas Law Review*, 94 (2015), 1155.
- Zheng, X. "A Tale of Two Enforcement Venues: Determinants and Consequences of the SEC's Choice of Enforcement Venue After the Dodd–Frank Act." *Accounting Review*, 96 (2021), 451–476.