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Citation

Heese, Jonas, Ranjani Krishnan, and Hari Ramasubramanian. "The Department of Justice as a Gatekeeper in Whistleblower-Initiated Corporate Fraud Enforcement: Drivers and Consequences." *Journal of Accounting & Economics* 71, no. 1 (February 2021).

Published Version

<https://doi.org/10.1016/j.jacceco.2020.101357>

Permanent link

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The Department of Justice as a Gatekeeper in Whistleblower-Initiated Corporate Fraud Enforcement: Drivers and Consequences

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August 21, 2020

Abstract

We examine drivers and consequences of U.S. Department of Justice (DOJ) oversight of whistleblower cases of corporate fraud against the government. We find that the DOJ is more likely to intervene in and conduct longer investigations of cases that have a higher chance of victory and yield greater monetary proceeds, indicating that DOJ enforcement is influenced by its performance measures. DOJ intervention also affects the firm- and aggregate-level fraud environment. Firms subject to DOJ intervention improve their employee relations, internal controls, and board independence, and experience lower future whistleblowing risk. Whistleblowers avoid courts and agencies with low DOJ intervention rates. In contrast, we do not find that cases pursued by whistleblowers alone affect firms' or whistleblowers' behavior, suggesting that public enforcement through DOJ intervention has a greater deterrent effect on fraud than private enforcement by whistleblowers acting alone.

Keywords: Whistleblowing; Department of Justice; DOJ Enforcement; Performance Measures; False Claims Act.

JEL Classifications: G18; L51; M41

* Corresponding author: jheese@hbs.edu. Harvard Business School, Boston, MA 02163. We thank Bob Holthausen (editor) and Terrence Blackburne (referee) for helpful comments and suggestions. We also thank Elin Baklid-Kunz, Ken Merchant, K. Ramesh, Jason Schloetzer (discussant), Bhavya Singhvi (discussant), Jeffrey Wooldridge, and workshop participants at Michigan State University, the 2018 AAA Annual Meeting, and the 2019 MAS meeting. We thank Botir Kobilov for excellent research assistance.

1. Introduction

Regulatory agencies in the United States rely on the assistance of whistleblowers to detect corporate fraud.¹ As the litigating arm of the government, the United States Department of Justice (DOJ) assists defrauded regulatory agencies with the enforcement of the False Claims Act (FCA) by selecting the whistleblower cases it will litigate (Devins and Herz, 2003). The DOJ acts as a gatekeeper, evaluating whistleblower allegations case by case to separate legitimate from frivolous cases. Our study examines the drivers and consequences of DOJ intervention into whistleblower cases filed under the False Claims Act.

Whistleblowers are important for fraud enforcement. Whistleblowers can deter potential violators, motivate firms to improve their accounting and control systems (Bowen et al., 2010; Wilde, 2017), and provide information to regulators and litigators about a firm's fraudulent activities (Call et al., 2018). However, whistleblower allegations can sometimes be frivolous, wasting resources of the public and accused firms alike (Bowen et al., 2010). Although the DOJ has oversight over FCA whistleblower cases, there is sparse evidence on how it exercises its gatekeeper authority. Likewise, little research examines the consequences of DOJ intervention on firms' fraud control practices and the overall fraud environment. We study the drivers and consequences of the DOJ's gatekeeping role in the context of whistleblower allegations brought under the qui tam provisions of the FCA.

The qui tam provisions of the FCA allow whistleblowers to initiate lawsuits against firms that are alleged to have defrauded the government. The FCA whistleblower regime is critical in combatting corporate fraud against the government, with approximately 12,000 lawsuits and over \$50 billion in recoveries between 2000 and 2018 (DOJ, 2018a). Once a whistleblower files a qui tam lawsuit, it is placed under seal and the DOJ's Civil Fraud

¹ For example, the Department of Defense (DOD), the Department of Health and Human Services (HHS), the Environmental Protection Agency (EPA), and the Securities and Exchange Commission (SEC) rely on whistleblowers to support their enforcement activities.

Division investigates the case. The DOJ has the power to dismiss, intervene in, or decline a case. Dismissal implies that the case is terminated and the whistleblower cannot pursue the case on its own. Intervention implies that the DOJ takes over the litigation of the case, but the whistleblower obtains a share of the monetary proceeds.² Decline implies that the DOJ does not participate, but the whistleblower is free to pursue the case on its own. Historically, approximately 90% of DOJ-intervened cases have resulted in settlements. In cases where the DOJ declined and the whistleblower pursued the case, only 6.8% have resulted in settlements (Kwok, 2013; Lockman, 2015).

The objective of the DOJ is to curtail fraud by enforcing the law (DOJ, 2019). To that end, the DOJ's performance assessment and budgetary allocations from the U.S. Congress are affected by the percentage of cases won and the recovery rate of monetary proceeds. Our first analysis examines DOJ intervention into whistleblower cases as a function of factors that affect the likelihood of victory and the extent of monetary proceeds. Our second analysis examines the DOJ's investigative efforts to build a strong case to increase its likelihood of victory. Our third analysis examines the consequences of DOJ intervention for firms, whistleblowers, and the overall fraud environment. Theoretical studies (e.g., Heyes and Kapur, 2009) posit that the DOJ's responses to whistleblowing can affect the level of future whistleblowing activity as well as the efficacy of the whistleblowing mechanism to deter fraud. Our tests examine whether DOJ intervention is associated with changes in firms' control systems and the overall level of whistleblowing activity in the economy. Finally, we examine the relative deterrent effects of public enforcement through DOJ intervention versus private enforcement by whistleblowers acting alone.³

² We use the terms "select" and "intervene" interchangeably to refer to the DOJ's enforcement decision.

³ "Public enforcement" refers to enforcement actions taken by public parties (e.g., the DOJ). "Private enforcement" refers to enforcement actions taken by private parties (e.g., whistleblowers) (Duro et al., 2019).

Our study aims to address two empirical problems that plague fraud enforcement research. First, the pool of potential enforcement targets is unobservable, forcing researchers to analyze subsamples of *likely* enforcement targets (e.g., Correia, 2014; Heese, 2019; Kedia and Rajgopal, 2011). We can identify the pool of potential enforcement targets because we study the entire population of whistleblower allegations brought to the DOJ's attention.⁴ Our sample consists of 554 whistleblower allegations against publicly listed firms from 2002 to 2012. The second problem in extant research is to design a measure of enforcement effort. We use investigation length, i.e., the period between the filing of the case with a U.S. District Court and the DOJ's case-selection decision as the effort measure. During this period, investigations remain under seal to permit the DOJ to conduct a covert investigation without the defendant's knowledge. This limits the possibility that the investigated firm can influence the investigation, thus providing a clean measure of the DOJ's investigative efforts.

Results indicate that both the DOJ's likelihood of intervention and the investigation length are influenced by the prospect of victory and the amount of monetary proceeds likely to be recovered from the case. Specifically, the DOJ is more likely to intervene in and conduct longer investigations of whistleblower cases when it has more resources (such as cases involving a federal agency that dedicates more resources to fraud enforcement), and where it has higher expected recovery of monetary proceeds (such as defendant firms with higher liquidity or profitability). In turn, the DOJ is less likely to intervene in cases with a lower likelihood of victory (such as cases involving target firms that are important suppliers to the allegedly defrauded agency, have greater market power, or have complex operations). We find that investigations are shorter when the target firm is a powerful defendant (evidenced by its political contributions, or market power).

⁴ Research that examines SEC enforcement actions faces difficulties in identifying the firms that are likely to have committed fraud. Such tests require a control sample of firms that were likely to engage in fraud but were passed over by the SEC, which is unobservable. Research therefore uses proxies, such as firms with poor earnings quality, as the control sample.

Next, we investigate the consequences of DOJ intervention for the design of firms' control systems. Using a difference-in-differences methodology and exploiting the staggered nature of FCA whistleblower lawsuits, we find that firms subject to DOJ intervention improve their internal controls, employee relations, and board independence. Firms that experienced DOJ intervention had lower future whistleblowing compared to firms that did not experience DOJ intervention. Turning our analysis to the aggregate level of the fraud environment, we find that whistleblowers avoid filing lawsuits with district courts or against federal agencies with low DOJ intervention rates.

Finally, we examine the differences in outcomes of public enforcement through DOJ intervention and private enforcement through whistleblowers acting alone. We find evidence that DOJ intervention is relatively more effective in reducing the likelihood of future fraud and improving the fraud control environment than whistleblowers acting alone, suggesting that public enforcement has a greater deterrent effect on fraud than private enforcement. When interpreting the results pertaining to the consequences of DOJ intervention as well as the relative effects of public and private enforcement, it is important to note that a limitation of our setting is that firms are not randomly assigned to public or private enforcement, potentially creating selection bias.

Our study makes three contributions. First, by providing insights into how the DOJ exercises its gatekeeper role in the context of the FCA whistleblower regime, we add to prior studies that show the important role of whistleblowers in fraud detection (Call et al., 2018; Dyck et al., 2010; Heese and Pérez-Cavazos, 2019) and prevention (Wilde, 2017).⁵ Because the efficacy of the whistleblower program hinges on the actions of the litigating arm of regulators, namely the DOJ, it is important to examine the drivers and consequences of the

⁵ Engstrom (2013) finds that DOJ intervention is based on many factors that are not limited to case merit. We extend Engstrom (2013) and examine the drivers and consequences of DOJ intervention for firms, whistleblowers, and federal agencies. Lee and Xiao (2018) review the accounting literature on whistleblowing.

DOJ's actions related to whistleblower cases. Prior research alludes to factors that could influence the DOJ's intervention decision (Depoorter and De Mot, 2006). However, empirical evidence is scarce. We show that performance measures used to assess the DOJ (i.e., victory likelihood and monetary proceeds) influence its enforcement decisions.

Second, our study provides empirical evidence on the consequences of the DOJ's enforcement decisions into whistleblower allegations. Literature (e.g., Heyes and Kapur, 2009) posits that the level of whistleblowing activity as well as the efficacy of whistleblowing to deter fraud depend on the responses to whistleblowing. However, empirical evidence is limited. We show that DOJ intervention reduces future fraud risk at the firm level by improving internal controls, employee relations, and board independence. These control system changes are not present for firms where the whistleblowers take the case to victory without DOJ intervention. Thus, public enforcement via DOJ intervention appears to have a greater effect on firm behavior than private enforcement via whistleblowers. This finding contributes to the literature on private and public enforcement as alternative fraud enforcement mechanisms (e.g., La Porta et al., 2006; Jackson and Roe, 2009) and sheds light on the debate regarding the efficacy of public versus private enforcement mechanisms (e.g., Schantl and Wagenhofer, 2020). At an aggregate level, DOJ intervention influences future whistleblowing activity for federal agencies as well as district courts that rely on these tips for fraud enforcement. DOJ intervention does not simply result in litigation and penalties, but also motivates firms to improve control systems, employee relations, and board independence, which can reduce future fraud. At the macro-level, DOJ intervention induces whistleblowers to come forward. These findings highlight the effects of the DOJ's gatekeeper role for the future fraud environment at the firm and the aggregate level.

Finally, while our results are based on FCA whistleblower cases where the fraud affects the public sector, they also provide insights for other whistleblower regimes that rely

on the DOJ as its primary litigator.⁶ For example, the DOJ's focus on victory likelihood and monetary proceeds is not unique to the FCA setting, and could affect the DOJ's enforcement decisions in other whistleblower regimes such as anti-trust, cartel behavior, and other anti-competitive behaviors. In such settings, fraudulent firm behavior directly affects private sector actors.

2. Prior Literature, Institutional Background, and DOJ Decision-Making

2.1. Theory and Literature

Determining the efficacy of enforcement mechanisms to curtail fraud has been the focus of research in accounting, economics, finance, and law, and is an important policy issue across countries. Conceptually, enforcement theory (Djankov et al., 2003; Shleifer, 2005) argues that enforcement strategies can be differentiated by their degree of public control. At one end of the spectrum is a total private enforcement mechanism where private individuals such as auditors, analysts, employees, private litigators, or other whistleblowers provide fraud control with minimal participation from public agencies such as the DOJ. At the other end of the spectrum is a public enforcement mechanism that vests all oversight with agencies who use their expertise and weigh costs and benefits to determine enforcement. In the middle of the continuum is a mixed regime of a private-public partnership (such as qui tam provisions under the FCA with DOJ intervention), where the public litigator partners with the whistleblower.

Public-private partnerships can be effective in curtailing fraud. Despite its efforts, the complexities of misconduct can limit the ability of a public litigator such as the DOJ to detect fraud. Even if it is able to detect fraud, the DOJ could struggle to assemble evidence to establish beyond reasonable doubt that fraud has occurred. Public-private partnerships can

⁶ For example, the DOJ's Securities and Financial Fraud Unit works closely with regulatory partners at the SEC and the Commodity Futures Trading Commission to focus on financial fraud (White, 2014). The DOJ also works with SEC enforcement staff in a majority of criminal securities fraud prosecutions, and some accounting fraud.

enrich the information environment by tapping into the knowledge of stakeholders in close proximity to the actual fraud. For example, relative to the DOJ, customers are more likely to be aware of overpricing, suppliers or competitors are more likely to know about side-payments or bribes, and employees are more likely to know about corruption. Research shows that whistleblowing improves enforcement outcomes and results in higher penalties for culpable executives (Call et al., 2018). However, whistleblowers motivated by monetary gain or malice could push forward cases with net social costs. Thus, the role of the DOJ becomes salient in distinguishing meritorious from non-meritorious cases.

2.2. Whistleblowing under the False Claims Act

Under the FCA’s whistleblower qui tam provisions, private citizens (or “relators”) can sue a firm on behalf of the government for various types of fraud, such as mispricing, corruption, or side payments in connection with government contracts and programs.⁷ The FCA is a critical player in the fraud landscape with 17,800 enforcement cases and aggregate recoveries of \$59 billion for cases filed during the period 1987-2018 (DOJ, 2018a). Figure 1, adapted from Heese and Pérez-Cavazos (2019), shows the enforcement timeline for qui tam cases.

– Insert Figure 1 here –

A qui tam lawsuit begins when the whistleblower files a lawsuit on behalf of the government in a U.S. District Court. A qui tam lawsuit cannot be identical to a previously filed lawsuit, an existing enforcement action, or a publicly disclosed claim.⁸ The Fraud Section of the Commercial Litigation Branch within the DOJ’s Civil Division partners with the allegedly defrauded regulatory agency (e.g., the HHS if it is a health care fraud) to

⁷ FCA investigations can also be initiated by actors other than whistleblowers, such as contracting officers or government auditors. These are called non-qui tam cases and are not part of our sample.

⁸ In *Graham Cty. Soil & Water Conservation Dist. v. United States ex rel. Wilson* (2010) the Supreme Court stated that the goal is to achieve “the golden means between adequate incentives for whistleblowing insiders [...] and discouragement of opportunistic plaintiffs who have no significant information to contribute of their own” (quoting *United States ex rel. Springfield Terminal Ry. Co. v. Quinn*, 14 F.3d 645, 649 (D.C. Cir. 1994)).

investigate the claims in conjunction with the relevant U.S. attorney's office (DOJ, 2018b). Within the allegedly defrauded agency, the Office of Inspector General (OIG) is responsible for the investigation. In instances where the Criminal Division of the DOJ conducts parallel criminal proceedings, the Criminal Division shares its insights with the Civil Division (and vice versa) to ensure efficient use of scarce investigative resources (DOJ, 2012a). The whistleblower and its counsel also contribute to the DOJ investigation and can assist in the review and analysis (Durrell, 2012). The defrauded agency assists in the investigation but does not have the authority to manage the legislative process for the DOJ. The lawsuit remains under seal, initially for a period of 60 days, while the DOJ conducts its investigation, with extensions granted by the court as deemed appropriate (DOJ, 2012b). The confidentiality seal allows the DOJ to investigate the lawsuit without the knowledge of the defendant firm. Whistleblowers are precluded from discussing the case with the press or other parties, and face risk of case dismissal if they violate the seal requirements (Hoyer, 2013).

After concluding the investigation, the DOJ decides whether to dismiss, intervene in, or decline the case. The dismissal option, which prevents the whistleblower from proceeding with the case independently, is used sparingly.⁹ If the DOJ decides to intervene, it takes primary responsibility for the litigation of the case. The DOJ can also decline to intervene and allow the whistleblower to proceed on its own. In such cases, although the government has a right to a portion of the recovery if the whistleblower wins the case, the government is not a party to the proceedings. If the DOJ declines to intervene and the case is successful, the whistleblower earns 25-30% of the monetary proceeds. If the DOJ intervenes and the case is successful, the whistleblower earns 15-25%. Net proceeds from the lawsuit are transferred to the U.S. Department of the Treasury (see 31 U.S.C. § 3730).

⁹ Since 1986, only 5% of FCA cases have been dismissed (Kwok, 2013).

The DOJ intervenes in approximately 25% of all cases filed (DOJ, 2012b). After the DOJ makes its decision to intervene, the seal is lifted, and the defendant firm is notified within 120 days. Various forms of settlements are possible including monetary penalties, government oversight, bar from future government contracting, and criminal actions against the firm or managers. The DOJ negotiates each settlement with the defendant and considers the financial condition of the defendant in determining the settlement amount as well as payment terms (Elmer and Gourley, 2002). Substantial power vests with the DOJ in the FCA litigation process, beginning with the fundamental question of whether to intervene in an FCA case. In the following section, we discuss factors likely to drive the DOJ's intervention decision.

2.3. DOJ Decision-Making Process

In theory, the DOJ is supposed to execute its gatekeeper function for the greater public good by selecting cases that protect public interest (Laffont and Tirole, 1991; Harrington, 1988). However, the DOJ faces constant pressure to demonstrate efficient stewardship of public resources. Section 2(b)(5) of the Government Performance and Results Act (GPRA) of 1993 requires every federal agency to develop five-year strategic plans linked to objective outcomes (Kravchuk and Schack, 1996). With continually increasing costs of trial preparation, the DOJ faces pressure to demonstrate results to justify budgetary allocations.¹⁰

Examination of DOJ's Annual Performance Reports for the period 2002-2012 (our sample period) indicates that DOJ's performance is assessed exclusively by two measures: Percentage of cases won, and percentage of cases in which at least 85% of the claim is recovered (e.g., DOJ, 2009). Appendix A summarizes the DOJ's targeted and actual performance across these two metrics for the study period. The performance measurement system creates incentives for the DOJ to pursue observable outputs over others (Engstrom,

¹⁰ From fiscal year 2004 to 2012, the DOJ's Civil Division's budget increased by 20%, while the number of new qui tam cases handled increased by nearly 50%.

2013). Perusal of DOJ's annual performance plans and budget submissions to Congress provides additional insights. First, the DOJ is considered a profit center for the U.S. Treasury and highlights its return on investment in its performance reports, emphasizing the amount of settlements collected from the cases it litigates (e.g., DOJ, 2012c).¹¹ Second, the DOJ can receive funding from its client agencies (such as HHS). However, these reimbursements dropped by almost 20% during the period 2004-2012, increasing the DOJ's reliance on budget allocations from the federal government (DOJ, 2012c).

Demonstrating satisfactory performance on its two measures (cases won and monetary claims) is critical to the DOJ for several reasons. First, its performance influences budget allocations from the federal government (Heinrich, 2007). Second, media coverage of its performance attracts attention from the public and politicians (e.g., James and John, 2007; Moynihan, 2015). Third, politicians face pressures from their constituencies regarding the fiscal accountability of government institutions such as the DOJ (Boyne et al., 2009). Finally, DOJ employees with career concerns must find a way to display their abilities to the labor market (e.g., DeHaan et al., 2015; Dewatripont et al., 2000). Next, we discuss how the DOJ can increase performance given its two performance measures – cases won and monetary claims.

Performance Measure 1: Cases Won

Resource Constraints

The DOJ's chances of victory are higher when it presents a meritorious case, which is a function of resources available. *Resource Constraints* are a function of three factors: (1) resources available for fraud enforcement at the OIG of the allegedly defrauded agency, (2) resources available at the local U.S. attorney office responsible for the investigation, and (3)

¹¹ In the budget submission for fiscal year 2013, the DOJ mentions (p. 23) “few profit centers can boast of a return on investment comparable to the Civil Division’s: In FY 2011, \$98 were either defeated or recovered for EVERY dollar spent.” Further (p. 25) “The Fraud Section has returned almost \$7 for every \$1 provided by Congress.”

information resources from parallel criminal proceedings against the firm. To measure the resources available for fraud enforcement, we scale the OIG budget of the allegedly defrauded agency by the total number of whistleblower allegations per year (including allegations against private firms). The intuition for this measure is that, because the DOJ relies on the support of the allegedly defrauded agency in successfully litigating cases, it is more likely to pursue cases that involve an agency that dedicates more resources to fraud enforcement. Data for this variable is obtained from the agencies' budget requests to Congress. We label this measure *OIG Budget*. We measure resources available at the local U.S. attorney office using the natural logarithm of the *Number of Cases* pending specifically for civil cases per U.S. attorney office at the beginning of the year of the whistleblowing event. Existence of a parallel criminal proceeding increases information resources available to the Fraud Section of the Commercial Litigation Branch within the DOJ's Civil Division (DOJ, 2018b). *Criminal Case* takes the value of 1 if the firm is subject to a parallel criminal case, and 0 otherwise. Information on parallel criminal proceedings is obtained from Violation Tracker.¹²

Powerful Defendant

The DOJ's chances of victory are likely to be *lower* in cases involving powerful defendants. We measure *Powerful Defendant* using three proxies – political contributions, agency dependence, and market power. Politically connected firms often obtain favorable treatment by courts (Laffont and Tirole, 1991; Stigler, 1971) and have the resources to fight DOJ litigation (e.g., Ansolabehere et al., 2003; Hillman et al., 2004). We measure *Political Contributions* as the natural logarithm of the sum of the three-year moving average of firms' lobbying and Political Action Committee (PAC) contributions (e.g., Correia, 2014). We

¹² A concern with this measure is that it could primarily capture case merit. To explore this, we examine whether a larger percentage of cases with a parallel criminal investigation result in settlements relative to cases without a parallel criminal investigation. In our sample, about 33% of cases with a parallel criminal case result in a civil settlement, a percentage that is similar in magnitude to the average number of cases resulting in a settlement, which is about 26%.

measure agency dependence on the firm using *Non-Competed Contracts*, defined as a firm's non-competed contract dollar volume with the allegedly defrauded agency divided by the agency's total non-competed contract dollar volume in the year prior to the whistleblowing event.¹³ Market concentration also plays an important role in firm conduct (Martin, 2010). A firm in a concentrated market can lose monopoly rents if it loses an FCA lawsuit. Therefore, it is likely to launch an aggressive defense (Zinn, 2002), which reduces the likelihood that the DOJ will win the case. We measure market concentration as the Herfindahl-Hirschman Index (*HHI*), i.e., the sum of the squares of market share (in revenues) of each firm within an industry (measured at the two-digit Standard Industry Classification (SIC)-code level).

Case Complexity

The DOJ is less likely to win complex cases, reducing its willingness to intervene. Case complexity is likely associated with firm complexity. We compute *Complex Firm* as the average scaled rank of firm age, number of business segments, and geographical segments.

Performance Measure 2: Monetary Claims

The second performance measure is the *extent of monetary claims recovered*. The DOJ is more likely to intervene if the monetary claims from the case are higher, or a firm's ability to pay the claims are higher.

Size of Claim

To measure the size of the claim, we use the natural logarithm of a firm's contract dollar volume with the allegedly defrauded agency, denoted *Contract Volume Defrauded Agency*.¹⁴ USAspending.gov provides data on government contracts to compute this variable.

Ability to Pay

¹³ The Federal Procurement Data System classifies each contract into seven categories according to the level of competition. We consider that a contract has not been subject to competition when the government's reported category is not 'A', 'D', 'E', 'F', or 'CDO'.

¹⁴ A more direct measure would be the size of the actual claim. However, a review of all lawsuits resulted in less than 20 (out of 439) lawsuits that included information on the size of the claim. Hence, the size of the actual claim is largely unobservable in our setting.

The DOJ is more likely to intervene in cases where it has potential to collect a higher percentage of the monetary proceeds. These cases involve firms with better *Liquidity* and greater earnings (*ROA*). *Liquidity* is the natural logarithm of current assets minus current liabilities at the beginning of the year, while *ROA* is the three-year average of return on assets during the year of whistleblowing lawsuit and the two years preceding the lawsuit.¹⁵

Whistleblower Characteristics

Whistleblower Resources

To conserve scarce public resources, the DOJ could be less likely to intervene when whistleblowers have resources to pursue the case on their own (Kwok, 2013). We use the experience of the law firm representing the whistleblower as a proxy for whistleblower resources. *Law Firm Experience* is measured by the natural logarithm of the number of FCA cases the law firm has represented.

Whistleblower Reputation

The DOJ is more likely to intervene in FCA cases of whistleblowers that have previous experience of a successful settlement. Such whistleblowers are more likely to bring meritorious cases to the DOJ. *Successful Whistleblower* equals 1 if the case is brought by a whistleblower who had previously reached a settlement for another FCA case. *Unsuccessful Whistleblower* equals 1 if the case is brought by a whistleblower that filed a case in the past, which did not result in a settlement. Such cases are less likely to be considered by the DOJ as meritorious, decreasing the DOJ's likelihood of intervention.

2.4. Model to examine Drivers of DOJ Intervention and Investigative Effort

Our first two analyses examine the factors driving the likelihood of DOJ intervention and investigation length. While DOJ intervention is observable, enforcement effort is not. We

¹⁵ We find consistent results if we use the firm's cash scaled by total liabilities, debt-to-equity ratio (total liabilities / total equity), or current ratio (current assets / current liabilities) as alternative liquidity measures (untabulated). We acknowledge that the measures of a firm's ability to pay could partly capture a firm's power.

use investigation length as a proxy for DOJ effort (Heese et al., 2017). *Investigation Length* is the number of days between the initial filing of the case with a U.S. District Court and the DOJ's case-selection decision (see Figure 1). Because a DOJ investigation remains under seal to permit the DOJ to conduct a covert investigation without the defendant's knowledge, it provides a measure of DOJ investigative effort. The basic model uses the subset of firms subject to FCA whistleblower lawsuits and is as follows (all subscripts are suppressed):

$$Y = f(\text{Resource Constraints, Powerful Defendant, Case Complexity, Size of Claim, Ability to Pay, Whistleblower Resources, Whistleblower Reputation, Firm Characteristics, Firm Governance Characteristics, Year FE}) \quad (1)$$

Y is the dependent variable of interest and is either *Selected Case* or *Investigation Length* (as defined above). *Selected Case* takes the value of 1 in the year the whistleblower filed a lawsuit if the DOJ selected the case for enforcement, and 0 if the DOJ declined to intervene, dismissed the case or filed a "Notice of no Election." In other words, we partition our sample of lawsuits into cases that were selected by the DOJ (*Selected Case* equal to 1), and all other cases (*Selected Case* equal to 0). When *Selected Case* is the dependent variable, equation 1 uses Probit regression.¹⁶ When *Investigation Length* is the dependent variable, equation 1 uses Poisson regression.¹⁷

Firm Characteristics

We control for dollar volume of government contracts (logarithm of *Contract Volume*), and for *Size*, defined as the natural logarithm of a firm's market value of equity.

Firm Governance Characteristics

Fraud is more likely in firms with weaker governance (Bowen et al., 2010). Thus, we include several governance variables. *Weak Internal Controls* uses the fitted value of internal control weakness obtained from estimating the Doyle et al. (2007) model. This variable takes

¹⁶ We find consistent results using a linear probability model (untabulated).

¹⁷ We find consistent results using negative binomial or OLS regression (untabulated).

the value of 1 if the firm belongs to the quartile with the highest likelihood of an internal control weakness, and 0 otherwise (see Bowen et al., 2010).¹⁸ We include percentage of *Inside Directors* (e.g., Beasley, 1996) and board-meeting frequency (*Board Meetings*) (Ettredge et al., 2011).¹⁹ *Employee Relations* uses the Environmental, Social, and Governance (ESG) statistics compiled by Morgan Stanley Capital International (MSCI) and takes the value of 1 if the count of employee strengths is greater than the count of employee concerns, 0 otherwise. Appendix B provides descriptions of all variables. We include year fixed effects, and cluster standard errors by defrauded agency. Across all models, the Variance Inflation Factors (VIFs) are lower than 10, indicating that multicollinearity is not a problem (Wooldridge, 2015).

3. Sample and Results

3.1. Sample

Information about FCA whistleblower cases are from Engstrom (2013) who collected the data from the DOJ under the Freedom of Information Act (FOIA).²⁰ The data included the caption of the case, the date received and filed, docket number, judicial district, law firm, and DOJ intervention decision. We supplement this dataset with hand-collected data on the details of the whistleblower (e.g., number of cases filed by the whistleblower in the past), the accused firm (e.g., contract volume with the government), the local DOJ office (e.g., workload of the DOJ office), and U.S. District Court.

¹⁸ The advantage of using predicted internal control weaknesses instead of actual internal control weaknesses is that it allows us to use the full sample from 2002 to 2012 for estimations. Actual internal control weakness data is only available from 2004 onwards.

¹⁹ Data for the governance variables are available for only a subset of our sample. We follow Hanlon et al. (2003) by setting missing values to 0 but include separate indicator variables (*Missing Indicators*) set equal to 1 when the respective governance data are unavailable, and 0 otherwise. We report separate results for all tests including and excluding these governance variables.

²⁰ Prior studies use whistleblower data from two sources: the press, and the Occupational Health and Safety Administration (OSHA) (e.g., Bowen et al., 2010; Call et al., 2016; Call et al., 2018; Dyck et al., 2010; Wilde, 2017). Bowen et al. (2010) note that the press sample likely reflects media bias towards more visible and larger firms, while the OSHA sample requires that the employee not only engages in whistleblowing but also files a discrimination complaint. Some prior studies include FCA whistleblower cases in their sample (e.g., Bowen et al., 2010; Call et al., 2018).

Our dataset contains 5,611 unique lawsuits filed by whistleblowers from 1987 to 2012. We manually identify publicly listed defendant firms. This process results in a sample of 898 unique lawsuits against 749 unique publicly listed firms, and 1,224 lawsuit-firm observations. We restrict the sample to lawsuits filed from 2002 onwards, the first year of available data for the variables used in our analyses. After excluding cases with missing data, we identify 439 unique lawsuits against 332 unique firms, yielding 554 lawsuit-firm observations between 2002 and 2012 (see Table 1, Panel A).

Table 1, Panel B provides a breakdown of the lawsuit-firm observations by year in absolute (Column 1) and relative terms (Column 2), cases selected by the DOJ in absolute (Column 3), and relative terms (Column 4), and the settlements associated with these cases in absolute (Column 5), and relative terms (Column 6).²¹ Out of the 554 observations, 106 (19.1%) were selected by the DOJ. Panel C of Table 1 shows sample composition by two-digit SIC codes. The three industries with the most lawsuit-firm observations are “Chemicals and Allied Products” (20.8%), “Health Services” (11.9%), and “Measuring, Analyzing and Controlling Instruments” (9.4%). Panel D of Table 1 reports the number of lawsuit-firm observations per defrauded agency for our sample. The three agencies with the most observations and largest settlements are the HHS, Department of Defense (DOD), and General Services Administration (GSA). Table 1, Panels E and F contain data on a subset of 279 unique lawsuits (371 lawsuit-firm observations) for which we had access to court documents from the Public Access to Court Electronic Records (PACER) system. Table 1, Panel E provides details by allegation and indicates that overbilling allegations constitute the majority of the lawsuits.²² Table 1, Panel F contains details on whistleblowers and indicates that in 67.1% of the lawsuit-firm observations whistleblowers are (former) employees.

²¹ We have fewer cases for 2012 because many of these cases were under seal at the time of data collection.

²² Some allegations can also result in financial misreporting. For example, overbilling can lead to overstated revenues, making it an attractive tool to manage earnings (Heese, 2018). FCA-overbilling cases are often

– Insert Table 1 here –

Table 2 contains summary statistics for the lawsuits used in our analyses and indicates that lawsuits intervened by the DOJ take longer to investigate (1,202 days) relative to lawsuits declined (570 days) or dismissed (478 days). Declined lawsuits that the whistleblower took to fruition settled in 485 days. Lawsuits intervened by the DOJ result in larger settlements (about \$51 million with an average whistleblower share of \$7.3 million) than lawsuits that whistleblowers settled on their own (about \$9 million with an average whistleblower share of \$2.4 million). Our sample also includes about 40 lawsuits in which the DOJ did not make a selection decision (termed “notice of no election”) because the court did not grant the DOJ additional time to finish its investigation. Out of those 40 cases, whistleblowers took 9 to fruition with 1,144 days to settle and an average settlement amount of \$18.9 million.

– Insert Table 2 here –

Table 3 reports descriptive statistics on the variables used in our tests of the drivers of DOJ intervention. In our sample, the DOJ intervenes in approximately 19.1% of the FCA whistleblowing lawsuits. The DOJ intervention rate increases to 74.6% when we only consider intervened cases and cases in which whistleblowers reached a settlement without DOJ intervention. The average investigation lasts approximately 786 days, which is consistent with previous studies (DOJ, 2012b; Engstrom, 2014). The average OIG budget per lawsuit is about \$5 million, and the average local U.S. attorney office has 2,038 civil cases pending. About 1.1% of lawsuits are subject to a parallel criminal investigation. The average contract volume with the defrauded agency is \$545 million. The average firm subject to whistleblowing is 29 years old, has \$1,584 million of current assets in excess of current liabilities, ROA of 3.2%, approximately 3 business as well as geographic segments, and

included in studies that focus on whistleblower cases related to corporate financial misconduct. About 50% of the press sample used by Bowen et al. (2010) consists of FCA cases related to overbilling.

operates in a competitive industry. The fraction of non-competed contracts with the allegedly defrauded agency is 3.4% for the average firm. The average law firm represented 41 FCA lawsuits. 3.7% of the cases are filed by whistleblowers that have previously been involved in a case that resulted in a settlement and 10.1% of the cases are filed by whistleblowers that have previously been involved in a case that did not result in a settlement. The average dollar government contract volume for sample firms is \$679 million, and the market value of equity is \$30 billion. 25% of the firms in our sample have weak internal controls. The average firm has an inside director ratio of 42% and 9 board meetings. Approximately 28% of all firms have good employee relations. To mitigate the concern that outliers affect our results, we winsorize all variables at the 1st and 99th percentile throughout all tests.²³

– Insert Table 3 here –

3.2. Results

3.2.1. DOJ Intervention Decision

Table 4 examines the drivers of the DOJ case-selection decision. The DOJ is more likely to select lawsuits involving agencies with a higher OIG budget per case, and lawsuits with a parallel criminal proceeding, suggesting that resource constraints affect DOJ intervention.²⁴ Lawsuits with a parallel criminal case have a 15.2 percentage points higher likelihood of intervention. DOJ intervention likelihood is lower in lawsuits against powerful defendants such as firms operating in less-competitive markets (measured by *HHI*) and firms with a larger fraction of *Non-Competed Contracts*; a one-standard deviation increase in *Non-Competed Contracts* decreases intervention likelihood by 3.9 percentage points. The DOJ is less likely to intervene in cases involving complex firms. The coefficients on *Contract Volume Defrauded Agency*, *Liquidity*, and *ROA*, indicate that the DOJ is more likely to select cases

²³ We find similar results for our primary analyses when we do not winsorize the variables (untabulated).

²⁴ We find similar results when we replace OIG budget scaled by the number of whistleblower cases with the logarithm of the OIG budget and the logarithm of the number of whistleblower cases (untabulated).

against firms where it expects larger claims and a higher ability to collect these claims.²⁵ The DOJ is also more likely to select cases filed by previously successful whistleblowers and less likely to select cases filed by previously unsuccessful whistleblowers, suggesting that whistleblowers' reputation affects DOJ intervention. Overall, the findings suggest that DOJ intervention is influenced by its performance measures. The DOJ selects lawsuits that have a higher likelihood of victory and higher recovery rate of monetary proceeds.

– Insert Table 4 here –

3.2.2. DOJ Investigation Length

Table 5 presents the results from the analysis of investigation length. Recall that investigation length is our proxy for DOJ effort. DOJ investigations are longer when the DOJ has more resources as the positive and significant coefficients on *OIG Budget* and *Criminal Case* suggest. Investigations are also longer when the number of civil cases pending with the local U.S. attorney office is larger, suggesting that resource constraints affect investigation length. The DOJ spends fewer days investigating cases against firms with larger political contributions and firms with greater market power. Investigation length is greater for firms with higher ROA and liquidity. These results indicate that the DOJ's investigative efforts are influenced by its two main performance measures, i.e., the number of cases won, and the size of the monetary proceeds. DOJ investigations are also shorter for cases filed by previously unsuccessful whistleblowers, suggesting that whistleblowers' reputation affects DOJ investigative efforts.

– Insert Table 5 here –

3.2.3. DOJ Intervention and DOJ Investigation Length for Cases with Merit

²⁵ We control for *Contract Volume* in our tests. Thus, a potential concern is that the significance of the coefficient on *Contract Volume Defrauded Agency* is driven by the inclusion of this control variable. We re-estimate the tests presented in Table 4 excluding *Contract Volume* and find consistent results (untabulated).

A concern with the results in Tables 4 and 5 is that the DOJ intervention decision and investigation length could be driven by underlying case merit, which could be correlated with our variables of interest, resulting in omitted variable bias. To address this concern, we exploit an institutional feature of the FCA, which allows the whistleblower to pursue a case in which the DOJ declines to intervene. In its budget submissions to Congress, the DOJ emphasizes that additional resources would allow for more investigations (e.g., DOJ, 2012c). This suggests that the DOJ may sometimes abstain from intervening in or thoroughly investigating meritorious cases due to resource constraints. We examine DOJ intervention and DOJ investigation length within the sample of intervened lawsuits and cases in which whistleblowers reached a settlement without DOJ intervention (i.e., points 1, 2a, and 3a in Table 2).²⁶ We tabulate the results in Table 6. The DOJ could decline a meritorious case or spend less time investigating it because it (a) does not assess them as winnable, (b) believes that the whistleblower could take the case to its fruition (in which case the DOJ still obtains the majority of the proceeds), or (c) is unable to conduct a satisfactory investigation due to resource constraints.

Results in Table 6, Column 1 are largely similar to the results presented in Table 4, but differ along two aspects. First, within this sample of successful cases, we do not find that the coefficients on the measures of a firm's ability to pay and the size of the potential claim are statistically significant. One interpretation of this finding is that both successful whistleblowers and the DOJ can identify firms that have significantly defrauded the government and are likely able to pay the claim. This interpretation is supported by the second difference we observe. Specifically, we find that within this sample of successful cases, the coefficient on *Law Firm Experience* is negative and statistically significant at $p < 0.01$.²⁷ This

²⁶ We also examine DOJ intervention decision using the sample of intervened and declined lawsuits (i.e., points 1 and 2 in Table 2). The results from these untabulated tests are similar to those tabulated in Table 4.

²⁷ We also explore whether the results for *Law Firm Experience* are driven by outliers (untabulated). To do so, we obtain the Cook's Distance from our model and do not find observations with a Cook's Distance of larger

suggests that within the subset of successful cases, the DOJ is less likely to intervene in cases when whistleblowers have resources to pursue the case on their own. These experienced law firms, in turn, can focus on winnable cases, explaining the first difference we observe. Overall, the results are consistent with the results in Table 4 and mitigate the concern that case merit drives our results.

Results in Table 6, Column 2 are largely similar to the results presented in Table 5, but differ along two dimensions. First, we no longer find that the coefficients on the measures related to resource constraints are statistically significant, suggesting that within the sample of cases with merit, resource constraints do not affect DOJ investigative efforts. Second, we find that within the sample of cases with merit the DOJ spends more days examining cases with larger claims, consistent with the notion that the size of the monetary proceeds affects DOJ investigation efforts.

– Insert Table 6 here –

4. Consequences of DOJ Intervention

4.1. Consequences of DOJ Intervention for Firms

DOJ intervention could help in deterrence of fraud if firms that experienced intervention improve their control systems to reduce future fraud incidents. For example, improved employee relations could increase employees' willingness to report issues internally, enabling firms to resolve the issues before they rise to the level of fraud (Stubben and Welch, 2019). We examine four types of control system consequences from DOJ intervention: strength of internal controls, employee relations, board independence, and future whistleblowing activity. For the first three consequences, we use the following difference-in-differences methodology (all subscripts are suppressed):

than one. We also compare the values of *Law Firm Experience* in declined cases with and without settlement and find that they have similar maximum values. Thus, our results for *Law Firm Experience* are unlikely to be explained by outliers.

$$Y = \beta_0 + \beta_1 Treated + \beta_2 Post + \beta_3 Treated \times Post + Controls + Fixed\ Effects + \epsilon \quad (2)$$

Y is the dependent variable of interest and is either *Weak Internal Controls*, *Employee Relations*, or *Independent Directors*. *Weak Internal Controls* is defined as before. *Employee Relations* is computed using the Environmental, Social, and Governance (ESG) statistics compiled by Morgan Stanley Capital International (MSCI). The database contains indicators that identify positive and negative employee relations practices. Positive employee relation practices include union relations, cash profit sharing, employee involvement through employee stock plans, retirement benefit plans, employee health and safety programs, supply chain labor standards, and best-in-class management performance. Negative employee relation practices include union relations concerns, workforce health and safety concerns, significant workforce reductions, inadequate retirement benefit plans, supply chain controversies, and employee controversies such as restrictions of employee rights. *Employee Relations* takes the value of 1 if the count of employee strengths is greater than the count of employee concerns, 0 otherwise. *Independent Directors* is the proportion of independent directors on the board and is a measure of governance strength (e.g., Brickley et al., 1994).

We estimate equation 2 for each of the three independent variables using OLS. The main variable of interest is the interaction between *Treated* and *Post*, which captures the difference-in-differences effect of the changes in the dependent variable. We define *Treated* as 1 throughout the sample period if the FCA lawsuit was intervened by the DOJ, and 0 otherwise. *Post* is set to 1 in the years following the DOJ intervention decision (i.e., when the firm becomes aware of the DOJ investigation), and 0 in the years before the FCA whistleblowing lawsuit was filed.²⁸ Following Heese and Pérez-Cavazos (2019), we compare the period before the filing of the lawsuit to the period after the DOJ's intervention decision

²⁸ For firms with multiple FCA lawsuits, treatment and control groups are determined based on the first lawsuit intervened by the DOJ. As a robustness test, we restrict our analyses to firms with only one FCA lawsuit during the sample period. We obtain qualitatively similar results.

(and drop firm-year observations during the investigation period) to capture changes at the firm before the whistleblower accused the firm of wrongdoing compared to the period after the DOJ decided to intervene in the case. We control for *Contract Volume*, *Size*, firm, and year fixed effects in these analyses.

Table 7, Panel A contains the results. In Column 1, the coefficient on *Treated x Post* is negative and statistically significant, indicating that DOJ intervention reduces the likelihood of future internal control weaknesses.²⁹ Column 2 reveals a positive and significant coefficient on the interaction between *Treated x Post* when the dependent variable is *Employee Relations* indicating that firms subject to DOJ intervention improve their employee relations. Column 3 indicates that firms subject to DOJ intervention increase the proportion of independent directors. These results are also economically significant. DOJ intervention reduces the likelihood of *Weak Internal Controls* by 11.5 percentage points, increases the likelihood of improvement in *Employee Relations* by approximately 13 percentage points, and increases the proportion of independent directors on the board by approximately 8 percentage points. These results suggest that firms that experienced DOJ intervention improve their control systems (e.g., Bowen et al., 2010; Wilde, 2017).

Table 7, Panel A also tabulates results from tests examining changes in employee relations in more detail. The primary dependent variables in these tests are several individual strengths of *Employee Relations*.³⁰ We also examine changes in compensation more directly. Similar to Call et al. (2016), we measure stock options granted to the average rank-and-file employee as the difference between the total number of options granted by the firm and the

²⁹ This model does not include the main effect of *Treated*, which is measured at the firm level. Hence, its coefficient is absorbed by the fixed effects. We also rerun this model replacing *Weak Internal Controls* with actual material internal control weaknesses. We find a significant lower likelihood of material internal control weaknesses following a DOJ intervention. These untabulated tests are limited to the period 2004-2012.

³⁰ For brevity, we do not tabulate results from tests related to additional dimensions of firms' employee relations such as workforce management, health and safety, or union relations, as we do not find a significant change following DOJ intervention for these dimensions.

number of options granted to the firm's top executives, scaled by the number of employees. We use ExecuComp to identify the number of options granted to top executives and Compustat to determine the total number of options granted by the firm. We examine whether firms grant more stock options to the average rank-and-file employee following the DOJ's intervention decision (see Column 6).³¹

Columns 4-7 show a positive and significant coefficient on the interaction between *Treated x Post* when the dependent variable is the strength of the firm's *Employee Stock Plan*, *Retirement Benefits*, *Employee Stock Options*, or *Supply Chain Labor Management*, indicating that firms subject to DOJ intervention take steps to increase employee participation, and improve their supply chain management practices. In terms of economic magnitude, firms grant approximately 130 additional stock options to the average rank-and-file employee following the DOJ's intervention decision. Such compensation alignment could reduce whistleblowing (Call et al., 2016). Further, it could incentivize employees to address concerns internally instead of whistleblowing, and thus improve the fraud environment.

The fourth consequence we examine is whether DOJ intervention is associated with the number of future FCA whistleblowing lawsuits for a firm (Table 7, Panel B). We estimate the model using a Poisson regression.³² We run the model on our sample of 332 unique firms subject to an FCA lawsuit (see Table 1, Panel A). Because three firms were subject to whistleblowing in 2012 and therefore cannot be subject to future whistleblowing during the sample period, our final sample includes 329 unique firms. Out of these firms, 106 were subject to another FCA lawsuit during the sample period. In these tests, we control for *Contract Volume*, *Size*, and the logarithm of the number of years from the year of the FCA

³¹ For the sample period 2002-2006, the number of options granted by the firm can also be computed using ExecuComp since it provides data on options granted to top executives and executives' share of total options granted. In untabulated tests, we estimate our regression using ExecuComp data to compute options granted to rank-and-file employees whenever available and use Compustat data otherwise. We find similar results.

³² We also run a model using a Cox regression to examine whether DOJ intervention reduces the hazard of future whistleblowing, and find consistent results (untabulated).

lawsuit until the final year of our sample period (2012), denoted *Count Years*. This variable controls for the additional risk for a firm that was subject to an earlier lawsuit (e.g., in 2003) relative to a firm that was subject to a later lawsuit (e.g., in 2010). We also include year and industry fixed effects. Standard errors are robust to distributional misspecification and heteroscedasticity.

As shown in Table 7, Panel B, firms with DOJ intervention experience fewer future whistleblowing allegations. In Table 7, Panel B, the coefficient on *Selected Case* is -0.624 , which translates to approximately 46 percent lower whistleblowing likelihood for firms that experienced a DOJ intervention in a previous whistleblowing case.³³ Results suggest that DOJ intervention reduces firms' likelihood of future whistleblower lawsuits.

– Insert Table 7 here –

4.2. Consequences of DOJ Intervention for District Courts and Federal Agencies

Our previous analysis suggests that DOJ intervention reduces the occurrence of fraud at the firm level. In this section, we examine the consequences of DOJ intervention at an aggregate level. Specifically, the DOJ's focus on pursuing winnable cases and high recoveries can lead to fraud cases being undetected. It is difficult to estimate the extent to which the DOJ intervention decisions lead to frauds being missed because we cannot identify events that did not occur. However, we can examine if DOJ intervention rate influences whistleblowers' willingness to come forward. If whistleblowers observe that district courts and federal agencies have low intervention rates, they could interpret this behavior as leniency on the part of the DOJ and conclude that there is no benefit of being a whistleblower. Thus, the DOJ's intervention decisions could dilute the fraud prevention climate and reduce the efficacy of this enforcement mechanism.

³³ This is calculated as $(1 - \exp(-0.624)) \times 100 = 46.42\%$.

To examine whether the DOJ's intervention decisions affect future whistleblowing activity, we study whether lower DOJ intervention is associated with a decrease in future whistleblower lawsuits at the U.S. District Court and federal agency level. Specifically, we examine the total number of future lawsuits (to capture overall whistleblowing activity).³⁴ At the U.S. District Court level, we examine whether judicial courts with lower DOJ intervention rates *before* our sample period attract fewer whistleblower lawsuits *during* our sample period.³⁵ The dependent variable is *Future FCA Lawsuits District Court*, which is the number of all FCA whistleblower lawsuits filed in a U.S. District Court per year (i.e., including lawsuits filed against private firms) (see Table 8, Column 1). Our main variable of interest is *Low Intervention Courts*, which equals 1 if the DOJ intervention rate at a U.S. District Court during 1987-2001 was below the median, and 0 otherwise (again, we also include FCA lawsuits filed against private firms). We restrict the sample to district courts with at least 10 FCA lawsuits filed before 2002, resulting in 61 district courts and 671 district court-year observations. We estimate this models using Poisson regression. We control for *Number of Cases* (as defined before), the potential whistleblowing population in the jurisdiction of each district court (*Labor Force*, measured by the logarithm of the local labor force), and the capacity of the district courts to handle cases (*Attorney Hours*, measured by the logarithm of attorney hours worked per year in a district court). Standard errors are clustered at the district court level.

As shown in Table 8, Column 1, we find a negative and statistically significant coefficient on *Low Intervention Courts*. Low intervention courts attract approximately 20 percent fewer whistleblower lawsuits than high intervention courts. These results indicate that

³⁴ We also run tests using the number of future settled lawsuits (to capture lawsuits with merit) and find consistent results (untabulated).

³⁵ According to Section 3732(a) of the FCA, a whistleblower lawsuit "may be brought in any judicial district in which the defendant or, in the case of multiple defendants, any one defendant can be found, resides, [or] transactions business [...]." Thus, if a firm operates in several jurisdictions, whistleblowers can choose where to file the lawsuit.

district courts with intervention rates below the median prior to 2002 received fewer FCA whistleblower lawsuits during the period 2002-2012.

At the federal agency level, we examine whether federal agencies with lower DOJ intervention rates *before* our sample period attract fewer whistleblowing lawsuits *during* our sample period. The dependent variable is *Future FCA Lawsuits Federal Agency* (see Table 8, Column 2).³⁶ Our main variable of interest is *Low Intervention Agencies*, which equals 1 if the DOJ intervention rate per defrauded agency during 1987-2001 was below the median, and 0 otherwise. We exclude unknown agencies, resulting in a sample of 30 agencies and 223 agency-year observations. We estimate this model using Poisson regression. We include *Agency Contract Volume*, which is the natural logarithm of the dollar contract volume per agency and year, to control for the size of each defrauded agency, and *Log OIG Budget*, which is the natural logarithm of an agency's OIG budget per year to control for an agency's resources available for fraud enforcement. Standard errors are clustered at the agency level.

As shown in Table 8, Column 2, we find a negative and statistically significant coefficient on *Low Intervention Agencies*. The results indicate that low intervention agencies receive approximately 38 percent fewer lawsuits than high intervention agencies. Thus, agencies with intervention rates below the median prior to 2002 received fewer FCA whistleblower lawsuits during the period 2002-2012.

Overall, the results suggest that DOJ intervention influences whistleblowing both at the district and agency level. District courts and agencies with lower DOJ intervention rates exhibit less future whistleblowing, suggesting that whistleblowers avoid filing lawsuits in courts and involving agencies with low intervention rates. Lower DOJ intervention rates also reduce the number of settled cases (untabulated), suggesting that lower intervention does not only reduce overall whistleblowing activity, but also reduces the number of lawsuits with

³⁶ We also run tests using the number of future settled lawsuits and find consistent results (untabulated).

merit. Thus, lower DOJ intervention dilutes the efficacy of whistleblowers' actions towards unraveling fraud and appears to weaken the overall fraud control environment.

– Insert Table 8 here –

4.3. Consequences of DOJ Intervention versus Consequences of Successful Whistleblower Lawsuits

Next, we examine the differences in effects of public enforcement via DOJ intervention versus private enforcement via whistleblowers acting alone. As the FCA allows whistleblowers to pursue a case in which the DOJ declines to intervene, we can compare the effects of successful whistleblower lawsuits on firms' control systems and the aggregate fraud environment to the effects of DOJ intervention documented in Tables 7 and 8.

Table 9, Panels A and B present the results from these analyses. All panels follow the same structure. We separately report the effects of DOJ intervention (*DOJ Intervention*) on firm and aggregate outcomes (i.e., the results from Tables 7 and 8) as well as the effects of cases declined by the DOJ that were successfully pursued by the whistleblower acting alone (*Successful Whistleblower*) on firm and aggregate outcomes, and then test the differences between these effects. When *DOJ intervention* is the treatment, the control group consists of firms subject to lawsuits that the DOJ did not select and did not result in a settlement, and cases declined by the DOJ that were successfully pursued by the whistleblower. When *Successful Whistleblower* is the treatment, the control group consists of firms subject to lawsuits that the DOJ did not select and did not result in a settlement, and cases selected by the DOJ.

Table 9, Panel A reports the results from tests examining firms' control systems changes following DOJ intervention (Columns 1, 3, and 5) and following successful whistleblower lawsuits acting alone (Columns 2, 4, and 6). While we find that cases successfully pursued by whistleblowers improve internal controls, we do not find that these

cases improve employee relations or board independence. We also find that the effect of DOJ intervention on *Independent Directors* is significantly larger than the effect of successful whistleblower cases on *Independent Directors*.

We also examine the effects of DOJ intervention and successful whistleblower cases on specific dimensions of employee relations (untabulated). We find that successful whistleblower cases are either not significantly or negatively associated with *Employee Stock Plan*, *Retirement Benefits*, *Employee Stock Options*, or *Supply Chain Labor Management*. We also find that the effect of DOJ intervention on these dimensions (except for *Retirement Benefits*) is significantly larger than the effect of successful whistleblower cases.

Table 9, Panel B tabulates the results of the effects of DOJ intervention and successful whistleblower cases on future whistleblowing at the firm, court and agency level. Column 1 shows that firms that experienced a DOJ intervention in a previous whistleblowing case have lower subsequent whistleblowing likelihood. However, Column 2 shows that firms with successful whistleblower cases without DOJ intervention do not have lower likelihood of future FCA cases. The effects of DOJ intervention on future lawsuits are significantly greater than the effects of successful whistleblowers, suggesting higher relative efficacy of public enforcement (Table 9, Panel B, last row). In Column 3, *Treated Court* is equal to 1 if the cases selected by DOJ for litigation as a percentage of whistleblowing cases filed in the district court is lower than or equal to the median DOJ intervention rate. In Column 4, *Treated Court* is equal to 1 if the cases won by the whistleblower as a percentage of whistleblowing cases filed in the district court is lower than or equal to the median rate of cases won by whistleblowers. We find that low DOJ intervention district courts attract significantly fewer lawsuits in the future. On the other hand, district courts with lower whistleblower success rates do not significantly affect future lawsuits. We also find that the adverse effect of low DOJ intervention on future lawsuits at the district court level is significantly larger than the

adverse effect of successful whistleblowers acting alone (Table 9, Panel B, last row). Courts with low DOJ intervention and low successful whistleblower lawsuits adversely affect future FCA lawsuits at the agency level. Overall, these results suggest that weaker public enforcement by the DOJ has somewhat greater effects on the future fraud environment than weaker private enforcement by whistleblowers.

When interpreting the results presented in Sections 4.2. and 4.3., it is important to consider the limitations of our setting. Specifically, our setting does not provide random assignment to public or private enforcement. A more robust setting to examine the consequences of DOJ intervention as well as the relative effects of public and private enforcement requires a sample of firms that are candidates for enforcement, and random assignment of firms from this sample to either DOJ intervention or whistleblower litigation. Further, each enforcer should be unaware of the presence of the other to prevent spillover effects across enforcers resulting from competitive or relative performance pressures.

– Insert Table 9 here –

5. Additional Tests

In untabulated tests, we examine the role of three additional case characteristics. First, we examine the role of competitors as whistleblowers. While competitors blew the whistle in only 3% of the cases in our sample (see Table 1, Panel F), the DOJ may treat such cases differently. We re-estimate the tests related to investigation length and DOJ case selection (i.e., Tables 4 and 5) with an additional indicator for *Competitor Whistleblower*. The coefficient on *Competitor Whistleblower* is insignificant across all tests, indicating that in our sample, whistleblowing by competitors does not differentially affect investigation length or the DOJ's intervention decision. Second, we re-estimate the tests on investigation length and DOJ case selection with additional indicator variables for the three most prevalent types of violations (see Table 1, Panel E), i.e., (1) *Overbilling*, (2) *Contract Violation*, and (3)

Kickback. Investigations are longer in overbilling or kickback cases. Finally, we re-estimate our primary tests with a control for *Firm Whistleblower*, which equals 1 if a firm blew the whistle (e.g., a competitor, contractor, or supplier). The DOJ is less likely to select cases brought by firms, consistent with the notion that the DOJ is less likely to intervene when the whistleblower has sufficient resources.

6. Conclusions

Regulatory agencies increasingly rely on the assistance of whistleblowers to detect corporate fraud. As the litigating arm of the government, the DOJ acts as a gatekeeper, evaluating whistleblower allegations case by case to separate legitimate from frivolous cases. Our study examines the drivers and consequences of DOJ intervention into whistleblower cases under the False Claims Act. We find that the DOJ is more likely to intervene and exerts more effort in cases with a higher likelihood of victory and higher expected monetary proceeds. DOJ's intervention has implications for the future fraud prevention environment at the firm level as well as the aggregate level of the district court and defrauded agency. Following a DOJ intervention, firms strengthen their internal controls, improve employee relations, increase the proportion of independent directors, and face lower future whistleblowing incidents. District courts and defrauded agencies with low DOJ intervention rates witness fewer FCA lawsuits, indicating that DOJ intervention affects the willingness of whistleblowers to file lawsuits. Additional analyses indicate that public enforcement curtails future fraud more effectively than private enforcement by the whistleblower.

Our study contributes to the growing accounting literature documenting the importance of whistleblowers for fraud deterrence and offers insights into how the DOJ exercises its gatekeeper authority in the context of whistleblower cases. Whistleblowers as an enforcement tool are likely to acquire an even greater prominence. The SEC, for example, has strengthened its whistleblower provisions following the Dodd–Frank Act, but does not allow

whistleblowers to pursue cases alone. Our study sheds light on the complex relationship between whistleblowers and the DOJ.

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Appendix A. The DOJ's Performance Measures

The table shows the targeted and actual performance for the Civil Division of the Department of Justice related to cases litigated on behalf of the U.S. government. The data was obtained from the budget and performance webpage of the DOJ (2018). The two performance measures with respect to cases brought by the DOJ on behalf of the government, communicated to the President, the Congress, and the public, and presented by the Civil Division of the DOJ in their performance budget Congressional submission are: (1) the percentage of cases filed by the DOJ on behalf of the government and won, and (2) the percentage of cases in which at least 85% of the claim sought is recovered.

Year	% of Cases Won (1)		% of Cases in which at least 85% of the Claim is recovered (2)	
	Target	Actual	Target	Actual
2002	80%	86%	60%	64%
2003	80%	87%	60%	66%
2004	80%	85%	60%	65%
2005	80%	84%	60%	72%
2006	80%	83%	60%	72%
2007	80%	83%	60%	68%
2008	80%	79%	60%	64%
2009	80%	83%	60%	63%
2010	80%	85%	60%	74%
2011	80%	85%	60%	66%
2012	80%	81%	60%	73%

Appendix B. Variable Definitions

The following variables are constructed using data from a proprietary dataset of whistleblower allegations obtained through FOIA requests [FOIA], Audit Analytics [AA], Compustat [C], Compustat Segments [CS], Corporate Library [CL], Center for Responsive Politics [CRP], Department of Justice Annual Statistical Reports [DOJ], ExecuComp [EX], the Federal Elections Commission database [FEC], USAspending.gov [GOV], Institutional Shareholder Services Directors (ISS), MSCI ESG KLD STATS [STATS], the Violation Tracker dataset [VT], agencies' annual budget requests to Congress [BUDGET], and Bureau of Labor Statistics [BLS].

Variable	Definition
Dependent Variables	
Selected Case	Indicator set to 1 if the DOJ selected the case, 0 otherwise. Note that the underlying sample varies across Table 4 and Table 6. [FOIA]
Investigation Length	Number of days between the court-filing date of the whistleblower lawsuit and the date of the DOJ's case-selection decision. Note that the underlying sample varies across Table 5 and Table 6. [FOIA]
Weak Internal Controls	Indicator set to 1 if the fitted value of internal control weakness falls in the highest quartile, and 0 otherwise. The fitted values are obtained from the following model, as estimated by Doyle et al., 2007: $Internal\ Control\ Weakness = \beta_0 + \beta_1 Size + \beta_2 \log Firm\ Age + \beta_3 Losses + \beta_4 Segments + \beta_5 Foreign\ Trans + \beta_6 Extreme\ SG + \beta_7 Restructure + error$. <i>Size</i> and <i>Firm Age</i> are already defined above, <i>Losses</i> is an indicator variable equal to 1 if earnings before extraordinary items in the two most recent years sum to less than zero, and 0 otherwise, <i>Segments</i> is the log of the number of operating and geographic segments reported by Compustat Segments database, <i>Foreign Trans</i> is an indicator variable equal to 1 if the firm has nonzero foreign translation, and 0 otherwise, <i>Extreme SG</i> is an indicator variable equal to 1 if year-over-year industry-adjusted sales growth falls into the top quintile, and 0 otherwise, and <i>Restructure</i> is the aggregate restructuring charge in the two most recent years, scaled by firm's market capitalization.
Employee Relations	Indicator set to 1 if the count of employee strengths is greater than the count of employee concerns, and 0 otherwise. [STATS]
Independent Directors	Independent directors as a proportion of total directors on the board. [ISS]
Employee Stock Plan	Indicator set to 1 if the firm encourages worker involvement through generous employee stock ownership plans, 0 otherwise. [STATS]
Retirement Benefits	Indicator set to 1 if the firm has a strong retirement benefits program, 0 otherwise. [STATS]
Employee Stock Options	Number of options granted to rank-and-file employees scaled by total employees (EMP). Number of options granted to rank-and-file employees is the difference between total number of options granted by the firm (OPTGR in Compustat) and total number of options granted to top executives (OPTION_AWARDS_NUM in ExecuComp). This variable is replaced with 0 if OPTGR is missing. [C + EX]
Supply Chain Labor Management	Indicator set to 1 if the firm has incentives for labor management compliance among suppliers, 0 otherwise. [STATS]
Future FCA Lawsuits	The number of FCA lawsuits encountered by a firm after the first FCA allegation. [FOIA]
Future FCA Lawsuits District Court	The number of FCA whistleblowing lawsuits filed in the district court per year. This also includes FCA lawsuits against private firms. [FOIA]
Future FCA Lawsuits Federal Agency	The number of FCA whistleblowing lawsuits filed with a federal agency per year. This also includes FCA lawsuits against private firms. [FOIA]

Independent Variables

DOJ Performance Measure 1: Cases Won

a) Resource Constraints

OIG Budget	OIG budget of the allegedly defrauded agency scaled by the number of whistleblower allegations per year. Data on agencies' OIG budgets is obtained from the agencies' budget requests to Congress. [BUDGET + FOIA]
Number of Cases	Logarithm of the number of pending civil cases per U.S. attorney office at the beginning of the year of the whistleblower event. [DOJ]
Criminal Case	An indicator set to 1 if the firm is subject to a parallel criminal case as a result of the False Claims Act violation, and 0 otherwise. [VT]
b) Powerful Defendant	
Political Contributions	Natural logarithm of the sum of three-year average during the year of the whistleblower allegation and the two years preceding it of lobbying expenditures and Political Action Committee (PAC) contributions [CRP + FEC]
Lobbying Expenditures	A firm's lobbying expenditures in year <i>t</i> . [CRP]
PAC Contributions	A firm's PAC contributions in year <i>t</i> . [FEC]
Non-Competed Contracts	A firm's non-competed contract dollar volume with the allegedly defrauded agency divided by the allegedly defrauded agency's total non-competed contract dollar volume in the year prior to the whistleblowing event. The Federal Procurement Data System classifies each contract into seven categories according to the level of competition. We consider that a contract has not been subject to competition when the government's reported category is not 'A', 'D', 'E', 'F', or 'CDO'. [GOV]
HHI	Herfindahl-Hirschman index; market shares are based on firm's sales (SALE) per two-digit SIC code. [C]
c) Case Complexity	
Complex Firm	Average scaled rank of <i>Firm Age</i> , <i>Business Segments</i> , and <i>Geographical Segments</i> in the year of the whistleblowing event. [C]
Firm Age	A firm's age in the year of the whistleblowing event; based on first time appearance in Compustat. [C]
Business Segments	A firm's number of business segments (STYPE) based on the Compustat Segments database. [CS]
Geographical Segments	A firm's number of geographical segments (STYPE) based on the Compustat Segments database. [CS]
DOJ Performance Measure 2: Monetary Claims	
a) Size of Claim	
Contract Volume Defrauded Agency	The natural logarithm of a firm's contract dollar volume with the allegedly defrauded agency. [GOV]
b) Ability to Pay	
Liquidity	Logarithm of a firm's current assets (ACT) minus current liabilities (LCT) at the beginning of the year. [C]
ROA	Return on assets, i.e., net income (NI) divided by average total assets (AT) over the current year and two years prior to the whistleblowing event. [C]
Whistleblower Characteristics:	
a) Whistleblower Resources	
Law Firm Experience	Logarithm of the number of FCA cases the law firm representing the whistleblower has been involved in. [FOIA]
b) Whistleblower Reputation	
Successful Whistleblower	Indicator equal to 1 if the whistleblower has filed a case in the past that resulted in a settlement, and 0 otherwise. [FOIA]
Unsuccessful Whistleblower	Indicator equal to 1 if the whistleblower has filed a case in the past that did not result in a settlement, and 0 otherwise. [FOIA]
Control Variables:	
a) Firm Characteristics	
Contract Volume	Logarithm of the total contract dollar volume with the government in the year of the whistleblowing event. [GOV]

Size	Logarithm of the market value of equity (PRCC_C x CSHO) in the year of the whistleblowing event. [C]
b) Firm Governance Characteristics	
Inside Directors	Ratio of inside directors to the total directors in the year of the whistleblowing event. [CL]
Board Meetings	Number of board meetings. [CL]
Missing Indicators	Separate indicators equal to 1 if <i>Inside Directors</i> , <i>Board Meetings</i> , or <i>Employee Relations</i> is missing, and 0 otherwise.
c) Consequences Tests	
Count Years	The logarithm of the number of years from the year of the first FCA whistleblowing lawsuit to 2012. [C]
Labor Force	The logarithm of the number of persons in the Judicial District who are eligible for employment. [BLS]
Attorney Hours	The logarithm of the number of court related work hours spent in the Office of District Attorney. [DOJ]
Agency Contract Volume	The logarithm of the total government contract volume for each defrauded agency. [GOV]
Log OIG Budget	The logarithm of OIG budget of the allegedly defrauded agency. [BUDGET]

Figure 1. Timeline of the False Claims Act Qui Tam Enforcement Process

This figure shows the timeline of the False Claims Act qui tam enforcement process and is adapted from Heese and Pérez-Cavazos (2019). The process starts with a whistleblower filing an allegation with a court. Next, the Department of Justice in conjunction with the allegedly defrauded federal agency investigates the claim. On average, this investigation takes more than two years. At the end of the investigation, the DOJ and federal agency decide whether to intervene in or decline to join the case. If the DOJ declines to join the case, the whistleblower can pursue the case without the DOJ. Cases end with terminations or settlements.

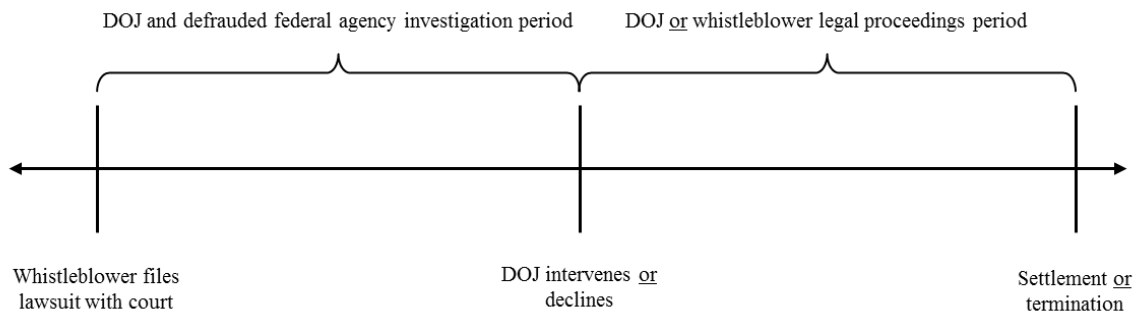


Table 1. Sample**Panel A. Sample Composition**

This table presents the sample composition for primary analyses for the period 2002-2012.

	Unique Lawsuits (1)	Unique Firms (2)	Lawsuit-Firm Observations (3)
Unique FCA Lawsuits	5,611		
Compustat Matches	898	749	1,224
Less: Lawsuits before 2002	(374)	(367)	(514)
Less: Lawsuits with missing Compustat data	(85)	(50)	(156)
Final sample	439	332	554

Panel B. Sample Composition by Year

This table presents the sample composition for the period 2002-2012 by year. Column 1 reports the number of lawsuit-firm observations per year. Column 2 presents the percentage of lawsuit-firm observations relative to the total number of lawsuit-firm observations for the period 2002-2012. Column 3 presents the number of intervened lawsuit-firm observations. Column 4 presents the percentage of intervened lawsuit-firm observations relative to the number of lawsuit-firm observations per year. Column 5 reports the total settlement amounts per year. Column 6 reports the percentage of settlement amounts per year relative to the sum of all settlements for the period 2002-2012.

Year	Lawsuit-Firm Observations (1)	% of Total (2)	Intervened Lawsuit- Firm Observations (3)	% of Total (4)	Settlements (\$) (5)	% of Total Settlements (6)
2002	64	11.6%	17	26.6%	278,225,000	6.5%
2003	53	9.6%	18	34.0%	1,145,332,000	26.7%
2004	67	12.1%	19	28.4%	531,499,000	12.3%
2005	59	10.6%	14	23.7%	299,991,000	7%
2006	69	12.5%	13	18.8%	652,651,000	15.3%
2007	51	9.2%	7	13.7%	1,089,600,000	25.4%
2008	51	9.2%	6	11.8%	40,537,000	0.9%
2009	54	9.7%	9	16.7%	93,872,670	2.1%
2010	41	7.4%	2	4.9%	5,688,000	0.1%
2011	34	6.1%	1	2.9%	158,300,000	3.7%
2012	11	2.0%	0	0.0%	0	0%
Total	554	100%	106	19.1%	4,295,695,670	100%

Panel C. Sample Composition by Industry

This table presents the sample composition for the period 2002-2012 by two-digit SIC code industry. Industries with less than 15 lawsuit-firm observations are classified as “Other Industries”.

SIC Code (2-digit)	Lawsuit-Firm Observations	% of Total	Industry Name
13	18	3.20%	Oil and Gas Extraction
28	115	20.80%	Chemicals and Allied Products
35	15	2.70%	Industrial and Commercial Machinery and Computer Equipment
37	32	5.80%	Transportation Equipment
38	52	9.40%	Measuring, Analyzing and Controlling Instruments
45	16	2.90%	Transportation by Air
48	18	3.20%	Communications
59	23	4.20%	Miscellaneous Retail
60	23	4.20%	Depository Institutions
63	25	4.50%	Insurance Carriers
73	27	4.90%	Business Services
80	66	11.90%	Health Services
	124	22.38%	Other Industries
Total	554	100%	

Panel D. Sample Composition by Agency

This table presents the sample composition for the period 2002-2012 by allegedly defrauded agency. Column 1 reports the number of lawsuit-firm observations per agency. Column 2 presents the percentage of lawsuit-firm observations per agency relative to the total number of lawsuit-firm observations for the period 2002-2012. Column 3 presents the total settlement amounts per agency. Column 4 reports the percentage of settlement amounts per agency relative to the sum of all settlements for the period 2002-2012. Agencies with less than 10 lawsuit-firm observations are classified as “Other Agencies”.

Agency Name	Lawsuit-Firm Observations	% of Total	Settlements (\$)	% of Total
	(1)	(2)	(3)	(4)
Department of Health and Human Services	277	50.00%	2,685,708,000	62.50%
Department of Defense	96	17.30%	480,553,000	11.20%
General Services Administration	32	5.80%	469,456,000	10.90%
Department of Education	16	2.90%	2,500,000	0.10%
Department of the Interior	13	2.30%	2,500,000	0.10%
Department of Transportation	13	2.30%	0	0%
Department of Veteran Affairs	12	2.20%	322,600,000	7.50%
Department of Homeland Security	11	2.00%	16,490,000	0.40%
Department of Housing and Urban Development	11	2.00%	233,300,000	5.40%
Federal Communications Commission	10	1.80%	16,837,890	0.40%
Postal Service	10	1.80%	12,000,000	0.30%
Other Agencies	47	8.48%	53,552,358	1.25%
Unknown	6	1.10%	198,422	0%
Total	554	100%	4,295,695,670	100%

Panel E. Sample Composition by Type of Whistleblower Allegation

This table presents the sample composition for the period 2002-2012 by the type of allegation for a subset of 279 unique lawsuits with available court documents in the Public Access to Court Electronic Records (PACER) system, referring to 371 lawsuit-firm observations. Lawsuits can include more than one allegation; thus, the sample is greater than 371.

Description	Number of Allegations	% of Total
Overbilling	325	87.6%
Contract Violation	133	35.8%
Kickbacks	18	4.9%
Environmental Violation	12	3.2%
Conspiracy	5	1.3%
Off-Label Marketing	4	1.1%
Discrimination	2	0.5%
Anti-Dumping	1	0.3%
Customs Fraud	1	0.3%
Illegal Trade	1	0.3%
Total	502	100%

Panel F. Sample Composition by Type of Whistleblower

This table presents the sample composition for the period 2002-2012 by the type of whistleblower for a subset of 279 unique lawsuits with available court documents in the Public Access to Court Electronic Records (PACER) system, referring to 371 lawsuit-firm observations.

Description	Lawsuit-Firm Observations	% of Total
(Former) Employee	249	67.1%
Customer	69	18.6%
Firm	45	
Individual	24	
Citizen	16	4.3%
Firm Specialized in Bringing FCA Claims	13	3.5%
Competitor	11	3.0%
Contractor	8	2.2%
Supplier	3	0.8%
Investor	1	0.3%
Nonprofit Organization	1	0.3%
Total	371	100%

Table 2. Summary Statistics on Case Outcomes

This table reports the summary statistics of the FCA lawsuits used in our primary analyses. The rows report the distribution of FCA lawsuits across different case outcomes. Column 1 reports the number of unique cases. Column 2 reports the number of lawsuit-firm observations. Column 3 reports the average investigation length in number of days. Column 4 reports the average settlement amount per case. Column 5 reports the average whistleblower dollar share. Column 6 reports the average whistleblower percentage share. The tests reported in Tables 5 and 6 rely on the full sample of FCA lawsuits. In Table 6, we use only the sample of intervened and declined lawsuits.

	Unique Lawsuits (1)	Number of Lawsuit- Firm Observations (2)	Investigation Length (in days) (3)	Average Settlement Amount (\$) (4)	Average Whistleblower Share (\$) (5)	Average Whistleblower Share (%) (6)
Sample FCA lawsuits (Tables 4 and 5)	439	554	721	42,399,616	6,419,412	15.1
1. Intervened by DOJ (Table 6)	92	106	1,202	50,996,140	7,334,240	14.4
2. Declined by DOJ (Table 6)	253	342	570	9,084,309	2,357,536	26.0
a. Whistleblower reached settlement	13	14	485	9,084,309	2,357,536	26.0
b. Whistleblower did not reach settlement	240	328	575	-	-	-
3. Notice of no election	40	59	895	18,884,015	4,662,991	24.7
a. Whistleblower reached settlement	9	22	1,144	18,884,015	4,662,991	24.7
b. Whistleblower did not reach settlement	31	37	822	-	-	-
4. Dismissed by DOJ	54	47	478	-	-	-

Table 3. Summary Statistics

This table reports the summary statistics for the variables used in our primary analyses for the period 2002-2012. All variables are defined in Appendix B.

Variable	N	Mean	Std. Dev	Min	Q1	Median	Q3	Max
Selected Case (Table 4)	554	0.191	0.394	0	0	0	0	1
Length of Investigation (Table 5)	554	786	587	0	306	616	1,138	2,933
Selected Case (Table 6)	142	0.746	0.437	0	0	1	1	1
DOJ Performance Measure 1: Cases Won								
a) Resource Constraints								
OIG Budget (per case in thousands)	554	5,239	8,675	900	1,298	1,758	5,857	41,500
Number of Cases (count)	554	2,038	1,861	165	838	1,200	2,915	10,859
Criminal Case	554	0.011	0.104	0	0	0	0	1
b) Powerful Defendant								
Lobbying Expenditures (in thousands)	554	1,149	1,469	0	0	300	2,210	3,680
PAC Contributions (in thousands)	554	131	163	0	0	34	255	414
Non-Competed Contracts (ratio)	554	0.034	0.147	0	0	0	0.011	1
HHI	554	0.063	0.073	0.016	0.024	0.043	0.083	1
c) Case Complexity								
Complex Firm								
Firm Age (years)	554	28.738	21.786	1	11	21	41	71
Business Segments (count)	554	2.727	2.348	0	1	2	4	11
Geographical Segments (count)	554	2.557	2.618	0	1	2	4	18
DOJ Performance Measure 2: Monetary Claims								
a) Size of Claim								
Contract Volume Defrauded Agency (in millions)	554	545	3,170	0	0	0.030	8	23,980
b) Ability to Pay								
Liquidity (in millions)	554	1,584	4,275	-7,230	0	318	1,872	23,018
ROA	554	0.032	0.111	-0.661	0.011	0.049	0.090	0.139
Whistleblower Characteristics:								
a) Whistleblower Resources								
Law Firm Experience (Number of cases handled)	554	41	142	1	1	3	12	786
b) Whistleblower Reputation								
Successful Whistleblower	554	0.037	0.189	0	0	0	0	1
Unsuccessful Whistleblower	554	0.101	0.302	0	0	0	0	1
Control Variables:								
a) Firm Characteristics								
Contract Volume (in millions)	554	679	3,529	0	0	0.096	17	23,980
Market Value of Equity (in millions)	554	30,004	49,828	1.104	1,198	7,017	31,259	311,756
b) Firm Governance Characteristics								
Weak Internal Controls	554	0.250	0.432	0	0	0	1	1
Inside Directors (ratio)	133	0.42	0.37	0.07	0.14	0.25	1	1
Board Meetings (count)	343	9.029	4.266	3	6	8	11	34
Employee Relations	221	0.281	0.450	0	0	0	1	1

Table 4. DOJ Intervention Decision

This table reports the estimation results from probit regressions on the probability of cases being selected by the DOJ for litigation for the period 2002-2012 within the sample of whistleblower cases. The dependent variable is an indicator equal to 1 in the year of the whistleblower lawsuit if the DOJ decided to intervene in a case, and 0 otherwise. Column 1 reports results without including governance variables. Column 2 reports results including governance variables. All variables are defined in Appendix B. We include year fixed effects. Standard errors are clustered at the defrauded-agency level. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Variables	Selected Case		Selected Case	
	(1)		(2)	
	Coefficient	Standard Error	Coefficient	Standard Error
DOJ Performance Measure 1: Cases Won				
a) Resource Constraints				
OIG Budget	0.014**	0.006	0.014**	0.006
Number of Cases	0.134	0.193	0.142	0.200
Criminal Case	0.662***	0.098	0.665***	0.102
b) Powerful Defendant				
Political Contributions	-0.012	0.009	-0.013	0.010
Non-Competed Contracts	-1.160**	0.523	-1.276**	0.555
HHI	-0.822***	0.218	-0.721***	0.218
c) Case Complexity				
Complex Firm	-0.615***	0.238	-0.623***	0.236
DOJ Performance Measure 2: Monetary Claims				
a) Size of Claim				
Contract Volume Defrauded Agency	0.026*	0.014	0.032**	0.013
b) Ability to Pay				
Liquidity	0.035**	0.014	0.024*	0.013
ROA	1.235***	0.453	1.185***	0.435
Whistleblower Characteristics:				
a) Whistleblower Resources				
Law Firm Experience	-0.009	0.017	-0.016	0.017
b) Whistleblower Reputation				
Successful Whistleblower	1.014***	0.246	1.104***	0.006
Unsuccessful Whistleblower	-0.802***	0.199	-0.841***	0.197
Control Variables:				
a) Firm Characteristics				
Contract Volume	-0.019***	0.005	-0.022***	0.0056
Size	-0.021	0.036	-0.048	0.042
b) Firm Governance Characteristics				
Weak Internal Controls			0.024	0.107
Inside Directors			0.006***	0.002
Board Meetings			0.006	0.012
Employee Relations			0.119***	0.042
Observations	554		554	
Missing Indicators	No		Yes	
Year FE	Yes		Yes	
SE clustered by	Defrauded Agency		Defrauded Agency	
Pseudo R-square	0.156		0.170	
Variance Inflation Factor Range	1.04-2.03		1.04-2.96	

Table 5. DOJ Investigation Length

This table reports the estimation results from Poisson regressions on the length of investigation within the sample of whistleblower cases for the period 2002-2012. The dependent variable is the number of days from the date of the whistleblower lawsuit filing (which marks the beginning of an investigation) to the date of the DOJ intervention decision (which marks the end of an investigation). Column 1 reports results without including governance variables. Column 2 reports results including governance variables. All variables are defined in Appendix B. We include year fixed effects. Standard errors are clustered at the defrauded-agency level. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Variables	Investigation Length		Investigation Length	
	(1)	(2)	(1)	(2)
	Coefficient	Standard Error	Coefficient	Standard Error
DOJ Performance Measure 1: Cases Won				
a) Resource Constraints				
OIG Budget	0.006*	0.003	0.006**	0.003
Number of Cases	0.059*	0.035	0.061*	0.037
Criminal Case	0.383***	0.092	0.357***	0.084
b) Powerful Defendant				
Political Contributions	-0.013***	0.004	-0.011**	0.005
Non-Competed Contracts	-0.001	0.001	-0.001	0.001
HHI	-0.346**	0.156	-0.315**	0.144
c) Case Complexity				
Complex Firm	-0.097	0.185	-0.113	0.178
DOJ Performance Measure 2: Monetary Claims				
a) Size of Claim				
Contract Volume Defrauded Agency	0.001	0.007	0.001	0.007
b) Ability to Pay				
Liquidity	0.033***	0.009	0.032***	0.009
ROA	0.927***	0.265	1.059***	0.266
Whistleblower Characteristics:				
a) Whistleblower Resources				
Law Firm Experience	-0.007	0.020	-0.009	0.020
b) Whistleblower Reputation				
Successful Whistleblower	0.064	0.113	0.087	0.129
Unsuccessful Whistleblower	-0.482***	0.094	-0.476***	0.091
Control Variables:				
a) Firm Characteristics				
Contract Volume	-0.001	0.007	-0.001	0.007
Size	0.018	0.019	0.017	0.015
b) Firm Governance Characteristics				
Weak Internal Controls			0.082	0.075
Inside Directors			-0.000	0.002
Board Meetings			-0.005	0.006
Employee Relations			0.041*	0.024
Observations		554		554
Missing Indicators		No		Yes
Year FE		Yes		Yes
SE clustered by		Defrauded Agency		Defrauded Agency
R-squared		0.267		0.279
Variance Inflation Factor Range		1.03-2.02		1.04-2.94

Table 6. DOJ Case Selection and DOJ Investigation Length for Cases with Settlement

This table reports the estimation results from probit regressions on the probability of cases being selected by the DOJ for litigation for the period 2002-2012 within the sample of whistleblower cases (Column 1) and the estimation results from Poisson regressions on the length of investigation within the sample of whistleblower cases for the period 2002-2012 (Column 2). In these tests, we compare the cases selected by the DOJ (i.e., point 1 in Table 2) to cases in which whistleblowers reached a settlement without DOJ intervention (i.e., points 2a and 3a in Table 2). In Column 1, the dependent variable is equal to 1 in the year of the whistleblower lawsuit if the DOJ decided to intervene in a case, and 0 if the DOJ declined to intervene but the case resulted in a settlement. In Column 2, the dependent variable is the number of days from the date of the whistleblower lawsuit filing (which marks the beginning of an investigation) to the date of the DOJ intervention decision (which marks the end of an investigation). All variables are defined in Appendix B. We include year fixed effects. Standard errors are clustered at the defrauded-agency level. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Variables	Selected Case (1)		Investigation Length (2)	
	Coefficient	Standard Error	Coefficient	Standard Error
DOJ Performance Measure 1: Cases Won				
a) Resource Constraints				
OIG Budget	-0.009	0.016	0.000	0.004
Number of Cases	0.445*	0.245	0.059	0.050
Criminal Case	6.242***	0.537	0.031	0.097
b) Powerful Defendant				
Political Contributions	-0.044***	0.017	-0.016*	0.009
Non-Competed Contracts	2.746	2.198	-0.022	0.185
HHI	-1.913*	0.993	-0.970***	0.252
c) Case Complexity				
Complex Firm	-0.149	1.342	-0.504	0.315
DOJ Performance Measure 2: Monetary Claims				
a) Size of Claim				
Contract Volume Defrauded Agency	0.016	0.024	0.012**	0.007
b) Ability to Pay				
Liquidity	-0.015	0.065	0.011	0.017
ROA	0.357	0.991	0.911**	0.376
Whistleblower Characteristics:				
a) Whistleblower Resources				
Law Firm Experience	-0.180***	0.061	-0.002	0.036
b) Whistleblower Reputation				
Successful Whistleblower	5.664***	0.327	-0.282	0.225
Unsuccessful Whistleblower	-0.356	0.292	-0.423***	0.128
Observations	142		142	
Controls for Firm Characteristics	Yes		Yes	
Controls for Firm Governance Characteristics	Yes		Yes	
Missing Indicators	Yes		Yes	
Year FE	Yes		Yes	
SE clustered by	Defrauded Agency		Defrauded Agency	
Pseudo R-square	0.390		0.328	
Variance Inflation Factor Range	1.15-3.28		1.16-4.72	

Table 7. Consequences of DOJ Intervention for Firms

Panel A. Firm Changes after DOJ Intervention

This table reports the estimation results from OLS regressions for changes in internal control concerns, employee relations, and board independence following DOJ's intervention in an FCA lawsuit filed during the sample period 2002-2012. The dependent variable in Column 1 is *Weak Internal Controls* defined as 1 if the fitted value of predicted internal control weaknesses based on the model by Doyle et al. (2007) falls in the top quartile, and 0 otherwise. The dependent variable in Column 2 is *Employee Relations* defined as 1 if the count of employee strengths exceeds the count of employee concerns, and 0 otherwise. The dependent variable in Column 3 is *Independent Directors* defined as the proportion of independent directors on the board. The dependent variable in Column 4 is *Employee Stock Plan* defined as 1 if the firm encourages worker involvement through generous employee stock ownership plans, and 0 otherwise. The dependent variable in Column 5 is *Retirement Benefits* defined as 1 if the firm has a notably strong retirement benefits program, and 0 otherwise. The dependent variable in Column 6 is *Employee Stock Options* defined as number of options granted to rank-and-file employees scaled by number of employees. Column 6 uses Compustat data to identify the options granted to employees. The dependent variable in Column 7 is *Supply Chain Labor Management* defined as 1 if the firm has incentives for labor management compliance among suppliers, and 0 otherwise. *Treated* is set to 1 throughout the sample period if the FCA lawsuit was intervened by the DOJ, and 0 otherwise. As data on each of the dependent variables is missing for different firms, the sample size varies across columns. *Treated* is set to 1 throughout the sample period if the FCA lawsuit was intervened by the DOJ, and 0 otherwise. *Post* is set to 1 in the years following the DOJ intervention decision, and 0 in the years before the FCA whistleblowing lawsuit was filed. *Controls* include *Contract Volume* and *Size*. All variables are defined in Appendix B. We include year and firm fixed effects and the standard errors are clustered at the firm level and reported in parenthesis. *Treated* is measured at the firm level and is time invariant, its coefficient is absorbed by firm fixed effects. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Dependent Variables	Weak Internal Controls (1)	Employee Relations (2)	Independent Directors (3)	Employee Stock Plan (4)	Retirement Benefits (5)	Employee Stock Options (6)	Supply Chain Labor Management (7)
Treated x Post	-0.115** (0.058)	0.127** (0.064)	0.078** (0.034)	0.165* (0.093)	0.049* (0.028)	129.728* (74.393)	0.112* (0.065)
Post	-0.005 (0.033)	-0.074* (0.042)	-0.035** (0.017)	0.036 (0.036)	-0.016 (0.029)	-1.780 (48.603)	-0.030 (0.018)
Observations	1,998	1,910	1,300	1,910	1,910	1,810	1,910
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year & Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE clustered by	Firm	Firm	Firm	Firm	Firm	Firm	Firm
R-Squared	0.036	0.062	0.322	0.023	0.083	0.077	0.080
Variance Inflation Factor Range	1.04-3.53	1.05-4.38	1.06-3.91	1.05-4.38	1.05-4.38	1.04-3.50	1.05-4.38

Panel B. DOJ Intervention and Future Whistleblowing

This table reports the estimation results on the future whistleblowing encountered by the firms within the sample during the period 2002-2012 after the firm was subject to whistleblowing for the first time. Each firm is included only once in the sample. The dependent variable is the number of whistleblowing events encountered by a firm after the first whistleblowing allegation was investigated by the DOJ. The model is estimated using a Poisson regression and the reported standard errors are robust to distributional misspecification and heteroskedasticity. The variable of interest is *Selected Case*, an indicator equal to 1 if the DOJ intervened in an FCA lawsuit, and 0 otherwise. All variables are defined in Appendix B. Standard errors are reported below the coefficients. We include year and industry fixed effects. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Dependent Variables	Future FCA Lawsuits (1)
Selected Case	-0.624*** (0.196)
Investigation Length	0.000* (0.000)
Contract Volume	0.032*** (0.011)
Size	0.400*** (0.061)
Count Years	7.239*** (0.232)
Observations	329
Year FE	Yes
Industry FE	Yes
Pseudo R-Squared	0.600
Variance Inflation Factor Range	1.20-2.01

Table 8. Consequences of DOJ Intervention for Courts and Agencies

This table reports estimation results from Poisson regressions on the number of whistleblowing cases filed in the district courts and with federal agencies during the period 2002-2012. In Column 1, the dependent variable is the number of FCA whistleblowing lawsuits filed in the district court per year. The variable of interest in Column 1 is *Low Intervention Courts*, an indicator equal to 1 for district courts having less than or equal to the median intervention rates in FCA whistleblowing lawsuits filed during the period 1987-2001, and 0 otherwise. The sample consists of all district courts with at least 10 FCA whistleblowing lawsuits during 1987-2001. Standard errors are clustered at the district court level. In Column 2, the dependent variable is the number of FCA whistleblowing lawsuits filed with a federal agency per year. The variable of interest in Column 2 is *Low Intervention Agencies*, an indicator equal to 1 for federal agencies having less than or equal to the median intervention rates in FCA whistleblowing lawsuits filed during the period 1987-2001, and 0 otherwise. The sample excludes unknown agencies. Standard errors are clustered at the agency level. Standard errors are reported below the coefficients. All variables are defined in Appendix B, and all tests include year fixed effects. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Dependent Variables	Future FCA Lawsuits District Court (1)	Future FCA Lawsuits Federal Agency (2)
Low Intervention Courts	-0.221* (0.118)	
Number of Cases	0.186 (0.207)	
Labor Force	0.323** (0.144)	
Attorney Hours	0.516*** (0.104)	
Low Intervention Agencies		-0.475* (0.267)
Agency Contract Volume		0.047*** (0.016)
Log OIG Budget		1.619*** (0.428)
Observations	671	223
Year FE	Yes	Yes
SE clustered by	District Courts	Defrauded Agency
Pseudo R-Squared	0.389	0.724
Variance Inflation Factor Range	1.13-1.89	1.09-1.91

Table 9. Consequences of DOJ Intervention versus Consequences of Successful Whistleblower Lawsuits

Panel A. Firm Changes after DOJ Intervention versus Firm Changes after Successful Whistleblower Lawsuits

This table analyzes the effect of different definitions of *Treated* on firm changes for the period 2002-2012. In Columns 1, 3 and 5, *Treated* is set to 1 throughout the sample period if the FCA lawsuit was intervened by the DOJ, and 0 otherwise. In Columns 2, 4 and 6, *Treated* is set to 1 throughout the sample period if the whistleblower reached a settlement of the FCA lawsuit independently, and 0 otherwise. *Post* is set to 1 in the years following the DOJ intervention decision, and 0 in the years before the FCA whistleblowing lawsuit was filed. The dependent variable in Columns 1 and 2 is *Weak Internal Controls* defined as 1 if the fitted value of predicted internal control weaknesses based on the model by Doyle et al. (2007) falls in the top quartile, and 0 otherwise. The dependent variable in Columns 3 and 4 is *Employee Relations* defined as 1 if the count of employee strengths exceeds the count of employee concerns, and 0 otherwise. The dependent variable in Columns 5 and 6 is *Independent Directors* defined as the proportion of independent directors on the board. As data on each of the dependent variables is missing for different firms, the sample size varies across columns. *Controls* includes *Contract Volume* and *Size*. All variables are defined in Appendix B. We include year and firm fixed effects and the standard errors are clustered at the firm level. *Treated* is measured at the firm level and is time invariant, its coefficient is absorbed by firm fixed effects. Standard errors are reported below the coefficients. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Dependent Variables	Weak Internal Controls		Employee Relations		Independent Directors	
	DOJ Intervention (1)	Successful Whistleblower (2)	DOJ Intervention (3)	Successful Whistleblower (4)	DOJ Intervention (5)	Successful Whistleblower (6)
Treated x Post	β_3 -0.115** (0.058)	-0.109* (0.064)	0.127** (0.064)	0.068 (0.113)	0.078** (0.034)	-0.041 (0.043)
Post	-0.005 (0.033)	-0.011 (0.027)	-0.074* (0.042)	-0.065 (0.041)	-0.035** (0.017)	-0.023 (0.017)
Observations	1,998	1,998	1,910	1,910	1,300	1,300
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
SE clustered by	Firm	Firm	Firm	Firm	Firm	Firm
R-Squared	0.036	0.035	0.062	0.059	0.322	0.311
Variance Inflation Factor						
Range	1.04-3.53	1.05-4.34	1.05-4.38	1.08-4.36	1.06-3.91	1.05-4.11
H0:	$\beta_3 \text{ DOJ Intervention} \geq \beta_3 \text{ Successful Whistleblower}$		$\beta_3 \text{ DOJ Intervention} \leq \beta_3 \text{ Successful Whistleblower}$		$\beta_3 \text{ DOJ Intervention} \leq \beta_3 \text{ Successful Whistleblower}$	
p-value	0.472		0.283		0.017	

Panel B. Future Whistleblowing after DOJ Intervention versus Future Whistleblowing after Successful Whistleblower Lawsuits

This table reports estimation results from Poisson regressions using different definitions of *Treated* on the number of whistleblowing cases encountered by the firms, filed in district courts, and filed with federal agencies during the period 2002-2012. In Columns 1 and 2, the dependent variable is the number of whistleblowing events encountered by a firm after the first whistleblowing allegation was investigated by the DOJ. Each firm is included only once in the sample. In Column 1, *Treated* is set to 1 if the FCA lawsuit was intervened by the DOJ, and 0 otherwise. In Column 2, *Treated* is set to 1 if the whistleblower reached a settlement of the FCA lawsuit independently, and 0 otherwise. In Columns 3 and 4, the dependent variable is the number of FCA whistleblowing lawsuits filed in the district court per year. In Column 3, *Treated Court* is equal to 1 if the cases selected by DOJ for litigation as a percentage of whistleblowing cases filed in the district court during the period 1987-2001 is lower than or equal to the median DOJ intervention rate, and 0 otherwise. In Column 4, *Treated Court* is equal to 1 if the cases won by the whistleblower as a percentage of whistleblowing cases filed in the district court during the period 1987-2001 is lower than or equal to the median rate of cases won by whistleblowers, and 0 otherwise. The sample consists of all district courts with at least 10 FCA whistleblowing lawsuits during 1987-2001. Standard errors are clustered at the district court level. In Columns 5 and 6, the dependent variable is the number of FCA whistleblowing lawsuits filed with a federal agency per year. In Column 5, *Treated Agency* is equal to 1 for federal agencies having less than or equal to the median intervention rates in FCA whistleblowing lawsuits filed during the period 1987-2001, and 0 otherwise. In Column 6, *Treated Agency* is equal to 1 if the cases won by the whistleblower as a percentage of whistleblowing cases filed per agency during the period 1987-2001 is lower than or equal to the median rate of cases won by whistleblowers, and 0 otherwise. The sample excludes unknown agencies. Standard errors are clustered at the agency level. In Columns 1 and 2, *Controls* includes *Investigation Length*, *Contract Volume*, *Size*, and *Count Years*. In Columns 3 and 4, *Controls* includes *Number of Cases*, *Labor Force*, and *Attorney Hours*. In Columns 5 and 6, *Controls* includes *Agency Contract Volume* and *Log OIG Budget*. All variables are defined in Appendix B. We include year fixed effects. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Dependent Variables	Future FCA Lawsuits		Future FCA Lawsuits District Court		Future FCA Lawsuits Federal Agency		
	DOJ Intervention	Successful Whistleblower	DOJ Intervention	Successful Whistleblower	DOJ Intervention	Successful Whistleblower	
	(1)	(2)	(3)	(4)	(5)	(6)	
Treated	β_1	-0.624*** (0.196)	0.313 (0.322)				
Treated Court	β_1			-0.221* (0.118)	0.117 (0.125)		
Treated Agency	β_1					-0.475* (0.267)	-0.542** (0.242)
Observations		329	329	671	671	223	223
Controls		Yes	Yes	Yes	Yes	Yes	Yes
Year FE		Yes	Yes	Yes	Yes	Yes	Yes
SE clustered by		Yes	Yes	District Courts	District Courts	Defrauded Agency	Defrauded Agency
Pseudo R-Squared		0.600	0.582	0.389	0.237	0.724	0.659
Variance Inflation Factor Range		1.20-2.01	1.12-2.03	1.13-1.89	1.15-2.14	1.09-1.91	1.06-2.61
Ho:		$\beta_1 \text{ DOJ Intervention} \geq \beta_1 \text{ Successful Whistleblower}$		$\beta_1 \text{ DOJ Intervention} \geq \beta_1 \text{ Successful Whistleblower}$		$\beta_1 \text{ DOJ Intervention} \geq \beta_1 \text{ Successful Whistleblower}$	
p-value		0.028		0.042		0.349	