Cash-for-information whistleblower programs: Effects on whistleblowing and consequences for whistleblowers

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Abstract

We study the effect of financial incentives on whistleblowing and the consequences for whistleblowers under the cash-for-information program of the False Claims Act (FCA). Exploiting appeals-court decisions that increase financial incentives for whistleblowing, we find that greater incentives increase the number of lawsuits filed with the regulator, the regulator's investigation length, the percentage of intervened lawsuits, and the percentage of settled lawsuits. Using information from lawsuits, a professional networking site, and background checks for up to 1,168 whistleblowers, we find that whistleblowers' long-term annual income decreases by approximately 8.6% or $6,500 but do not find evidence of social costs. In comparison, whistleblowers can expect to receive approximately $140,000 for blowing the whistle. Overall, our results suggest that the FCA cash-for-information program helps expose corporate misconduct and helps compensate whistleblowers for their income loss.

Keywords: Whistleblowers; cash-for-information whistleblower programs; False Claims Act; corporate misconduct; consequences for whistleblowers.

JEL Classifications: D82, G18, M41

1. Introduction

In recent years, whistleblower programs have gained momentum as a regulatory tool to enforce corporate misconduct in areas such as financial fraud, government procurement fraud, or tax fraud (Dasgupta and Kesharwani 2010). To incentivize whistleblowers to come forward, regulators increasingly employ bounty schemes that reward individuals for revealing information about illegal conduct.[1] Despite the prevalence of cash-for-information programs, little is known about how financial incentives affect whistleblowers' decisions to report potential misconduct to authorities. Similarly, there is no large-sample evidence on the consequences for whistleblowers under these programs. We study these questions using over 5,000 whistleblower lawsuits brought under the False Claims Act (FCA) against firms accused of defrauding the government. The FCA whistleblower regime is critical in combatting fraud against the government, with approximately 12,000 lawsuits and over $50 billion in recoveries since 2000 (DOJ 2018a).

Our setting provides three strengths to answer these questions. First, whistleblower allegations filed with regulators are typically unobservable.[2] In contrast, we have access to all FCA whistleblower lawsuits filed with district courts. Our sample consists of more than 5,000 lawsuits filed against public and private firms from 1994 to 2012.[3] Second, it is difficult to establish causality between financial incentives for whistleblowing and whistleblowers' decision to file a lawsuit. We overcome this challenge by exploiting decisions by Courts of

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[1] For instance, the False Claims Act awards whistleblowers between 15% and 30% of the recovery from lawsuits. More recently, the Dodd-Frank Wall Street Reform and Consumer Protection Act (DFA) of 2010 introduced a cash-for-information program that awards whistleblowers between 10% and 30% of the monetary sanctions collected by the Securities and Exchange Commission (SEC).

[2] Typically, researchers are unable to observe the full sample of whistleblower tips filed with the authorities, forcing them to analyze subsamples of tips. Prior studies primarily use data from two sources: the press and the Occupational Health and Safety Administration (e.g., Bowen et al. 2010; Call et al. 2018; Dyck et al. 2010).

[3] Our sample ends in 2012 as we obtain the list of whistleblower lawsuits from Engstrom (2013), who procured it through a series of requests to the DOJ under the Freedom of Information Act (FOIA) for the years 1994 to 2012.

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Appeals that increase the financial incentives for whistleblowers to file FCA lawsuits with treated district courts at different points in time. Third, it is challenging to examine the consequences for whistleblowers, as whistleblowers typically remain anonymous. We identify approximately 1,600 employee whistleblowers from court documents available from the Public Access to Court Electronic Records (PACER) system and construct a comprehensive database using data from the lawsuits, a professional networking site, and background checks to track a wide variety of outcomes for whistleblowers over the short, medium, and long term.

Our first set of analyses examines the effect of financial incentives on whistleblowing. Proponents of cash-for-information programs point to the large number of tips that regulators receive from whistleblowers and the success in terms of cases and penalties imposed on corporations (e.g., Dyck et al. 2010; Pope and Lee 2013). They argue that cash-for-information programs help to expose corporate fraud and highlight that these programs simply compensate employee whistleblowers for taking the risk of reporting wrongdoing to the authorities.

In contrast, critics argue that cash-for-information programs motivate employees to file meritless allegations with regulators that waste resources of regulators and accused firms alike (Bok 1980; Gobert and Punch 2000). Further, they argue that these programs incentivize employees to share information directly with regulators (e.g., Miceli and Near 1992). They contend that this is detrimental, as firms can better assess tips in the context of their business and better resolve issues than the authorities.

To examine the effect of financial incentives on whistleblowing, we exploit decisions taken by U.S. Courts of Appeals that increase the financial incentives for whistleblowing under the FCA in specific judicial districts. In the U.S., the 94 district courts are organized into 12 circuits, each with its own Court of Appeals. Decisions of a given Court of Appeals are mandatory for the district courts and other lower courts within the respective circuit. We exploit

three staggered decisions by Court of Appeals that increased whistleblowers' power to negotiate settlements, eligible damage awards, or eligible penalties. As Huang et al. (2019) and Klasa et al. (2018) point out, exploiting appeals-court decisions comes close to a natural experiment, as each case at a circuit court is assigned to a panel of three randomly selected judges and these courts are deemed to be independent of external pressure. We use a difference-in-differences methodology to examine changes in (1) the number of lawsuits filed, (2) the percentage of lawsuits filed internally before reporting to the authorities, (3) the Department of Justice's (DOJ) investigative efforts, and (4) the outcomes of lawsuits in treated district courts.

First, we find that whistleblowers file a greater number of lawsuits in treated district courts following decisions that increase financial incentives for whistleblowing. More specifically, treated courts receive 6.9% more lawsuits. However, we do not find a reduction in the fraction of allegations reported internally before the filing of a lawsuit.

Second, we examine the effect of financial incentives for whistleblowing on DOJ investigation length as a proxy for the extent of the DOJ's investigative efforts (Heese et al. 2021).[4] Our analyses show that the DOJ increases the investigation length by 36.5% for the average whistleblower allegation filed in treated courts. This finding suggests that the information brought forward is more valuable, in turn warranting more of the DOJ's time to build a winnable case (versus dismissing cases with meritless claims outright).

Third, we examine the effect of greater financial incentives for whistleblowers on lawsuit outcomes. We find an increase in the percentage of DOJ-intervened lawsuits and the percentage of settled lawsuits. In particular, an appeals-court decision that increases financial

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[4] DOJ investigation length is the period between the filing of the case with a court and the DOJ's case-selection decision. During this period, the allegation remains under seal to permit the DOJ to conduct a covert investigation without the defendant's knowledge. The seal period limits the possibility that the investigated firm can influence the investigation, thus providing a clean measure of the DOJ's investigative efforts (Heese et al. 2021). Lawsuits that the DOJ selects for litigation have longer investigations (Heese et al. 2021).

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incentives for whistleblowing increases the percentage of intervened cases by 3.2% and the percentage of settled cases by 3%.

In sum, these findings support the view that cash-for-information programs help to expose misconduct. Specifically, our findings show that whistleblowers respond to financial incentives by filing additional lawsuits, which the DOJ investigates for a longer period and that are more likely to result in a settlement. These findings are inconsistent with the critics' view that greater financial incentives for whistleblowers primarily trigger meritless lawsuits. We also do not find that greater financial incentives decrease the percentage of lawsuits reported internally first before informing the authorities, as argued by the critics.

However, the concern is that whistleblowers face severe costs to help uncover corporate fraud (e.g., Dyck et al. 2010). Our second set of analyses investigates the career, financial, and social consequences for up to 1,168 whistleblowers under cash-for-information programs. We start by investigating the firms' responses to employee whistleblower allegations. Employee whistleblowers report in their lawsuits that, in most of the allegations, firms ignore the issue raised by them, and, in 10% of the allegations, firms try to cover-up the issue internally. In only 6% of cases, firms open an internal investigation. We also find a high prevalence of retaliation. Employee whistleblowers report in their lawsuits that firms typically retaliate against them via firing (in more than one third of all cases), harassment (about 16% of all cases), threats (about 10% of all cases), and demotions (about 6% of all cases). In only 21% of all cases, the firm does not retaliate against an employee whistleblower.

Next, we collect career information from the profiles of 89 whistleblowers from a professional networking site. The average whistleblower finds a new job approximately within one year. In 52% of the cases, the next job is better or equivalent to the one at the accused firm, while 10% of employees' next job is worse, and 21% of employees become self-employed.

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16% of whistleblowers move to another state for their next job and 35% change industry. To assess longer-term consequences, we examine the most recent job and find that in 58% of the cases, it is better or equivalent to the job at the accused firm. At the same time, there is a reduction in self-employment from 21% to 16%. Over this more extended period (on average eight years after the lawsuit filing), 24% of whistleblowers work in a different state, and 42% in a different industry.

While the previous findings rely on whistleblowers' self-reported consequences (which could be subject to bias), we also examine the consequences for employee whistleblowers conducting background checks using information from a comprehensive set of public records. We manually search records for each whistleblower and collect time-series data related to financial and social consequences. We focus on financial and social consequences as prior research concludes that whistleblowers face substantial costs in both categories (e.g., Dyck et al. 2010). Regarding financial consequences, we collect data about the median income in the neighborhood where the whistleblower resides, judgments and liens, and bankruptcies. In terms of social consequences, we collect data on divorces, legal records, and traffic violations.

To conduct a difference-in-differences analysis, we construct a matched sample by finding individuals with similar attributes (i.e., same gender and similar age) who worked for the same firm and held a position similar to the whistleblower at the lawsuit filing time. Using this design, we find that whistleblowers' income is lower by 7.3% (or $5,500) to 8.6% (or $6,500) one, five, and ten years after the lawsuit filing. In the short term, whistleblowers are also more likely to face judgments and liens. However, we do not find an increase in bankruptcy likelihood, and the likelihood of judgments and liens is economically modest in the medium and long term. In fact, the expected reward for blowing the whistle is approximately $140,000, which seems to offset the financial costs, which are concentrated among rank-and-file

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employees. In terms of social outcomes, we do not find meaningful differences between whistleblowers and matched individuals across our measures.

Our analyses are subject to the following caveats. First, we do not attempt to provide a complete cost-benefit analysis of the effects of cash-for-information programs. Second, our results only speak to the effect of financial incentives on whistleblowing in lawsuits filed with the authorities, as we do not observe complaints that whistleblowers filed internally with the firm and were not reported to the authorities. Third, our sample focuses on whistleblower allegations filed under the FCA against firms accused of defrauding the government. Cash-for-information programs in other regimes may have a different effect on whistleblowing.

These caveats notwithstanding, our study makes the following three contributions. First, prior literature has shown that employee whistleblowers are an important information source for regulators (e.g., Dyck et al. 2010; Heese et al. 2021; Heese and Pérez-Cavazos 2021), focusing primarily on the consequences for firms (e.g., Bowen et al. 2010). We contribute to this literature by providing evidence on the effect of financial incentives on whistleblowing, a research area that is "woefully lacking" (Pope and Lee 2013). Our findings suggest that cash-for-information programs help expose corporate misconduct. In particular, stronger financial incentives for whistleblowing result in a larger number of lawsuits, which the DOJ investigates for a longer period and that are more likely to result in a settlement. In contrast, we do not find support for critics' views that stronger financial incentives for whistleblowing primarily trigger additional meritless lawsuits or drive whistleblowers to inform the authorities directly without informing the firm first.

Second, prior research has shown that employee whistleblowers face severe costs and retaliation (e.g., Dyck et al. 2010). For example, Dyck et al. (2010) use a sample of 17 employee whistleblowers and find that in 82% of the cases, the whistleblower was fired, quit under

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duress, or had significantly altered responsibilities. They conclude that whistleblowers face substantial cost from whistleblowing, especially employees, as they "seem to lose outright from whistleblowing." We extend these inferences by studying a larger sample of whistleblowers, using a wide variety of data sources, and providing insights into the longer-term consequences. We find that the financial and social consequences for whistleblowers do not appear to be particularly severe—especially when considering that the average whistleblower can expect to receive approximately \$140,000 in rewards under the FCA cash-for-information program, representing approximately three years of salary for rank-and-file employees.[5]

Finally, our study offers three main insights for policy-makers, firms, and potential whistleblowers. First, our finding that financial incentives lead to additional lawsuits that are more likely to result in a settlement can help regulators design more effective whistleblower programs. For instance, the new whistleblower directive of the European Union (2019) does not require member states to offer financial rewards to whistleblowers. Our evidence that financial incentives can motivate whistleblowers to expose firms' fraudulent activities and help compensate whistleblowers for their income loss can inform such policy debates. Second, firms (and regulators) are concerned that cash-for-information programs incentivize employees to report directly to regulators instead of alerting firms, and to file meritless allegations with regulators.[6] Our findings do not support these concerns. Finally, our evidence on

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[5] The average salary of the median employee working for a publicly traded firm in 2018 is approximately \$50,600, calculated using median pay from annual proxy statements and number of employees from S&P Global Market Intelligence (Serkez and Francis 2019).

[6] To mitigate this concern, the SEC encourages employees to report to their employer before contacting the SEC (SEC 2019). Similarly, the European Union (2019) recently passed regulation that encourages whistleblowers to first report issues to their employer and only report to regulators if the issue cannot be resolved within the firm. In contrast, FCA whistleblowers can choose whether to raise the issue internally first or directly contact the authorities. A report of the National Whistleblowers Center (2010) recommends that the SEC adopts reporting procedures for whistleblowers similar to those of the FCA whistleblower program.

whistleblowers' career, financial, and social outcomes can inform individuals about the consequences of whistleblowing under the FCA, facilitating their decision-making.

2. Institutional background, related research, and research question

2.1. The False Claims Act and Qui Tam Provisions

The False Claims Act (FCA) is an American federal law and the government's primary tool to combat fraud in connection with federal programs and expenditures. Congress enacted it in 1863 in response to concerns that suppliers of the Union Army during the Civil War defrauded the Army. The FCA originally stipulated that any person who knowingly submitted false claims to the government was liable for double the government's damages plus a penalty of $2,000 for each false claim.

The FCA was revamped in 1986, primarily due to abuses in the defense contracting industry. These amendments significantly expanded the role of whistleblowers, increased financial incentives, and reduced barriers to bringing actions against persons or entities alleged to have submitted fraudulent claims to the federal government. The changes also included an increase in the damages from double to treble damages and an increase in the penalties from $2,000 to a range of $5,000 to $10,000 (Engstrom 2014). Since the 1986 amendments, the FCA has recovered more than $59 billion (DOJ 2018a). Nearly one-half of all recoveries have come from healthcare cases. The FCA also has been effective in combating fraud in other industries, such as defense, energy, natural disaster recovery, and other forms of government procurement.

The FCA allows private persons (called "relators") to file suit for violations of the FCA on behalf of the government, called a "*qui tam*" action (this is also referred to as the FCA's whistleblower provision).[7] The *qui tam* provisions of the FCA were motivated by the

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[7] The term "*qui tam*" is an abbreviation of the Latin phrase "*qui tam pro domino rege quam pro se ipso in hac parte sequitur*", which means "[he] who sues in this matter for the king as well as for himself."

recognition that the government lacks the information, as compared to private citizens, to pursue all those who submit fraudulent claims to the government. These private citizens can be employees, suppliers, customers, or shareholders of the company allegedly defrauding the government, among others. 12,643 lawsuits (or 71% of all lawsuits) from 1987 to 2018 were filed by citizen whistleblowers, who received rewards upwards of $7 billion (DOJ 2018b).

2.2. The enforcement process for qui tam cases

The enforcement of *qui tam* cases consists of five steps (DOJ 2017): 1) the lawsuit filing by a whistleblower with a court, 2) the DOJ investigation of the claims, 3) the DOJ's decision to join the case, 4) the legal proceedings after this decision (either with the DOJ if the DOJ decides to join, or if not, then the whistleblower can pursue the case without the DOJ), and 5) the conclusion of the case, typically marked either by a settlement or no settlement. Figure 1, adapted from Heese and Pérez-Cavazos (2019), shows the timeline of the FCA *qui tam* enforcement process and the average time spent on each step for our sample of FCA lawsuits.

– Insert Figure 1 here –

The FCA includes the following provisions to discourage opportunistic plaintiffs and minimize the chance of frivolous lawsuits: (i) a "first-to-file" provision precludes claims that mirror a previously filed lawsuit; (ii) a bar on claims related to an already existing enforcement action; and (iii) a bar on claims previously disclosed publicly.

A *qui tam* whistleblower can initiate a lawsuit by filing a complaint on behalf of the government with a court. 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] transacts business […]." Thus, if a firm operates in several jurisdictions, whistleblowers can choose where to file the lawsuit. This

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complaint is "under seal," wherein only the government is informed of the lawsuit. The purpose of the seal is to permit the government to conduct a covert investigation without the defendant's knowledge.[8] If whistleblowers violate the seal requirements (e.g., by publicly discussing the case), the court can dismiss the case (Hoyer 2013). Next, the DOJ opens an investigation into the lawsuit's claims and investigates the claims together with the allegedly defrauded agency. Investigations typically include interviews and statements from the whistleblower and other witnesses and obtaining the defendant's records through the subpoena process. The DOJ and agency initially have 60 days for their investigation, but they can ask the court for an extension. During the length of the investigation, the case is kept under seal. Each extension request grants an additional six months for the investigation, and most cases remain under seal for approximately two years (DOJ 2011; see Figure 1).

At the end of an investigation, the DOJ, together with the industry-specific agency, decides on whether to join the case (or "to intervene") or to decline joining the case (see Heese et al. 2021 for a study examining DOJ selection of FCA lawsuits). In the latter case, the *qui tam* whistleblower still has the option to proceed on his own without the DOJ.[9] At the end of this stage, the case is unsealed and proceeds to the next step.

The next step in the *qui tam* process involves active litigation. At this time, the complaint must be served to the defendant within 120 days, who is obliged to file an answer to the complaint within 20 days of receiving it. The case then proceeds through various phases such as discovery, trial, and any appeals. The litigation process can span several years (1.3 years for our sample lawsuits, as shown in Figure 1). At any point in the *qui tam* process, the

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[8] Companies can become aware of the allegation while the investigation is ongoing through other means, for instance, when the company receives a subpoena for records, or if investigators interview employees.
[9] According to the DOJ, it intervenes in approximately 25% of all cases (DOJ 2011).

defendant has the option to settle the case. Companies can be held liable for criminal penalties in the form of fines, asset forfeiture, jail time, and a bar from future government contracting.

Qui tam whistleblowers stand to gain financially from successful lawsuits. The gains depend on the DOJ's intervention decision. If the DOJ declines to intervene and the whistleblower continues on his own, then a successful whistleblower earns between 25% and 30% of any recovery; if the DOJ intervenes, then a successful whistleblower keeps 15% to 25% of recoveries.

2.3. Decisions by U.S. Courts of Appeals

The financial incentives for whistleblowing under the FCA differ across the 94 district courts. In the U.S., these district courts are organized into 12 circuits, each with its own Court of Appeals. Decisions of a given Court of Appeals are mandatory for the district courts and other lower courts within the respective circuit. We exploit three decisions by Court of Appeals that increased the financial incentives for whistleblowers filing FCA lawsuits in given circuits. The first decision is *United States ex rel. Killingsworth v. Northrop Corp.* 25 F.3d 715, 722 (9th Cir. 1994).[10] In 1994, the U.S. Court of Appeals of the 9th Circuit ruled—contrary to all other appeals courts to consider the issue—that the DOJ may only influence a settlement between a whistleblower and a defendant where it has intervened previously.[11] This decrease in government power is relevant because a whistleblower sues on behalf of the United States, and any judgment determines the government's later assertion of related claims. This decision increased the financial incentives for whistleblowing in two ways (Engstrom 2013). First, it

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[10] We end the treatment period for the 9th Circuit in 2001, because in that year the 9th Circuit decided in *United States. v. Mackby,* 261 F.3d 821 (9th Cir. 2001) that treble damages under the FCA were subject to the *Excessive Fines Clause of the Eighth Amendment*. This decision made it financially less attractive to file lawsuits in that circuit because the decision raised the possibility that the district courts would assess treble damages as excessive, reducing the overall settlement amount.

[11] In lawsuits filed in other district courts the DOJ can veto settlements in cases that it declined to intervene in (Engstrom 2013).

creates incentives for whistleblowers and defendants to trade a wide release of liability for a larger settlement. Second, the DOJ could be more likely to intervene in cases filed in the 9th circuit to police collusive settlements. This benefits whistleblowers because DOJ intervention increases the likelihood of reaching a settlement substantially.

The second decision we exploit is *United States v. Larry Reed & Sons Partnership*, 280 F.3d 1212 (8th Cir. 2002). In 2002, the U.S. Court of Appeals of the 8th Circuit decided that damage awards are not limited to the amounts alleged in the initial complaint. As the whistleblower's share is based on the total recovery (i.e., the sum of damages and penalties), this decision increased the financial incentives for whistleblowing as this decision allows whistleblowers to revise their claims upwards throughout the investigation process and the legal proceedings, increasing total recovery.

The third decision we exploit is *U.S. ex rel. Tyson v. Amerigroup Illinois, Inc.*, 488 F. Supp. 2d 719 (N.D. Ill 2007). In this case, the jury returned a verdict that the defendant perceived as imposing excessive penalties. The defendant filed an appeal with the U.S. Courts of Appeals for the 7th Circuit in 2007. On appeal, the court ruled in favor of the plaintiffs. This decision increased financial incentives for whistleblowers to file cases in the 7th Circuit because it ruled in favor of allowing penalties greatly in excess of damages, increasing total recovery.

We focus on these three decisions as prior law literature (e.g., Engstrom 2013) and law firms specialized in FCA cases discuss the impact of these decisions on settlements.[12] As a validation test, we also examine whether the total and average settlement amounts in treated courts increase following these decisions. As shown in Appendix A, we find evidence

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[12] See for example https://www.hg.org/legal-articles/survey-of-penalties-and-damages-in-false-claims-act-cases-22139 for a discussion of *U.S. ex rel. Tyson v. Amerigroup Illinois, Inc.,* 488 F. Supp. 2d 719 (N.D. Ill 2007).

validating that these decisions indeed increased financial incentives for whistleblowers.[13] Potential whistleblowers likely become aware of these decisions through three channels. First, many law firms discuss recent legal developments related to the FCA on their websites.[14] Similarly, law firms also often present their successful cases on their websites. For example, the law firm Goldberg Kohn, which represented the whistleblower in the case *U.S. ex rel. Tyson v. Amerigroup Illinois, Inc.*, describes this case as a "landmark victory" that received "the largest jury award in the history of these statutes."[15] Second, large cases and decisions are also widely discussed in the press. For example, the cases against Amerigroup and Northrop were covered by the *Wall Street Journal*.[16] Similarly, law enforcement authorities, such as the DOJ, also announce large cases and the resulting settlements via press releases.[17] Third, FCA lawyers typically follow the legal developments across different circuits and advise whistleblowers in the court-selection decision.

Each of the three Court-of-Appeals decisions that we exploit increases the likelihood that a whistleblower will file a lawsuit to benefit from the stronger financial incentives in the circuit. While whistleblowers can bring the lawsuit to any judicial district where the accused firm operates or transacts business, there are important factors that affect their court-selection decision. For example, whistleblowers likely consider the expected costs of traveling if they file in a remote court. Legal procedures often take years, which could lead to numerous trips. Similarly, filing in a remote court would also be costly for the law firm to represent the client.

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[13] We also examine parallel trends around the appeals-court decisions in our sample and do not find significant differences between treated and untreated courts prior to the court decisions (see Internet Appendix Table IA1).

[14] See for example https://www.crowell.com/NewsEvents/AlertsNewsletters/all/Lets-Talk-FCA-Top-False-Claims-Act-Developments-of-2019-February-2020.

[15] https://www.whistleblowersattorneys.com/successes.html.

[16] See https://www.wsj.com/articles/SB121884581899646109 and https://www.wsj.com/articles/SB110970413208767253

[17] See, for example, the DOJ press release of the case against Amerigroup: https://www.justice.gov/archive/opa/pr/2008/August/08-civ-723.html

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Moreover, courts have constraints too, and if all cases converged to one or two friendly jurisdictions, then court resource constraints would likely cause large delays in hearings of cases, which could additionally deter whistleblowers and their lawyers from concentrating on select jurisdictions.[18]

2.4. Related literature and research objective

The literature defines "whistleblowing" as the disclosure by either former or current employees of alleged illegal, immoral, or illegitimate practices that are under the control of the employer (Miceli and Near 1985). While employees are likely to have the greatest opportunities to identify corporate wrongdoings, whistleblowing can come from external sources to the firm as well.[19] Using a sample of 216 fraud cases between 1996 and 2004, Dyck et al. (2010) find that employees are the most important source of information (17% of the cases), followed by non-financial market regulators (13%) and the media (13%). The SEC and auditors only account for 7% and 10% of the cases, respectively. They conclude that whistleblowers face weak incentives to reveal wrongdoings, especially employees, who "seem to lose outright from whistleblowing." Similarly, Brickley (2003) reports that random reviews of whistleblower complaints conducted by the National Whistleblowers Center and the Government Accountability Project find that over half of complainants reported they were fired after blowing the whistle, and over 90% were subject to reprisals or threats.

To reduce these costs for whistleblowers, regulators increasingly employ cash-for-information programs that provide financial rewards for whistleblowers. Proponents of these programs argue that financial incentives by a regulator are likely to increase whistleblowers'

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[18] We do not find evidence of a reduction in the number of lawsuits filed in non-treated courts, mitigating the concern that whistleblowers simply reshuffle cases across courts (see Internet Appendix Table IA2).

[19] Prior studies document consequences for firms targeted by employee whistleblowers. For instance, Bowen et al. (2010) find that firms subject to whistleblowing allegations face subsequent negative consequences (such as negative market reactions, restatements, and shareholder lawsuits). Whistleblowing has also been shown to deter financial misreporting and tax aggressiveness (e.g., Wilde 2017; Berger and Lee 2019; Wiedman and Zhu 2017).

willingness to share their information with the authorities (Pope and Lee 2013; Xu and Ziegenfuss 2008).[20] They highlight that incentivizing whistleblowers to share their information with the authorities is important because whistleblowers have access to valuable information related to corporate misconduct. Call et al. (2018), for example, document that whistleblower involvement is associated with higher penalties for targeted firms and longer prison sentences for culpable executives. Under this view, cash rewards serve as compensation for the costs associated with reporting wrongdoing to the authorities. Evidence of significant underreporting of wrongdoing supports the implementation of financial rewards for whistleblowers (Ethics Resource Center 2013; Heese and Pérez-Cavazos 2021).

In contrast, critics argue that whistleblowers are often disgruntled employees or other stakeholders that waste resources of regulators and accused firms, and lodge baseless allegations (Gobert and Punch 2000). Miceli and Near (1992) also describe that whistleblowers often misjudge the situation and hence file trivial or frivolous complaints. They are also likely to report directly to regulators for the sake of financial rewards instead of alerting the company first. Bok (1980) discusses that whistleblowers may "hope for revenge for past slights or injustices." Under this view, cash-for-information programs trigger employees to file meritless allegations with authorities that they might not have filed otherwise, generating costs for regulators and firms (Bok 1980; Schmidt 2005).

In the first part of this study, we examine the effect of financial incentives on whistleblowing under the FCA cash-for-information program by exploiting staggered court decisions that increase financial incentives for whistleblowing during the period 1994 to 2012. In the second part of this study, we investigate the short-, medium-, and long-term career,

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[20] Xu and Ziegenfuss (2008) find that internal auditors are more likely to report wrongdoing when they receive incentives by their employing firm, and Pope and Lee (2013) find similar results in a sample of MBA students.

financial, and social consequences for whistleblowers under the FCA cash-for-information program using information from lawsuits, a professional networking site, and background checks on up to 1,168 whistleblowers.

3. Data and sample characteristics

We obtain the list of whistleblower lawsuits from Engstrom (2013), who procured it through a series of requests to the DOJ under the Freedom of Information Act (FOIA). This dataset contains all FCA lawsuits initiated by whistleblowers from 1994 to 2012 against private and public firms.[21] For each lawsuit, the data includes the filing date, the accused firm, the district court, and the lawsuit outcome. Appendix B provides examples from our sample.

Table 1, Panel A describes the entire dataset as well as the samples that we use for the analyses. The initial dataset comprises 5,138 lawsuits, involving 6,181 whistleblowers and 6,828 unique whistleblower-lawsuit observations.[22] We refer to this sample as the "full sample." We next obtain the court documents for these lawsuits from the Public Access to Court Electronic Records (PACER) system and collect data on the nature of the fraud, the whistleblowers, and the firm's details and behavior towards the complaint and the whistleblower.[23] We are able to obtain the court documents for a sample of 1,926 unique lawsuits involving 2,318 unique whistleblowers and comprising 2,450 unique whistleblower-lawsuit observations. This sample comprises 2,219 unique firms. We refer to this sample as the

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[21] Roughly 3,000 (2,500 during our sample period) *qui tam* lawsuits remain under seal and fall into one of three categories (Engstrom 2013). First, a substantial portion of the cases remain under seal pending the completion of investigations. Second, a small fraction is comprised of closed cases that could involve national security concerns. According to DOJ attorneys (Engstrom 2013), the rest of the cases are likely closed cases that remained sealed for a variety of reasons, including neglect by the judge to unseal the case, accidental failure by the relevant DOJ attorney to request unsealing upon case termination, or a successful whistleblower effort to persuade the trial judge to keep the case sealed, typically because he or she remains employed by the company named in the lawsuit.

[22] A lawsuit may involve more than one whistleblower, explaining why the number of unique whistleblowers exceeds the number of unique lawsuits. We cannot determine the number of unique firms for the full sample without access to the court documents.

[23] Three different teams of research assistants reviewed all lawsuits to ensure an accurate final dataset. Remaining issues were resolved by us.

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"lawsuits with court documents sample." 1,335 (591) of the 1,926 lawsuits with court documents are filed by employee (non-employee) whistleblowers. In some instances, we note differences in lawsuits against public versus private firms.[24]

Table 1, Panel B describes the distribution of the 5,138 lawsuits over the sample period. The lawsuits are relatively equally spread over the sample period, while the settlement amounts are the highest for lawsuits filed in 2003.[25] The 5,138 lawsuits identify more than 20 agencies that were allegedly defrauded by our sample firms (see Table 1, Panel C). The two agencies with the most cases are the Department of Health and Human Services (comprising 56% of the sample), and the Department of Defense (comprising 16% of the sample).[26] Panel D reports the distribution of the 5,138 lawsuits across the 94 U.S. District Courts. The district courts in California, Florida, and Texas receive the largest number of FCA lawsuits.

Table 1, Panel E provides more information on the sample composition of the 2,451 whistleblower-lawsuit observations with court documents by type of whistleblower. By far, employee whistleblowers are the most common whistleblower in our sample, with approximately 70% of the observations related to employee whistleblowers. Other key categories of whistleblowers include customers (the second largest category with 4.5% of all observations), contractors, business partners, external auditors, competitors, and suppliers. Less than 30% of all lawsuits result in a settlement, suggesting that most lawsuits lack merit (or sufficiently strong evidence).

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[24] To identify public firms, we review the court filings to match the name of each defendant to a GVKEY identifier.
[25] The number of allegations drops significantly in 2012 (the last year in our sample) because many cases were still under seal at the time of the FOIA requests.
[26] See Heese et al. (2016) for a study on FCA enforcement of overbilling in the healthcare setting.

Regarding the characteristics of employee whistleblowers, men file approximately 60% of lawsuits.[27] We also consider the ranks of employee whistleblowers in our sample.[28] The majority of the lawsuits are filed by rank-and-file employees (about 59%), followed by middle management (27%), and upper management (4%). Almost 60% of the settlement amounts pertain to cases filed by rank-and-file employees, and the percentages of settled lawsuits are similar across whistleblower ranks: 25%, 28% and 33% of lawsuits are settled for rank-and-file, middle and upper management, respectively.[29] The average settlement per lawsuit is also similar across different ranks – the highest average settlement being for upper-management whistleblowers ($23 million), followed by middle-management and rank-and-file employees (about $17 million for each category).[30]

– Insert Table 1 here –

4. Effect of financial incentives on whistleblowing

4.1. Empirical methodology

We examine the effect of financial incentives on whistleblowing by estimating the following regression at the district-court level using the full sample of 5,138 lawsuits:

$$Y_{i,l,t} = \alpha_0 + \alpha_1 Treatment_{i,t} + Controls + \alpha_i + \alpha_t + \epsilon_{i,t}, \quad (1)$$

where the dependent variable $Y_{i,t}$ is either the natural logarithm of one plus the number of FCA lawsuits (denoted *Number of Lawsuits*), the percentage of internally reported lawsuits (denoted *% Internally Reported Lawsuits*), the natural logarithm of the average DOJ investigation

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[27] This could be reflective of the distribution of men versus women in our sample firms. According to the U.S. Department of Labor, as of 2016, less than 47% of U.S. workers are women (DOL 2016).

[28] We categorize all C-suite executives, such as a CEO, COO, CFO, Chairman, President, and Executive Vice President as upper management. We group positions that include the designations of "manager", "supervisor", "director" under middle management, and designate all others as rank-and-file. "Director" does not refer to a member of the board of directors; instead, these are designations such as "Director of Operations." When not obvious, we read more about the position of the employee to determine his or her rank in the firm.

[29] This is slightly different for public firms: 24% and 32% of lawsuits filed by rank-and-file and middle management are settled; however, only 17% of lawsuits filed by upper management are settled.

[30] This is different for public firms: rank-and-file employee whistleblowers have the highest average settlement at $46 million, followed by middle and upper management at $22 million and $19 million, respectively.

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length, i.e., the number of days from the filing to the case-selection date (denoted *DOJ Investigation Length*), the percentage of DOJ-intervened lawsuits (denoted *% Intervened Lawsuits*), or the percentage of settled lawsuits (denoted *% Settled Lawsuits*) district court *i* incurred during year *t*.[31] The main explanatory variable *Treatment$_{i,t}$* takes the value of 1 following an appeals-court decision in year *t* that increased the financial incentives for whistleblowing in district courts *i*, and 0 before that decision.[32]

Our identification strategy is a difference-in-differences methodology that exploits appeals-court decisions over time. Given that judges at these courts are largely independent of external pressures, exploiting such decisions comes close to a natural experiment (Huang et al 2019; Klasa et al. 2018).[33] The first difference is the change in whistleblowing at each district court before and after a court decision that increased financial incentives for whistleblowers. The second difference is the change in whistleblowing in FCA lawsuits filed at other district courts that are not subject to these decisions. We estimate the effect of financial incentives on district-court-level whistleblowing as the difference in those two differences.

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[31] We examine the robustness of our results when winsorizing the dependent variables at the 1st and 99th percentiles (see Internet Appendix Table IA3). We find consistent results.

[32] As pointed out before, the treatment period for the 9th Circuit ends in 2001. To mitigate the concern that our results are sensitive to this specific definition of *Treatment*, we run additional robustness tests using a three-year or five-year treatment window after each of the three decisions. We find largely consistent results (see Internet Appendix Table IA4).

[33] One potential concern is that our tests jointly capture the effect of greater financial incentives on the behavior of both the DOJ and the whistleblowers. In particular, our outcome variables may reflect both a change in the quality of the cases filed by whistleblowers as well as enforcement changes by the DOJ. For example, the DOJ may also respond to greater financial incentives by spending more resources on cases filed in treated courts. To examine this possibility, we obtain data on *non-qui tam* lawsuits for our sample period via a Freedom of Information Act request to the DOJ. *Non-qui tam* lawsuits are FCA lawsuits that the DOJ files independently, and hence these lawsuits do not involve whistleblowers (and their incentives). If our findings are primarily driven by a change in the DOJ's behavior, we would expect that the effects on the number of cases, the investigation time, and the settlement amount are similar irrespective of whether the case was filed by a whistleblower or by the DOJ. However, the treatment effects are significantly larger when the dependent variables are based on *qui tam* lawsuits compared to *non-qui tam* lawsuits (see Internet Appendix Table IA5). These additional tests alleviate the concern that our findings are due to a change in the DOJ's enforcement behavior following the increases in financial incentives.

We also estimate a stacked event-by-event regression as an alternative research design as recent studies raise the concern that treatment effects in staggered difference-in-differences OLS regressions might be biased by using already treated units as comparison units for later-treated units (e.g., Baker et al. 2021; Cengiz et al. 2019). Following the approach of Cengiz et al. (2019), we create a separate dataset for each of the three Court-of-Appeals decisions, each excluding observations from the other two treated Courts of Appeals. In these datasets, we use a 10-year estimation window (*t-5* to *t+5*) around the respective decision and then stack these event-specific datasets in relative time to calculate an average treatment effect across the three events (the resulting stacked dataset has 3,888 observations).

Our tests include district-court fixed effects to control for time-invariant court characteristics and year fixed effects to control for general time trends. Similar to Heese et al. (2021), we include the following *Controls* for district-court and macroeconomic conditions. To control for resources available at each district court, we include *Number of Cases* (measured as the natural logarithm of one plus the number of civil cases pending per U.S. attorney office at the beginning of the year) and *Attorney Hours* (measured as the natural logarithm of attorney hours worked per year in a district court). To control for the macroeconomic conditions, we control for the size of the local *Labor Force* (measured as the natural logarithm of the labor force in each district at the beginning of the year) and the *Unemployment Rate* (measured as the district's unemployment rate at the beginning of the year). All variables are defined in Appendix C. Standard errors are clustered at the circuit-court level.

Table 2 provides descriptive statistics for the variables included in our tests. In our sample, 14.4% of all observations are subject to an appeals-court decision that increases financial incentives for whistleblowers. On average, 2.88 FCA lawsuits are filed per district-court year, and the average investigation length is 409 days. Approximately 18.5% of these

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lawsuits are settled, with an average settlement of $3.8 million. The average district court has 1,142 civil cases pending per year and spends 9,458 attorney hours per year. District courts have an average labor force of roughly 1.6 million people and an unemployment rate of 5.85%.

– Insert Table 2 here –

4.2. Results

4.2.1. Number of lawsuits

We examine whether district courts receive a larger number of FCA lawsuits after an appeals-court decision that increases financial incentives for whistleblowing. To do so, we examine changes in the *Number of Lawsuits* using equation 1. If financial incentives trigger whistleblowers to file more lawsuits, we expect the number of lawsuits to be higher following appeals-court decisions that increase financial incentives for whistleblowing.

Table 3 reports the results. The main difference across the models in Columns 1 through 4 is the inclusion of different *Controls* and alternative estimation techniques. Columns 1 and 4 do not include any *Controls*. Column 2 includes district-court-specific *Controls*, and Column 3 also includes macroeconomic *Controls*. Columns 1-3 report results from OLS regressions and Column 4 from a pooled stacked regression. All models include district-court and year fixed effects. In all models, we find a positive and significant coefficient on *Treatment*, indicating that financial incentives increase the number of FCA lawsuits filed with district courts. In particular, as per Column 1, treated courts receive 6.9% more lawsuits.

– Insert Table 3 here –

4.2.2. Internal reporting

In this section, we examine the effect of financial incentives for whistleblowing on employees' decisions to report alleged wrongdoings internally first, versus directly reporting

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the case to regulators.[34] Critics of cash-for-information programs argue that whistleblower complaints reported to the authorities without informing the firm first are more likely to be frivolous and reflect whistleblowers' intent to obtain a quick payday. Under this view, we should observe differential case outcomes within our sample of lawsuits depending on whether an allegation was directly reported to the authorities versus reported internally first.

We begin our examination by providing statistics in Table 4, Panel A on the sample of 1,335 lawsuits with a court document filed by 1,666 employee whistleblowers. The statistics in Table 4, Panel A show that a significantly larger percentage of lawsuits were reported internally first. Further, a significantly larger percentage of lawsuits not reported internally first get settled (approximately 30% of these lawsuits settle) as compared to lawsuits reported internally first (approximately 25% of these lawsuits settle). Contrary to the critics' view, the average settlement is not statistically different across lawsuits initially reported internally versus those directly reported externally (the average settlement is approximately $15 million). These descriptive statistics suggest that lawsuit merit cannot be predicted merely by the whistleblower's internal versus external reporting choice. We further examine the court documents to understand the whistleblowers' reasons for reporting directly to regulators. In almost 90% of the lawsuits, the whistleblowers did not provide a reason. Among those that did offer a reason, fear of retaliation was the most cited cause for not reporting internally first (9.4% of cases), followed by the supervisor being involved in the fraud (0.5%), and external parties already being aware of the fraud (0.4%).

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[34] We code all lawsuits in which the employee whistleblower unambiguously describes that he or she reported the issue internally before informing the authorities as internally reported. We cannot determine whether the employee whistleblower provided the firm with sufficient time to respond to the allegation.

In Table 4, Panel B, we conduct a more in-depth analysis of the various types of channels used by employee whistleblowers.[35] The majority of whistleblowers who report internally first choose to report to top management (34% of the time) or their direct supervisor (38% of the time). Other channels include reporting to a colleague, legal compliance, HR, a hotline, and an internal auditor. Interestingly, hotlines (made specifically for use by whistleblowers) are very rarely used in our sample (2-4% of the time). Three explanations are possible for this. First, many private firms may not employ such hotlines as they are not required by law for private firms. Second, it is possible that most cases that are reported to hotlines are successfully resolved internally, and hence we do not observe these in our sample of lawsuits (e.g., Stubben and Welch 2020). Third, Soltes (2020) finds that there are often barriers to the proper functioning of hotlines, such as wrong or incomplete phone numbers provided or non-functioning websites.[36] Hence, whistleblowers may rarely use this channel. Among the external reporting channels, employee whistleblowers either report first to courts (in more than 95% of the cases), a government agency, or an external auditor.

Next, we examine the effect of financial incentives on informing firms before filing a lawsuit by studying changes in the percentage of internally reported lawsuits per district court and year (denoted *% Internally Reported Lawsuits*) using equation 1 and the sample of 1,335 lawsuits with a court document filed by employee whistleblowers. If financial incentives trigger whistleblowers to contact authorities directly, we expect the percentage of lawsuits reported internally to decrease following appeals-court decisions that increase whistleblowing

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[35] While most employee whistleblowers use only one internal reporting channel (in about 47% of the cases), it is not unusual for some whistleblowers to use multiple internal reporting channels prior to reporting externally. As a result, the number of observations for reporting channels used is greater than the number of observations for employee whistleblowers who chose to report internally first.

[36] Soltes (2020) documents that 20% of his sample of 250 firms had impediments that hindered the reporting by whistleblowers. He notes that, "some of these obstacles were serious, and effectively locked reporting on the channel altogether."

incentives. Table 4, Panel C reports the results. The table follows the same structure as Table 3. In all models, the coefficient on *Treatment* is positive and insignificant, indicating that incentives do not affect the percentage of FCA lawsuits reported internally first significantly.[37]

This result is consistent with prior descriptive evidence. For example, in its report on FCA whistleblowing, the National Whistleblowers Center (2010) concludes that "the existence of a qui tam whistleblower reward program has no impact on the willingness of employees to internally report potential violations of law or to work with their employer to resolve compliance issues" (p.5). Similarly, the study by Kesselheim et al. (2010), which provides descriptive statistics on a small sample of qui tam lawsuits, finds that "nearly all insiders first tried to fix matters internally by talking to their superiors, filing an internal complaint, or both" (p.1834). Kesselheim et al. (2010) also describe that only a small number of the whistleblowers intended to file a lawsuit. Instead, the company's response to their internal report eventually led them to file a lawsuit. Thus, while whistleblowers file more lawsuits in treated courts, we do not find that stronger financial incentives reduce whistleblowers' willingness to report internally first. One interpretation of these findings is that the larger financial incentives motivate a larger number of whistleblowers to go forward and file a lawsuit.

– Insert Table 4 here –

4.2.3. Investigation length

In this section, we examine the effect of financial incentives for whistleblowing on DOJ investigation length to capture the DOJ's investigative efforts using equation 1 and the full

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[37] One possibility is that the effect of financial incentives on *% Internally Reported Lawsuits* is concentrated in shorter windows around the appeals-court decisions. To examine this possibility, we rerun our analysis using three- or five-year treatment windows after each of the three decisions. However, we do not find a significant effect on *Treatment* using these alternative windows (see Internet Appendix Table IA3). We also examine the confidence interval in more detail. As per Table 4, Panel C, Column 3, the 95% confidence interval for *Treatment* is [–0.015, 0.033]. This confidence interval suggests that the estimate is statistically insignificant because the effect is economically small; not because of a lack of precision in the estimate.

sample of 5,138 lawsuits. If stronger financial incentives help whistleblowers to come forward with valuable information, we would expect that the DOJ spends, on average, more time investigating each allegation to build a stronger case. In contrast, if incentives trigger meritless claims, we would expect the DOJ to reduce the average investigation length.

Table 5 reports the results. It follows the same structure as Table 3. As shown in Columns 1-4, we find a positive and significant coefficient on *Treatment*, indicating that treated district courts have longer DOJ investigations on average. The results are also economically significant. For the average district court, an appeals-court decision that strengthens incentives for whistleblowing increases the investigation length by 36.5% (based on Table 5, Column 1).

– Insert Table 5 here –

4.2.4. Lawsuit outcomes

Next, we study the effect of financial incentives for whistleblowing on the outcomes of lawsuits using equation 1 and the full sample of 5,138 lawsuits. To do so, we examine the percentage of DOJ-intervened lawsuits (*% Intervened Lawsuits*) and the percentage of settled lawsuits (denoted *% Settled Lawsuits*) per district court and year. If financial incentives encourage whistleblowers to file higher-quality lawsuits, we expect to find an increase in the percentage of DOJ-intervened lawsuits and in the percentage of settled lawsuits following appeals-court decisions that raise incentives for whistleblowing.

Table 6, Panels A-B report the results. The table follows the same structure as Table 3. As shown in Columns 1-4, we find a positive and significant coefficient on *Treatment*, indicating that treated district courts have a larger percentage of DOJ-intervened as well as settled lawsuits. The results are also economically significant. For the average district court, an appeals-court decision that increases financial incentives for whistleblowing increases the

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percentage of intervened cases by 3.2% (based on Table 6, Panel A, Column 1) and the percentage of settled cases by 3% (based on Table 6, Panel B, Column 1).

– Insert Table 6 here –

In sum, these findings support the view that cash-for-information programs help expose misconduct. Specifically, our analyses provide evidence that whistleblowers respond to financial incentives by filing more lawsuits, which the DOJ investigates for a longer period and that are more likely to result in a settlement. In contrast, we do not find support for the critics' view that stronger financial incentives for whistleblowing primarily trigger meritless lawsuits or drive whistleblowers to inform the authorities directly without informing the firm first.

5. The consequences for whistleblowers

We conduct three sets of analyses to examine the consequences of whistleblowing for employee whistleblowers. In particular, we study firms' immediate reactions and whistleblowers' career, financial, and social consequences. Our first two tests use self-reported information obtained either from the lawsuits or a professional networking site. The last set of tests employs background-check information from public sources.

5.1. Firms' responses to employee whistleblower allegations and immediate consequences

When an employee reports an issue internally, firms can choose to react to the complaint in several ways. They may open an internal investigation, cover it up, or ignore the complaint. Firms may also retaliate against employee whistleblowers in various ways, such as harassment, threats, suspension, demotion, and even firing them (Dyck et al. 2010).

We read each lawsuit to determine firms' responses as reported by the whistleblower. We also examine whether the whistleblower reports to be subject to any retaliatory practices, and if so, which ones. Table 7 describes the various responses and retaliation from the accused firms for the sample of lawsuits filed by 897 employee whistleblowers, who reported internally

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first.[38] For most of the allegations in the sample (60%), whistleblowers report that firms ignore the issue raised by the employee. For 10% of the allegations, firms try to cover-up the issue internally. In only 6% of cases, firms open an internal investigation.

Whistleblowers also report that firms often retaliate against them. The most common form of retaliation against whistleblowers in our sample is firing them (37% of cases). Other forms of retaliation include harassment (16%), threats (10%), demotion (6%), and suspension (2.5%). Employee whistleblowers quit in 7% of the cases and have a lawsuit filed against them in 0.4% of the cases. In only 20% of lawsuits, firms do not retaliate against the whistleblower.[39]

We also find that the probability of reaching a settlement is higher in lawsuits where the whistleblower is fired, with 12% of those cases ending with an average settlement of $8.3 million. In those cases, the whistleblower's expected benefit is approximately $200,000, representing four times of the average annual compensation of the median employee.[40] The unconditional expected benefit for whistleblowers in our sample is approximately $140,000.[41] While these benefits seem large, it could take a long time to collect them. In our sample, the average whistleblower receives the reward 4 years after the filing date, and 75% of all whistleblowers receive the money within 5 years.

The evidence from this analysis suggests that informing the authorities carries costly consequences at the current firm, with approximately 45% of employees leaving the firm shortly thereafter, either by being fired or pushed to quit. However, the average benefits

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[38] The results are similar across public and private firms.

[39] In unreported analyses, we find that firms' responses and retaliations in our lawsuit sample do not vary much based on the rank of the whistleblower. Thus, it does not seem that firms' behaviors against whistleblowers and their complaints depend on the whistleblower's rank.

[40] We estimate the expected monetary benefits as the product of the probability of reaching a settlement, the average settlement amount, and the average fraction of recovered amounts collected by the whistleblowers in our sample (12% x $8.3 million x 20%). As mentioned earlier, the average annual compensation of the median employee is $50,603 in 2018.

[41] We estimate the unconditional expected monetary benefits as the product of the probability of reaching a settlement, the average settlement amount, and the average fraction of recovered amounts collected by the whistleblowers in our sample using information from Table 2 (18.5% x $3.8 million x 20%).

collected by employees who are terminated mitigate, and in some instances, fully eliminate the losses associated with the job loss.[42] Especially for rank-and-file employees, the expected benefits appear to be larger than the costs associated with blowing the whistle. In contrast, the expected benefits may not be large enough to incentivize upper management to file a lawsuit.

– Insert Table 7 here –

5.2. Career consequences for employee whistleblowers

As shown in the previous analysis, one of the primary consequences of blowing the whistle is job loss. Prior work suggests that, in addition to job loss, whistleblowers suffer from a long unemployment period. To examine this conjecture, we hand-collect data about whistleblowers' career outcomes from a professional networking site. We find the profiles of 89 whistleblowers working at public firms and examine the career consequences with respect to the immediate job after working for the accused firm ("next job") and the whistleblowers' most recent job ("latest job"). Table 8 presents the results from this analysis. The average employment gap (i.e., the period between the job at the accused firm and the next job) is 1.1 years. When considering the different ranks, upper management has, on average, no gap, whereas rank-and-file employees have the longest gap at 1.4 years.[43]

We also find that the whistleblower's next job is better than its job at the accused firm in 31% of cases, equivalent in 21%, worse in 10%, and the whistleblower becomes self-employed in 21% of the cases. In 16% of the cases, the profile does not provide enough information to assess the next job. While these overall statistics apply to rank-and-file and middle-management employees, they are different for upper management. For upper

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[42] As we describe in the next section, the average unemployment gap for whistleblowers is approximately 1 year.
[43] We have very few observations for upper management whistleblowers (6 employees). Thus, we caution the reader to interpret the findings for this rank of whistleblowers with this consideration in mind.

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management, their next job is better or equal 0% of the time, is worse 33% of the time, and the whistleblower becomes self-employed 50% of the time.

Whistleblowers can also suffer costs if they have to move to another state or change industries.[44] In our sample, 16% of whistleblowers move to a different state for their next job and 35% change industry. To better understand the long-term consequences of blowing the whistle, we also examine the whistleblowers' most recent job. The average whistleblower begins working at their latest job 8 years after filing the lawsuit. In 58% of the cases, the whistleblower's latest job is better or equal to the job at the time of whistleblowing. In 12% of the cases, the whistleblower has a worse job, and in 16% the whistleblower is self-employed. In 15% of the cases, we do not have enough information about the latest job. In terms of geographical moves and industry changes, 24% move to another state and 42% change industry. These changes could also be due to normal labor movements in the economy.

Overall, this evidence suggests that while most whistleblowers cease working at their current firm, they can find an equivalent or better job within a year. In addition, most whistleblowers do not appear to suffer extremely negative long-term career consequences (particularly rank-and-file and middle-management whistleblowers).

– Insert Table 8 here –

5.3. Financial and social consequences for whistleblowers

Our third set of analyses examines short-, medium-, and long-term financial and social consequences for up to 1,168 employee whistleblowers (we are unable to obtain information for 467 out of the 1,635 employee whistleblowers in our sample).[45] Prior survey evidence

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[44] For example, Dyck et al. (2010) describe some of the costs associated with whistleblowing as being forced to leave the hometown in the years following the allegation.

[45] In some instances we are unable to unambigusouly find a specific whistleblower, as there may be multiple individuals with the same name that have lived in the state where the case was filed. In those instances we read through several profiles to assess whether additional information allows us to identify the correct individual.

suggests that, even after leaving their organization, whistleblowers may be affected by prolonged unemployment, bankruptcy, divorce, and social prejudice (e.g., Park and Lewis 2018).[46] Researchers have also shown that whistleblowers are likely to experience increased stress (e.g., Peters et al. 2011). Stress (including work-related stress), in turn, has been documented to have direct links to various adverse life outcomes, including traffic violations (e.g., Hartley and El Hassani 1994), unlawful behavior, and crime (e.g., Gibbens et al. 1971).

Given the above evidence, we examine the following financial outcome variables: (1) median income of the census tract where the whistleblower resides, (2) number of judgments and liens, and (3) bankruptcy events.[47] We focus on the following social outcome variables: (1) divorce, (2) traffic violations, and (3) legal record. For this analysis, we conduct background checks on each employee whistleblower using LexisNexis Smartlinx, which accesses over 13,000 proprietary and public data sources. In Smartlinx, we conduct individual searches using each whistleblower's name, state, and an estimated age range to construct a panel with their historical records on the two sets of outcome variables.

This analysis offers three main advantages over our first two sets of analyses. First, it allows us to observe a wider range of outcomes in a more standardized manner. Second, the information from public records does not rely on whistleblowers' self-reported consequences. Lastly, we are able to measure consequences over a more extended period.

5.3.1. Descriptive statistics

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[46] For example, the Horuragi Foundation (2013), a civic group dedicated to protecting whistleblowers, conducted interviews with 42 whistleblowers and found that several of them experienced financial troubles and divorces.

[47] We use the median income in the whistleblower's neighborhood as a proxy for the income of the whistleblower, a common approach in economics (e.g., Lucas 1977). Prior studies provide arguments and empirical tests that lead them to conclude that there is support for using neighborhood-level measures of income as a proxy for individual income. Given that census tract boundaries are defined to separate relatively homogenous populations, Krieger (1992), for example, concludes that "aggregated census-based proxies are good substitutes for mico-level measures of individual socioeconomic characteristics." Cherkin et al. (1992) compare income-related survey responses to census-based income estimates and conclude that "census block groups [income] was a valid, if imprecise, proxy of the income of individuals living with the block groups."

Table 9 provides the summary statistics for our outcome variables one, five, and ten years before and after the lawsuit filing using the sample of 1,168 whistleblowers. Before blowing the whistle, the average whistleblower has an annual income of $75,000. We do not find any noticeable changes in terms of financial or social outcomes in the year after the lawsuit filing date. In terms of financial outcomes, we observe increases in the likelihood of facing judgments and liens over the medium and long terms. In terms of social outcomes, we observe a reduction in the likelihood of divorcing over the medium and long term. Please note that these descriptive statistics offer insights into the *levels* for various outcomes but do not compare the changes to a counterfactual or control for time trends. Our difference-in-differences analysis, which we discuss next, offers more precise insights into how the whistleblowers' life trajectory changes after blowing the whistle.

– Insert Table 9 here –

5.3.2. Difference-in-differences analysis

Next, we conduct a difference-in-differences analysis using the sample of 89 employee whistleblowers described in Section 5.2. To that end, we use a professional networking site to find a non-whistleblower control individual.[48] More specifically, we manually match "control" individuals if they worked at the *same firm* as the whistleblower at the *same time*, held a *similar position* at the firm, are likely to be in a *similar age group*, and preferably of the *same gender*. We then search each individual from the non-whistleblower control group in Smartlinx and collect information about their financial and social outcomes. Collecting data from this non-whistleblower matched sample allows us to employ a difference-in-differences methodology. This design controls for time trends, firm-specific factors, and many observable individual

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[48] We focus on whistleblowers working at public firms because those firms typically have a larger number of employees, which allows us to find better matches.

characteristics, such as age, gender, and job title. However, the main limitations of this test are threefold. First, we cannot know if the control employee also knew about the alleged wrongdoing. Second, we cannot observe if the control employee has different personality traits than the whistleblower, which could affect the willingness to blow the whistle and our outcome variables. Third, it is possible that using neighborhood-level measures of income as a proxy for individual income is less precise in capturing changes to an individual's income. It is important to interpret our results in light of these limitations. The sample for our difference-in-differences analysis consists of 172 individuals, i.e., 86 whistleblowers and 86 matched non-whistleblowers (we do not find a match for three whistleblowers and hence exclude them from this analysis). We estimate the following model:

$$Y_{i,j,t} = \alpha_0 + \alpha_1 Treatment_{i,t} + Age + \alpha_i + \alpha_t + \alpha_{j,t} + \epsilon_{i,t}, \quad (2)$$

Where $Y_{i,j,t}$ is each of our six dependent variables, and *Treatment* takes the value of 1 in the one, five, or ten years after a whistleblower files a lawsuit with the court, and 0 in the one, five, or ten years before a whistleblower files a lawsuit. We include person and lawsuit-year fixed effects in all models. Lawsuit-year fixed effects allow us to do a within-case analysis where each specific whistleblower is compared to their specific control person.

Table 10 presents the results. Panel A reports the results using different financial outcomes as dependent variables. Whistleblowers are more likely to move to neighborhoods with a median income that is 7.3% to 8.6% lower. This effect presents itself one year after the filing date and persist in the medium and long terms. We also find an increase in the likelihood of judgments and liens in the one-, five-, and ten-year periods after the lawsuit filing. Whistleblowers are 7.7% more likely to be subject to a lien in the short term. However, this effect is less than three times smaller in the medium and long term than in the first year. Lastly, we do not find that whistleblowing affects the likelihood of filing for bankruptcy.

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Panel B reports the results using our social outcome variables as dependent variables. We do not find any differences between the whistleblower and non-whistleblower samples when examining the likelihood of traffic violations, legal offenses, or going through a divorce.

Overall, the results from Table 10 indicate that whistleblowers have worse financial outcomes in the years after whistleblowing, but no worse social outcomes. However, the evidence also shows that the financial repercussions are largely offset by the expected benefits of $140,000. An 8.6% lower income represents approximately a reduction of $6,500 per annum for the average whistleblower.[49] Moreover, the increase in the likelihood of facing more severe financial outcomes (e.g., judgments and liens) is only pronounced in the short term. When interpreting these results, it is important to point out that whistleblowers could be subject to additional costs that we are unable to observe. For example, we cannot observe mental illnesses such as depression or anxiety disorders, which would only be available from medical records.

– Insert Table 10 here –

Finally, we examine whether there are differential effects depending on the rank of the whistleblower. Table 11 reports the coefficients on our *Treatment* variable when we re-run equation 3 by employee rank.[50] Panel A reports the results using our financial outcome variables. The income effects are concentrated in the rank-and-file and middle-management employees. In contrast, upper-management whistleblowers report, on average, higher income five years after blowing the whistle. Consistent with these results, judgments and liens are concentrated in middle-management whistleblowers.

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[49] According to Table 9, the average whistleblower's *Income* one year before filing the lawsuit is $75,592. Taking 8.6% of that figure yields $6,501.

[50] Please note that the coefficient on *Treatment* is missing in several cells, as there is sometimes no variation in the dependent variables or the sample is too small to run the model.

Table 11, Panel B reports the results when we use social outcomes as dependent variables. By and large, we do not find significant differences between whistleblowers and their matched-sample. Overall, the evidence from these tests indicates that upper-management employees do not suffer from negative financial or social consequences from blowing the whistle. In contrast, rank-and-file employees and middle managers are likely to experience negative financial repercussions. Regarding social consequences, our findings indicate that no rank experiences social costs from whistleblowing.

– Insert Table 11 here –

7. Conclusion

In this paper, we examine the effect of financial incentives on whistleblowing and the consequences of whistleblowing for employee whistleblowers under the cash-for-information program of the False Claims Act (FCA). We exploit appeals-court decisions that increased the financial incentives for whistleblowing and find that these decisions incite whistleblowers to file a greater number of lawsuits, which the DOJ investigates for a longer period and that are more likely to result in a settlement.

We examine the career, financial, and social consequences of blowing the whistle and find that whistleblowers suffer from retaliation that affects them professionally and financially, but they seem to be compensated for it. In particular, the financial costs of blowing the whistle are \$6,500 per year, while the expected benefits are \$140,000. Thus, the benefits seem to compensate whistleblowers for the financial costs. Moreover, we do not find evidence of social costs for whistleblowers in terms of a higher likelihood of divorce, longer legal records, and traffic violations.

Our study is subject to three main limitations. First, we do not attempt to provide a complete cost-benefit analysis of the effects of cash-for-information programs. For instance,

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we do not examine the deterrent effect of stronger financial incentives for whistleblowing on corporate misconduct. Second, our sample of lawsuits comprises the universe of whistleblower FCA lawsuits that were filed with regulators. We do not observe complaints that whistleblowers filed internally with the firm and were not reported to the authorities (either because they were resolved internally or because the whistleblower chose not to pursue these with regulators). Therefore, our results only speak to the effect of financial incentives on whistleblowing in cases filed with the authorities. Third, our sample focuses on whistleblower allegations filed under the FCA against firms accused of defrauding the government. Cash-for-information programs in other regimes may have a different effect on whistleblowing.

Despite these limitations, our study has important implications for scholars, regulators, corporations, and employees. Prior literature has documented the importance of whistleblowers in detecting corporate fraud. However, considerable controversy remains on how cash-for-information programs affect the enforcement of corporate misconduct. Our paper sheds light on this debate by providing large sample evidence on whistleblowers' and firms' behaviors under one of the largest cash-for-information programs. Our evidence can be useful for regulators in designing more effective whistleblower-award programs. Finally, our evidence on consequences can inform individuals in their decision to blow the whistle.

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Appendix A. Appeals-Court Decisions and Total and Average Settlements

This table reports the estimation results from OLS regressions of financial incentives on the settlement amounts per district court for the period 1994-2012. *Treatment* is equal to 1 for FCA lawsuits filed in district courts following appeals-court decisions that increased the financial incentives for whistleblowing, 0 otherwise. In Columns 1-3, the dependent variable, *Settlement*, is the natural logarithm of one plus the settlement amounts per district court. In Columns 4-6, the dependent variable, *Average Settlement*, is the natural logarithm of one plus the average settlement amount per district court. The models also differ in the *Controls* included. Columns 1 and 4 report results without *Controls*. Columns 2 and 5 report results with district-court-level *Controls*. Columns 3 and 6 report results with district-court-level and county-level *Controls*. All models include year and district-court fixed effects. All variables are defined in Appendix C. Standard errors are clustered at the appeals-court level. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Dependent Variable	Settlement			Average Settlement		
Variables	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	0.825***	0.830***	0.834***	0.593***	0.593***	0.581***
	(0.174)	(0.200)	(0.242)	(0.085)	(0.094)	(0.127)
Cases		−0.054	0.022		−0.029	0.034
		(0.231)	(0.246)		(0.214)	(0.228)
Attorney Hours		0.192	0.239		0.090	0.130
		(0.666)	(0.630)		(0.587)	(0.558)
Labor Force			−1.922			−1.740
			(1.333)			(1.190)
Unemployment Rate			−20.501			−15.968
			(18.335)			(16.686)
Judicial District FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-square	0.376	0.376	0.376	0.344	0.343	0.343
Observations	1,786	1,786	1,786	1,786	1,786	1,786

Appendix B. Examples of Whistleblower Allegations

The following examples of whistleblower fraud allegations are based on excerpts from court documents.

Example 1: *US ex rel. Thom, Robert v Pacifica Service Inc.*

Relator [Mr. Thom] verbally informed his immediate supervisor and General Manager for PACIFICA that employees have improperly used, damaged and/or disposed of government property for their own personal benefit and/or pecuniary gain. […] He was told on numerous occasions that an investigation would be conducted. However, no investigation was ever conducted. […] On or about June 28, 1996, Relator submitted a letter of resignation from his employment with the Defendant. […] the defendants, harassed, discriminated and otherwise retaliated against this Relator, resulted in Relator assigned diminished inferior duties, for which Relator has no training […] resulting in Relator sustaining serious physical injury.

Case Facts:
- Case Received by Court: 3/10/1997
- DOJ Election Decision: 10/1/1997
- DOJ Intervened? No
- WB Reporting channels: Direct Supervisor
- Firm Response: Ignored
- Firm Retaliation: Whistleblower was harassed and forced to quit.

Example 2: *US ex rel. Hicks, James A v PeopleSoft Inc.*

PeopleSoft submitted a proposed GSA price list and Commercial Pricing Practices as part of MAS solicitations, but neither of document disclose all discounts to the Government. Hicks (the relator) has calculated that PeopleSoft's failure to disclose resulted in a minimum of $7,152,112 in excess fees charged to the federal Government in 1997. […] Hicks warned PeopleSoft's National Sales Manager that not including discounts was a risk to the company, but the manager told Hicks not to do anything about the issue. In January 2000, after meeting with in-house attorney, Hicks was discharged.

Case Facts:
- Case Received by Court: 3/5/2003
- DOJ Election Decision: 4/7/2006
- DOJ Intervened? Yes
- Settlement Judgment: 10/27/2006
- Time from Filing to Settlement: 3.65 years
- Settlement Amount: $98.5 Million
- Reporting Channel: Direct supervisor
- Firm Response: Ignored
- Firm Retaliation: Whistleblower was fired

Example 3: *US ex rel. Bill, Betty; State of IL v Curran Contracting Co Inc.; Curran Group Inc.*

Defendants regularly and systematically inflated the amounts of materials that were billed to the Government under road building contracts. In addition, defendants, knowingly made false representation of the amount of business being done by Disadvantaged Business Enterprises. […] In July of 1999, Bill contacted IDOT to report that Curran (the defendant) was defrauding the Government. At sometime thereafter, Curran and its employees subsequently retaliated against her through harassment, threats and other discriminatory acts. […] Bill suffered emotional distress and was constructively discharged from Curran's employment.

Case Facts:
- Case Received by Court: 5/17/2001
- DOJ Election Decision: 5/16/2005
- DOJ Intervened? Yes
- Settlement Judgment: 6/9/2005

- Time from Filing to Settlement: 4.07 years
- Settlement Amount: $0.5 Million
- Reporting channel: Report to State government directly
- Firm Retaliation: Whistleblower was harassed and fired

Example 4: *US; State of Florida ex rel. Rubin, Darren A v University of South Florida et al.*

After discovering the falsified research data, Dr Moor and Relator RUBIN present the findings to Mark P. McLean, Ph.D. (defendant). […] Mark convinced that it would be the best never to disclose said research findings to anyone outside of the immediate group, […] Relator Rubin, having continuing concerns on actions taken with respect to falsified research notebook, addressed to President of University of South Florida, […] he was informed that Dr. Phillip Marty, had been assigned responsibility for conducting the initial inquiry concerning the reported research misconduct.

Case Facts:
- Case Received by Court: 6/6/2008
- DOJ Election Decision: 4/2/2012
- DOJ Intervened? No
- Reporting Channels: Direct supervisor; Top management
- Firm Response: Internal investigation
- Firm Retaliation: Whistleblower was fired

Example 5: *US ex rel. Harris, Robert v JP Morgan-Chase & Co.*

[JP Morgan Chase & Co.'s] inability to keep up with their loss mitigation duties led to purposeful shortcuts, including but not limited to forging documents, forging signatures, backdating documents, expanding loss recognition authority, and lack of proper document review. Defendants eventually abandoned all pretense of loss mitigation for tens of thousands of loans it considered too costly and time consuming to properly handle. […] As a direct and proximate result of Defendants' fraudulent and/or illegal actions and pattern of fraudulent conduct, the United States has paid directly or indirectly thousands of false claims and spent millions of dollars. […] Plaintiff-Relator [Harris] notified Chase management officials about the Defendants' failure to comply with regulations and loss mitigation requirements and that Chase was foreclosing on loans without proper loss mitigation. […] Defendants fired Mr. Harris in retaliation for complaining about these issues on or about January 11, 2010.

Case Facts:
- Case Received by Court: 12/29/2006
- DOJ Election Decision: 4/17/2012
- DOJ Intervened? Yes
- Settlement Judgment: 4/4/2012
- Time from Filing to Settlement: 5.27 years
- Settlement Amount: $6.18 Million
- Reporting Channel: Top management
- Firm Response: Ignored
- Firm Retaliation: Whistleblower was fired

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Appendix C. Variable Definitions

The following variables are constructed using data from a proprietary dataset of whistleblower lawsuits obtained through FOIA requests [FOIA], the actual court documents pertaining to these lawsuits obtained from the Public Access to Court Electronic Records system [PACER], the Bureau of Labor Statistics [BLS], Department of Justice Annual Statistical Reports [DOJ], Institutional Shareholder Services Directors [ISS], and Smartlinx [SX].

Variable	Definition
Dependent Variables	
Number of Lawsuits	Natural logarithm of one plus the number of FCA lawsuits per district court. [FOIA]
% Internally Reported Lawsuits	Percentage of internally reported lawsuits per district court. [FOIA + PACER]
DOJ Investigation Length	Natural logarithm of the average number of days from the filing to the case-selection data per district court. [FOIA]
% Intervened Lawsuits	Percentage of DOJ-intervened FCA lawsuits per district court. [FOIA]
% Settled Lawsuits	Percentage of settled FCA lawsuits per district court. [FOIA]
Settlement	Logarithm of one plus the settlement amount per district court. [FOIA]
Average Settlement	Logarithm of one plus the average settlement amount per district court. [FOIA]
Financial Outcomes	
Income	Natural logarithm of the median income in the census tract of an individual's residence. [SX]
Judgments and Liens	Indicator equal to 1 in the year an individual faces a judgment or lien filed with a state court where there is a monetary amount awarded, 0 otherwise. [SX]
Bankruptcy	Indicator equal to 1 in the year an individual files for personal bankruptcy, 0 otherwise. [SX]
Social Outcomes	
Divorce	Indicator equal to 1 in the year an individual filed for divorce, 0 otherwise. [SX]
Traffic Violation	Indicator equal to 1 in the year an individual has a traffic violation, 0 otherwise. [SX]
Legal Record	Indicator equal to 1 in the year an individual has a derogatory mark added to his or her criminal record, 0 otherwise. The criminal record includes derogatory information from multiple sources, including statewide criminal courts, Department of Corrections, and county arrest records. We exclude traffic violations. [SX]
Independent Variables	
Whistleblower Characteristics	
Rank and File	Indicator equal to 1 if the employee whistleblower is a rank-and-file employee as described in the FCA lawsuit, 0 otherwise. [FOIA + PACER]
Middle Management	Indicator equal to 1 if the employee whistleblower is part of the middle management as described in the FCA lawsuit, 0 otherwise. [FOIA + PACER]
Top Management	Indicator equal to 1 if the employee whistleblower is part of the top management as described in the FCA lawsuit, 0 otherwise. [FOIA + PACER]
Control Variables	
Number of Cases	Natural logarithm of the number of pending civil cases per U.S. attorney office at the beginning of the year. [DOJ]
Attorney Hours	Natural logarithm of the number of attorney work hours spent in the Office of District Attorney. [DOJ]
Labor Force	Natural logarithm of the number of persons in the Judicial District who are eligible for employment at the beginning of the year. [BLS]
Unemployment Rate	The judicial district's unemployment rate at the beginning of the year. [BLS]
Age	Individual's age. [SX]

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. The process starts with a whistleblower filing an allegation with a court. Then the Department of Justice in conjunction with the allegedly defrauded federal agency investigate 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.

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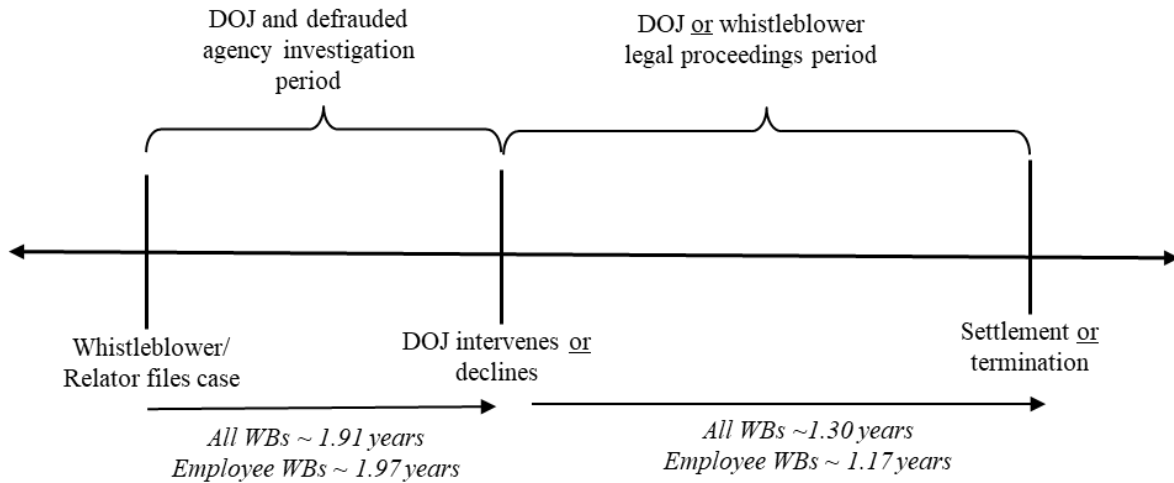
Table 1: Sample

Panel A: Sample composition

This table presents the sample composition for the period 1994-2012. We are unable to determine the number of unique firms for the full sample, as we do not have access to the court documents for all of those lawsuits.

	Unique Lawsuits	Unique Firms	Unique Whistleblowers	Unique Whistleblower-Lawsuit Observations
Full Sample of Lawsuits	5,138	-	6,181	6,828
Less: Lawsuits without Court Document	(3,212)	-	(3,863)	(4,378)
Lawsuits with Court Document	1,926	2,219	2,318	2,450
Lawsuits Employee Whistleblowers	1,335	1,540	1,635	1,666
Lawsuits Non-Employee Whistleblowers	591	679	683	784

Panel B: Sample composition by year

This table presents the distribution of the 5,138 whistleblower lawsuits against firms in our sample for the period 1994-2012 by year.

Year	Lawsuits	% of Total	Total Settlements ($ Millions)	% of Total
1994	189	3.7%	844	4.6%
1995	220	4.3%	820	4.5%
1996	331	6.4%	835	4.6%
1997	375	7.3%	598	3.3%
1998	317	6.2%	1,243	6.8%
1999	332	6.5%	968	5.3%
2000	271	5.3%	1,449	7.9%
2001	188	3.7%	731	4.0%
2002	284	5.5%	770	4.2%
2003	268	5.2%	4,180	22.8%
2004	307	6.0%	1,510	8.3%
2005	301	5.9%	766	4.2%
2006	323	6.3%	947	5.2%
2007	277	5.4%	1,857	10.1%
2008	278	5.4%	261	1.4%
2009	298	5.8%	286	1.6%
2010	267	5.2%	59	0.3%
2011	224	4.4%	176	1.0%
2012	88	1.7%	0	0.0%
Total	5,138	100.0%	18,300	100%

Panel C: Sample composition by agency

This table presents the sample composition the 5,138 whistleblower lawsuits in our sample for the period 1994-2012 by allegedly defrauded agency.

Agency Name	Lawsuits	% of Total	Total Settlements ($ Millions)	% of Total
Department of Health and Human Services	2,874	55.9%	14,983	81.9%
Department of Defense	771	15.5%	1,389	7.6%
Department of Housing and Urban Development	183	3.6%	294	1.6%
Department of Education	177	3.4%	116	0.6%
Department of the Interior	136	2.6%	42	0.2%
General Services Administration	118	2.3%	692	3.8%
Department of Transportation	107	2.1%	62	0.3%
Department of Justice	72	1.4%	5	0.0%
Department of Agriculture	65	1.3%	29	0.2%
Department of Energy	61	1.2%	69	0.4%
Department of Labor	50	1.0%	7	0.0%
Environmental Protection Agency	49	1.0%	2	0.0%
Department of Veterans' Affairs	48	0.9%	81	0.4%
Department of the Treasury	44	0.9%	38	0.2%
U.S. Postal Service	39	0.8%	74	0.4%
Department of Homeland Security	34	0.7%	65	0.4%
NASA	28	0.5%	6	0.0%
Small Business Administration	28	0.5%	28	0.2%
Social Security Administration	23	0.4%	15	0.1%
Federal Communications Commission	22	0.4%	154	0.8%
Federal Deposit Insurance Corporation	18	0.4%	3	0.0%
Office of Personnel Management	17	0.3%	91	0.5%
Department of Commerce	16	0.3%	13	0.1%
Department of State	16	0.3%	9	0.0%
Federal Reserve System	14	0.3%	0.1	0.0%
Agency for International Development	8	0.2%	0.01	0.0%
U.S. Government Accountability Office	8	0.2%	2	0.0%
CIA	7	0.1%	3	0.0%
Tennessee Valley Authority	4	0.1%	0.2	0.0%
International Trade Commission	3	0.1%	0	0.0%
National Science Foundation	3	0.1%	0.9	0.0%
Securities and Exchange Commission	3	0.1%	0.3	0.0%
Equal Employment Opportunity Commission	2	0.1%	0	0.0%
Office of the President	2	0.1%	0	0.0%
Export-Import Bank of the U.S.	2	0.1%	0	0.0%
U.S. Government Publishing Office	2	0.1%	0.3	0.0%
Other	10	0.2%	3	0.0%
Unknown	74	1.4%	23	0.1%
Total	5,138	100.0%	18,300	100%

Panel D: Sample composition by district court

This table presents the sample composition of the 5,138 lawsuits for the period 1994-2012 by district court.

Judicial District	Lawsuits	% of Total	Circuit	Judicial District	Lawsuits	% of Total	Circuit
AK	12	0.2%	9	MSS	30	0.6%	5
ALM	19	0.4%	11	MT	6	0.1%	9
ALN	95	1.8%	11	NCE	20	0.4%	4
ALS	11	0.2%	11	NCM	12	0.2%	4
ARE	46	0.9%	8	NCW	19	0.4%	4
ARW	19	0.4%	8	ND	11	0.2%	8
AZ	52	1.0%	9	NE	15	0.3%	8
CAC	358	7.0%	9	NH	10	0.2%	1
CAE	78	1.5%	9	NJ	124	2.4%	3
CAN	129	2.5%	9	NM	35	0.7%	10
CAS	75	1.5%	9	NV	20	0.4%	9
CO	87	1.7%	10	NYE	74	1.4%	2
CT	46	0.9%	2	NYN	26	0.5%	2
DC	195	3.8%	DC	NYS	109	2.1%	2
DE	7	0.1%	3	NYW	23	0.4%	2
FLM	277	5.4%	11	OHN	68	1.3%	6
FLN	28	0.5%	11	OHS	97	1.9%	6
FLS	146	2.8%	11	OKE	4	0.1%	10
GAM	27	0.5%	11	OKN	19	0.4%	10
GAN	119	2.3%	11	OKW	59	1.1%	10
GAS	24	0.5%	11	OR	28	0.5%	9
GU	2	0.0%	9	PAE	191	3.7%	3
HI	26	0.5%	9	PAM	31	0.6%	3
IAN	4	0.1%	8	PAW	39	0.8%	3
IAS	18	0.4%	8	PR	8	0.2%	1
ID	19	0.4%	9	RI	8	0.2%	1
ILC	20	0.4%	7	SC	64	1.2%	4
ILN	156	3.0%	7	SD	10	0.2%	8
ILS	27	0.5%	7	TNE	31	0.6%	6
INN	17	0.3%	7	TNM	48	0.9%	6
INS	57	1.1%	7	TNW	27	0.5%	6
KS	35	0.7%	10	TXE	58	1.1%	5
KYE	26	0.5%	6	TXN	103	2.0%	5
KYW	64	1.2%	6	TXS	122	2.4%	5
LAE	96	1.9%	5	TXW	105	2.0%	5
LAM	17	0.3%	5	UT	40	0.8%	10
LAW	36	0.7%	5	VAE	144	2.8%	4
MA	149	2.9%	1	VAW	17	0.3%	4
MD	132	2.6%	4	VI	5	0.1%	3
ME	11	0.2%	1	VT	10	0.2%	2
MIE	110	2.1%	6	WAE	11	0.2%	9
MIW	23	0.4%	6	WAW	69	1.3%	9
MN	76	1.5%	8	WIE	30	0.6%	7
MOE	48	0.9%	8	WIW	14	0.3%	7
MOW	46	0.9%	8	WVN	7	0.1%	4
MP	0	0.0%	9	WVS	15	0.3%	4
MSN	18	0.4%	5	WY	39	0.8%	10

Panel E: Sample composition by type of whistleblower

This table presents the sample composition for the period 1994-2012 by the type of whistleblower for a subset of 2,450 whistleblower-lawsuit observations, involving 1,926 unique lawsuits with available court documents in the Public Access to Court Electronic Records (PACER) system filed by 2,318 unique whistleblowers.

Description	Whistleblower-Lawsuit Observations	% of Total	% Settled	Average Settlement ($ Millions)	Total Settlements ($ Millions)
(Former) Employee	1,666	68.0%	27.3%	$15.6	$7,083.4
Gender					
Female	682	40.9%	27.1%	$14.7	$2,716.6
Male	984	59.1%	27.4%	$16.2	$4,366.8
Rank					
Rank and File	979	58.8%	24.9%	$16.9	$4,112.9
Middle Management	453	27.2%	27.6%	$17.4	$2,170.7
Upper Management	69	4.1%	33.3%	$23.0	$529.9
No Information	165	9.9%	38.2%	$4.3	$270.0
Repeat Whistleblowers					
1 Allegation Only	1,620	97.2%	27.2%	$13.4	$5,896.5
Multiple Allegations	46	2.8%	30.4%	$84.8	$1,186.9
Unknown	493	20.1%	21.1%	$32.8	$3,415.5
Customer	110	4.5%	14.5%	$9.0	$143.4
Contractor	54	2.2%	13.0%	$8.0	$55.9
Business Partner	25	1.0%	20.0%	$16.2	$81.1
External Auditor	24	1.0%	16.7%	$51.8	$207.1
Tenant	20	0.8%	25.0%	$0.1	$0.3
Government Employee	13	0.5%	7.7%	$62.8	$62.8
Supplier	12	0.5%	16.7%	$139.2	$278.4
Consultant	11	0.4%	27.3%	$54.5	$163.6
Competing Firm	9	0.4%	33.3%	$10.4	$31.1
Lawyer/Law Firm	7	0.3%	0.0%	-	$0.0
Private Investigator	4	0.2%	0.0%	-	$0.0
Stockholder	2	0.1%	0.0%	-	$0.0
Total	2,450	100.0%	24.7%	$19.0	$11,522.60

Table 2: Summary Statistics

This table provides descriptive statistics for the variables at the district-court-year level for 1994-2012.

	Sample (N=1,786)						
Variable	Mean	St. Dev.	Min.	p25	Median	p75	Max.
Treatment	0.144	0.351	0	0	0	0	1
Number of Lawsuits	2.88	3.97	0	0	1.50	4.00	35.00
% Internally Reported Lawsuits (%)	16.49	31.85	0	0	0	16.67	100
Investigation Length (days)	409	410	0	0	347	646	3,006
% Settled Lawsuits (%)	18.46	29.07	0	0	0	33.33	100
% Intervened Lawsuits (%)	17.99	29.13	0	0	0	33.33	100
Settlement ($ Millions)	10.25	68.75	0	0	0	0.72	2,056
Average Settlement ($ Millions)	3.79	17.30	0	0	0	0.60	228
Cases	1,142	1,402	3	365	680	1,216	10,859
Attorney Hours (Hours)	9,458	15,879	78	3,724	5,494	9,243	197,740
Labor Force (Thousands)	1,613	1,324	182	685	1,243	2,332	9,145
Unemployment Rate (%)	5.85	2.14	2.06	4.41	5.34	6.86	16.36

Table 3: Whistleblowing Incentives and Number of Lawsuits

This table reports the estimation results from regressions of financial incentives on the number of lawsuits filed with district courts for the period 1994-2012. *Treatment* is equal to 1 for FCA lawsuits filed in district courts following appeals-court decisions that increased the financial incentives for whistleblowing, 0 otherwise. The models differ in the *Controls* included and estimation technique. The dependent variable, *Number of Lawsuits*, is the natural logarithm of one plus the number of FCA lawsuits filed per district court. Columns 1 and 4 report results without *Controls*. Column 2 report results with district-court-level *Controls*. Column 3 reports results with district-court-level and county-level *Controls*. Columns 1-3 report results from OLS regressions and Column 4 from a pooled stacked regression. All models include year and district-court fixed effects. All variables are defined in Appendix C. Standard errors are clustered at the appeals-court level. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Dependent Variable	Number of Lawsuits			
Variables	(1)	(2)	(3)	(4)
Treatment	0.069*	0.061*	0.050*	0.107**
	(0.034)	(0.030)	(0.026)	(0.051)
Cases		0.040	0.037	
		(0.028)	(0.028)	
Attorney Hours		0.017	0.015	
		(0.051)	(0.052)	
Labor Force			−0.139	
			(0.160)	
Unemployment Rate			1.714	
			(2.240)	
Judicial District FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adj. R-square	0.638	0.638	0.638	0.101
Observations	1,786	1,786	1,786	3,888

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Table 4: Whistleblowing Incentives and Internal Reporting

Panel A: Lawsuits reported internally first versus lawsuits directly reported to the authorities

This table presents statistics for the sample of 1,335 lawsuits with court document filed by 1,666 employee whistleblowers on whether employee whistleblowers reported misconduct internally first before informing the authorities and the reasons why the whistleblowers did not raise the issue internally first (in several cases the whistleblowers did not provide a reason in the court documents for not raising the issue internally – we code those as "No Reason Provided"). The row "Difference" reports the difference between lawsuits reported internally first and those that were directly reported to the authorities and tests whether these differences are significant at the two-tailed 10% (*), 5% (**), or 1% (***) levels.

Description	Obs.	Obs.	% of Total	% Settled	Average Settlement ($ Millions)	Total Settlements ($ Millions)
Lawsuit reported Internally First	1,666					
No		769	46.2%	30.6%	$15.9	$3,743.2
Yes		897	53.8%	24.5%	$15.2	$3,340.2
Difference			–7.6%***	5.5%***	$0.7	
Reasons for not Reporting Internally First	769					
No Reason Provided		690	89.7%	29.1%	$16.6	$3,345.2
Fear of Retaliation		72	9.4%	44.4%	$12.4	$396.5
Supervisors Involved		4	0.5%	50.0%	$0.7	$1.5
External Parties Already Knew		3	0.4%	0.0%	-	$0.0

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Panel B: Internal and external reporting channels

This table describes the internal and external reporting channels as reported by the 1,666 employee whistleblowers for the sample of 1,335 FCA lawsuits with court documents. Note that whistleblowers may report to use multiple channels internally and externally, increasing the sample size for this table.

Description	Obs.	No. of Times Used	% of Total	% Settled	Average Settlement ($ Millions)	Total Settlements ($ Millions)
Internal Reporting Channels	1,281					
Top Management		481	37.5%	24.3%	$12.3	$1,438.5
Direct Supervisor		441	34.4%	21.8%	$21.5	$2,061.4
Colleague		130	10.1%	24.6%	$11.0	$353.4
Legal Compliance		124	9.6%	28.2%	$20.3	$709.8
HR		50	3.9%	20.0%	$1.5	$15.2
Hotline		31	2.4%	19.4%	$4.4	$26.3
Internal Auditor		24	1.9%	12.5%	$11.5	$34.4
External Reporting Channels						
Reported Internally First	897					
Straight to Court System		856	95.4%	25.0%	$15.6	$3,333.0
Government Agency		34	3.8%	17.6%	$1.2	$7.2
External Auditor		7	0.8%	0.0%	-	$0.0
Directly Reported Externally	769					
Straight to Court System		740	96.2%	30.8%	$16.4	$3,732.5
Government Agency		29	3.8%	24.1%	$1.5	$10.8
External Auditor		0	0.0%	-	-	$0.0

Panel C: Whistleblowing incentives and internal reporting

This table reports the estimation results from regressions of financial incentives on the fraction of lawsuits reported internally first at the district-court level for the period 1994-2012. *Treatment* is equal to 1 for FCA lawsuits filed in district courts following appeals-court decisions that increased the financial incentives for whistleblowing, 0 otherwise. The models differ in the *Controls* included and estimation technique. The dependent variable, *% Internally Reported Lawsuits*, is the fraction of lawsuits internally reported per district court. Columns 1 and 4 report results without *Controls*. Column 2 reports results with district-court-level *Controls*. Column 3 reports results with district-court-level and county-level *Controls*. Columns 1-3 report results from OLS regressions and Column 4 from a pooled stacked regression. All models include year and district-court fixed effects. All variables are defined in Appendix C. Standard errors are clustered at the appeals-court level. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Dependent Variable	% Internally Reported Lawsuits			
Variables	(1)	(2)	(3)	(4)
Treatment	0.013	0.010	0.009	0.001
	(0.015)	(0.015)	(0.012)	(0.031)
Cases		0.014	0.012	
		(0.018)	(0.019)	
Attorney Hours		0.016	0.014	
		(0.022)	(0.023)	
Labor Force			0.058	
			(0.070)	
Unemployment Rate			0.781	
			(0.799)	
Judicial District FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adj. R-square	0.241	0.240	0.240	0.086
Observations	1,786	1,786	1,786	3,888

Table 5: Whistleblowing Incentives and DOJ Investigation Length

This table reports the estimation results from regressions of financial incentives on the DOJ investigation length for lawsuits filed with district courts for the period 1994-2012 at the district-court level. *Treatment* is equal to 1 for FCA lawsuits filed in district courts following appeals-court decisions that increased the financial incentives for whistleblowing, 0 otherwise. The models differ in the *Controls* included and estimation technique. The dependent variable, *Investigation Length*, is the natural logarithm of one plus the number of days from the filing date to the case selection date for lawsuits per district court. Columns 1 and 4 report results without *Controls*. Column 2 reports results with district-court-level *Controls*. Column 3 reports results with district-court-level and county-level *Controls*. Columns 1-3 report results from OLS regressions and Column 4 from a pooled stacked regression. All models include year and district-court fixed effects. All variables are defined in Appendix C. Standard errors are clustered at the appeals-court level. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Dependent Variable	Investigation Length			
Variables	(1)	(2)	(3)	(4)
Treatment	0.365***	0.350***	0.294***	0.397*
	(0.081)	(0.075)	(0.057)	(0.216)
Cases		0.069	0.051	
		(0.143)	(0.141)	
Attorney Hours		0.106	0.099	
		(0.197)	(0.196)	
Labor Force			–0.660	
			(0.634)	
Unemployment Rate			9.275	
			(7.542)	
Judicial District FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adj. R-square	0.355	0.354	0.354	0.070
Observations	1,786	1,786	1,786	3,888

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Table 6: Whistleblowing Incentives and Lawsuit Outcomes

Panel A: Whistleblowing incentives and percentage of DOJ-intervened lawsuits

This table reports the estimation results from regressions of financial incentives on the fraction of DOJ-intervened lawsuits per district court for the period 1994-2012. *Treatment* is equal to 1 for FCA lawsuits filed in district courts following appeals-court decisions that increased the financial incentives for whistleblowing, 0 otherwise. The models differ in the *Controls* included and estimation technique. The dependent variable, *% Intervened Lawsuits*, is the percentage of DOJ-intervened lawsuits per district court. Columns 1 and 4 report results without *Controls*. Column 2 reports results with district-court-level *Controls*. Column 3 reports results with district-court-level and county-level *Controls*. Columns 1-3 report results from OLS regressions and Column 4 from a pooled stacked regression. All models include year and district-court fixed effects. All variables are defined in Appendix C. Standard errors are clustered at the appeals-court level. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Dependent Variable	% Intervened Lawsuits			
Variables	(1)	(2)	(3)	(4)
Treatment	0.032***	0.032***	0.030***	0.052*
	(0.004)	(0.005)	(0.007)	(0.028)
Cases		0.003	0.004	
		(0.012)	(0.013)	
Attorney Hours		−0.028	−0.027	
		(0.018)	(0.018)	
Labor Force			−0.059	
			(0.069)	
Unemployment Rate			0.027	
			(0.650)	
Judicial District FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adj. R-square	0.115	0.115	0.114	0.034
Observations	1,786	1,786	1,786	3,888

Panel B: Whistleblowing incentives and percentage of settled lawsuits

This table reports the estimation results from regressions of financial incentives on the fraction of settled lawsuits per district court for the period 1994-2012. *Treatment* is equal to 1 for FCA lawsuits filed in district courts following appeals-court decisions that increased the financial incentives for whistleblowing, 0 otherwise. The models differ in the *Controls* included and estimation technique. The dependent variable, *% Settled Lawsuits*, is the percentage of settled lawsuits per district court. Columns 1 and 4 report results without *Controls*. Column 2 reports results with district-court-level *Controls*. Column 3 reports results with district-court-level and county-level *Controls*. Columns 1-3 report results from OLS regressions and Column 4 from a pooled stacked regression. All models include year and district-court fixed effects. All variables are defined in Appendix C. Standard errors are clustered at the appeals-court level. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Dependent Variable	% Settled Lawsuits			
Variables	(1)	(2)	(3)	(4)
Treatment	0.030***	0.031***	0.029***	0.019*
	(0.007)	(0.007)	(0.008)	(0.010)
Cases		−0.002	−0.002	
		(0.011)	(0.011)	
Attorney Hours		−0.011	−0.011	
		(0.018)	(0.018)	
Labor Force			−0.037	
			(0.032)	
Unemployment Rate			0.162	
			(0.666)	
Judicial District FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adj. R-square	0.118	0.117	0.116	0.040
Observations	1,786	1,786	1,786	3,888

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Table 7: Firms' Responses and Retaliations against Employee Whistleblowers

This table presents the types of responses to complaints and retaliations against employee whistleblowers from the alleged firms as reported by employee whistleblowers for the sample of lawsuits with court document filed by 897 employee whistleblowers, who reported internally first, from 1994-2012. Note that whistleblowers may report multiple forms of retaliation against them, increasing the sample size.

Description	Obs.	% of Total	% Settled	Average Settlements ($ Millions)	Total Settlements ($ Millions)
Response to Allegation	*897*				
Ignored	546	60.9%	14.3%	$6.9	$1,520.8
Cover Up	92	10.3%	3.2%	$3.7	$824.2
Internal Investigation	56	6.2%	1.0%	$0.3	$59.8
No Information	203	22.6%	6.0%	$4.3	$935.4
Retaliation Against WB	*1,355*				
Fired	505	37.1%	12.0%	$8.3	$1,819.0
Harassed	219	16.1%	5.2%	$1.9	$411.0
Threat	135	9.9%	1.6%	$0.2	$33.7
Quit	99	7.3%	3.6%	$0.8	$170.3
Demotion	82	6.0%	1.4%	$0.6	$121.3
Suspension	34	2.5%	0.7%	$0.1	$16.6
Lawsuit	6	0.4%	0.2%	$0.0	$0.9
No Retaliation	275	20.6%	9.8%	$6.7	$1,478.5

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Table 8: Consequences for Employee Whistleblowers

This table reports the long-term career consequences for 89 employee whistleblowers who filed an FCA lawsuit. The table is constructed from profiles collected from a widely used professional networking site. Next job refers to the whistleblower's immediate job after working for the accused company. Latest job refers to the whistleblower's last reported job.

	All Profiles			Rank and File			Middle Management			Upper Management		
	Obs.	Next job	Latest Job	Obs.	Next job	Latest Job	Obs.	Next job	Latest Job	Obs.	Next job	Latest Job
Number of years from the job at the accused firm	80	1.1	8.0	47	1.4	7.9	23	0.9	7.6	5	0.0	7.8
No Information	9	-	-	4	-	-	3	-	-	1	-	-
Position:	89			51			26			6		
Better		31%	43%		35%	51%		38%	42%		0%	17%
Equal		21%	15%		27%	18%		19%	15%		0%	0%
Worse		10%	12%		10%	10%		8%	12%		33%	50%
Self-employed		21%	16%		20%	16%		23%	19%		50%	17%
No Information		16%	15%		8%	6%		12%	12%		17%	17%
Moved to another state:	89			51			26			6		
Yes		16%	24%		16%	25%		4%	12%		33%	33%
No		30%	24%		31%	24%		31%	23%		17%	17%
No Information		54%	52%		53%	49%		65%	65%		50%	50%
Changed Industry:	89			51			26			6		
Yes		35%	42%		33%	45%		38%	42%		50%	33%
No		52%	44%		55%	45%		46%	46%		33%	17%
No Information		13%	13%		12%	8%		15%	12%		17%	50%

Table 9: Summary Statistics for Financial and Social Outcomes

This table reports statistics for three financial outcome variables and three social outcome variables for 1,168 whistleblowers using data from public records. Income is reported as the average annual value, while the remaining variables show the average likelihood of the event occurring during the 1-, 5-, and 10-year periods, respectively. Columns 1-4 present the average value of each variable 1 year before (pre),1 year after (post) the lawsuit filing, the difference, and the t-statistic associated with the change. Columns 5-8 present the average value of the outcome variables in the 5 years before and after the lawsuit filing, the difference, and the t-statistic associated with the change. Columns 9-12 present the average value of the outcome variables in the 10 years before and after the lawsuit filing, the difference, and the t-statistic associated with the change. Variable definitions are provided in Appendix C.

	1 year				5 years				10 years			
	Pre	Post	Ch.	T-stat (Δ)	Pre	Post	Ch.	T-stat (Δ)	Pre	Post	Ch.	T-stat (Δ)
Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Financial Outcomes												
Income	75,592	75,556	(36)	(0.03)	75,212	75,929	717	0.52	74,409	76,223	1,814	1.36
Judgments and Liens	0.0617	0.0848	(0.0017)	1.79	0.2624	0.3502	0.0034	2.84	0.4528	0.5890	0.0171	3.07
Bankruptcy	0.0231	0.0154	(0.0077)	(1.32)	0.0812	0.0556	(0.0256)	(2.32)	0.1410	0.0932	(0.0479)	(3.18)
Social Outcomes												
Divorced	0.0017	0.0000	(0.0017)	(1.41)	0.0120	0.0017	(0.0103)	(3.02)	0.0214	0.0051	(0.0163)	(3.45)
Traffic Violation	0.0179	0.0060	(0.0120)	(2.41)	0.0581	0.0573	(0.0009)	(0.07)	0.0863	0.1094	0.0231	1.44
Legal Record	0.0309	0.0300	(0.0009)	(0.11)	0.1741	0.1464	(0.0277)	(1.24)	0.2856	0.2757	(0.0099)	(0.31)

Table 10: Consequences for Employee Whistleblowers using a Difference-in-Differences Analysis

Panel A. Financial consequences for whistleblowers

This table reports the estimation results from OLS regressions of whistleblowing on financial consequences for whistleblowers for the period 1986-2019. The models differ in their dependent variables and definitions of *Treatment*. In Columns 1, 4, and 7, *Treatment* is equal to 1 in the one year after a whistleblower filed the lawsuit with the court, and 0 in the one year before filing the lawsuit. In Columns 2, 5, and 8, *Treatment* is equal to 1 in the five years after a whistleblower filed the lawsuit with the court, and 0 in the five years before filing the lawsuit. In Columns 3, 6, and 9, *Treatment* is equal to 1 in the ten years after a whistleblower filed the lawsuit with the court, and 0 in the ten years before filing the lawsuit. In Columns 1-3, the dependent variable, *Income*, is the natural logarithm of the median income in the census tract of an individual's residence. In Columns 4-6, the dependent variable, *Judgments and Liens*, is an indicator equal to 1 in the year an individual faces a judgment or lien, 0 otherwise. In Columns 7-9, the dependent variable, *Bankruptcy*, is an indicator equal to 1 in the year an individual files for personal bankruptcy, 0 otherwise. All models include lawsuit-year and person fixed effects. All variables are defined in Appendix C. Standard errors are clustered by year. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Dependent Variable	Income			Judgments and Liens			Bankruptcy		
Treatment Window	1 Year	5 Years	10 Years	1 Year	5 Years	10 Years	1 Year	5 Years	10 Years
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treatment	–0.073**	–0.081***	–0.086***	0.077**	0.023*	0.021**	–0.013	0.004	0.006
	(0.033)	(0.021)	(0.009)	(0.031)	(0.012)	(0.010)	(0.011)	(0.009)	(0.006)
Age	–0.001	–0.001	0.000	–0.001**	0.000	0.001*	–0.000	–0.000	–0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Person FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lawsuit FE x Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-square	0.606	0.749	0.691	0.062	0.169	0.128	0.018	0.023	0.060
Observations	331	1,635	3,132	331	1,635	3,132	331	1,635	3,132

Panel B. Social consequences for whistleblowers

This table reports the estimation results from OLS regressions of whistleblowing on social consequences for whistleblowers for the period 1986-2019. The models differ in their dependent variables and definitions of *Treatment*. In Columns 1, 4, and 7, *Treatment* is equal to 1 in the one year after a whistleblower filed the lawsuit with the court, and 0 in the one year before filing the lawsuit. In Columns 2, 5, and 8, *Treatment* is equal to 1 in the five years after a whistleblower filed the lawsuit with the court, and 0 in the five years before filing the lawsuit. In Columns 3, 6, and 9, *Treatment* is equal to 1 in the ten years after a whistleblower filed the lawsuit with the court, and 0 in the ten years before filing the lawsuit. In Columns 1-3, the dependent variable, *Divorce*, is an indicator equal to 1 in the year an individual filed for divorce, 0 otherwise. In Columns 4-6, the dependent variable, *Traffic Violation*, is an indicator equal to 1 in the year an individual has a traffic violation, 0 otherwise. In Columns 7-9, the dependent variable, *Legal Record*, is an indicator equal to 1 in the year an individual has a violation that resulted in a derogatory mark in his or her legal record, 0 otherwise. The sample in Columns 1-3 is smaller as not all states make divorce filings publicly available. All models include lawsuit-year and person fixed effects. All variables are defined in Appendix C. Standard errors are clustered by year. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Dependent Variable	Divorce			Traffic Violation			Legal Record		
Treatment Window	1 Year	5 Years	10 Years	1 Year	5 Years	10 Years	1 Year	5 Years	10 Years
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treatment	-	0.001	–0.004	–0.009	–0.013	–0.013	0.013	0.001	–0.012
	-	(0.001)	(0.004)	(0.026)	(0.008)	(0.009)	(0.012)	(0.009)	(0.009)
Age	-	–0.000	–0.000	–0.001	–0.000	–0.000	–0.001	–0.001	–0.000
	-	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
Person FE	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lawsuit FE x Year FE	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-square	-	0.007	0.003	0.011	0.034	0.070	0.010	0.062	0.039
Observations	-	670	1,277	331	1,635	3,132	331	1,635	3,132

Table 11: Consequences of Whistleblowing by Employee Rank

Panel A. Financial consequences

This table reports the estimation results from OLS regressions of whistleblowing on financial consequences for whistleblowers by rank for the period 1986-2019. The models differ in their dependent variables and definitions of *Treatment*. In Columns 1, 4, and 7, *Treatment* is equal to 1 in the one year after a whistleblower filed the lawsuit with the court, and 0 in the one year before filing the lawsuit. In Columns 2, 5, and 8, *Treatment* is equal to 1 in the five years after a whistleblower filed the lawsuit with the court, and 0 in the five years before filing the lawsuit. In Columns 3, 6, and 9, *Treatment* is equal to 1 in the ten years after a whistleblower filed the lawsuit with the court, and 0 in the ten years before filing the lawsuit. Each row presents the coefficient on *Treatment* using different dependent variables. In row a), the dependent variable, *Income*, is the natural logarithm of the median income in the census tract of an individual's residence. In row b), the dependent variable, *Judgments and Liens*, is an indicator equal to 1 in the year an individual faces a judgment or lien, 0 otherwise. In row c), the dependent variable, *Bankruptcy*, is an indicator equal to 1 in the year an individual files for personal bankruptcy, 0 otherwise. Columns 1-3 report results using the sample of rank-and-file employees. Columns 4-6 report results using the sample of middle-management employees. Columns 7-9 report results using the sample of upper-management employees. All models include lawsuit-year and person fixed effects. All variables are defined in Appendix C. Standard errors are clustered by year. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Employee Rank	Rank and File			Middle Management			Upper Management		
Treatment Window	1 Year	5 Years	10 Years	1 Year	5 Years	10 Years	1 Year	5 Years	10 Years
Dependent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
a) Income									
Treatment	–0.075***	–0.082***	–0.095***	–0.071	–0.088**	–0.078**	-	0.138*	0.035
	(0.025)	(0.021)	(0.015)	(0.099)	(0.040)	(0.031)	-	(0.065)	(0.080)
b) Judgments and Liens									
Treatment	0.056	0.017	0.009	0.116**	0.029	0.040**	-	0.080	0.063
	(0.054)	(0.019)	(0.014)	(0.041)	(0.025)	(0.018)	-	(0.078)	(0.059)
c) Bankruptcy									
Treatment	–0.020	0.011	0.007	-	-	0.008	-	–0.113	–0.050
	(0.018)	(0.015)	(0.008)	-	-	(0.006)	-	(0.117)	(0.050)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Person FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lawsuit FE x Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	207	1,013	1,930	114	562	1,082	10	60	120

Panel B. Social consequences

This table reports the estimation results from OLS regressions of whistleblowing on social consequences for whistleblowers by rank for the period 1986-2019. The models differ in their dependent variables and definitions of *Treatment*. In Columns 1, 4, and 7, *Treatment* is equal to 1 in the one year after a whistleblower filed the lawsuit with the court, and 0 in the one year before filing the lawsuit. In Columns 2, 5, and 8, *Treatment* is equal to 1 in the five years after a whistleblower filed the lawsuit with the court, and 0 in the five years before filing the lawsuit. In Columns 3, 6, and 9, *Treatment* is equal to 1 in the ten years after a whistleblower filed the lawsuit with the court, and 0 in the ten years before filing the lawsuit. Each row presents the coefficient on *Treatment* using different dependent variables. Each row presents the coefficient on *Treatment* using different dependent variables. In row a), the dependent variable, *Divorce*, is an indicator equal to 1 in the year an individual filed for divorce, 0 otherwise. In row b), the dependent variable, *Traffic Violation*, is an indicator equal to 1 in the year an individual has a traffic violation, 0 otherwise. In row c), the dependent variable, *Legal Record*, is an indicator equal to 1 in the year an individual has a violation that resulted in a derogatory mark to his or her legal record, 0 otherwise. The sample in row a) is smaller as not all states make divorce filings publicly available. Columns 1-3 report results using the sample of rank-and-file employees. Columns 4-6 report results using the sample of middle-management employees. Columns 7-9 report results using the sample of upper-management employees. All models include lawsuit-year and person fixed effects. All variables are defined in Appendix C. Standard errors are clustered by year. *, **, *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

Employee Rank	Rank and File			Middle Management			Upper Management		
Treatment Window	1 Year	5 Years	10 Years	1 Year	5 Years	10 Years	1 Year	5 Years	10 Years
Dependent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
a) Divorce									
Treatment	-	-	-	-	–0.001	–0.010	-	-	-
	-	-	-	-	(0.002)	(0.009)	-	-	-
b) Traffic Violation									
Treatment	0.008	–0.009	–0.005	–0.042	–0.020	–0.026**	-	–0.067	–0.068
	(0.041)	(0.012)	(0.012)	(0.043)	(0.012)	(0.015)	-	(0.068)	(0.062)
c) Legal Record									
Treatment	0.023	0.008	–0.016	0.008	–0.013	–0.004	-	-	-
	(0.022)	(0.011)	(0.011)	(0.013)	(0.011)	(0.016)	-	-	-
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Person FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lawsuit FE x Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	207	1,013	1,930	114	562	1,082	10	60	120