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Abstract

The U.S. government may recover losses due to fraud by paying a bounty for information leading to prosecutions. Paying a percentage bounty encourages more valuable information, but a high bounty could reduce net government recoveries. Under the False Claims Act, the Federal government pays a minimum 15% bounty for information regarding fraud. Utilizing a 2004 change in the tax code as exogenous variation, I present evidence that whistleblowers respond to higher bounty percentages by bringing more cases valued under $440,000. The current 15% minimum may be sufficient for higher valued cases, but the government may be able to increase prosecutions and recoveries through a higher bounty for smaller cases of fraud.
The Price of Private Enforcement Under the False Claims Act

How much should we pay for information?

Combating fraud against the federal government is a difficult task, beginning with the challenge of identifying the occurrence of fraud. “Improper payments” under Medicare and Medicaid alone may start at $70 billion, and these are the more easily detectable cases. Under the False Claims Act (FCA), the Department of Justice (DOJ) has come to rely upon private parties, typically whistleblowers, to identify cases of fraud for prosecution. These whistleblowers, known as “relators” under the statute, receive a percentage of the final recovery against the defendant. Utilizing data from the DOJ under the Freedom of Information Act, I evaluate the percentage payment to whistleblowers in the fight against fraud.

Background on the False Claims Act

The False Claims Act proscribes fraud against the federal government through the imposition of both civil and criminal penalties. Besides traditional public enforcement, the Act also contains qui tam provisions, which allow private litigants known as relators to pursue civil actions and prosecute cases of fraud separately from the Department of Justice. Dating back to the Abraham Lincoln presidency, the qui tam provisions received renewed attention in 1986 when Congress enhanced the reward structure. Today, relators can receive as much as 30% of the civil recovery, which can be substantial given the treble damages provisions in the statute. Civil penalties also include $5,500 to $11,000 in fines per false claim. Relators do not have to satisfy the traditional requirements of standing; as such, they have a remarkable amount of flexibility in pursuing cases of their choice. From a private enforcement perspective, relators are nearly on par with public enforcement agents in their ability to select cases. The relators, often whistleblowers within an organization, typically obtain representation by counsel on a contingency fee basis; they are not responsible for attorneys' fees if the case is unsuccessful.

The DOJ effectively has a right of first refusal on every FCA qui tam case. Upon the initial filing by a relator, the court will immediately seal and stay the case for 60 days. During this time, the DOJ investigates the allegations. The government typically requests time extensions for investigation, which are routinely granted. After an average of 13 months, the DOJ announces whether or not it is "intervening" in the action, also known as its "election" regarding intervention. If it chooses to intervene, it either takes over litigation of the case or dismisses the case outright and may do so over the objections of

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5 See Beck, 78 N.C.L. REV. 539, 554-65 for a brief history.
8 See § 3730(b).
the relator.\textsuperscript{9} If it does not intervene, the relator is then free to litigate the case. Should the relator attempt to settle or dismiss the action, however, she must obtain DOJ consent.\textsuperscript{10}

If the DOJ intervenes in the \textit{qui tam} action, the relator is entitled to receive between 15 and 25 percent of the amount recovered.\textsuperscript{11} I refer to this as the “finder's bounty.” If the DOJ declines to intervene in the action and the relator prevails in litigation against the defendant, her share is between 25 to 30 percent.\textsuperscript{12} Regardless of intervention, a successful relator is also entitled to legal fees from the defendant.\textsuperscript{13}

The finder's bounty is the most common bounty in FCA enforcement. As the DOJ runs the litigation, the finder's bounty is mostly for the relator's information regarding the fraud. The relator and her attorney will still cooperate with the DOJ after the intervention decision, but I will focus my analysis on the relator's pre-election incentive. The main question for the government, then, is the proper bounty in encouraging relators to come forward with cases of fraud.

Private Enforcement in General

Qui tam litigation is a form of private action in the support of public interests. There is a substantial literature describing such programs generally.\textsuperscript{14} Private enforcement of public law has a number of perceived benefits. Private involvement can increase the total resources devoted to fighting a particular problem, and the private parties might be more efficient at doing so. For example, the cost for an employee to monitor an employer might be less than the costs involved if the federal government were to do so. Private involvement might also correct for agency slack; government regulators might be more subject to political pressure or lobbying, but private involvement might shame them into action. Private enforcement could also develop innovations in litigation, settlements, and law.

The potential downsides to private enforcement dovetail with the aforementioned benefits. Private party involvement might generate excessive enforcement—enforcement against parties who should not be liable. Private enforcement might also interfere with the public regulatory system—either interfering with ongoing government efforts, or perhaps triggering even further government slack. Finally, there can be a lack of public accountability for private enforcement.

More formally, Landes & Posner (1975) argue that private enforcement is theoretically inefficient because of the incentive problem with fines under optimal enforcement. To minimize costs of detection and enforcement, they recommend a combination of high

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\textsuperscript{9} \S 3730(c)(2)(A).
\textsuperscript{10} \S 3730(b).
\textsuperscript{11} \S 3730(d).
\textsuperscript{12} \textit{Id}.
\textsuperscript{13} \textit{Id}.
fine and low detection rate for crime. The high fine, however, will provide an incentive for greater investment by private enforcers, thus increasing the overall social loss.

Polinsky (1980) emphasizes the importance of enforcement costs. Due to a combination of defendant wealth constraints and their ability to cause societal damage, a theoretically high fine and low detection probability may not work. If the costs of raising the detection chance to a level satisfying rational deterrence are too high, public (as opposed to private) enforcement may be the only option. Public enforcement is not constrained by the profit motive of private enforcers. Polinsky also notes that paying private enforcers an amount different from the fine assessed to the defendant may generate socially optimal results.

A number of papers have taken steps towards modeling the FCA qui tam provisions. Bucy presents a complicated game theoretic model incorporating the relator, the defendant, and the regulatory as three players. Although not explicitly in her model, she does mention the fact that the potential relator's counsel is a repeat player, thus justifying the design of her analysis in the form of repeated/iterated games.

Depoorter & De Mot also present a game theoretic model of the FCA, utilizing the same main three players as Bucy. Their model emphasizes the differences in probability of success between the relator acting alone versus the government intervening. With a government actor that values the recovered dollars, it predicts that the government will intervene in high dollar cases along with low dollar cases that the relator would not otherwise pursue. They hypothesize that this setup may trigger underprovision of qui tam cases if the relators recognize the government's potential for free riding. Finally, they mention the perverse incentive for relators to delay in obtaining maximum damages.

Heyes & Kapur, although not specific to the FCA, present an economic model of the whistleblower. They highlight different decision metrics by which whistleblowers decide to take action along with the impact of "noisy" or imperfect information.

These studies are limited in that they have difficulty studying individuals who witnessed wrongdoing but did not blow the whistle, nor do they clearly identify those who make false accusations, the results suggest that most whistleblowers fall on the positive side. Feldman & Lobel make important contributions to the former difficulty by conducting laboratory survey experiments. Given the severe social and professional repercussions of whistleblowing, however, we may be concerned about the external validity of hypothetical survey results.

Selecting the proper bounty percentage

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16 Bucy at 627.
17 Ben Depoorter & Jef De Mot, Whistle Blowing, 14 Supreme Court Economic Review 135 (2005)
A major line of concern is the selection of the FCA's bounty percentage. Since relators receive a percentage of the damages, various commentators argue that the relators have an incentive to allow the fraud to increase, thus improving the relator's reward. In a related strain of argument, others are concerned that relators target relatively trivial contractual violations, and then pursue claims of fraud for the value of the entire contract (or series of contracts), thus unjustifiably penalizing the defendant.\(^\text{20}\) Many of the statutory changes of the FCA, along with commentator proposals, thus have centered on restructuring the maximum bounty percentage. The FCA originally guaranteed a full 50% of recovery to the relator.\(^\text{21}\)

Brollier suggests a graduated bounty percentage that will encourage prompt revelation.\(^\text{22}\) His proposal grants up to 30% to relators who file within two years of defendant's first fraud, decreasing down to 10% for relators who file after four or more years have elapsed. In contrast to Brollier's suggestion, Kovacic proposes that the relator's damage award be constrained by the time at which the relator knew or had constructive knowledge of the misconduct.\(^\text{23}\) Trunk recommends improved incentives for voluntary disclosure of compliance/contractual violations, including assurances of continued government business and guarantees of less than treble damages.\(^\text{24}\)

Ferziger & Currell make broad recommendations of low (single digit percentage) bounties, maximizing informant anonymity, and increasing the predictability of bounty payment.\(^\text{25}\) Their ideal bounty percentage "should be equal to the agency's average information cost per dollar of enforcement revenue, not including the bounty program's marginal operating cost."\(^\text{26}\)

These commentators recognize specific concerns within the private enforcement scheme, and speculate on potential impacts. In contrast, I address two simpler questions with systematic empirical evidence. First, what is the impact of the current bounty percentage on government interests? Second, what would be the result of a change in the bounty percentage?

In designing its fraud enforcement scheme, the DOJ has at least two priorities: compensation and deterrence. The defrauded government agency desires compensation for its loss. This principle of compensation is more precisely described as net government


\(^{22}\) Brollier (2006) (at 716-18)


\(^{24}\) Trunk, at 177


\(^{26}\) Ferziger & Currell, 1999 U. Ill. L. Rev. at 1187.
compensation, since paying the relator reduces the amount of government compensation. Furthermore, it may be better if the agency had never suffered loss in the first place. A sufficiently strong enforcement scheme might deter potential offenders. The public litigation bounty is one method by which the DOJ can encourage relator participation in the enforcement scheme.

A. A Simple Model of Private Enforcement

To determine the appropriate finder's bounty, I begin with a simple model of private enforcement. The three parties are the DOJ, the potential defendant, and the potential relator. Working from a rational crime perspective, the potential defendant is a profit maximizer. He will commit fraud if he expects it to be profitable. If the probability of being caught is too high, the DOJ has successfully deterred him from committing fraud.

The potential relator is an individual who has knowledge of fraud otherwise unknown to the DOJ. She recognizes that becoming a relator is a costly activity, as whistleblowing can be a lengthy process with serious career consequences. She may have various motivations in becoming a relator, including personal satisfaction in seeing wrongdoing exposed. The important assumption in this simple model is that she responds positively to financial reward. A larger bounty percentage increases the probability that she will step forward and become a relator. Her decision is a binary decision: either she blows the whistle, or she does not. The relator is typically represented by counsel, but initially I set aside potentially conflicting incentives by assuming that counsel is a faithful agent to the relator principal.

For now, I also abstract away from the remaining qui tam procedure. Once the relator decides to file, the DOJ handles the rest. Thus, this simple model is analogous to other reward schemes in which enforcement agencies offer cash for information leading to arrest or prosecution. While there are many methods the DOJ might use to encourage potential relators to take action, I here look at the DOJ's choice of bounty percentage.

I begin with a DOJ that focuses only on government compensation. With this objective, it wishes to maximize recovery dollars going to the government from defendants. The bounty paid to relators is a cost that reduces net government recoveries. As such, this DOJ will set a bounty percentage high enough to encourage relator participation, but not so high that relators receive all of the recoveries. More precisely, this DOJ will select a bounty percentage such that the marginal gain due to last case brought forward is equal to the marginal cost of paying the bounty. If the DOJ were to raise the bounty any higher than this level, it would encourage another relator to come forward, but the gain in prosecuting that case would be outweighed by the additional bounties paid to all of the relators. If the DOJ were to set the bounty lower than this level, it would be “leaving money on the table.” In other words, by raising the bounty percentage, relators would bring new cases forward. The recovered dollars from those cases would outweigh the additional bounty percentage paid for all cases.
A DOJ that focuses solely on deterrence would behave differently. Since a higher probability of detection makes potential defendants less likely to commit fraud, it could attempt to maximize the probability of detection. One simple solution would be to maximize the bounty percentage. If the DOJ does not spend its own funds, the maximum bounty percentage would be 100%. The success of this system approach depends on the susceptibility of potential defendants to detection and thus deterrence, though, along with the responsiveness of potential relators. It is possible that despite high bounty percentages, potential relators might be generally unwilling to come forward. As a result, although the 100% bounty might maximize their willingness, the still low probability of their action might not generate much deterrence. Similarly, if many potential defendants believe their probability of detection is low even at a 100% bounty, a 90% bounty might produce the same level of deterrence.

Now, I consider a DOJ that incorporates both deterrence and compensation objectives. Such a DOJ would likely choose a bounty percentage in between the aforementioned levels. More precisely, the DOJ would select a bounty percentage such that the marginal compensation benefit is equal to the marginal deterrence benefit. The compensation-only DOJ previously selected a percentage at which a higher percentage would have resulted in a net compensation loss for the DOJ. By factoring in the additional deterrence gain from the higher percentage, though, the unified objective DOJ can find the higher percentage acceptable.

It is possible, though, that potential defendants simply are not deterred at the relevant bounty percentages. If this is the case, the unified objective DOJ would behave like the compensation only DOJ. There is no additional deterrence gain in raising the bounty percentage, so it only considers the compensatory value in setting the bounty.

First Implication of the model: Deterrence disagreements

In comparing the two goals of deterrence and compensation, it is important to note that compensation is easier to observe. We can measure the total dollars recovered in a rather straightforward manner, but properly measuring the amount of potential fraud deterred can be challenging. To an outside observer, then, a DOJ establishing a relatively high bounty percentage may appear to be “irrationally” paying too much to relators. The argument would be that the relators who came forward with information under the high bounty percentage would still have done so under a slightly lower bounty percentage. Therefore, the DOJ is being wasteful by paying too much for information and thereby failing to maximize net compensation. Following the broader line of reasoning in this section, however, the discrepancy may be explained by differences in estimating deterrence. The DOJ might believe that the higher bounty percentage generates substantial deterrence, while the outside observer might disagree or not even value deterrence.

Second Implication: Administrative ease of deterrence
Another important implication is that a fixed bounty percentage might have advantages beyond administrative ease. In an idealized sense, a DOJ focused exclusively on compensation might want to engage in price discrimination among relators. Such a DOJ might try to determine the minimum it would have to pay any particular potential relator to induce her to provide information. This theoretical price discrimination scheme would be complex and administratively difficult, as each relator would be reluctant to disclose her price flexibility. Offering a fixed bounty percentage makes it easier for relators to set expectations regarding their personal compensation for whistleblowing. Making the decision to become a whistleblower has serious career and social consequences; the prospect of also having to negotiate with the government regarding bounty percentages may not be attractive to a potential relator.

Besides administrative feasibility, however, note that the fixed percentage may also help drive deterrence against larger cases of fraud. If the magnitude of fraud offense varies, a fixed bounty percentage may inadvertently grant “too much” to a potential large-fraud relator from a compensation perspective. Nonetheless, the large bounty may help increase the probability of relator participation and thus drive deterrence of such large frauds.

Third implication: Compensation and deterrence are only tradeoffs at the high end.

The third implication is that compensation and deterrence are not always in competition as goals. If the current bounty percentage is particularly low, increasing the percentage may result in both more compensation and more deterrence. On figure 1, this would be zone A. If the government can determine that its current bounty percentage is in Zone A, increasing the bounty is a win-win. Only after the current bounty percentage exceeds the compensation maximum, zone B, do we actually confront a tradeoff between compensation and deterrence. Within zone B, the government must then determine how much it values deterrence in comparison to compensation for fraud. If deterrence is more important than compensation, it may select a bounty percentage on the right side of zone B. If deterrence is difficult to measure or less important than compensation, the government may end up choosing a spot closer to the left side of zone B.

Figure 1
B. Evidence from the FCA data

Empirical evaluation of a fraud enforcement system is difficult due to the challenge of offense detection. Unlike more physical crimes such as homicide, the victim of fraud often may not realize she has been victimized until the offender is caught. Without background victimization information, we cannot make claims that a program has prosecuted 80% of fraud offenses. The volume of observed offense prosecution could reflect a complex interaction between the unobserved offense prevalence and enforcement efforts.

In healthcare, HHS has attempted to estimate the total annual amount of “improper payments” under Medicare and Medicaid, and some have touted the 2010 estimate of $70 billion as a background fraud estimate. HHS generated the improper payments estimate through random sampling of medical claims. If the provider was unable to support a claim with documentation, for example, HHS would flag the claim as an improper payment. Due to the tremendous volume of healthcare claims, this technique is useful in estimating the error rate in payments, but it both over and under-identifies fraud. For over-identification, we typically view fraud as a purposeful action with an attendant mens rea. Sloppy or misfiled documentation may simply be a mistake or negligence not rising to the level of fraud.

The under-identification problem is more serious, though, from a performance measurement perspective. First, documentation is notoriously easy to manufacture. For example, consider practices such as “up-coding” or “up-charging,” in which medical providers intentionally diagnose patients with worse conditions than merited for billing purposes. If the practice is common and subtle, it should be easy to maintain
documentation in compliance with the exaggerated diagnosis. Ex post verification of whether the patient actually had acute chest spasms or just a mild cough would be extremely difficult. Second, the HHS estimate does not include some of the major fraud recoveries under the False Claims Act, such as off-label advertising fraud\(^\text{27}\) or average wholesale price litigation\(^\text{28}\). As such creative methods of fraud come to light, we lack systematic evidence of the underlying frequency of such frauds.

An estimate of the FCA detection rate

The approach I take in estimating enforcement performance focuses on the relationship between fraud offenses of varying magnitude. I claim that the underlying volume of smaller offenses can be approximated by the volume of larger offenses. For example, if I observe 30 cases of $10 million fraud in one year, I expect that there are at least 30 cases of $1 million fraud occurring in that time period.

This expectation can be justified via two methods. First, to the extent that offenses are an aggregation of repeated fraudulent behavior, it is possible that the $10 million fraud might have been detected earlier. An unscrupulous healthcare provider might steadily increase its monthly volume of fraudulent Medicare claim. At an earlier point, the accrued fraud might only have reached $1 million. It was only the failure to detect and stop the fraud earlier that resulted in the $10 million value of the offense.

The second justification is based upon a prediction of defendant behavior. Most enforcement schemes apply greater penalties to large offenses over smaller offenses. The FCA is no different, as criminal sanctions generally apply only to the worst offenders, and civil penalties scale with the magnitude of the offense under the treble damages rule. Under this type of enforcement scheme, I predict greater deterrence of worse offenses over smaller offenses. Unless greater resources are targeted explicitly at the smaller offenses, the offense volume for those smaller offenses should be at least at the level of the worse offenses, if not greater.

Utilizing this approach to estimate the background level of offenses, we can look at the distribution of offenses by offense value.

Figure 2: Histogram of prosecuted offenses by log offense value

\(^{27}\) Pfizer settled a $2.3 billion off-label marketing case under the False Claims Act in 2009. See Gardiner Harris, NY Times pg B4, Sept 3, 2009, “Pfizer Pays $2.3 Billion to Settle Marketing Case.”

Figure 2 shows the volume of successfully prosecuted offenses, with a peak between $e^{13}$ and $e^{15}$ ($440,000 and $3.2 million). I will call this range of offenses the middle value offenses. On either side of this peak, the volume of offenses decreases.

Utilizing this distribution of offenses, I infer that the FCA is less successful at prosecuting offenses valued under $440,000 relative to offenses between $440,000 and $3.2 million. If, hypothetically, the DOJ were catching and prosecuting 50% of middle value offenses, I would claim that the DOJ caught less than 50% of the sub-$440,000 offenses. An alternative interpretation, of course, is that there are simply fewer offenses occurring that are valued under $440,000. For the above reasons, I believe this is unlikely. Nonetheless, it is possible that potential offenders are less willing to commit smaller amounts of fraud. Perhaps, for example, their fear of criminal or other sanctions is so great that only large amounts of money are sufficient to compensate for the risk.

This information does not help much in understanding the performance of the FCA in the $440,000 to $3.2 million zone. To the right of the $3.2 million, the rate of prosecuted offenses declines. This might suggest that deterrence is at play, in that large bounties or criminal sanctions reduce the probability of committing high dollar frauds. Since the high dollar fraud commission rate is lower, there are simply fewer cases to be caught. On the other hand, it could also be evidence that defendants with the resources to commit such large frauds also fight more vigorously against detection and sanction. Alternatively, judges and juries might be unwilling to award such large sanctions for fraud despite the prevalence of such actions.
For purposes of this evaluation, though, it is sufficient to say that there appears to be opportunity for improvement in prosecuting cases valued under $440,000. The next question is whether relators could play a role in the improvement. Given a higher bounty percentage, would relators be more willing to bring these sub-$440,000 cases forward?

Measuring responsiveness of relators to the bounty percentage

Predicting how relators react to various bounty percentages is difficult. The ideal situation would be to have a randomized experiment as to the effective finder's bounty percentage. We could then make strong recommendations as to the appropriate bounty percentages.

Unfortunately, not only do we lack a randomized experiment, we do not have much variation in the finder's bounty percentage. Since the FCA's 1986 amendments, the base finder's bounty percentage has remained constant at 15%. The lack of variation on the bounty percentage makes it difficult to observe how relators would respond to different bounty percentages. The statute provided different bounties prior to 1986, but the 1986 amendments had other significant changes besides the bounty percentages. It would be challenging to determine which portion of increased relator participation would be properly attributable to the bounty percentage change as opposed to the other statutory changes. Further clouding the issue would be the broader differences in government contracting, cultural norms, and legal environment before and after 1986.

My strategy is to look at a source of exogenous variation in the effective bounty percentage. The American Jobs Creation Act of 200429 (AJCA) changed the rules for the tax treatment of plaintiff awards paid on or after October 23, 2004. Prior to that statute, the Internal Revenue Service held that the plaintiff's proceeds were fully taxable as income, including the attorneys' fees paid under a contingency arrangement.30 Although the attorneys' fees could be deducted as a miscellaneous itemized expense, this deduction was not available to taxpayers subject to Alternative Minimum Tax (AMT). After the AJCA, the plaintiff's net proceeds after attorneys' fees were treated as income, thus avoiding the AMT and deduction problem.

I argue that the AJCA is a source of exogenous variation as the motivations for passing the law do not seem related to the underlying causes of qui tam cases. As a contrasting example, consider a hypothetical judge whom we observe to grant higher bounty percentages in comparison to other judges. We would be suspicious of drawing


inferences from this difference in this judge's bounty awards. Her award of greater percentages might be the result of particularly reprehensible defendant conduct in her jurisdiction. She could also be an unusually demanding judge, such that only the most skilled relators would appear before her, yet she would compensate for the high demands by offering higher bounties, too. Utilizing a source of exogenous variation reduces the impact of other causal arguments in predicting the impact of the bounty change.

The impact of this tax treatment change is an effective increase in the bounty percentage, but it is not a uniform increase for all relators. There are two groups of relators who receive an effective increase. The first group consists of relators subject to AMT. Given that the median relator share is approximately $144,000, many relators likely fall into this category. For large rewards, the change is uniform, as the reward is sufficient to bring the taxpaying relator into the AMT range. For smaller rewards, however, the impact depends upon the non-qui tam income of the relator. If the relator’s total income was sufficient to subject her to AMT, then the tax treatment change provides a higher effective bounty.

The second group of relators who receive an effective increase are those who did not benefit from the miscellaneous itemized deduction of attorneys' fees. These are relators who did not have enough deductions to justify itemizing deductions and would have taken the standard deduction on their income tax. It is possible that the miscellaneous itemized deduction of attorneys' fees was large enough to justify itemization, but on the margin, the benefit might not be that much greater than the standard deduction they would have received. Of course, if attorneys' fees are lower than the standard deduction, the relator would receive no marginal tax reduction under the pre-AJCA regime. The AJCA treatment allows these relators to benefit from both the standardized deduction and the removal of the attorneys' fees from income. Given that the standard deduction is on the order of $5,000 to $10,000, it is unclear how many relators would fall into this category. A qui tam case must be rather small if the standard deduction significantly weighs against the importance of the attorneys' fees. Without more detailed information regarding relator income tax filings, it is difficult to estimate the size and impact of this tax treatment.

My rough prediction, then, is that the effective shift in tax treatment should disproportionately favor larger cases. These larger cases will result in larger bounties that subject relators to AMT. Unless relators are uniformly high income individuals subject to AMT, or if relators filing low-dollar cases are distinctly higher income, it is more likely that the relator filing a high-dollar case would benefit under the AJCA tax regime.

To estimate the magnitude of the tax treatment improvement, consider that the AMT is roughly 28% on income over $175,000. Next, I approximate the contingency fee for the attorney at 40%. A relator subject to AMT receiving a bounty before October 23, 2004, would not only have to pay her attorney 40% of her share, but she would also pay 28% of that 40% to the IRS, which translates to an additional 11.2% of her total share. I ignore the tax she owes on the original 60% of her share, since that does not change under the AJCA. Thus, she takes home 48.8% of her share of the qui tam recovery. After October,
2004, she can now take home the 60% of her share, as she is no longer responsible for the 11.2% under AMT. This is approximately a 23% increase in the amount she takes home after October 23, 2004.

First stage: relator recognition of improved tax treatment

The first stage in measuring the elasticity of relators to greater financial compensation is potential relator recognition of the effectively greater reward under the AJCA tax regime. Before a potential relator decides to file, she must weigh various factors of taking action, including perhaps the costs and benefits of proceeding with a qui tam claim. Becoming a whistleblower can have dire career and social consequences, and others might view a whistleblower receiving financial reward to be particularly distasteful. It is unclear if potential relators consider the tax consequences of the qui tam bounty, since receipt of litigation proceeds is probably an unusual tax circumstance for most people.

Perhaps a more likely vector of either information or incentive is the relator's attorney. A responsible attorney might discuss the tax consequences of potential rewards with the relator in helping her make a decision about proceeding with a qui tam filing. Another possibility is that the attorney works harder or is more likely to encourage a relator to move a claim forward under the AJCA tax regime because he predicts that the relator will be more satisfied with the eventual financial reward. Note that the attorney does not personally benefit from the favored tax treatment under the AJCA, except to the extent that it encourages greater relator participation on either the extensive or intensive margins.

Again, this first stage is extremely difficult to evaluate; it is unclear if potential relators and their attorneys have much precision or accuracy regarding the value of their information. The improved tax treatment could generate an upward nudge in their preliminary value estimate.

The second stage: Relator responsiveness to an increased reward

Assuming that knowledge of the improved AJCA tax treatment does find its way to the potential relator and her attorney, I now consider the impact of the effectively increased reward. Under the finder's bounty, the financial incentive is for relators to bring information to the DOJ. The ostensible prediction is that a relator is more likely to come forward if the bounty percentage is greater.

The AJCA is quite clear that cases paying out after October 23, 2004, should be subject the more favorable tax regime. Assuming that the relator or her attorneys are aware of this improvement in tax treatment, we might expect the change in relator filings to occur immediately after the October date. Complicating matters, however, is whether or not relators might have had earlier knowledge of the AJCA. It is possible that they might have been aware of the Act before October. Given that the expected time under seal while waiting for the DOJ's election is over a year, such relators could have increased their rates of filing before the October 2004 date. This anticipatory filing behavior would weaken
my estimate of relator elasticity using the October date as a discontinuity. Alternatively, relators could react to the shift in tax treatment by holding off filing qui tam actions until immediately after the October 2004 date. This type of relator would have otherwise filed earlier, but decided she would rather obtain the guarantee of an effectively higher bounty percentage. This alternative anticipatory action would bias the discontinuity estimate upwards, since the “additional” filing generated by the relator after the October 23, 2004 date would not be a marginal case in the counterfactual pre-October 2004 situation.

The extended time pending DOJ election causes a further challenge in evaluating relator elasticity. The FOIA data end in July, 2009. Cases spend an average of 600 days under seal, with a median time of 437 days and a standard deviation of 517 days. Given this lengthy time under seal and my lack of data regarding sealed cases, we likely observe only a small fraction of cases filed in 2007 or 2008. Since the key filing date is October 23, 2004, I do not have many years of final outcome data after that date. Without substantial post-October 23, 2004 data, a regression discontinuity design does not seem feasible until the DOJ provides further information.

Qui tam cases per year (year in which the attorney general was served)

Given the sparse data I have presently, I utilize a difference approach. I look at cases filed in the years immediately before and after October 23, 2004. I will refer to these as pre-AJCA and post-AJCA years.
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Median log case value vs year (year in which AG was served)
Twoway histogram: density of case values. Red is two years pre-AJCA, Navy is two years post-AJCA

There is a decrease in the median case value after October 23, 2004; above I show a graph overlaying the distribution of case values before and after the AJCA date. This suggests that the increased incentive is disproportionately affecting the smaller value cases. Alternatively, the reduction in median case value could be driven by a lower relative frequency of high dollar cases, but it would be difficult to attribute this to the preferential tax treatment.

From a rough visual analysis, the greatest region of relative increase is between $e^{10}$ and $e^{12}$, which roughly corresponds to $22,000$ and $160,000$. Cases around $e^{13}$, around $440,000$, also seem to rise in proportion, but to a smaller extent.

From this evidence, I infer that for large dollar cases, relators were already moving forward in the pre-AJCA regime. The additional effective bounty they receive in the post-AJCA regime does not impact them in the same way as relators considering small dollar cases. The potential relators with knowledge of small dollar cases in the pre-AJCA regime were relatively less likely to participate in the qui tam system. After the increased bounty, some of those reluctant potential relators seem to have moved forward with their qui tam claims.

Verification
The challenge with this approach is that it is entirely possible that something else may have fundamentally changed around the October, 2004 timeframe that would have resulted in this effect. My assumption in measuring the responsiveness of relators to the AJCA change is that other factors related to qui tam actions would have remained smooth for purposes of regression. The difference approach I use is even more rough than a regression discontinuity design. Nonetheless, I can at least verify that other case attributes are relatively consistent before and after October 23, 2004.

<table>
<thead>
<tr>
<th>Settlement/Judgments</th>
<th>All cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-AJCA (2yrs)</td>
<td>Post-AJCA (2yrs)</td>
</tr>
<tr>
<td>n</td>
<td>105</td>
</tr>
<tr>
<td>Primary Agency = HHS</td>
<td>64 (61%)</td>
</tr>
<tr>
<td>Intervention rate</td>
<td>87%</td>
</tr>
<tr>
<td>Median Time to Decide (days)</td>
<td>907</td>
</tr>
<tr>
<td>Primary Agency = DOD</td>
<td>13 (12%)</td>
</tr>
<tr>
<td>Dismissal rate</td>
<td>n/a</td>
</tr>
</tbody>
</table>

The above table considers two years of cases immediately before and after the AJCA date. The first and second columns reflect characteristics of the cases in which there was an imposition against the defendant; these are the only cases I consider above, as I have no other method of distinguishing case values. The third and fourth columns include all unsealed cases filed during the two years before and after the AJCA date. Many of these comparisons suffer simply from the small volume of cases. Nonetheless, there do not appear to be dramatic differences before and after the AJCA date. The reduction in median time to decide regarding election supports the censoring difficulty. That is to say, likely many cases are not showing up in the years after the AJCA because they remain under seal.

What is the counterfactual for the sub-$440,000 cases?

The favorability of the AJCA regime depends on our view of the counterfactual. We observe a relative increase in the proportion of sub-$440,000 cases. The worst situation is that the relative increase is due solely to the relative decrease in higher value cases in the AJCA regime. If the AJCA’s effective increase in bounties somehow counter-intuitively caused whistleblowers to participate less in high value cases, this would make the change undesirable. On the other hand, if the increase in bounties actually deterred high-value fraud from occurring in the first place, the law would seem to be a success.
Assuming that the increase in sub-$440,000 cases is due to an absolute volume increase in comparison to the pre-AJCA regime, there are at least three possible counter-factual conditions for these sub-$440,000 cases. First, there are non-marginal cases that would still have been prosecuted under the pre-AJCA regime and were of the same value. For these cases, the increased bounty was detrimental to government compensation. The DOJ could have paid less to the relator and still have prosecuted the case.

The second category consists of cases that would not have been prosecuted under the pre-AJCA regime. These cases generate new compensation that would not have otherwise been available to the government. Their prosecution may also generate other deterrence or social benefits, as observers may feel that crime is less likely to pay. Prosecution of these additional cases is not costless, though. The DOJ will face additional burdens due to these filings, as may the judiciary. The desirability of this increased enforcement depends on the difficult cost-benefit comparison.

The third category of cases is the most desirable. These are cases that would also have been prosecuted under the pre-AJCA regime but for much greater losses. In the pre-AJCA regime, the fraud might have accumulated to $1,000,000 before prosecution; the increased AJCA bounty resulted in prosecution before the fraud reached $1,000,000 in losses. The earlier prosecution could be a result of the whistleblower or her attorney acting sooner because her recovery share was sufficient to offset the cost of participating. The earlier prosecution could also be the result of greater investments by relators or attorneys in detecting these lower value frauds. Regardless of the specific mechanism, this category of cases does not impose any additional burdens on the DOJ or the judiciary. The government would have handled the case regardless of the bounty increase. Perhaps I might describe this effect as “incapacitation,” as the defendant was unable to commit the full extent of fraud desired prior to prosecution.

The composition of the sub-$440,000 cases under the AJCA is likely a mix of the aforementioned categories. I do not yet have a strategy for identifying the mix of cases, but the greater the proportion of the third category, the more desirable the bounty increase. Utilizing an increased bounty percentage to catch cases earlier is administratively and judicially attractive in comparison to complex proposals looking at “constructive knowledge.” The simpler bounty increase may also incur less strategic responses to added legislative complexity.

Weaknesses of this approach

The empirical strategy I have chosen has quite a few limitations. First, similar to other regression discontinuity designs, the window of causal inference is extremely narrow, which may limit the external validity. Even if everything in the measurement design works well, the strongest claim I can make is that, given the bounty situation that existed before October 2004, an approximate 23% post-tax increase in bounty generated an increase in relator participation for cases valued under $440,000. This claim is, of course,

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31 See Kovacic, supra note 23.
different than saying that an additional 23% today would still generate a further increase in relator participation. This difficulty in causal inference is unfortunately common, but I believe these data at least give policy makers some evidence as to future considerations in the finder’s bounty percentage.

Second, there are legitimate concerns with the difference approach I utilize instead of the preferred regression discontinuity design. Given the likelihood of censored data in the last five years of my data and the limited number of cases after 2004, the difference approach seems to be my best choice at present. Nonetheless, since I am not comparing the absolute volume of cases before and after October 2004, the design does not actually show an absolute increase in volume of cases valued under $440,000. The increase is relative to higher valued cases. As such, from an absolute sense, there may not have been an actual increase in case volume after October 2004 attributable to the AJCA. As more cases filed after 2004 are resolved, we may be able to gain better insight into the absolute effects of the AJCA.

Third, the first stage of my exogenous variation could use more support. It is unclear how attorneys or relators perceive a 23% increase in the effective bounty percentage. The percentage does not seem so large as to “shock” marginal individuals into taking action. If relators and attorneys do not have clear conceptions of the value of their cases, it is less certain if a 23% increase would be meaningful.

C. What is socially optimal?

Thus far, I have considered the DOJ as an organization pursuing some mix of deterrence and compensation. I have used the concept of rational crime deterrence for the first goal, and I have looked at net government compensation for the second goal. To determine a socially optimal enforcement scheme, I will step back from these specific DOJ goals. For a hypothetical social planner, the enforcement system's goal should be to maximize social welfare. Besides the losses accrued to society by the fraud, social welfare also incorporates the benefits obtained by offenders and is reduced by the costs of catching and sanctioning defendants.

Is fraud costly?

Fraud is a rather broad concept. In some ways, it might be analogous to theft. When a healthcare provider bills Medicare for a non-existent procedure, the provider’s gain of money seems like theft at Medicare’s expense. On the other hand, courts have also recognized some forms of regulatory violation as fraud. Under FDA regulations, pharmaceutical companies may not market “off-label” uses for their products. The FDA approves drugs for the treatment of specific conditions, and the companies sell and label drugs for those particular purposes. Physicians, however, may utilize the drugs as they see fit. They may learn or discover other conditions for which the drug is useful, even though the FDA has yet to approve the drug for those other conditions. While the pharmaceutical company may respond to physician inquiries about such off-label uses, they cannot market or advertise these alternative treatments. As an example, Pfizer settled
a $2.3 billion off-label marketing case under the False Claims Act in 2009.\textsuperscript{32} While the action may have been a clear violation of FDA guidelines, it is more difficult to determine the social harm from the offense. Perhaps patients who otherwise would have suffered greatly gained early access to a treatment that was yet to be FDA approved. On the other hand, there may have been patients who were exposed to unnecessary risks and side effects due to insufficient drug testing. We can see similar concerns for other frauds that stem from regulatory violations, such as compliance with the Department of Education’s regulations regarding school loans.

Even in the more direct case of fraud as theft, social welfare analysis might consider the defendant’s situation. Perhaps the defendant is a poor, disadvantaged individual who does not quite qualify for Medicare coverage, yet obtains life saving healthcare through fraudulent billing.

Also consider the dynamic costs of fraud. Fraud, like theft, is a form of the involuntary transfer of resources. In many ways, the legal system helps facilitate voluntary agreements and transfers in the support of private freedoms. The potential for involuntary transfers can trigger both offensive and defensive investments that seem wasteful. Offenders may expend efforts concealing their fraud, while the government may create additional bureaucracy to slow or complicate attempts at fraud. These costs are above the direct costs of detection and prosecution of fraud.

The efficacy of this system depends greatly on the ability of the judicial system to ascertain the proper costs and, perhaps, benefits, of fraud offenses. If the damages or penalties awarded are out of line with this social calculus, the system can break down. For purposes of the percentage bounty system, fraud penalties must be proportional to the social harm in order to provide the appropriate incentives to relators. Recall that the False Claims Act provides a $5,500 to $11,000 civil penalty per claim in addition to treble damages. A difficult outstanding question is whether courts utilize this sanction scheme to produce total penalties in line with the social costs of the defendant's actions.

Does it create bad incentives?

One simple concern is that bounties might induce people to commit fraud, and high bounties might induce higher amounts of fraud. We can imagine a disgruntled employee inducing her employer to commit fraud and then profiting by blowing the whistle. She must be sufficiently sophisticated to hide her role in the fraud, lest the DOJ cut her off from any reward. Although I do not have any evidence of this fraud-inducing effect, the DOJ’s investigative abilities are important in preventing such abuse.

Another concern is that the bounty system might induce excessive investment in fighting fraud. This is the Landes & Posner (1975) concern with damage multipliers and private enforcement: if private enforcers receive an amount that is greater than the social cost of

\textsuperscript{32} See Gardiner Harris, NY Times pg B4, Sept 3, 2009, “Pfizer Pays $2.3 Billion to Settle Marketing Case.”
the offense, they may over-invest in enforcement. Given that the FCA is a treble damages statute, it is possible that the actual social loss due to a case of fraud might be less than triple the base damage amount. Depending on the judicial application of the civil penalty per false claim, actual social losses could be dramatically lower than the penalty. If relators receive a sufficiently high percentage of the defendant payments, there may be incentive for them to over-invest.

At this point, I separate the analysis between the relator and her attorney. The data show a very limited number of repeat players; the few relators who file multiple cases tend to file them against multiple defendants in a short period of time. From this, I infer that relators are not making investments to discover fraud. Rather, they discover fraud in the course of their regular work. As such, I argue that the bounty as currently structured does not appear to induce relators to invest excessively in discovering fraud.

On the other hand, the bounty system does encourage relators to disclose the existence of fraud. This whistleblowing behavior can be costly to the relator, and the damage to her career may be irreparable. The fact that a successful relator receives compensation for her efforts may be of some comfort to her, but there is still social loss due to the whistleblowing costs.

The bounty system may also encourage attorneys to invest in searching for relators and cases. Perhaps if bounties are too high, there may be excessive competition and expenditures among law firms in securing the best relators. Given the prevalence of successful one-shot firms in the data, however, it may be that firms simply search for valuable cases. FCA cases are a possibility, but the bounty system might not play a large role in diverting search resources from other cases.

Costs & Benefits of the system

The earlier bounty analysis treats compensation and deterrence as the main benefits of the qui tam system as measured by prosecuted cases. The majority of cases submitted under the qui tam system, however, are not prosecuted. It is difficult to measure the costs and benefits of those other cases. What was the cost to the whistleblower of bringing a non-prosecuted action? There may have been value to the information she provided to the DOJ, but that value might not be immediately realized. The information might later guide the DOJ in discovering other fraud, or it may alert the DOJ to entities that merit more thorough investigation.

The deterrence provided by the system might also be greater than described under the rational offender theory. The DOJ’s ability to secure both large recoveries and pay large bounties might be particularly salient and attention-grabbing in ways smaller frauds and smaller rewards might not.

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D. Conclusion

Private individuals have valuable information that may help prosecute cases of fraud, but the choice to become a whistleblower is not easy. By paying a finder’s bounty, the government can encourage these whistleblowers to come forward. Such a whistleblower reward program can help the government both recover penalties against offenders and potentially deter people from committing fraud in the first place.

One difficult question, then, is selecting the proper finder’s bounty percentage. If the bounty percentage is too low, perhaps too few whistleblowers will come forward. Conversely, an excessively high bounty percentage may leave “money on the table,” as all of the whistleblowers who participate would have been willing to do so for less money.

I utilize evidence from the False Claims Act to suggest that the Federal government’s base bounty of 15% for information regarding fraud may be too low for certain offenses. Given the spectrum of fraud offenses, whistleblowers seem to address only a limited number of cases valued under $440,000. Working with evidence from a 2004 change in the tax code, I claim that whistleblowers may be more willing to disclose information regarding these smaller offenses in exchange for a higher bounty percentage.