

NOISE REDUCTION: THE SCREENING VALUE OF *QUI TAM*

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ABSTRACT

Whistle-blowing mechanisms have long been recognized and used as tools to encourage the revelation of hidden information. The information sought is often evidence of otherwise undetectable fraud. An effective mechanism will be one that best deters such fraud. To do this, the mechanism needs to produce high-quality information that is not otherwise lost in the noise of low-quality information. In this paper, we present a model to explore how the use of a court-centric qui tam mechanism as opposed to an agency-driven mechanism can improve whistle-blowing along these dimensions.

We compare two leading mechanisms that have been implemented in high-profile federal statutes. The first is the court-centric qui tam mechanism embodied in the False Claims Act. The second is the agency-centric system enacted as part of the Dodd Frank Act.

The model demonstrates that the qui tam mechanism—which allows whistleblowers to bring a lawsuit on behalf of the government—produces a separating equilibrium by imposing a private, loss contingent cost commitment on whistleblowers. When whistleblowers possess private information, the cost commitment screens out low-quality information while maintaining the incentives for high-quality information and lawsuits. In turn, enforcement and deterrence are improved. Counterintuitively, then, increasing costs and lowering rewards for whistleblowers can often lead to better enforcement and less fraud.

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We conclude by exploring applications of this model and the resulting insights for other areas of private information and third-party enforcement mechanisms.

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INTRODUCTION

On February 22, 2013, the Department of Justice joined a False Claims Act lawsuit against Lance Armstrong and his associates.¹ The case had

1. See United States' Notice of Election to Intervene in Part, United States *ex rel.* Floyd Landis v. Tailwind Sports Corp., No. 10-CV-00976, 2013 WL 769485 (D.D.C. Feb. 22, 2013); Press Release, U.S. Dep't of Justice, United States Joins Lawsuit Alleging Lance Armstrong and Others Caused the Submission of False Claims to the U.S. Postal Service (Feb. 22, 2013), available at <http://www.justice.gov/opa/pr/2013/February/13-civ-224.html>.

originally been filed by Floyd Landis years earlier.² The substantive allegations are straightforward. Armstrong and the other defendants had taken sponsorship money from the United States Postal Service (“USPS”) while falsely representing that they were not using performance enhancing drugs or other doping techniques.³ The facts are equally straightforward. Armstrong famously confessed his sins of doping to Oprah.⁴ The contracts between the defendants and the USPS contain representations that no doping was occurring.⁵ All that remains is to determine whether that constitutes a false claim and whether and to what extent the USPS was damaged.

Procedurally, matters are not so straightforward. Landis, who has no individual claims in this particular lawsuit, filed the suit as a *qui tam* action on behalf of the United States. Under the False Claims Act (“FCA”), a *qui tam* action allows individuals (known as “relators”) to file and pursue suits for wrongs committed against the government.⁶ Prior to February 22, it was Landis and his lawyers expending the resources and making the decisions in running the case. Pursuant to the statute, and the extensions granted by the judge, the suit remained sealed until the Department of Justice had completed its investigation and made a determination to join the suit.⁷ Now the Department of Justice is at the helm.⁸ But Landis still stands to receive a substantial percentage of any

2. Complaint for Violations of the Federal False Claims Act, United States *ex rel.* Floyd Landis v. Tailwind Sports Corp., No. 10-CV-00976 (D.D.C. June 10, 2010).

3. Second Amended Complaint for Violations of the Federal Claims Act, at 11–16, ¶¶ 36–43, United States *ex rel.* Floyd Landis v. Tailwind Sports Corp., No. 10-CV-00976, 2013 WL 647311 (D.D.C. Feb. 22, 2013).

4. *Oprah and Lance Armstrong: The Worldwide Exclusive*, (OWN television broadcast Jan. 17 & 18, 2013), available at <http://www.oprah.com/own/Lance-Armstrong-Confesses-to-Oprah-Video> (video clip of part of broadcast) (last visited May 30, 2014). Prior to the Oprah Winfrey interview, Armstrong had persistently and vehemently denied all allegations of doping. His admission resolves some (though not all) of the foundational factual questions of the lawsuit.

5. See Second Amended Complaint, *supra* note 3.

6. 31 U.S.C. §§ 3729–33 (2006) [hereinafter “FCA”]. The substance of the claim here is somewhat uncommon for an FCA case. Most claims deal with recipients of government goods or more traditional government contractors. Here the USPS was acting like a private sponsor. Nonetheless, its location in the Federal government makes the FCA applicable. Other private sponsors are not covered.

7. *Id.*

8. Landis still retains some limited input in prosecuting cases. See 31 U.S.C. § 3730 (providing that a relator remains a party but setting out limitations on their participation). Complicated questions about jurisdiction, Landis’s qualifications as an original source relator, and other procedural hurdles imposed by the statute may remain. For example, Landis may not be able to recover anything if the information contained in his suit was already public and he was not the “original source” of the information. See *Rockwell Int’l Corp. v. United States*, 549 U.S. 457 (2007). The defendants filed motions to dismiss in July 2013. The motions have yet to be decided and turn largely on statute of limitations grounds and the interplay between the FCA and the Wartime Suspension of Limitations Act. 18 U.S.C. § 3287 (2012).

USPS recovery.⁹ And if history is any indicator, recovery is quite likely now that the Department of Justice has taken over.¹⁰

Meanwhile, in the same district court, the Securities and Exchange Commission has obtained an agreement from JPMorgan Chase to pay over \$296 million in fines for misleading investors about the quality of mortgage-backed securities just before the 2008 financial crisis.¹¹ How are these cases connected? Whistleblowers. The lawsuit leading to the JPMorgan settlement was brought by the SEC. But its allegations may have been derived from information provided to it by one or more unnamed whistleblowers.¹² On February 8, 2013, the SEC invited any individuals claiming to have provided information that led to the settlement to make a claim for their whistleblower reward under the new whistleblower provision in the Dodd-Frank Act (“DFA”).¹³

The financial rewards for whistleblowers under the FCA and the DFA are similar.¹⁴ The procedural mechanisms for the JPMorgan whistleblowers to report and recover under the DFA, however, are different along many important dimensions from those for FCA claimants like Floyd Landis. The FCA whistleblower brings the case directly to the court on behalf of the government and must convince a judge that he has cleared a number of statutory hurdles. DFA whistleblowers, on the other hand, inform directly to the SEC. The procedure is more streamlined but prosecution and recovery is at the discretion of the SEC.¹⁵ At least in the

9. See 31 U.S.C. § 3730(d) (providing an award for relators ranging from ten and thirty percent of the overall recovery).

10. There is a dramatic difference in overall success rate between those cases where the government does and does not intervene. See David Kwok, *Does Private Enforcement Attract Excessive Litigation? Evidence from the False Claims Act*, PUB. CONT. L.J. (forthcoming) (manuscript at 10), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1832934 (“as of September 20, 2009, only 239 of 3,920 non-intervened cases resulted in a settlement or judgment in favor of the United States, a 6% success rate. In comparison, of the 1,134 cases in which the DOJ intervened, 1,076 resulted in a settlement or judgment in favor of the United States, a 95% success rate.”). See also Pamela H. Bucy, *Private Justice*, 76 S. CAL. L. REV. 1, 51 (2002) (finding a stark difference in dismissal rates).

11. Litigation Release No. 22533, U.S. Sec. & Exch. Comm’n, SEC Charges J.P. Morgan Securities, LLC With Misleading Investors in RMBS Offerings (Nov. 16, 2012), available at <http://www.sec.gov/litigation/litreleases/2012/lr22533.htm>.

12. See *Notices of Covered Actions: 2013 Archive*, U.S. SEC. & EXCH. COMM’N, <http://www.sec.gov/about/offices/owb/owb-awards/2013-nocas.shtml> (last visited Apr. 9, 2014).

13. *Id.*

14. The DFA ranges from ten to thirty percent and the FCA ranges from fifteen to thirty percent. Compare Dodd-Frank Act, Pub. L. No. 111-203, § 922, 124 Stat. 1376, 1844 (2010) with 31 U.S.C. § 3730(d).

15. Dodd-Frank Act, Pub. L. No. 111-203, § 922, 124 Stat. 1376, 1844 (“Any determination made under this section, including whether, to whom, or in what amount to make awards, shall be in the discretion of the Commission”). The determination of the amount of the reward within the

initial inquiry, the court has no say in the DFA award,¹⁶ and the DOJ has no say in the FCA award.¹⁷

Why the difference? And which is better? We explore those questions in this Article. We present a model demonstrating the value of the FCA *qui tam* mechanism in situations where it is difficult to verify the merits of the whistleblower's claim. The *qui tam* process screens information and in turn improves enforcement and deterrence. Screening models are, of course, broadly relevant and well developed elsewhere. But the concept has not been addressed in the FCA or the DFA whistleblower context. We suggest that this neglected feature of the *qui tam* mechanism is perhaps its defining and most valuable characteristic.

The existing literature on whistle-blowing has focused primarily on (1) the incentive effects of whistleblower rewards and protection,¹⁸ and (2) the regulatory capture that may necessitate empowering individuals to bring *qui tam* cases on behalf of the government.¹⁹ The first strand has been well explored theoretically and a new empirical literature is emerging to test those theories.²⁰ But these tell us little about the comparative advantage of an FCA court-centric private-plaintiff mechanism and a DFA agency-centric mechanism.²¹

statutory bounds of ten and thirty percent is unreviewable and other determinations are reviewed by the courts of appeals under the deferential arbitrary-and-capricious standard of 5 U.S.C. § 706 (Supp. IV 1965–69).

16. *Id.*

17. 31 U.S.C. § 3730(d) (providing rules for awards in FCA cases).

18. See, e.g., Yuval Feldman & Orly Lobel, *The Incentives Matrix: The Comparative Effectiveness of Rewards, Liabilities, Duties, and Protections for Reporting Illegality*, 88 TEX. L. REV. 1151 (2010); Alexander Dyck et al., *Who Blows the Whistle on Corporate Fraud?*, 65 J. FIN. 2213 (2010).

19. See, e.g., Geoffrey Christopher Rapp, *Mutiny by the Bounties? The Attempt to Reform Wall Street by the New Whistleblower Provisions of the Dodd-Frank Act*, 2012 BYU L. REV. 73, 135; J. Randy Beck, *The False Claims Act and the English Eradication of Qui Tam Legislation*, 78 N.C. L. REV. 539 (2000); Bucy, *supra* note 10, at 51. A third strand might be identified in the work, theoretical and empirical, on the proper design within one or the other mechanism. For example, David Freeman Engstrom tests the effectiveness of professional relators and a “*qui tam* bar” within the FCA mechanism. David Freeman Engstrom, *Harnessing the Private Attorney General: Evidence from Qui Tam Litigation*, 112 COLUM. L. REV. 1244 (2012). We do not here explore every design question within each system. Our inquiry is more foundational in comparing an FCA-like mechanism to a DFA-like mechanism.

20. Feldman & Lobel, *supra* note 18. For a collection of empirical work, see Engstrom, *supra* note 19, at 1269 n.83.

21. Ferziger and Currell compared the FCA to other bounty systems in place in 1999. Their analysis long predates the DFA and the recent amendments to the FCA. They focused primarily on the FCA's advantage in committing the government to a reward. That is not true of the agency whistleblower schemes they examined. They also explore the optimal level of reward. Marsha J. Ferziger & Daniel G. Currell, *Snitching for Dollars: The Economics and Public Policy of Federal Civil Bounty Programs*, 1999 U. ILL. L. REV. 1141.

The second strand provides a regulatory-capture and agency-incentive justification for preferring the court-centric private-plaintiff mechanism.²² This suggests that executive agencies cannot be trusted, because of capture or resource constraints. This reasoning is flawed and under theorized. It is difficult to reconcile with any general theory of agency power. It provides no coherent explanation for why a court-centric private plaintiff mechanism should be utilized in whistleblower cases and not other agency investigations, prosecutions, and regulation. Rather it suggests an unusual and idiosyncratic solution for general agency-incentive problems and suggests no reason to think that a court-centric solution will be more effective than the alternatives.²³

We suggest a different justification for the FCA mechanism based on information screening. Starting with a rational actor model and assuming risk neutrality, we compare the two mechanisms.²⁴ We show that the court-centric private-plaintiff mechanism²⁵ is superior to the agency-centric mechanism²⁶ when there is asymmetric information²⁷ because it screens for the most accurate information from whistleblowers. This private cost commitment is not required of the SEC whistleblower under the DFA scheme.

Thus, the *qui tam* design should—all else being equal—create a separating equilibrium that enhances the overall quality of information to the enforcers and reduces the costs of effective enforcement. In turn, the design will increase the deterrence effect of whistle-blowing. These screening benefits are particularly important for a whistleblower scheme (with its inherent information asymmetry),²⁸ and the outcome does not

22. See, e.g., Rapp, *supra* note 19, at 135.

23. Regulatory capture has been studied generally. This literature identifies the problem in various contexts beyond whistle-blowing and explores various proposals for structural solutions. See Jean-Jacques Laffont & Jean Tirole, *The Politics of Government Decision-Making: A Theory of Regulatory Capture*, 106 Q. J. ECON. 1089 (1991); Ian Ayres & John Braithwaite, *Tripartism: Regulatory Capture and Empowerment*, 16 L. & SOC. INQUIRY 435 (1991); Michael E. Levine & Jennifer L. Forrence, *Regulatory Capture, Public Interest, and the Public Agenda: Toward a Synthesis*, 6 J.L. ECON. & Org., Special Issue, Jan. 1990, at 167; Michael A. Livermore & Richard L. Revesz, *Regulatory Review, Capture, and Agency Inaction*, 101 GEO. L.J. 1337 (2013); see also PREVENTING REGULATORY CAPTURE: SPECIAL INTEREST INFLUENCE AND HOW TO LIMIT IT (Daniel Carpenter & David A. Moss, Eds., 2013).

24. See *infra* notes 143–44 for a discussion of the impact of risk aversion, irrationality, and the role of non-pecuniary benefits for whistleblowers.

25. We will generally refer to this as the *qui tam* mechanism or the FCA-like mechanism.

26. We will refer to this as the DFA-like mechanism.

27. See *infra* Part II.A on the causes and dynamics of asymmetric information.

28. Information asymmetry exists when one party has information that is not available to the other. Whistleblower mechanisms by definition presuppose this state of affairs. If information were

turn on the quality of the enforcing agency or the level of agency-incentive problems. We do not, however, suggest that all else is equal or that the FCA is perfectly designed. Our point is simply that its value in screening information through cost imposition has been under appreciated. To the extent other mechanisms can be modified to achieve this screening, they may be preferable to the FCA design.

Indeed, this analysis provides new, prescriptive guidelines generally for designing whistleblower systems that effectively deter fraud in various contexts.²⁹ Our analysis suggests that the worries of agency capture and a reduced quantity of information under the DFA are overemphasized. The more vexing concern will be an over-provision of tips relative to a mechanism that imposes some cost on the whistleblowers. This over-provision will swamp the reviewing agency with low-quality information. If the agency is budget constrained and cannot easily distinguish low-quality tips from high-quality tips, this shifts resources toward less effective investigation. Alternatively, it may shift enforcement to other types of cases with less information asymmetry even if those cases are otherwise less important.³⁰ By reducing effective enforcement, this will in turn result in less deterrence.

Even in the FCA model, an increase in the bounty payment can often lead to under-deterrence. That is, as the reward to the FCA relator is increased, the benefit of the screening of the *qui tam* mechanism dissipates and the outcome converges with the inefficient DFA result.³¹ Indeed, the

available to the Government, the whistleblower would not be necessary. For more on asymmetric information, see *infra* Part II.A.

29. This analysis of the deterrence effect has been somewhat neglected in the literature evaluating the DFA and FCA whistleblower mechanisms. David Kwok looks at the different deterrence effects of FCA litigation in prosecuting different types of cases. He does not, however, address the deterrent effect of the *qui tam* mechanism compared to other mechanisms. Additionally, in addressing the way to increase deterrence, he concludes that the government should increase the bounty payments. See David Y. Kwok, *The Price of Private Enforcement Under the False Claims Act* 13, 30 (Working Paper, Aug. 2012), available at: http://works.bepress.com/david_kwok/5. Heidi Hansberry also suggests that increased reporting leads to increased enforcement and, therefore, increased deterrence. See Heidi L. Hansberry, Comment, *In Spite of Its Good Intentions, The Dodd-Frank Act Has Created an FCPA Monster*, 102 J. CRIM. L. & CRIMINOLOGY 195 (2012). We suggest that this is the wrong approach.

30. This may explain the surge in SEC enforcement of options-backdating investigations following the news reports demonstrating the prevalence of and statistical roadmap to identifying such violations even where the magnitude may have been quite small. On the rate of options-backdating cases, see Stephen J. Choi, Adam C. Pritchard, & Anat Carmy Wiechman, *Scandal Enforcement at the SEC: The Arc of the Options Backdating Investigations* (U. of Mich. Law & Econ, Empirical Legal Studies Ctr. Paper No. 11-009; N.Y.U. Law & Economics Research Paper No. 11-20, Jan. 14, 2013), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1876725.

31. This is in direct contrast to Kwok, *supra* note 29, at 13, 30.

screening model shows that the precise relationship between the level of compensation and the private costs that whistle-blowing imposes is more important than previously recognized.³² Our analysis also provides insight into the failure of private-plaintiff mechanisms in other environments where whistleblowers are not involved.³³

We proceed in three parts. In Part I, we explore the contrasts between the FCA and the DFA (and other mechanisms similar to the DFA). In Part II, we illustrate the information screening value of the *qui tam* mechanism, setting out a model for eliciting private information in the enforcement context. Part III explores larger implications and limitations of this model, namely (1) the likelihood that whistleblowers may not be motivated by financial rewards, but rather by morality or revenge; (2) the costs and errors that may arise when such mechanisms have been employed where information screening was not a central concern; and (3) other areas of law where we may or may not think court-centric private-plaintiff mechanisms can be valuably employed for information screening.

I. JUSTIFYING THE COMPETING MECHANISMS

A. *The Different Mechanisms*

The mechanisms in the FCA and DFA are just two of many such mechanisms—statutory and judge made—that provide for private enforcement of public regulation. But they are among the most important. Together false claims and securities fraud litigation account for thousands of cases that have led to billions of dollars in recovery for the federal government.³⁴ The FCA has been called the “gold standard” of whistleblower legislation and provides a powerful example of the *qui tam*

32. Ferziger’s and Currell’s 1999 article stands out as one of the rare pieces in the literature to note that a higher reward can lead to noise and inefficient enforcement. Ferziger & Currell, *supra* note 21, at 1172. For the most part, Ferziger and Currell treat costs as given and focus on optimal rewards. They advocate a very low bounty to account for this and provide a model for setting rewards. We take their analysis further, exploring the effects on deterrence and delving deeper into the cost side of the equation. In contrast to their conclusion, our model suggests that rewards could be set very high (and often should be) if loss-contingent costs can be increased.

33. Attempts at private enforcement of public regulation have been well documented across various areas from corporate governance and securities to intellectual property to employment and environment law. *See, e.g.*, J. Maria Glover, *The Structural Role of Private Enforcement Mechanisms in Public Law*, 53 WM. & MARY L. REV. 1137 (2012). Many view the use of this mechanism in areas of corporate governance as a major failure. We explore the implications of our model in these broader contexts in Part III.

34. *See* Engstrom, *supra* note 19, at 1246 n.2 (collecting statistics).

mechanism.³⁵ Its history since enactment during the Civil War has been well documented.³⁶ It has been amended many times and contains many complex and at times difficult to interpret procedural provisions.³⁷ In short, those provisions bar whistleblowers from bringing a false claims suit based on public information unless the whistleblower is the original source of that information.³⁸

The whistleblower files its lawsuit under seal and must provide the underlying information to the government.³⁹ The government has sixty days (although extensions are often requested and granted) to review the allegations before it must decide whether to intervene and take over the lawsuit.⁴⁰ If the government intervenes it takes over primary control of the lawsuit. If the government decides not to intervene, the relator retains control.⁴¹

If the lawsuit is successful, the wrongdoer pays up to treble damages and penalties and the whistleblower receives a bounty under the statute.⁴² This reward ranges from twenty-five to thirty percent of recovered damages where the government does not intervene and fifteen to twenty-five percent of recovered damages where the government does intervene.⁴³

The DFA's section 922 is the latest high-profile whistleblower provision. Modeled largely after the IRS's whistleblower program,⁴⁴ it provides a bounty to whistleblowers that bring information to the SEC if that information leads to a monetary sanction in a judicial or administrative action.⁴⁵ The bounty is only available if the action "results

35. See Cynthia Estlund, *Rebuilding the Law of the Workplace in an Era of Self-Regulation*, 105 COLUM. L. REV. 319, 376 (2005).

36. See Matthew S. Brockmeier, *Pulling the Plug on Health Care Fraud: The False Claims Act after Rockwell and Allison Engine*, 12 DEPAUL J. HEALTH CARE L. 277, 281–85 (2009) (discussing history of the FCA); Engstrom, *supra* note 19, at 1270 (summarizing history and collecting sources).

37. See Engstrom, *supra* note 19. Over the years, the statute has led to numerous circuit splits in interpreting various phrases within it. See Brockmeier, *supra* note 36, at 288–89 (noting the volume of circuit splits and documenting that "[c]ourts have been asked to interpret virtually every word of every provision of the Act at some point").

38. "False claims" include false claims for money from the government under a contract or some other legal right as well as false statements of money owed to the government (reverse false claims).

39. 31 U.S.C. § 3730(b) (2006).

40. *Id.*

41. 31 U.S.C. § 3730(c)(3).

42. 31 U.S.C. § 3730(d).

43. *Id.*

44. See Rapp, *supra* note 19, at 132. Historically, the IRS had discretionary authority to pay whistleblowers. In 2006, awards became mandatory for large cases. Feldman & Lobel, *supra* note 18, at 1168.

45. Dodd-Frank Act, Pub. L. No. 111-203, § 922, 124 Stat. 1376, 1844 (2010).

in monetary sanctions exceeding \$1,000,000.”⁴⁶ The bounty given is bounded by statute to be between ten and thirty percent of the monetary sanctions imposed; but the exact amount within those bounds is subject to the discretion of the SEC.⁴⁷ The initial mechanism for the reward does not involve the courts. The determination to issue or not issue the award may be appealed directly to the court of appeals. For those challenges, the SEC is given a high level of deference under 5 U.S.C. § 706.⁴⁸ The determination of the amount of the award cannot be challenged in the courts.⁴⁹

B. Existing Justifications

We demonstrate below that a central value of a *qui tam* mechanism over other forms of whistleblower procedures is the information-screening mechanism. An upshot of this is that *qui tam* is a particularly important mechanism where there is asymmetric information that is difficult to verify. Of the various justifications and benefits of the *qui tam* system over other mechanisms, the screening mechanism we model is the most distinctive—and potentially most valuable—feature of the mechanism. Indeed, most of the existing justifications in the whistleblower literature fail to explain why a *qui tam* process provides a better mechanism or why that mechanism is uniquely valuable in the whistleblower context. We explore these limitations of the existing literature in this section.

The goals of a whistleblower mechanism are plain: we want to elicit the most accurate information at the lowest cost in order to deter fraud. The means are more complicated. The foundational inquiry, which has been explored in great detail, is whether it makes sense to pay individuals for information.⁵⁰ The benefits of payment lie in the creation of pecuniary incentives to nudge otherwise reluctant informants to reveal what they know. The problems might include encouraging false information, and crowding out information that would otherwise be provided for non-pecuniary reasons that include moral or ethical considerations.⁵¹

46. *Id.*

47. *Id.*

48. *Id.*

49. *Id.* As of the end of the 2013 fiscal year, the SEC has made only six whistleblower awards as the bulk of qualifying cases are still pending. Five of the awards were in the thousands of dollars. The sixth was an award of \$14 million. U.S. SEC. & EXCH. COMM’N, 2013 ANNUAL REPORT TO CONGRESS ON THE DODD-FRANK WHISTLEBLOWER PROGRAM 14–15, available at <http://www.sec.gov/about/offices/owb/annual-report-2013.pdf>.

50. See Feldman & Lobel, *supra* note 18; Rapp, *supra* note 19; Engstrom, *supra* note 19.

51. See Feldman & Lobel, *supra* note 18 (on the interplay of moral and pecuniary incentives).

Nonetheless, recent empirical work shows that monetary incentives for fraud revelation do have a strong, positive effect on an employee's decision to blow the whistle.⁵² This result holds irrespective of the severity of the fraud.⁵³ The level of false information has been harder to test.⁵⁴

A second question that arises is who should receive the information from the whistleblower and what should be done with it. A fear of regulatory capture and political influence has led many to believe that the individuals within executive branch agencies and departments cannot be trusted with acting on information that their long-time business partners are defrauding the government. The regulatory-capture story is that the industry has "captured" the agency and exercises influence on its decisions. The political influence story is similar.⁵⁵ The influence comes from politically elected officials above the agency. In turn, those officials may be captured by special-interest groups. The solutions to these problems may be at odds with each other: political oversight might curb regulatory capture at the agency level but increase potentially problematic political influence. In that sense, the political oversight just moves the capture problem up one step in the command chain.

The argument that providing financial rewards may crowd out better information comes from behavioral psychology literature. We do not address this argument in detail. The idea is that providing information is good when provided with altruistic motives. Increasing the rewards dilutes the quality of the information because informers feel the monetary reward cheapens their role. See Diego G. Pardow, *What Should We Expect From the Dodd-Frank Bounty Program?* (Working Paper, July 23, 2012), available at <http://works.bepress.com/dpardow/1>. This argument assumes that altruistic ventures, such as donating blood, may lose their altruistic qualities once financial compensation is given. This may lead to a "crowding out" of blood, especially high-quality blood. See RICHARD M. TITMUS, *THE GIFT RELATIONSHIP: FROM HUMAN BLOOD TO SOCIAL POLICY* (1971); Philippa Howden-Chapman, John Carter, & Nicholas Woods, *Blood Money: Blood Donors' Attitudes to Changes in the New Zealand Blood Transfusion Service*, 312 *BRITISH MED. J.* 1131 (1996). The evidence for this idea, however, in the blood donation context is somewhat mixed. See, e.g., Carl Mellström & Magnus Johannesson, *Crowding Out in Blood Donation: Was Titmuss Right?*, 6 *J. EUR. ECON. ASS'N* 845 (2008) (finding no crowding out effect in males, but a significant effect in females); Nicola Lacetera, Mario Macis, & Robert Slonim, *Rewarding Altruism? A Natural Field Experiment* (Nat'l Bureau of Econ. Research, Working Paper No. 17636, 2011), available at <http://www.nber.org/papers/w17636>.

52. Dyck et al., *supra* note 18, at 2215. The authors find that this effect is particularly strong in the healthcare industry. Engstrom suggests that Dyck et al.'s result may follow from the fact that potential whistleblowers in the healthcare industry are better positioned to observe fraud because of the industry's relatively flat organizational structure and the result tells us little about the degree of crowding out compared to a world where bounties are not available to healthcare workers. David Freeman Engstrom, *Whither Whistleblowing? Bounty Regimes, Regulatory Context, and the Challenge of Optimal Design*, 15 *THEORETICAL INQUIRIES L.* (forthcoming 2014), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2341808.

53. Dyck et al., *supra* note 18, at 2215.

54. There may also be concerns that rewards might lead potential whistleblowers to facilitate or encourage fraud in hopes of reporting it later. There is no evidence that this is a significant problem.

55. See sources cited *supra* note 23.

These fears have long been cited as a defense of the FCA's grant of prosecutorial authority to individuals on behalf of the government. When the executive branch fails to do so, the individual may pursue the case in court subject to dismissal by the court.⁵⁶ Similarly, regulatory capture has been at the heart of critiques of alternative mechanisms like the DFA. Because those mechanisms leave the discretion to the government agency, it is argued, they lead to too few investigations and prosecutions.⁵⁷

This argument places a great deal of faith in the judiciary as immune to agency capture. The assumption is that the judiciary is not subject to outside influence and enforcement constraints the way that agencies are. While this may be correct, the conclusion requires more theoretical and empirical grounding than has been provided.⁵⁸ Of course, this faith (often under-theorized) in courts as outside guardians of proper incentives is not at all unique to this case. Eric Posner and Adrian Vermeule have noted that this problem—which they label the inside-outside problem—is an incoherency that pervades much of legal scholarship.⁵⁹ As Posner and Vermeule point out, it may very well be true that courts have more public-spirited and less selfish motives than other government actors, or that the institutional structure constrains their self-driven motives more, but that point should not be assumed without further foundational support.⁶⁰

On the other side of the equation, the arguments in favor of a judicial process assume that no executive agency can be designed to significantly reduce regulatory capture. This assumption has stronger empirical and theoretical support. While the SEC's organization as an independent agency⁶¹ may be viewed as an attempt to reduce political influence from the executive,⁶² many suspect there is a regulatory-capture problem that

56. The real shift might be not to the relators but to the courts that exercise ultimate authority.

57. Rapp, *supra* note 19.

58. Eric Posner & Adrian Vermeule, *Inside or Outside the System?* (Pub. Law & Legal Theory, Working Paper No. 422, Mar. 2013), available at http://chicagounbound.uchicago.edu/public_law_and_legal_theory/395/.

59. *Id.* at 22, 37.

60. *Id.* at 7–8. It is also possible that if courts defer to government agencies, they could indirectly be captured by the industry. Government agencies or departments are captured by the industry; the court defers to the government; the court has thus been captured.

61. On independent agencies, see Rachel E. Barkow, *Insulating Agencies: Avoiding Capture Through Institutional Design*, 89 TEX. L. REV. 15 (2010) (discussing the key features of independent agencies); Kirti Datla & Richard L. Revesz, *Deconstructing Independent Agencies (and Executive Agencies)*, 98 CORNELL L. REV. 769 (2013); Adrian Vermeule, *Conventions of Agency Independence*, 113 COLUM. L. REV. 1163 (2013).

62. Some may argue that its independence exacerbates the regulatory capture problem, because the executive has less direct control and the industry is especially influential. Of course, that might be viewed as trading capture from one constituency for capture from another. Barkow, *supra* note 61, at 34–35 (summarizing various arguments).

arises from the coziness that exists between the SEC and the finance industry.⁶³ But all of this begs the question of why we worry more or differently about capture in whistleblower cases. Agencies routinely investigate, enforce and regulate industries where the risk of capture is high. Much ink has been spilled in suggesting mechanisms and structures that employ internal and external checks on a given agent's bad incentives. Dual agencies, independent monitors, court oversight, congressional oversight, and overlapping state power are just a few of the proposed solutions.⁶⁴ Even oversight by a central agency like DOJ or OIRA can be seen as a potential curb to some of the agency-capture problems.⁶⁵ It is not clear why the use of private plaintiffs and the shift of gatekeeping to the courts are better than other solutions; or, if they are, why they should only be utilized in the whistleblower cases.

Indeed, one might worry more about the non-whistleblower cases. The SEC's capture by the industry should concern us with SEC criminal enforcement, SEC rule setting, SEC trading review, and so on. The assumption that we only worry about the capture when an outsider blows a whistle on an offense unknown to the SEC has a weak logical foundation.

This point can be seen in other areas of regulation that intersect with the FCA. For example, the Minerals Management Service (MMS) (formerly an agency of the Department of the Interior) regulated federal natural resources and collected royalties on oil and gas taken from Federal lands.⁶⁶ The MMS was disgraced in 2008 when it came to light that its employees received lavish gifts from industry representatives and had "frequently consumed alcohol at industry functions, had used cocaine and

63. See Jill E. Fisch, *Top Cop or Regulatory Flop?*, *The SEC at 75*, 95 VA. L. REV. 785, 785–86 (2009) ("The SEC has been the target of relentless criticism . . . [including] assertions of delays and blunders and possible industry capture . . ."); William W. Bratton & Joseph A. McCahery, *Regulatory Competition, Regulatory Capture, and Corporate Self-Regulation*, 73 N.C. L. REV. 1861 (1995).

64. See sources cited *supra* notes 19 & 20.

65. See, e.g., Christopher C. Demuth & Douglas H. Ginsburg, *White House Review of Agency Rulemaking*, 99 HARV. L. REV. 1075 (1986); John O. McGinnis, *Presidential Review as Constitutional Restoration*, 51 DUKE L.J. 901 (2001); Cass R. Sunstein, *Paradoxes of the Regulatory State*, 57 U. CHI. L. REV. 407 (1990); but see Nicholas Bagley & Richard L. Revesz, *Centralized Oversight of the Regulatory State*, 106 COLUM. L. REV. 1260, 1308, 1312 (2006). The nuances of these arguments are further discussed in Barkow, *supra* note 61; Ryan Bubb & Patrick Warren, *Optimal Agency Bias and Regulatory Review* (N.Y.U. Pub. L. & Legal Theory Research Paper Series, Paper No. 12-69; N.Y.U. Law & Economics Research Paper No. 12-47, Jan. 15, 2013), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2201042; and Jennifer Nou, *Agency Self-Insulation Under Presidential Review*, 126 HARV. L. REV. 1755 (2013).

66. The MMS no longer exists. It has been replaced by the Bureau of Ocean Energy Management and the Bureau of Safety and Environmental Enforcement. See *The Reorganization of the Former MMS*, BUREAU OCEAN ENERGY MGMT., <http://www.boem.gov/About-BOEM/Reorganization/Reorganization.aspx> (last visited Mar. 13, 2014).

marijuana, and had sexual relationships with oil and natural gas company representatives.”⁶⁷

One might be relieved to know that when whistleblowers allege that the MMS was duped out of royalties on federal oil or gas, the Department of Justice cannot prevent the case from going forward. But it is not clear why. The DOJ is not the captured agency in these cases.⁶⁸ A simpler solution, if direct agency capture was the main problem, might have been just to move the prosecution on tips up to the DOJ level without granting *qui tam* protection. Some have even suggested that the *qui tam* process introduces its own major capture problem.⁶⁹ The DOJ has less of the coziness with the oil executives it sues than the MMS does. But once you introduce the *qui tam* mechanism, you introduce a different coziness that comes from many *qui tam* relators’ counsel being former DOJ lawyers and future employers of current DOJ lawyers. This is the classic revolving door problem.⁷⁰

Moreover, it is the abuses that the MMS did know about that should worry us most. If a federal agency is sitting on information that is in its possession and either doing nothing or doing too little, that is a good signal of some agency problem. And if coziness is the problem, we might think that the mishandling of existing investigations would be common. But the FCA essentially excludes these cases from plaintiff’s power and judicial oversight. As a practical matter, the whistleblower has to acquire the relevant information from outside of the agency. A media report that the agency is sitting on information would be a public disclosure that bars suit by anyone without independent information. Similarly, a whistleblower who identified the case through a FOIA request would be barred from independently proceeding as a whistleblower.⁷¹ This leaves no room for outside whistleblowers to police agency enforcement. For example, in the MMS context, the Department of Interior’s investigative report uncovered a scheme where lucrative contracts were being awarded improperly with major conflicts of interest. In several cases the

67. *Oil Brokers Sex Scandal May Affect Drilling Debate*, USA TODAY (Sept. 11, 2008, 10:18 AM), available at http://usatoday30.usatoday.com/news/washington/2008-09-11-oil-scandal-drilling_N.htm (quoting from investigative report by Interior Department).

68. Of course, the DOJ could itself be captured and putting pressure on the MMS. But the facts of the cases suggest the problem was precisely the opposite. *See id.*

69. *See Engstrom*, *supra* note 19, at 1251–52.

70. Engstrom attempts to test these claims with new empirical data. *See id.*

71. *Schindler Elevator Corp. v. U.S. ex rel. Kirk*, 131 S. Ct. 1885 (2011).

Department of Justice declined to prosecute the offenders.⁷² There was nothing that *qui tam* relators could do about that. These conflicts would be hard to fit under a false claims act violation. But, more fundamentally, no whistleblower could qualify as an original source of information that had already been disclosed in a government report.⁷³

Concerns of political influence where capture is occurring higher up the chain are rampant in the Lance Armstrong case. Allegations of attempts to capture government officials have circled the case for years. Some allege that a federal criminal investigation was dropped against him under odd circumstances.⁷⁴ Moreover, one Congressman appeared to be using his influence to stop the United States Anti Doping Agency (USADA) from investigating Lance Armstrong.⁷⁵ In response to the allegations and proceedings USADA brought against Armstrong and his affiliates, the Congressman asked for the Office of National Drug Control Policy (ONDCP) to investigate the use of taxpayer funds given to USADA. The letter requesting the investigation included a lengthy defense of Armstrong including the oft-repeated (but false) recitation that Armstrong had never failed a drug test even though he had been tested over 500 times.⁷⁶ Disappointed with the response from ONDCP and the continued investigation, the Congressman somewhat ominously announced: “I will continue to follow USADA’s activities with interest.”⁷⁷

72. Emma Schwartz, *No More Sex, Drugs, and Gifts*, ABC NEWS (Sept. 18, 2008), <http://abcnews.go.com/Blotter/story?id=5836045>.

73. It might be argued that the political system provides the appropriate check on the DOJ’s or DOJ’s failure to pursue claims in these cases. But the same political mechanism would work if the FCA placed the DOJ or DOJ rather than the relator in charge of prosecuting whistleblower claims.

74. Reed Albergotti, *Armstrong Lobbying Targeted Investigator*, WALL ST. J. (Feb. 18, 2013, 5:48 PM), available at <http://online.wsj.com/article/SB10001424127887324449104578311941851284534.html> (lobbying firm was hired on Armstrong’s behalf to raise questions about the FDA investigation); Pete Yost, *Influence Game: Armstrong Lobbying Cycle*, AP’S THE BIG STORY (July 17, 2012, 4:35 PM), <http://bigstory.ap.org/article/influence-game-armstrongs-lobbying-cycle> (noting the influence Armstrong had on Congress); *Report: Armstrong’s Influence Extends Beyond Sport*, CYCLINGNEWS.COM (Oct. 23, 2012), <http://www.cyclingnews.com/news/report-armstrongs-influence-extends-beyond-sport> (same).

75. Christian Red, *USADA’s Lance Armstrong Probe Met with Opposition by Politicians Including Congressman Jim Sensenbrenner*, N.Y. DAILY NEWS (Oct. 17, 2012, 8:47 PM), available at <http://www.nydailynews.com/sports/i-team/armstrong-probe-thwarted-politics-article-1.1186090>.

76. Letter from Congressman Sensenbrenner to ONDCP (July 12, 2012), available at <http://sensenbrenner.house.gov/news/documentsingle.aspx?DocumentID=303025>. As has now been established, the statement that Armstrong never failed a test was false. See *Oprah and Lance Armstrong: The Worldwide Exclusive*, (OWN television broadcast Jan. 17 & 18, 2013), available at http://www.oprah.com/own_tv/onc/lance-armstrong-one.html.

77. Statement of Congressman Sensenbrenner (Aug. 23, 2012), available at <http://sensenbrenner.house.gov/news/documentprint.aspx?DocumentID=303025> (statement in response to the Office of Nat’l Drug Control Policy’s reply to the Congressman’s inquiry into the roughly \$9 million in taxpayer funds given to the U.S. Anti-Doping Agency).

Again, none of these agency problems can be addressed by *qui tam* litigation. The conflicts relate to investigations that are beyond the reach of the FCA. Floyd Landis has no ability to prosecute a federal criminal investigation against Armstrong. Only the civil allegations about the USPS contract, of which Landis has independent knowledge, could have gone forward without government approval. But if the *qui tam* mechanism is about curbing agency problems, we should grant individuals the right to bring suits whenever there is a potential conflict, not just where information resides outside of the regulators' possession. We do not see that. Instead, the mechanism is only employed where the supposedly captured agent is presented with information that he or she has likely never seen before.

We might even think we trust the captured agent more when the information is new and comes only from a whistleblower. The surprise at the information, and the possibility that the whistleblower will go public against the captured agent as well should serve as an incentive to prosecute that is not present in other cases.

The arguments for not allowing private citizens to prosecute all government claims (criminal or civil) in the face of a conflict of interest include avoiding interference with government functioning and a deference to the political process. Again, those apply equally in the whistleblower context. The DFA prevents individuals from interfering with the SEC's enforcement process and there may be political ramifications if the SEC ignores whistleblowers. The same should be true for the MMS. In some sense, the SEC is less politically accountable than the MMS and the DOI and more susceptible to pressure from the industry,⁷⁸ suggesting that the DFA and FCA mechanisms are inaptly designed. Under an agency-capture theory, *qui tam* mechanisms should be more desirable when the agency is independent and not politically accountable.⁷⁹

All of this is to say that the existing justifications for preferring an FCA mechanism to a DFA mechanism are unsatisfactory.⁸⁰ It is not clear that

78. See sources cited *supra* note 65.

79. This is true if we think that the capture is coming from the industry representatives who deal with the agency. The opposite would be true if we think inappropriate influence is coming from the White House or the DOJ.

80. There are other justifications based more on psychological benefits for whistleblowers that we do not address. Geoffrey Rapp, for example, criticizes the DFA regime for not providing bounties when the damages against the fraudulent party are less than \$1 million. See Rapp, *supra* note 19, at 92–95, 143–44. Rapp also notes that a *qui tam* action would have provided plaintiffs with a forum to be heard. *Id.* at 78. The argument is based on the behavioral psychology approach that suggests

there is anything unique about a whistleblower case that raises additional concerns about agency capture than other roles played by agencies. And we do not see many proposals to hand the entire administrative state over to the courts.⁸¹ It has also been noted that agency-capture problems are likely to be present within the *qui tam* mechanism as well.⁸² Resource-constraint arguments fall to a similar challenge. If *qui tam* cases encourage claims that an agency cannot prosecute because of resource constraints, it is difficult to justify using that mechanism only when the agency does not possess the relevant information. This is equally unlikely.⁸³

We should not take this critique as a reason to embrace the DFA over the FCA. There is, as we show in Part II, a stronger justification for the FCA mechanism design. It has nothing to do with agency capture. Rather, it is all about information screening. And we suggest, even with all of the faith in the SEC as being trustworthy beyond reproach, the FCA provides a better mechanism than the DFA for dealing with whistleblower cases. We are not the first to critique the new DFA whistle-blowing regime for omitting *qui tam* provisions. Other commentators, however, have focused on aspects other than the screening benefits that *qui tam* would have provided.⁸⁴ We demonstrate the advantage of the FCA's procedures in screening information in the next part.

II. SCREENING THE QUALITY OF A WHISTLEBLOWER'S INFORMATION

Many benefits and costs of whistle-blowing are common to both the DFA and the FCA. The key distinction between the two is that under the FCA, an informant brings the information to the attention of the government through a private *qui tam* action; under the DFA, an informant anonymously brings information to the regulatory agency.

In this section, we develop a model to illustrate that *qui tam* actions in the FCA provide a useful mechanism for screening the quality of a

whistleblowers are motivated by more than just money. This is no doubt true. Rapp uses experimental evidence to suggest that *qui tam* gives whistleblowers "a chance to tell their stories and to restore their reputations." *See id.*

81. Nor is it obvious that there is anything unique about judicial oversight that makes it the only solution to regulatory-capture problems. *See* Posner & Vermeule, *supra* note 58.

82. *See* Engstrom, *supra* note 19 (examining DOJ regulatory capture within the FCA regime).

83. Many proposals for private bidding on the right to pursue actions for others provide a mechanism for providing financing for profitable lawsuits that may not be pursued because of resource constraints that limit litigation. Nothing in the system requires that a resource constrained entity also be information constrained. *See infra* text accompanying notes 158–66 for a discussion of these dynamics in the context of shareholder derivative suits.

84. *See supra* notes 18–20.

whistleblower's information. We show that increasing the rewards for informing or decreasing the private cost of informing—such as the regime provided for under the DFA—dilutes the quality of the information brought forward. We also show the counter-intuitive result that increasing the rewards to whistleblowers may lead to an increase in the underlying fraud. Our model builds on rich law and economics literature exploring the differences between litigation and regulation. This literature, however, has largely focused on the effectiveness of ex post litigation compared to ex ante regulation.⁸⁵ The ex ante regulation of corporate fraud in the United States before the DFA was commonly critiqued for its ineffectiveness.⁸⁶ Here, our model departs from this literature by exploring the deterrent effects of two different forms of ex post litigation.

A. Screening as a Solution to the Problem of Hidden Information in Whistle-blowing

The hidden information problem is illustrated by George Akerlof's classic example of the market for second-hand cars.⁸⁷ The seller of a second-hand car knows whether the product is high quality or whether it is low quality (i.e., a "lemon"). The buyer, on the other hand, is poorly informed. He cannot determine, without incurring high cost, whether the car is a lemon or not. This hidden information causes the market to unravel. That is, bad cars "drive out" the good cars, because the two types of cars sell for the same price. This "lemons problem" is pervasive in all aspects of a market economy where one side of the market is better informed than the other.⁸⁸

85. See, e.g., Donald Wittman, *Prior Regulation versus Post Liability: The Choice Between Input and Output Monitoring*, 6 J. LEG. STUDIES 193 (1977); Steven Shavell, *Liability for Harm versus Regulation of Safety*, 13 J. LEG. STUDIES 357 (1984); Steven Shavell, *A Model of the Optimal Use of Liability and Safety Regulation*, 15 RAND J. OF ECON. 271 (1984); Joshua Schwartzstein & Andrei Shleifer, *An Activity-Generating Theory of Regulation*, 56 J. OF L. & ECON. 1 (2013); REGULATION VS. LITIGATION: PERSPECTIVES FROM ECONOMICS AND LAW (Daniel P. Kessler ed., 2011); ANDREI SHLEIFER, *THE FAILURE OF JUDGES AND THE RISE OF REGULATORS* (2012).

86. See Rapp, *supra* note 19; Dyck et al., *supra* note 18.

87. In the early 1970s, economists generated models illustrating how asymmetric information can distort the efficiency of markets. See, e.g., George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Q. J. OF ECON. 488 (1970).

88. For example, how does a potential employer know whether a job candidate is productive or lazy? The job candidate has a far better idea about her own productivity than the firm does. The information asymmetry means that a highly productive worker is treated as an unproductive worker; she is offered a wage that is below her worth. From a theoretical perspective, see generally DOUGLAS G. BAIRD, ROBERT H. GERTNER & RANDAL C. PICKER, *GAME THEORY AND THE LAW* 153–56 (1994).

There are two actions that can help alleviate the problem of asymmetric information: *signaling* and *screening*. *Signaling* takes place when the better-informed side of the market takes steps to indicate their type to the less-informed side of the market.⁸⁹ That is, individuals with better information can *signal* their type.

Screening is closely linked to signaling, but it differs in one key respect. In a signaling model, the better-informed player moves first to send a signal to the less well-informed player of their attributes. In a screening model, the less well-informed player moves first. For example, a hiring firm can screen the productivity of workers by offering higher wages for candidates with higher educational levels.⁹⁰ In screening models, the party with poorer information sets up a screen in order to determine the type of the better-informed party. It is a mechanism by which the less well-informed party can extract private information from the better-informed party.

The lemons problem arises in the context of whistle-blowing. The government cannot determine the quality of a whistleblower's information without engaging in a costly investigation. But this does not mean that the government should simply rely on *ex ante* regulation. Rather, the government can screen the information that a whistleblower brings forward.

Ex ante regulation of fraudulent behavior is often difficult and expensive. In the context of the FCA and government procurement, the federal government contracts for a wide variety of goods and services ranging from computers to aircraft carriers, from construction materials to medical services through Medicare reimbursements. The federal government spends over a trillion dollars each year on discretionary

89. In the second-hand car example, the dealer may distinguish between high- and low-quality cars by offering longer warranties for high-quality cars. The longer the warranty is signaling that the car is high quality.

90. In 1973, Michael Spence illustrated that an individual's education level can operate as a signal for productivity. Imagine that there are two types of people: productive workers and unproductive workers. An unproductive worker has a higher cost of completing more years of education than the productive worker. Consequently, a productive worker can signal their type to potential employers by undertaking more years of education. Michael Spence, *Job Market Signaling*, 87 Q. J. OF ECON. 355 (1973). For these contributions to economics, George Akerlof and Michael Spence (along with Joseph Stiglitz, another prominent economist who studied problems of asymmetric information) were awarded the 2001 Nobel Prize in Economics. See Press Release, Nobelprize.org, The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2001 (Oct. 10, 2001), available at http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/2001/press.html.

spending.⁹¹ In the context of the DFA and SEC regulation, there are, on average, about 2.7 billion trades made per day on the New York Stock Exchange.⁹² Analyzing and regulating every single contract, transaction, or document for evidence of fraud is simply not practicable or cost effective.⁹³ Some evidence on the ineffectiveness of ex ante regulation in detecting fraud might be reflected in the fact that the SEC detected only seven percent of alleged major corporate scandals between 1996 and 2004.⁹⁴

To use resources more efficiently, government regulators often seek to rely on information provided by whistleblowers that have better information about the existence of fraud.⁹⁵ As noted above, however, the government must contend with the problem of hidden information. The government does not know, ex ante, how strong the whistleblower's information is. On one hand, the whistleblower could have high-quality information. She may have actually been involved in the fraud or she may be privy to sensitive information about how the fraud was conducted. On the other hand, the whistleblower may be poorly informed and have low-quality information. The employee may not understand the nature of the behavior or what constitutes fraud. The whistleblower's information may not establish the merits of the claim. Alternatively, the whistleblower may have a vendetta against the firm and over-blow the quality of information she knows is weak. Put simply, the government regulator finds it difficult to determine whether a whistleblower's information is high-quality information or whether the information is a lemon.

Consider the following example. A former employee of a healthcare provider approaches the government regulator and informs them that his former employer has been making excessive and inaccurate claims for Medicare reimbursements. The government regulator is unable to assess,

91. In fiscal year 2012, discretionary spending by the federal government was \$1.285 trillion, slightly less than the \$1.344 trillion requested in the budget. See CONG. BUDGET OFFICE, THE BUDGET AND ECONOMIC OUTLOOK: FISCAL YEARS 2013 TO 2023 (2013).

92. See N.Y. STOCK EXCH., <http://www.nyse.com/financials/-1022221393023.html#dlyvolume> (last visited Feb. 11, 2014).

93. On the inefficiency of ex ante regulatory enforcement costs, see Steven Shavell, *A Fundamental Enforcement Cost Advantage of the Negligence Rule over Regulation* (Harvard John M. Olin Discussion Paper Series, Discussion Paper No. 731, Sept. 2012), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2144553.

94. See Alexander Dyck, Adair Morse, & Luigi Zingales, *Who Blows the Whistle on Corporate Fraud?*, 65 J. FIN. 2213, 2214 (2010).

95. According to the Association of Certified Fraud Examiners (ACFE), over forty percent of fraud detection occurs as a result of tips. See ASS'N OF CERTIFIED FRAUD EXAMINERS, 2010 REPORT TO THE NATIONS, available at http://www.acfe.com/uploadedFiles/ACFE_Website/Content/documents/rtn-2010.pdf (last visited May 31, 2014).

ex ante, whether the former employee genuinely has inside information that fraud has been committed, has an unfounded hunch, or is simply using a weak signal to seek revenge against his former employers.⁹⁶ The government cannot know the quality of the information the whistleblower has without engaging in a costly investigation.

Whistle-blowing laws are enacted with the express purpose of inducing parties with private information about socially costly dishonest or illegal behavior to come forward to the poorly informed government. The government seeks a mechanism that encourages whistleblowers with high-quality information to come forward but at the same time, discourages whistleblowers with low-quality information from coming forward. Investigations of claims made by low-quality informants are a waste of society's resources.

In the next section, we illustrate how a *qui tam* mechanism screens out low-quality information with a simple game-theory model.

B. The Model of Screening

Here, we sketch our model that captures the essence of a screening mechanism of the FCA whistle-blowing scheme. We start with two foundational assumptions and then later discuss what happens when those assumptions are relaxed. First, we assume that the deterrence is a proper and dominant goal of these anti-fraud statutes. This is consistent with the public rhetoric and legislative history surrounding both statutes.⁹⁷ Second, as is customary, we assume a rational actor framework. The impact of imposing costs and offering rewards will obviously differ if whistleblowers or those committing fraud are not rational. This is not to say, however, that our model cannot account for non-pecuniary costs and rewards. A whistleblower may get value from morality, indignation, or revenge. As with any other payoff that value must be considered when designing the correct cost-reward dynamic.

96. For literature on revenge as a motive see Engstrom, *supra* note 19, at 1275 n.109 (collecting sources).

97. That being said, the same conclusions hold if we assume a dominant punitive goal. Other theories of punishment may focus on factors such as the expressive power of law to make certain rules more salient, provide behavioral focal points, or to otherwise shift norms. *See generally* Richard H. McAdams, *A Focal Point Theory of Expressive Law*, 86 VA. L. REV. 1649 (2000). Our model does not address those facets of anti-fraud law.

1. *The Decision to Commit Fraud (Firms)*

Let's first examine the potential for a firm to engage in socially costly fraudulent behavior. Much of the academic literature on *qui tam* actions starts from the assumption that fraud has occurred.⁹⁸ From an economic perspective, however, the whistleblower scheme only provides value if it deters socially costly fraudulent behavior. This deterrent effect is explicit in our model.

Consider an example of fraudulent behavior that could be captured under the FCA. Firms make the decision whether or not to commit fraud when contracting with the government. The economy has 1000 government contracts to supply various building materials. Each contract is worth \$20 million. These 1000 contracts are awarded to 1000 different suppliers in the economy, who comprise a subset of a larger number of potential suppliers. Each firm has the option to fraudulently misrepresent the quality of the building materials used by the firm.

Assume that there are two types of firms: efficient firms and inefficient firms. Efficient firms have a low cost of supplying high-quality materials. Assume that they receive no private benefit from fraudulently misrepresenting the quality of their materials. These efficient firms make up ninety percent of all firms. The inefficient firms, on the other hand, can privately benefit from fraudulent behavior if their fraudulent behavior remains undetected. By misrepresenting the quality of their product, they stand to gain \$6 million. These inefficient firms make up about ten percent of all firms. This fraudulent behavior is costly to society as a whole. Assume each case of fraudulent behavior in each contract costs society \$10 million. This social cost comes from the misallocation of resources, mismatching of contracting partners, and procurement of substandard materials.⁹⁹

While fraudulent contracting is socially costly, the government agency or regulatory body investigating fraud does not have the resources to investigate all 1000 government contracts. Assume the government agency is afforded a budget of \$50 million to investigate fraud and each investigation costs the agency \$1 million. If the agency chooses to spend the \$1 million, they will know with certainty whether or not fraud has been committed. If fraud has been committed, the case against the dishonest firm is clear and the information is verifiable before a court of

98. *See supra* Part I.

99. *See* STEVEN SHAVELL, FOUNDATIONS OF ECONOMIC ANALYSIS OF LAW 330 (2004).

law. The agency can only investigate fifty claims, at most, under the budgetary restrictions. For simplicity, assume that if the government agency tries to spread the budget across more than fifty cases, and spends less than \$1 million on any one investigation, the probability of accurately detecting fraud falls to zero. We further assume that if an inefficient firm is investigated and found guilty of making fraudulent claims against the government, the firm pays damages of \$20 million (or, is simply forced to pay back the contract money).¹⁰⁰

In a first, best world—where the government agency investigating fraud has perfect information and can distinguish between an efficient firm and an inefficient firm—there would be no problem of fraud. The agency would simply restrict its investigations to the 100 inefficient firms, increasing the likelihood of being detected to fifty percent. (Recall that there are only fifty investigations). When the probability of detection is fifty percent, the expected damages are \$10 million (fifty percent of the \$20 million damages). This is far greater than the \$6 million of private benefit that an inefficient firm can stand to gain from committing fraud.¹⁰¹ As a consequence, inefficient firms will be truthful about the costs of their materials and will be less likely to win government contracts. Fraudulent behavior is deterred.

The problem of fraud, however, exists when the government agency does not have perfect information. If the agency has weak ex ante information about which firms are committing fraud, it may perhaps randomly select fifty of the 1000 contracts to investigate. The likelihood of a fraudulent firm getting caught is now just five percent. The expected damages that a fraudulent, inefficient firm will have to pay, therefore, are only \$1 million (five percent of \$20 million). Given that the private benefit of committing fraud is \$6 million, it is in their private interests to commit fraud.¹⁰²

In the equilibrium outcome here, all inefficient firms commit fraud. The inefficient firms know that the government agency may simply randomize; they know that the agency cannot ex ante detect which firms are potential fraudsters. The social cost of this fraudulent behavior is high.

100. Under the FCA, treble damages may be awarded. The fact that the government could claim up to \$60 million here does not change the substance of the screening mechanism described below; it merely affects the height of the hurdles.

101. If the government has perfect information as to the efficiency of the firm at the front end of the contracting process, then there would be no problem of fraud in the first place. The inefficient firms would simply not win contracts over efficient firms.

102. It also follows that an efficient firm will never commit fraud under these assumptions. The efficient firm generates no private benefit from committing fraud.

Not only will inefficient firms commit fraud, but the government agency also wastes \$40 million investigating claims against efficient firms. This misallocation of the regulator's investigation resources may attract further costs as efficient firms waste resources to defend themselves against non-meritorious investigations. This may discourage efficient firms from contracting with the government in the future.¹⁰³

In order to better distinguish between efficient and inefficient firms, the government agency seeks to rely on inside information from individual employees of these firms. But that information is only useful if it is accurate. For example, the government may get 100 accurate inside reports of fraud tips and 400 inaccurate inside reports based on weak information. If the government cannot distinguish the tips, it has to randomly choose fifty of the firms to investigate. In expectation those fifty investigations will lead to ten fraudulent firms (or twenty percent) being caught. The expected penalty for fraudulent firms will be \$4 million (twenty percent of \$20 million), and they will not be deterred.

The next subsection looks at the incentives whistleblowers have to come forward with these tips.

2. *The Decision to Blow the Whistle (Informants)*

In our model, an employee at each of these firms may receive private information about whether his firm has committed fraud. The individual receives a signal that is either *strong* or *weak*. The strong signal of fraud may be seeing a smoking gun document that outlines how the firm has dishonestly contracted with the government. The weak signal of fraud may simply be rumor or hearsay about dishonest or fraudulent dealings.

Employees at any type of firm—efficient or inefficient—can receive a weak signal of fraud. These weak signals are evenly distributed across all firms. We will assume the signal is correct only ten percent of the time. Only employees of inefficient and fraudulent firms, however, can receive a strong signal. That is, if an employee receives a strong signal that fraud is occurring, he has strong information that the firm is inefficient *and* has committed fraud. We assume that each employee knows the quality of his own information. He knows whether the information is strong or weak and he knows the likelihood that the information is correct. Put simply, he knows the probability the claim of fraud will be successfully proven.

103. These arguments against the FCA have been made before in the literature. *See, e.g.*, William E. Kovacic, *The Civil False Claims Act as a Deterrent to Participation in Government Procurement Markets*, 6 SUP. CT. ECON. REV. 201 (1998). The problem will be even greater under the DFA.

The government agency investigating fraud can harness the employee's inside information about fraud to help overcome their information deficiencies. There are two problems, however, that the government must address if seeking to incentivize whistle-blowing behavior. First, the government agency cannot *ex ante* determine the quality of the information that is brought before them by the whistleblower. The employee makes a claim, but the government cannot determine whether the individual has received a strong signal of fraud or a weak signal of fraud. In order to verify the information, the government must launch a full-scale investigation at a cost of \$1 million.¹⁰⁴

Second, there is a private cost that an individual employee must bear when blowing the whistle on fraudulent behavior. These costs include potential retaliation by the employer or restrictions on promotions or other employment opportunities in the future. Many whistleblowers either lose their job or are demoted. These private costs will be discussed in greater detail below.¹⁰⁵ For now, let's assume that the whistleblower estimates these costs to be \$250,000. There are two ways for the government to improve the benefit-cost balance. One way is to minimize the cost of blowing the whistle by ensuring anonymity and confidentiality. Another method is to increase the benefit side of the equation by compensating the whistleblower for any losses he may incur if he does provide the information.¹⁰⁶ Consistent with the economic literature, we assume that the government can incentivize individuals with financial reward; if the whistleblower expects to receive *at least* \$250,000 in compensation, he will be incentivized to come forward.¹⁰⁷ In the next sub-section, we model the institutional framework of different types of whistle-blowing schemes to illustrate the benefits of *qui tam* actions.

104. We assume that this investigation cost of the government is constant and there is no difference between the cost of investigating a tip that comes directly to the agency and the cost of investigating the veracity of a claim made by an individual in a suit.

105. See *infra* Part II.B.3.b.

106. The economics literature on rewards—and rewards from private enforcement—is vast. The underlying incentive of the agent responding to a reward is at the heart of the rational actor model in law and economics. In the context of private enforcement, see SEAN FARHANG, *THE LITIGATION STATE: PUBLIC REGULATION AND PRIVATE LAWSUITS IN THE UNITED STATES* 21–31 (2010) (discussing the incentive structure of litigation).

107. As noted below, there may be different types of information about fraud where individuals are willing to provide tips for free. See *infra* Part III.

3. *The Structure of Whistle-Blowing Laws (Government)*

In our model, the government agency investigating fraud recognizes that whistleblowers must be financially incentivized to blow the whistle. In this sub-section, we explore different institutional options open to the government.

a. Financial Reward Schemes

Let's first spell out why a "flat fee" or fixed payment made to every employee who blows the whistle will not work. If the government agency offers \$250,000 to any employee who has received a signal of fraud, all potential whistleblowers that receive a signal—weak or strong—will come forward.¹⁰⁸ This incentive scheme will generate too much whistle-blowing: The government will not be able to *ex ante* distinguish between well-informed whistleblowers and poorly informed whistleblowers. This generates what is known as a "pooling" effect¹⁰⁹: employees with weak information are treated the same as employees with strong information. The flat fee fails to separate good information from bad.

Next, let's consider the effects of making the payment to the whistleblower conditional upon a successful finding of fraud. Under both the FCA and the DFA, the whistleblower is entitled to a portion of the damages that the government receives. Making payment conditional upon success can operate as a screen. Informants with high-quality information will be incentivized to bring their information to the attention of the government agency. On the other hand, informants with weak information will be less inclined to blow the whistle, because the expected benefits are lower.¹¹⁰ The expected benefit is a function of the likelihood of success and individuals with strong information, therefore, have a higher expected reward than individuals with weak information. The government is able to

108. Our model assumes that individuals receive a signal before coming forward as a whistleblower. We assume that a fabricated signal can easily be identified as such and penalties for fraud will deter such behavior. The key is that the weak signal, from the government's view, *might* be a strong signal. The same is not true when individuals receive no signal.

109. In game-theory literature *pooling* occurs when different types of individuals behave the same way. Here, those employees who receive a weak signal act the same way as those employees who receive a strong signal. *See, e.g.*, JOEL WATSON, STRATEGY: AN INTRODUCTION TO GAME THEORY 282–92 (2001); ERIC RASMUSEN, GAMES AND INFORMATION: AN INTRODUCTION TO GAME THEORY Ch. 9 & 11 (4th ed. 2007); ANDREU MAS-COLELL, MICHAEL D. WHINSTON, & JERRY R. GREEN, MICROECONOMIC THEORY Ch. 13 (1995).

110. Whistleblowers know that the *expected benefits* are lower when the information is weak because, while the reward is the same for both types, the probability of winning the reward is much lower for whistleblowers with weaker information.

set up a screen that whistleblowers with strong information will clear, but whistleblowers with weak information will not. This generates a “separating” equilibrium.¹¹¹

But this separating equilibrium is not guaranteed by simply making the whistleblower’s payment contingent upon success. If the contingent payment is too low, then there will be a pooling equilibrium: no individuals will come forward. There will be, therefore, no deterrent effect of the whistle-blowing law and inefficient firms will continue to commit fraud. For example, let’s say in our model that the government offered a bounty of just one percent of any damages to the whistleblower. This will incentivize neither informants with weak information nor informants with strong information to come forward. Whistleblowers with strong information bear a cost of \$250,000, but have an expected benefit of just one percent of \$20,000,000 (\$200,000). The expected bounty is not sufficiently high to incentivize whistle-blowing behavior. The expected reward for whistleblowers with weak information is even lower.¹¹² The effect of a pooling equilibrium on the decision of a firm to commit fraud is clear. With no whistle-blowing behavior, inefficient firms are not deterred from engaging in fraudulent behavior.

We can observe a separating equilibrium by increasing the reward. Under this equilibrium, only an informant with strong information will come forward. The expected benefits now outweigh the costs. An informant with weak information knows that the cost of blowing the whistle outweighs any expected cut of the damages from any successful fraud claim. Since only informants with high-quality information come forward, the government can focus its efforts on these claims of fraud. This increases the likelihood that an inefficient firm committing fraud will be caught.

In our model, suppose that the government offers ten percent of any damages to the whistleblower. Whistleblowers with strong information have an expected reward of \$2 million. This more than covers the cost of blowing the whistle. Whistleblowers with weak information, however, will not be induced to come forward. Those with weak information have only a ten percent chance of recovery and so they will value the chance of a

111. In game-theory literature, a *separating equilibrium* is where individuals of different types behave differently. Here, a separating equilibrium is desirable when those employees with strong information come forward; but those employees with weak information do not.

112. Here, a whistleblower with weak information has only a ten percent chance of success. The expected reward, therefore, for a whistleblower with weak information is ten percent x one percent x \$20 million = \$20,000.

reward at \$200,000. Under the conditions of the model, only whistleblowers with strong information will come forward.

This enhanced ability to screen information deters fraud. By increasing the likelihood of detection, inefficient firms are discouraged from acting dishonestly. No inefficient firm will commit fraud provided a sufficiently high proportion of employees of inefficient firms receive a strong signal.¹¹³

The relationship between increasing rewards and increasing deterrence is not monotonic, however. If the rewards are too high, then whistleblowers with weak signals will be incentivized to come forward. For example, increasing the rewards can encourage disgruntled employees with poor information to blow the whistle in the hope of hitting the jackpot (recall that ten percent of weak signals will result in recovery). Once again, we have a pooling equilibrium; but this time, too many informants come forward.¹¹⁴ If the success-contingent payment to whistleblowers is too high, then the institutional structure begins to resemble the fixed-fee system described above.

In our model, if a whistleblower is entitled to twenty-five percent of the damages awarded against the fraudulent firm then all employees who receive a signal—weak or strong—will come forward. Whistleblowers with weak information will come forward because the expected reward (ten percent of \$5 million)¹¹⁵ exceeds the cost of blowing the whistle. As with the flat-fee incentive structure, the government cannot *ex ante* distinguish between well-informed whistleblowers and poorly informed whistleblowers. The regulator is faced with the problem of information overload.

Excessive contingent payments not only dilute the quality of the information, but they have an ancillary effect of reducing the deterrence. We are left with a rather perverse result that increasing the rewards to potential whistleblowers can actually encourage firms to commit fraud.

113. Let's say, for example, that an employee in fifty percent of inefficient firms receives a strong signal if fraud is actually committed. The agency, therefore, receives reports from fifty whistleblowers. All the whistleblowers that come forward received a strong signal. The likelihood of a fraudulent inefficient firm being investigated is, therefore, fifty percent. The expected cost of committing fraud, therefore, is \$10 million (fifty percent of the \$20 million damages), while the benefit is \$6 million. No inefficient firm will commit fraud under these conditions.

114. See Ferziger & Currell, *supra* note 21, at 1172.

115. To be clear, the expected reward is ten percent x twenty-five percent x \$20 million = \$500,000. This is greater than the cost incurred.

The argument, here, essentially follows from the idea that greater accuracy in the legal process generates greater deterrence.¹¹⁶

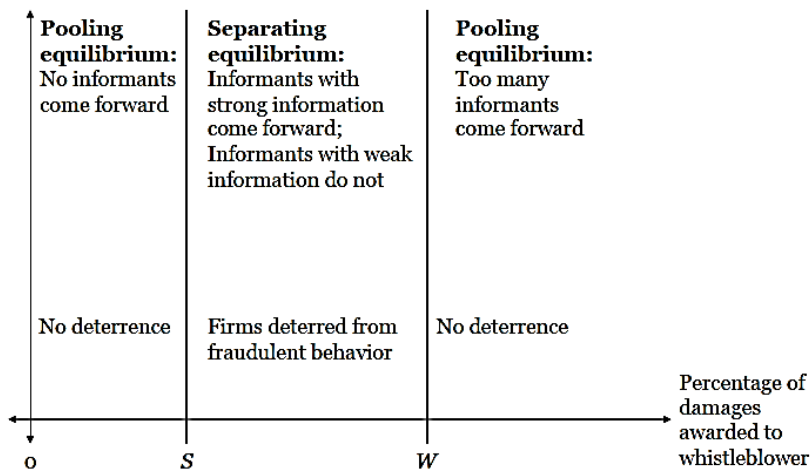
These equilibria are illustrated graphically in Figure 1. If the reward is low (i.e., less than the threshold hurdle S), then no one will be incentivized to come forward. If the reward is increased to an amount between S and W , only informants with strong information come forward. This reward scheme deters fraud. Increasing the reward beyond the hurdle W , however, has deleterious effects. This incentivizes all whistleblowers to come forward and dilutes the quality of the information. This information overload reduces the deterrence effect and can produce greater incentive to commit fraud.

More generally, assume that the damages awarded against the firm are D , the percentage awarded to the whistleblower is r , and the cost of blowing the whistle is c . The probability of victory in a particular claim against the firm is p and is known by the whistleblower. Under these assumptions, a whistleblower will be incentivized into blowing the whistle if $r > c/pD$. There are two types of informants—those with weak information with probability of victory p_w , and those with strong information with probability of victory p_s . The threshold percentage of damages required to encourage strong informants is $S = c/p_s D$. The threshold percentage of damages where weak informants will also be encouraged is $W = c/p_w D$. It follows that $W > S$.¹¹⁷

116. This argument follows from a familiar result in the law and economics literature that the deterrent effect of law is reduced as the likelihood of inaccuracy in the legal system—either Type I or Type II errors—increases. As Type II errors—that is, the likelihood of a guilty party being found not guilty—increases, the likelihood of punishment is reduced. Therefore, parties are more likely to commit crimes. As Type I errors—that is, the likelihood of an innocent party being found guilty—increases, the relative cost of committing a crime is reduced. Therefore, parties are more likely to commit crimes. See Louis Kaplow & Steven Shavell, *Accuracy in the Determination of Liability*, 37 J.L. & ECON. 1 (1994); Louis Kaplow & Steven Shavell, *Accuracy in the Assessment of Damages*, 39 J.L. & ECON. 191 (1996); Louis Kaplow, *The Value of Accuracy in Adjudication: An Economic Analysis*, 23 J. LEGAL STUD. 307 (1994). Here, in our model, we have only Type II errors. That is, inefficient and fraudulent firms are less likely to be found guilty of fraud when the regulator must randomize which firms to investigate because it has received too many tips. Given that they are less likely to be found guilty, the likelihood of committing fraud increases; this is in spite of the increase in the quantity of information flowing to the regulator.

117. Under our assumptions that $D = \$20$ million, $c = \$250,000$, $p_w = 0.1$, and $p_s = 1$, we get the following thresholds: $S = 1/80$ and $W = 1/8$. That is, if the whistleblower receives less than 1/80th of the \$20 million damages, there is a *pooling equilibrium*: no one blows the whistle. If the whistleblower receives more than 1/8 of the damages, there is a *pooling equilibrium*: every employee who receives a signal blows the whistle. If the reward falls between these thresholds, only those with good information come forward. Such rewards optimize the deterrent effect of whistle-blowing.

FIGURE 1



The deterrent effect of a whistleblower scheme is a function of the reward given to the whistleblower. If the reward is too high, it can *reduce* the deterrent effect.

The impact that a pooling equilibrium has on enforcement and deterrence should not be underestimated. If the whistleblowers pool on the left side of Figure 1, then the government has no tips to use in investigating firms. The best the government can do is investigate randomly. This lowers enforcement to five percent and deters no fraud. If the whistleblowers pool on the right side of Figure 1, then everyone with a weak signal blows the whistle. A firm that commits fraud faces no sanction from being the subject of a tip. Because the government is overwhelmed with tips, it does not have the resources to differentiate strong tips from weak tips and chooses randomly from the tips. The whistleblower can do nothing to differentiate its tip as strong because the government does not have the resources to verify.

Of course in the real world things are not so simple or binary. Some tips will be laughable. Others will be slam-dunks. But as long as there remains a large category of "plausible" cases, the lack of screening creates a cost. The government might look for indicia of strong tips. But as more tips come in, it will be harder to differentiate among the plausible tips, and it will be more costly for the government to examine the indicia closely. The measures will be more superficial, less verifiable, and more likely to produce false positives and false negatives.

The Bernie Madoff scandal provides a demonstration of this exact phenomenon. Even before the DFA, the SEC's limited resources required

them to be selective in choosing which tips to investigate. But their selection criteria were crude at best. Over nine years, Harry Markopolos provided the SEC with information about the Madoff scheme. The returns Madoff was achieving were unheard of. And at one point, Markopolos demonstrated that there were not enough options existing in the world for Madoff to be running the strategy he claimed. Madoff's operations were mathematically impossible.¹¹⁸

Mathematical impossibility, however, was not one of the SEC's criteria for measuring the credibility of a tip. As Markopolos notes, the SEC basically determined, "the only way I would qualify as a whistleblower is if I came in with a tape recording of Bernie Madoff admitting he was running a Ponzi scheme Obviously, I didn't have that tape, and if I did I wouldn't have needed the SEC."¹¹⁹

b. Reducing the Cost of Blowing the Whistle

Individuals seeking to blow the whistle on fraudulent behavior may bear a high private cost of blowing the whistle. For example, the whistleblower may be threatened with retaliation that can come in the form of reduced opportunities for promotion, losing their job, or perhaps even threatened with criminal proceedings for their part in the fraudulent behavior.

Consider the following two examples. First, a group of eleven employees and former employees of the Food and Drug Administration (FDA) complained in letters to Congress that the FDA uses intimidation and coercion tactics in order to gain approval for unsafe or defective medical devices used to screen for cancer. These allegations were published on the front page of the New York Times.¹²⁰ Six of the whistleblowers subsequently brought a claim in the federal courts alleging that the FDA retaliated by unlawfully reading e-mails and, in some cases, terminating employment.¹²¹

118. *Oversight of the SEC's Failure to Identify the Bernard L. Madoff Ponzi Scheme and How to Improve SEC Performance: Hearing Before the S. Comm. on Banking, Housing & Urban Affairs*, 111th Cong. 30, 60 (2009) (statement of Harry Markopolos); *Assessing the Madoff Ponzi Scheme and Regulatory Failures: Hearing Before the Subcomm. on Capital Mkts., Ins. & Gov't Sponsored Enters. of the H. Comm. on Fin. Servs.*, 111th Cong. 5, 101 (2009) (statement of Harry Markopolos).

119. Interview by Steve Inskeep with Harry Markopolos (Mar. 2, 2010), available at <http://www.npr.org/templates/story/story.php?storyId=124208012>.

120. Harris Gardiner, *Scientists Say F.D.A. Ignored Warnings on Radiation Exposure*, N.Y. TIMES, Mar. 29, 2010, at A14.

121. Second Amended Complaint, Paul Hardy v. Margaret Hamburg, No. 1:11-CV-01739-RLW (D.D.C. July 17, 2012).

Second, in light of a report that soccer referees had been fixing soccer matches in China, the Chinese Football Association offered amnesty and anonymity to any corrupt referees who admitted match-fixing behavior.¹²² The chief referee, Gong Jianping, came forward and detailed the links between soccer officials, referees, and illegal gambling rings. The Chinese Football Association went against their word; they had Gong Jianping arrested and he was sentenced to ten years in prison. He died eighteen months later.¹²³

Such potential costs of retaliation, no doubt, loom large in the decision of the individual to blow the whistle. The larger these costs, the less likely individuals will be to blow the whistle. A common argument in both the legal academic literature and popular press is that the government can further cultivate and encourage whistle-blowing by guaranteeing anonymity of the informant and preventing any possible retaliation against the whistleblower.¹²⁴ Protecting whistleblowers against such retaliation undoubtedly has the effect of encouraging whistle-blowing.¹²⁵ But the protection may reduce the ability of the regulator to screen the quality of the information—at least when the level of the reward and other costs are not considered or adjusted when designing the protection.

122. There is an extensive, game-theoretic literature on the use of leniency to encourage whistleblowers to come forward. The literature is largely situated in the antitrust arena, where leniency is given when a whistleblower informs about other members of a price-fixing cartel. The use of leniency is sensible in this context because of the instability of any cartel. *See, e.g.*, Cécile Aubert, Patrick Rey, & William E. Kovacic, *The Impact of Leniency and Whistle-Blowing Programs on Cartels*, 24 INT'L J. INDUS. ORG. 1241 (2006); Wouter P.J. Wils, *Leniency in Antitrust Enforcement: Theory and Practice*, 30 WORLD COMPETITION 25 (2007). *But see* Edward M. Iacobucci, *Cartel Class Actions and Immunity Programmes*, J. ANTITRUST ENFORCEMENT 1 (2013). Leniency may not have the same effect in the context of fraud as it does in the context of antitrust. First, the equilibria of fraudulent behavior are not inherently unstable, as it is in a cartel. Second, the leniency provisions only work if the whistleblower can be protected against prosecution or other state punishment. In the context of the FCA and the DFA, the individual whistleblower may not have committed any fraudulent or dishonest act; there may be nothing that a leniency or immunity program could do to incentivize coming forward.

123. *See, e.g.*, DECLAN HILL, *THE FIX: SOCCER AND ORGANIZED CRIME* 15 (2008).

124. *See, e.g.*, Robert J. McCarthy, *Blowing in the Wind: Answers for Federal Whistleblowers*, 3 WM. & MARY POL'Y REV., Spring 2012, at 184; ROBERTA ANN JOHNSON, *WHISTLE-BLOWING: WHEN IT WORKS—AND WHY* (2003). For an example of recent media reports on drug use in Australian sport, see also Adam Cooper, *Whistleblowers Need Anonymity*, THE AGE NEWSPAPER (Feb. 10, 2013), available at <http://www.theage.com.au/afl/afl-news/whistleblowers-need-anonymity-20130209-2e5d1.html>.

125. The idea of the need to protect federal employees who blow the whistle and report agency misconduct from such retaliation is the basis of the Whistleblowers Protection Act of 1989, Pub. L. No. 101-12, § 2, 103 Stat. 16 (1989) (“The purpose of this Act is to strengthen and improve protection for the rights of Federal employees, to prevent reprisals, and to help eliminate wrongdoing within the Government . . .”).

The private costs that whistleblowers bear play a vital role in generating a separating equilibrium. To see why, let's return to our model. We previously assumed that the cost of bringing the information to the attention of the government agency is \$250,000. But, let's say the government seeks to further encourage whistle-blowing by reducing this private cost. This lowers the hurdle that whistleblowers have to clear to come forward with their information. If the government can guarantee anonymity of the whistleblower and guarantee that there will be no retaliation against the employee, then the costs may even fall to zero.

Decreasing the private cost of blowing the whistle has two effects. First, it will encourage strong whistleblowers as the threshold S , in Figure 1, decreases. That is, whistleblowers with strong signals will be induced by smaller rewards. Second, it can encourage too many whistleblowers. In Figure 1, the threshold W also decreases. With a low cost of blowing the whistle, more informants with weak signals will be encouraged to come forward.

Reducing the cost of blowing the whistle to zero eliminates any possibility of a separating equilibrium in our model. The threshold W in Figure 1 will be located at 0. If whistleblowers receive any expected benefit from coming forward—no matter how small—they blow the whistle. This is true for employees with either weak or strong information. Thus, reward schemes that allow whistleblowers to anonymously report information to the regulator, such as that under the DFA, may merely dilute the quality of the information and consequently fail to deter fraud.

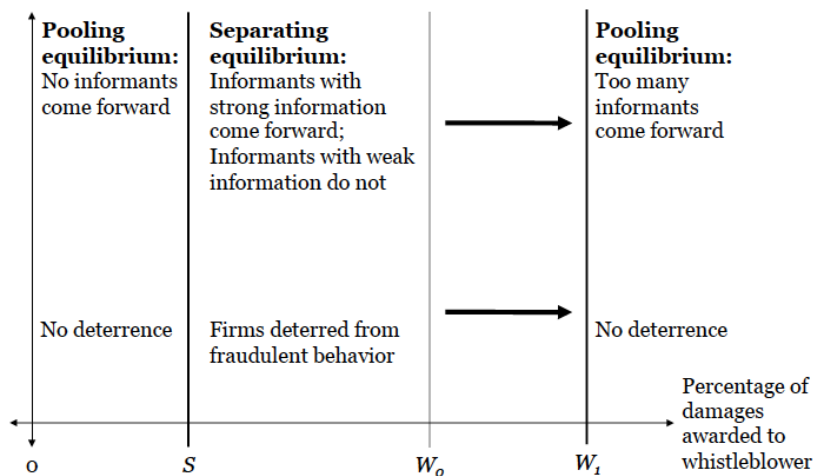
In a perfect world, we could maximize the value of a screen by making it costless for whistleblowers with strong information to come forward while making it costly for whistleblowers with weak information. This world of perfect separation does not exist. If, however, the costs of blowing the whistle on non-meritorious claims were greater than the costs of blowing the whistle on meritorious claims, then the likelihood of a separating equilibrium increases. Loss-contingent costs can achieve this.

The effect of loss-contingent costs is illustrated in Figure 2. The threshold W increases from W_0 to W_1 . This increases the gap between S and W . If we represent the loss-contingent costs by k , then W_1 is $(c + (1-p_w).k)/p_w D$. This is clearly greater than W_0 .¹²⁶ If the costs of bringing forward information are borne disproportionately by whistleblowers that received weak signals, the deterrent effect on fraud is

126. If $1-p_s > 0$, then S will also shift to the right as well. The shift, however, will be less than the shift in W . Now, S_1 will be $(c + (1-p_s).k)/p_s D$. The change in S is $\delta S/\delta k = (1-p_s)/p_s D$, which is unambiguously smaller than the change in W , $\delta W/\delta k = (1-p_w)/p_w D$.

stronger. In the next sub-section, we set out the argument that this is exactly what the FCA *qui tam* mechanism provides.

FIGURE 2



If costs are contingent on bringing unsuccessful claims, the likelihood of a separating equilibrium increases.

c. The Screening Benefits of Qui Tam Actions under the FCA

Qui tam actions under the FCA present three, additional screening opportunities over blowing the whistle directly to the regulating agency. First, there are costs of bringing suit in court. Second, these additional costs of bringing a *qui tam* action are more likely to be borne by parties who have weak information. Third, plaintiffs' lawyers who work on contingency fees will act as an additional screen¹²⁷ on the quality of

127. Pamela Bucy has emphasized a related point. She argues that the complexity and cost of prosecuting an FCA case will discourage inexperienced counsel from taking these cases. Bucy, *supra* note 10, at 58. This is a different form of screening. It is not clear, however, why this would be true. An inexperienced lawyer faced with a strong signal for an FCA case would stand to receive an enormous return on her effort. While plaintiffs may tend to choose more experienced lawyers, that result should be expected in most areas of litigation. David Freeman Engstrom's work suggests the methods of selecting attorneys and the qualities of success are more complicated. Engstrom finds that "certain repeat players—namely former DOJ prosecutors turned private sector relator counsel—are far more likely to persuade the DOJ to exercise its powerful authority under the FCA to intervene in qui tam cases and push them to resolution." Engstrom, *supra* note 19, at 1251. But he also finds that they are involved in a small number of cases and achieve lower returns for the government than other successful cases. *Id.* at 1251–52.

information that is brought forward.¹²⁸ This third argument has been made in the literature discussing the merits of contingency fees more generally.¹²⁹ We will, therefore, restrict our analysis to the first two arguments.¹³⁰

Qui tam actions are costly. Above, we argued that whistleblowers bear a large private cost from truncated career opportunities. There are two, additional types of cost that must be borne by plaintiffs under the FCA that informants who report directly to the regulator do not have to pay. First, there are upfront costs. There are significant costs of hiring attorneys, filing costs, and substantiating claims. The plaintiff will expend a great deal of time, effort, and energy. Under the FCA, the plaintiff must prove to the judge that he has cleared a number of statutory hurdles. Additionally, as with any lawsuit, the plaintiff must meet minimum pleading requirements.¹³¹ These will be greater than the requirements of providing a tip to the SEC.¹³² The pleading requirement costs will likely deter potential

128. The plaintiff will need to expend resources to convince the lawyer that the signal is a good one. This cost is not worth expending if the signal is weak, but it is if the signal is strong. As we see below, *qui tam* litigation introduces several of these case development screening points: (1) the lawyer screens; (2) the court screens on a motion to dismiss; and (3) the DOJ screens in making its decision to proceed. At each point, the plaintiff is undertaking costs that are likely to be wasted if the signal is weak.

129. See, e.g., HERBERT M. KRITZER, RISKS, REPUTATIONS, AND REWARDS: CONTINGENCY FEE LEGAL PRACTICE IN THE UNITED STATES (2004) [hereinafter KRITZER, RISKS]; Herbert M. Kritzer, *Contingency Fee Lawyers as Gatekeepers in the Civil Justice System*, 81 JUDICATURE 22 (1997); Daniel L. Rubinfeld & Susan Scotchmer, *Contingent Fees for Attorneys: An Economic Analysis*, 24 RAND J. ECON. 343 (1993); William H. J. Hubbard, *A Theory of Pleading, Litigation, and Settlement* 30–31 (Univ. of Chi., Pub. Law Working Paper No. 446; Univ. of Chi. Coase-Sandor Inst. for Law & Economics Research Paper No. 663, Jan. 23, 2014), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2360723.

130. It is worth noting though that the role of contingency fee lawyers will not be nearly as important in the DFA context. First, the need to retain counsel in making a tip under the DFA is much lower. The primary benefit is that it ensures anonymity. But that role should be significantly smaller than the role of the lawyer in the FCA context. Second, the cost to the lawyer of advising on a weak anonymous tip under the DFA is negligible especially when compared to the costs of filing an FCA suit. Lawyers should be expected to do less screening in the DFA context.

131. Generally, a plaintiff may be able to signal the strength of their case to the defendant at the pleadings stage of proceedings in civil suits. William Hubbard notes: “through factually detailed pleading . . . a plaintiff communicates the strength of her case . . .” See Hubbard, *supra* note 129, at 5.

132. The SEC cannot realistically impose similar “pleading requirements” for tips. The SEC would have an incentive to declare all tips insufficient and then investigate the case anyway, keeping the recovery and not paying the tip. If, on the other hand, the SEC committed to pay whenever there is a recovery, the pleading requirement would be meaningless. The *qui tam* mechanism makes it difficult for a plaintiff’s lawyer or the DOJ to reject a tip and continue with the case. And the court lacks the internal incentive to dismiss the case to squeeze out the whistleblower because it receives none of the recovery.

plaintiffs from filing suit,¹³³ but, as noted above, this increase can bolster the screening effect. In Figure 1, these upfront costs shift *both* thresholds— S and W —to the right.¹³⁴

Second, the costs incurred by whistleblowers under the FCA mechanism are disproportionately borne by whistleblowers with weak information. That is, some costs are only borne by parties who lose in court. For example, under the FCA the court can award costs (such as attorney's fees, etc.) to the successful side.¹³⁵ This acts like a fine on the losing whistleblower. While fee-shifting arrangements are not unique to FCA litigation,¹³⁶ as a practical matter fee shifting is almost unheard of in out-of-court whistle-blowing schemes. In theory, the DFA would look much more like the FCA if there was a fee (or fine) imposed on tipsters who do not prevail. But it may be difficult to implement. Allowing the SEC to fine the whistleblower for a failed investigation when the whistleblower had no control over the investigation introduces complex moral hazard problems. This determination would have to be adjudicated by a third party—most likely a court. As a practical matter, we can expect the court to defer almost entirely to the SEC in the decision to pursue an investigation. And even if the court steps in, the whistleblower should only prevail if it shows that the investigation should have been successful. That litigation in turn will look a great deal like the litigation that the whistleblowers undertake in the first place in the *qui tam* system. A world where we have tips directly to an agency who investigates but then we employ a court to determine the value of the reward, the quality of the tip, the propriety of pursuing the tip, and the costs imposed on the losing

133. Law and economics theory on the decision to file suit is summarized in RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 593–639 (7th ed. 2003); ROBERT COOTER & THOMAS ULEN, *LAW AND ECONOMICS* 388–444 (4th ed. 2004); and Shavell, *supra* note 99, at 389–418.

134. In the more general model, it can be easily shown that increasing c , the upfront, private cost of blowing the whistle, will result in both $S = c/p_s D$ and $W = c/p_w D$ shifting to the right.

135. On the effects of “English fees” and “American fees,” see generally MARY FRANCIS DERFNER & ARTHUR D. WOLF, *COURT AWARDED ATTORNEY FEES* (1995), which describes, generally, the use of fee shifting; see also Peter van Wijck & Ben van Velthoven, *An Economic Analysis of the American and the Continental Rule for Allocating Legal Costs*, 9 *EUR. J.L. & ECON.*, Mar. 2000, at 115; Ronald Braeutigam, Bruce Owen, & John Panzar, *An Economic Analysis of Alternative Fee Shifting Systems*, 47 *L. & CONTEMP. PROBS.*, Winter 1984, at 173 (1984); John C. Hause, *Indemnity, Settlement, and Litigation, or I'll Be Suing You*, 18 *J. LEGAL STUD.* 157 (1989); Avery Katz, *Measuring the Demand for Litigation: Is the English Rule Really Cheaper?* 3 *J.L. ECON. & ORG.* 143 (1987), and H.S.E. Gravelle, *The Efficiency Implications of Cost-Shifting Rules*, 13 *INT'L REV. L. & ECON.* 3 (1993). See generally Louis Kaplow & Steven Shavell, *Economic Analysis of Law*, in 3 *HANDBOOK ON PUBLIC ECONOMICS* 1661, 1732–33 (Alan J. Auerbach & Martin Feldstein eds., 2002) (providing a brief survey of the law and economics literature on fee shifting); see also Ferziger & Currell, *supra* note 21.

136. Engstrom makes this important critique of our analysis. See Engstrom, *supra* note 52.

tipster, begins to look like a Rube Goldberg version of a *qui tam* mechanism.

More fundamentally, under the FCA, the Department of Justice investigates claims made by the whistleblower that has brought suit and elects whether or not to join the case as co-plaintiff. This imposes two costs—one that is fixed and one that is contingent on the quality of the information.

The fixed cost is the cost of convincing the DOJ that the case is strong. The DOJ acts as a screen in this way. The DOJ will typically join a strong case; they will not join a weak case. The plaintiff is incurring significant costs to develop the case while the DOJ is considering whether to join. The DOJ's "investigation" often entails simply reviewing the results of the plaintiff's discovery. Thus, the plaintiff incurs the cost to demonstrate the strength of its case. This cost is likely to be wasted if the plaintiff knows that its signal is weak. This is analogous to the costs of convincing the contingent-fee lawyer, and convincing the judge at the motion-to-dismiss stage. The DOJ will, however, require a greater level of proof to join the case than the judge. In practice, it appears that these costs are real and function as a strong screen. The federal government has, historically, been a very good judge of the strength of a case following a preliminary investigation.¹³⁷ When the DOJ joins a whistleblower in suit, the plaintiff wins in approximately ninety-five percent of cases; when the DOJ does not, the plaintiff wins in just five percent of cases.¹³⁸

As an additional cost that is contingent on the strength of the signal, when the DOJ joins the suit the remaining costs of suit are borne by the government. In cases where the DOJ does not join, the whistleblower (presumably with a weak case) must bear the litigation costs. This has the effect of further encouraging informants with strong information, while further discouraging informants with weak information. Such contingent costs¹³⁹ have the effect of shifting W further to the right, increasing the likelihood of a separating equilibrium.¹⁴⁰

Qui tam actions under the FCA, therefore, provide a key institutional advantage over whistleblowers reporting directly to a regulator. Litigation

137. An alternative explanation for the difference in success rates is that the government is a good litigator, and not necessarily a good judge of the merits of a case. Our model assumes away differences in litigation quality, merely focusing on informational quality.

138. See Kwok, *supra* note 10, at 6.

139. This cost is not purely "loss-contingent" but rather contingent upon the weakness of the signal after the case has been partially developed. This has the same beneficial effect.

140. As noted above, with loss-contingent costs, k , the threshold for weak informants is $W_l = (c + (1-p_w) \cdot k) / p_w D$.

forces individuals who blow the whistle to bear an upfront cost. Further, the costs of litigation are greater as the probability of winning falls. This discourages whistleblowers that *know* that they have poor information from coming forward, thereby discouraging overzealous or non-meritorious claims.

With similar effect the SEC might require a bond for tips. This is the same as the fee-shifting fine discussed above. In some cases, the bond might achieve the same outcome. But in others it might create perverse incentives for the SEC in choosing between investigating good tips and just keeping the bond.¹⁴¹

There are, of course, some qualifications to this screening benefit. We have made some assumptions that, if relaxed, will dampen our results. First, we assumed that informants have perfect knowledge of the quality of their claim. Any uncertainty in the knowledge, however, will likely weaken the positive effects. While whistleblowers may have good information about the nature of the fraud, they may not be able to determine the likelihood of success in courts. Cases of fraud can be highly complex and this may reduce the likelihood that individuals blow the whistle even when the merits of the case are very strong. Second, we have assumed that individuals here are risk neutral. If individuals are risk averse, though, loss-contingent costs may over deter individuals from bringing claims. *Qui tam* actions represent a significant risk; whistleblowers gamble the cost of suit and future employment opportunities against possible gains.¹⁴² This would deter individuals with strong information who are averse to risk.¹⁴³

The screening benefits of the FCA mechanism are not found in the new whistle-blowing regime under the DFA. The DFA mechanism seeks to encourage whistle-blowing by *both* increasing the rewards available to whistleblowers *and* reducing the cost of blowing the whistle. The loss-contingent costs associated with blowing the whistle by bringing suit are missing from the DFA. Encouraging whistle-blowing by allowing anonymous reporting to the SEC without substituting in other costs, will encourage weaker information, resulting in information overload for the regulator.

141. See *supra* note 132, for why it would be difficult for the SEC to impose a similar upfront cost without involving a *qui tam* mechanism.

142. See Rapp, *supra* note 19, at 119.

143. On the concept of risk aversion in the context of litigation, see Shavell, *supra* note 99, at 406–7. On the concepts of risk neutrality and risk aversion more generally, see ROBERT S. PINDYCK & DANIEL L. RUBINFELD, MICROECONOMICS 165–70 (7th ed. 2009).

One might imagine that if anonymity were not provided, the cost would increase to a level that made it unnecessary to impose other costs. On the other hand, it might be possible to offer anonymity in the FCA context without sacrificing screening because costs are imposed through litigation. That may or may not be feasible. The key takeaway is that costs cannot be set haphazardly. And the near zero costs that the DFA is designed to provide will not provide any meaningful screening.

In the end, the optimal reward-cost structure will, of course, depend on many features. We know, though, that the SEC was receiving a high number of complaints prior to the DFA whistle-blowing regime. The problem was not a low volume of available whistleblowers.¹⁴⁴ Rather, if there was a problem, it was one of screening for quality.¹⁴⁵ Our theory suggests the mechanism implemented under the DFA will therefore be counter-productive in deterring fraud.

III. BROADER APPLICATIONS AND LIMITATIONS

The fact that the above analysis focuses on fraud on the government (FCA) and violations of securities laws (DFA) is not an inherent limitation on the screening value of *qui tam* mechanisms. It is a function of the magnitude and recent high profile of these two whistleblower programs. As we have noted, whistleblower mechanisms are also used by the IRS to detect tax fraud. Private suits on behalf of the government and other whistle-blowing measures were widely used in English criminal law before public police forces.¹⁴⁶ *Qui tam* suits have been used in intellectual property law¹⁴⁷ and elsewhere.¹⁴⁸ Previous literature has noted the

144. Denise Voigt Crawford, former head of the Texas Securities Commission, made this point in testimony before the Committee on Financial Services of the United States House of Representatives. *Capital Markets Regulatory Reform: Strengthening Invest Protection, Enhancing Oversight of Private Pools of Capital, and Creating a National Insurance Office: Hearing Before the H. Comm. on Fin. Servs.*, 111th Cong. 84 (2009), available at <http://financialservices.house.gov/media/file/hearings/111/printed%20hearings/111-84.pdf> (“Well, the problem isn’t that people weren’t complaining to the Securities and Exchange Commission. They receive I think about 750,000 complaints a year. The problem is that they were ignoring them or at least not making good determinations with regard to those complaints that really needed to be followed up on.”).

145. Cf. Madoff discussion, *supra* Part II.B.3.a.

146. See J. M. BEATTIE, *CRIME AND THE COURTS IN ENGLAND, 1660–1800*, at 50–55 (1986) (discussing the use of rewards, sometimes ad hoc and sometimes by statute, to obtain information leading to apprehension of criminals).

147. See, e.g., False Marking Act that allowed *qui tam* actions on behalf of the government. 35 U.S.C. § 292 (2012). These *qui tam* provisions were, however, recently struck down as unconstitutional by a federal district court. *Unique Prod. Solutions, Ltd. v. Hy-Grade Valve, Inc.*, 813 F. Supp. 2d 854 (N.D. Ohio 2011).

148. For example, there are *qui tam*-like provisions allowing for private suits regarding violations

importance of whistleblower mechanisms when there is hidden information and the government wishes to extract this private information. Our analysis suggests that when there are sticky asymmetric information problems—which is, of course, the definition of hidden information—the screening mechanism is important. We have illustrated the benefit of a *qui tam* mechanism over other whistleblower schemes in screening low-quality information from high-quality information.

That is not to say, however, that the *qui tam* mechanism is always the silver bullet for rooting out hidden information; there may be other ways to impose costs on whistleblowers. There are several limitations that our model suggests should restrict the expansion of whistleblower rewards generally and *qui tam* mechanisms in particular. In this part, we discuss these limitations as well as areas where expansion will be valuable.

A. *Limitation One: Ulterior Motives*

The screening properties of *qui tam* are important insofar as they deter firms from engaging in fraudulent behavior. Excessive rewards and promises of anonymity are blunt instruments for encouraging whistleblowing and deterring fraud. By themselves, the instruments are blunt because they focus on the *quantity* of information rather than the *quality*. The ability of the government regulator to parse out meritorious claims from non-meritorious claims is tightly linked to the deterrent value of whistle-blowing.

The question of which tools to use to optimally deter dishonest behavior may turn on the type of fraudulent activity that the government is seeking to deter. So far we have bracketed issues regarding claims about the types of motivations that drive whistleblowers. A long literature has explored the non-pecuniary interests that may drive whistle-blowing.¹⁴⁹ Our model focuses on financial incentives. Rewards must be high enough (relative to costs) to attract high-quality tips but costs must also be high enough (relative to rewards) to screen out low-quality tips. Further, if costs are increasingly contingent on outcome, then higher costs will screen out low-quality information without deterring high-quality tips.

In other areas of regulation, however, potential whistleblowers may not be as incentivized as our rational-actor model suggests. The government must still contend with the problem of hidden information and the quality

of Native American protection laws, see 25 U.S.C. § 201 (2006), and regarding arming vessels against a “friendly nation.” See 18 U.S.C. § 962 (2006).

149. See Dodd-Frank Act, Pub. L. No. 111-203, § 922, 124 Stat. 1376, 1844 (2010).

of the information provided. In these cases where financial rewards are unlikely to be a strong factor in the decision of the whistleblower, then mechanisms that reduce the private cost of blowing the whistle will be of greater salience (assuming there are wealth constraints even for the morally motivated). Anonymity and other measures that reduce the cost of informing will be more effective tools for increasing the quantity of information here. On the flip side, lower monetary rewards—even zero rewards—may actually be correlated with higher quality information than large financial rewards. That is, if we assume the morally motivated are likely to have stronger information in an area than the financially motivated, we may not need to use rewards, but may simply seek to lower those costs that may deter altruistic and wealth-constrained whistleblowers. The moral payout substitutes for the monetary payout and is potentially contingent itself on the quality of the information. This will be the case if those who only come forward where their moral sensitivities have been breached do so with more credible information.¹⁵⁰

There are other non-pecuniary motives that may present problems. Individuals may come forward because they are seeking revenge. Revenge can be difficult. On the one hand, like morality, it may be a substitute for monetary rewards.¹⁵¹ On the other hand, the revenge payout may not be correlated with the quality of information. A terminated employee may be happy to see her employer punished regardless of whether the employer committed any fraud. Thus, the information brought forward by

150. In reality, of course, individuals may blow the whistle for a variety of non-financial reasons. Take, for example, the case of three Canadian scientists working for Health Canada, the Canadian government agency with responsibilities similar to those of the Food and Drug Administration in the United States. In 1998, Dr. Shiv Chopra, Dr. Margaret Hayden, and Dr. Gerard Lambert blew the whistle on what they alleged to be dishonest, drug approval processes for bovine growth hormone. They contended that the long-term effects on cows and the effects on humans were inadequately tested and that they were being pressured to approve the drug. These whistleblowers did not come forward because of financial incentives. Rather, they were concerned for the integrity of the drug approval system. All three whistleblowers lost their job. See *Whistleblowers: Moment of Truth* (CBC television broadcast Oct. 19, 2012), available at <http://www.cbc.ca/fifth/episodes/2012-2013/whistleblowers-moment-of-truth>.

151. In unemployment benefit fraud, for example, the Australian government authority responsible for distributing unemployment benefits and social security benefits (CentreLink) received, on average, 2,115 phone calls each week from informants providing tip-offs as to recipients receiving more than their entitlement. The information was given anonymously; none of the informants was paid any money at all. In 2010, this information led to over 43,000 cases being reviewed and 7,954 payments being reduced (a success rate of under 20% of investigations). The anonymous whistleblower scheme saved the Australian government over \$2.3 million. Renee Viellaris, *Number of Australians Dobbing in Welfare Cheats Reaches All-Time High*, THE SUNDAY MAIL (May 22, 2011, 12:00 AM), <http://www.news.com.au/national-old/number-of-australians-dobbing-in-welfare-cheats-reaches-all-time-high/story-e6frfkvr-1226060326917>.

informants merely to generate bad publicity for the regulated firm may be of lower quality. In those contexts, mechanism design is more complicated. The interplay between costs, monetary rewards, and a revenge motive is difficult to intuit or test.¹⁵²

While these considerations may be prevalent elsewhere, we suspect they do not loom large in the DFA context. First, in the context of financial regulation, potential whistleblowers who work in the finance industry are likely to be highly motivated by financial incentives.¹⁵³ Second, the financially-motivated-rational-actor model has generally proven to be a stronger indicator of behavior of whistleblowers than other explanations in the context of fraudulent behavior in business.¹⁵⁴

B. Limitation Two: Asymmetry of Information

The results of our model rely on the assumption that the individual whistleblower has superior information to the government. This idea of asymmetric information underpins the legal elements in whistleblower statutes requiring that the information not be publicly disclosed or that the whistleblower be an “original source”¹⁵⁵ of independent knowledge.¹⁵⁶ These requirements generally prevent people from coming forward to collect on information that is already public and in the hands of those who can use the information properly. This limits the effect of the statutes to scenarios with asymmetric information.

152. Other motivators may exist. And it may be important to distinguish altruism, indignation, anger, and revenge. These and many other nuanced behavioral motivations may have a wide range of varying correlation with accuracy. The “how’s my driving” anonymous tipster programs might be prime examples of the usefulness and influence of non-monetary incentives in encouraging the reporting of accurate asymmetric information. These are discussed both theoretically and empirically in the work of Lior Strahilevitz. Lior Jacob Strahilevitz, “How’s My Driving?” *For Everyone (and Everything?)*, 81 N.Y.U. L. REV. 1699 (2006); David S. Abrams and Lior Jacob Strahilevitz, *Do More Eyes on the Road Mean Better Driving? A Field Experiment* (Univ. of Pa. & Univ. of Chi., Working Paper, Jan. 21, 2013), available at https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=ALEA2013&paper_id=308. This area of study may provide fertile ground for testing the dynamic interplay of various incentives in whistleblowing.

153. Engstrom reaches a similar conclusion but on different grounds: “Lower moral disapprobation in [the areas of tax, securities and procurement fraud] means that regulators cannot rely on an underlying moralistic proclivity to report wrongdoing. Nor is there a substantial risk of crowd-out, as there is little moralistic motivation to report wrongdoing in the first place.” Engstrom, *supra* note 52 (footnote omitted).

154. For a more comprehensive discussion of the literature on financial rewards of whistleblowers, see Dyck et al., *supra* note 18.

155. See, e.g., 31 U.S.C. 3730(e)(4)(A) (2012).

156. See, e.g., 31 U.S.C. 3730(e)(4)(B)(2).

We noted in Part I that justifications of the *qui tam* mechanism based on regulatory capture of agencies ignored this distinction. Agency capture and the need to solve it are not unique to whistleblower allegations. But asymmetric information is. And that is why a central value of the *qui tam* mechanism is its ability to screen information.

The upshot is that *qui tam* mechanisms—or mechanisms that resemble or mimic *qui tam* mechanisms—may be less valuable or more problematic if applied to scenarios without asymmetric private information but large agency costs. Though not explicitly a *qui tam* mechanism, in the law of corporations the shareholders' derivative suit may pose this type of scenario.¹⁵⁷ The derivative lawsuit is a mechanism for a shareholder to bring suit (at least in theory) on behalf of the corporation (usually, but not necessarily, against the current or former directors or officers of the corporation).¹⁵⁸ It is essentially a *qui tam* procedure where the derivative plaintiff's attorney fills the role of "whistleblower" and receives the (sometimes quite hefty) reward.¹⁵⁹

But derivative suits are generally not ones where the plaintiff has hidden information that needs to be coaxed out.¹⁶⁰ Indeed, Delaware courts have, for decades, lamented that it is usually quite the opposite.¹⁶¹ Justifications for derivative suits instead focus primarily on the agency problem. Unlike FCA and DFA whistleblower cases, the source of the plaintiff's knowledge is irrelevant. But the existence of a conflict of interest is paramount. A derivative plaintiff with original hidden information will nonetheless be precluded (by way of the demand requirement) from bringing suit where the directors are deemed to have no

157. We view class actions as a different category altogether dealing with much broader problems of coordination and collective action. We do not address those here.

158. *See, e.g.*, *Aronson v. Lewis*, 473 A.2d 805 (Del. 1984) (a seminal case on derivative litigation and the procedural demand requirements imposed on derivative plaintiffs).

159. The attorneys in *Americas Mining Corp. v. Theriault*, 51 A.3d 1213 (Del. 2012), received fees of \$304 million in a derivative suit. That is an outlier, but fees for successful cases are substantial.

160. For a more general discussion of the economics of derivative suits, see FRANK H. EASTERBROOK AND DANIEL R. FISCHER, *THE ECONOMIC STRUCTURE OF CORPORATE LAW* 100–02 (1991).

161. *See, e.g.*, *Grimes v. Donald*, 673 A.2d 1207 (Del. 1996) (lamenting the failure of derivative plaintiffs in using statutory tools such as DGCL § 220 to request to inspect the books and records that are in possession of the board directors—whose members are usually the defendants—to obtain information to verify if they can meet the pleading requirements in a derivative suit); *South v. Baker*, 62 A.3d 1, 6 (Del. Ch. 2012) (“[O]ur Supreme Court has admonished stockholders repeatedly to use Section 220 of the General Corporation Law to obtain books and records and investigate their claims before filing suit.”).

conflict¹⁶² and a derivative plaintiff suing on public information will be allowed to proceed if she can show the directors are not impartial.¹⁶³

Derivative suits certainly have not been praised as the gold standard for rooting out corporate misbehavior. And our analysis above suggests that the mechanism is ill designed. A *qui tam* like mechanism, in a world without a central problem of asymmetric information,¹⁶⁴ is raising costs and rewards needlessly. The lure of hefty fees attracts more and more claims. In response, the courts have continued to ratchet up the cost side of the equation with strict demand requirements, special committees empowered to dismiss suits, the imposition of pre-filing requirements, and the like. As these costs increase, plaintiffs require higher rewards to bring even the strongest cases. In turn, the fees awarded to attorneys for those best cases have to go up.

This suggests the corporate governance setting may be precisely the case (as opposed to true whistleblower situations) where a DFA mechanism—where shareholders file grievances to an outside agency that pursues violations of corporate governance—would be optimal.¹⁶⁵ The derivative procedure with its *qui tam* quality is poorly designed, given the problem it addresses. It is not effective screening to artificially raise costs for parties who have no private information. Most of these cases start with public disclosures or news reports. Plaintiffs' lawyers then race to be the first to overcome the court-imposed hurdles. This race provides no new information to the corporation or its other shareholders. In a weak attempt to make the process more effective, courts have insisted that plaintiffs make a request to see the books and records of the corporation so they can look for wrongdoing and conflict. This is a fairly pointless mechanism.

162. To put it simply, the derivative plaintiff must first make demand on the directors to cause the corporation to bring the suit. The only way around this is for the plaintiff to show that demand was futile because the directors are conflicted and not impartial in making the decision. See *Grimes*, 673 A.2d 1207. If the plaintiff makes demand, and it is refused, the plaintiff faces a very high burden of showing that demand was wrongfully rejected.

163. See *Aronson*, 473 A.2d 805; *Grimes*, 673 A.2d 1207.

164. Of course, it might be different if these suits were being brought by inside employees rather than outside shareholders. That would look much more like the cases that the DFA is directed at. But only shareholders have standing to bring derivative suits. And the overwhelming bulk of cases are brought by outside shareholders not employees who own shares.

165. Another option that has been explored elsewhere would be to have outside law firms bid for the right to pursue the case. See Jonathan R. Macey & Geoffrey P. Miller, *The Plaintiffs' Attorney's Role in Class Action and Derivative Litigation: Economic Analysis and Recommendations for Reform*, 58 U. CHI. L. REV. 1 (1991) (proposing an auction system of choosing counsel); Randall S. Thomas & Robert G. Hansen, *Auctioning Class Action and Derivative Lawsuits: A Critical Analysis*, 87 NW. U. L. REV. 423 (1993); Jonathan R. Macey & Geoffrey P. Miller, *Auctioning Class Action and Derivative Litigation: A Rejoinder*, 87 NW. U. L. REV. 458 (1993); Jill E. Fisch, *Lawyers on the Auction Block: Evaluating the Selection of Class Counsel by Auction*, 102 COLUM. L. REV. 650 (2002).

Plaintiffs' lawyers have no special talent for reviewing books and records and the information in those books and records is controlled and filtered by the very directors and officers who are alleged to have a conflict.

The whole process imposes a cost on the corporation and the plaintiffs while providing no real screening or signaling. As costs increase, the rewards (in fees) have to increase to keep the plaintiffs in the game. As a result, fees are high but cases are extremely costly to bring. This is a waste that is designed to deal with the wrong problem.

This cycle of raising costs and damages has little screening effect. In some sense, all of the potential plaintiffs have the same signal based on public reports. Some cases are good and some are bad, but the plaintiffs have no way of knowing. As long as the odds are good, they bring a portfolio of cases fishing for the big one. Because the signal remains constant, moving the cost or benefit thresholds does nothing to alter the quality of the pool. If anything, moving both thresholds up just favors risk seeking firms, firms with larger portfolios of cases, or firms with liquidity advantages that can invest more in overcoming the upfront hurdles.

Here, where the problem is real agency capture and not hidden information, an independent agency that responds to information (public reports and tips) and rewards tips with a small (perhaps even fixed) reward should reduce costs significantly and address agency problems more directly.¹⁶⁶

C. Limitation Three: Public vs. Private Screening

The corporate governance case just discussed might be viewed as a pseudo-public mechanism. These are private entities, but the shares are widely held and the benefits of any action are spread across millions of shares. But what about true private settings? Surely, asymmetric information is a problem that faces private firms in their dealings with employees and counterparties.

If the screening value of *qui tam* is so strong, should we allow parties to stand in the shoes and bring suits on behalf of other private parties? For example, let's say that there are two employees of IBM and one employee has strong private information that the other has committed fraud against IBM: Does our model suggest that it would be beneficial for the whistle-

166. The history of Delaware derivative cases demonstrates that outside tips and information will generally not have great value. Complaints are often filled with nothing but a recitation of public information—or worse, an exact copy of a complaint in another proceeding. The purpose of tips would just be to bring lower-profile public information to the agencies attention.

blowing employee to take a private action on behalf of IBM against the fraudulent employee? We should be careful to acknowledge the limits of the theory.

Qui tam is a solution when the problem of information asymmetry is great and is intractable; it should be used only when the information asymmetry is difficult to resolve not when the information can be cheaply verified. The cost of unpacking the truth about fraud against the government can be great, given the scale and scope of government operations. Similarly, the cost of the government detecting corporate securities fraud is high.¹⁶⁷ It is not clear that informational problems cannot be overcome in the private-party situation with lower cost by using other mechanisms. To continue with our IBM example: IBM would have its own internal structure for dealing with fraudulent behavior by an employee against the company. Allowing *qui tam* type suits here may undermine these internal mechanisms.

The same may not be true, however, if IBM is worried about its contracts with outsiders. If a third-party supplier is defrauding IBM, it may very much want to reward employees of that supplier for bringing suit on its behalf. Presumably, such a system would allow firms to opt in or out of any mechanism. For example, IBM might not care enough about small fraud that was immaterial to its profit reporting at an unimportant vendor. But the opposite might be true for its largest suppliers, distributors or retailers. A system could be developed for a firm to opt into a public system where certain claims against certain parties could be brought on its behalf. We would expect to see this opt-in behavior where the relationships are important and the asymmetry is both large and intractable.

All of that said, such proposals start to run into other areas of theoretical concern that we must reserve for another day. Chief among those is the theoretical and empirical concerns about third-party financing

167. See *supra* Part II.A.

of private litigation.¹⁶⁸ There is much to be said on both sides of that debate.¹⁶⁹

Finally, private settings that do not involve litigation or disputes might also present asymmetric information problems where our analysis is relevant. For example, companies often want to get information from outsiders about the performance of their employees or other non-human assets.¹⁷⁰ Facebook, for example, offers a minimum \$500 reward to users who report technical bugs in their program.¹⁷¹ Our model predicts that Facebook will get too many tips because they do not impose a cost on the tipsters. Some of Facebook's comments regarding those tips suggest this is true. One tipster found a bug that allowed him to post on private timelines of people he is not connected to. His tip was ignored and Facebook noted that it could not respond to tips when its technicians cannot reproduce the bug. The tipster responded by posting his complaint on the private timeline of Facebook's CEO Mark Zuckerberg. He did not receive the reward.¹⁷²

Facebook's response appears to be of the same nature as the SEC's response to tips about Bernie Madoff.¹⁷³ In a world of too much information, the recipients are forced to adopt high (perhaps arbitrary) criteria for responding to tips. Our model suggests Facebook might be wise to adopt a system that imposes costs on the tipsters to screen the information.¹⁷⁴

168. See, e.g., Joanna M. Shepherd, *Ideal Versus Reality in Third-Party Litigation Financing*, 8 J.L. ECON. & POLICY 593 (2012); Jason Lyon, Comment, *Revolution in Progress: Third-Party Funding of American Litigation*, 58 UCLA L. REV. 571, 574 (2010); Daniel C. Cox, Comment, *Lawsuit Syndication: An Investment Opportunity in Legal Grievances*, 35 ST. LOUIS U. L.J. 153, 154–59 (1990). The issue has been discussed in popular press: Binyamin Appelbaum, *Investors Put Money on Lawsuits to Get Payouts*, N.Y. TIMES, Nov. 15, 2010, at A1; Lisa Rickard, *Why Are Hedge Funds Allowed to Invest in Litigation?*, THE ATLANTIC (July 3, 2012, 1:42 PM), <http://www.theatlantic.com/national/archive/2012/07/why-are-hedge-funds-allowed-to-invest-in-litigation/259345/>; Vanessa O'Connell, *Funds Spring Up to Invest in High-Stakes Litigation*, WALL ST. J., Oct. 3, 2011, at B1.

169. The financing of litigation also ties in with the role of lawyers on contingent fees. We acknowledge that contingency fees for lawyers can operate as a screening mechanism. In some sense, with contingency fees, the lawyer is "buying" a partial stake in a suit. They will only take on suits that have a high likelihood of winning. While the precise mechanism is different, the screening effect is similar to that of *qui tam*. For more on contingency fees, see Kritzer, *supra* note 129 and references within.

170. See, e.g., Strahilevitz, *supra* note 152; Strahilevitz & Abrams, *supra* note 152.

171. *Bug Bounty Info*, FACEBOOK, <https://www.facebook.com/whitehat> (last visited Feb. 11, 2014) (login required).

172. Steven Musil, *Researcher Posts Facebook Bug Report to Mark Zuckerberg's Wall*, CNET NEWS (Aug. 18, 2013, 11:36 AM), http://news.cnet.com/8301-1023_3-57599043-93/researcher-posts-facebook-bug-report-to-mark-zuckerbergs-wall/.

173. See *supra* note 144.

174. They might also adopt a mechanism that commits them to a formula for determining the

CONCLUSIONS

Efficient detection of fraud is important. Detection by an ill-informed, resource-constrained regulator can be improved by tapping into private information held by individuals. By using this private information, the regulator can focus its resources on investigating those firms who are more likely to have committed fraud. In doing so, the regulator can deter fraud at lower cost. Whistleblowers, therefore, serve an important regulatory and social function. Providing financial rewards to whistleblowers who successfully uncover fraud encourages this outcome. Financial rewards alone, however, are not perfect. The increase in the quantity of information should not come at the expense of the quality of information. Diluting the quality of the information reduces the deterrent value and can defeat the ultimate purpose of the scheme.

We suggest that the mechanism through which whistleblowers are channeled to seek reward affects the incentives of the whistleblower in dynamic ways. By making rewards to whistleblowers contingent upon success *and* making the losses suffered by whistleblowers contingent upon failure, the quality of the information will increase. The mechanism needs to balance both the rewards and the costs to maximize the likelihood of detecting fraud and generating optimal deterrence.

The rewards under the DFA scheme are success-contingent, but the private costs that must be borne by whistleblowers are low and not loss-contingent. This reduction in cost reduces the height of the screen and serves to encourage whistleblowers with low-quality information. Under the DFA scheme, we predict that the SEC will be inundated with, *on average*, lower quality tips. We further predict that this information overload will dilute the deterrence effect.

It is too early to determine whether our predictions about the DFA's whistle-blowing scheme are being borne out, although the SEC has already reported a large number of tips.¹⁷⁵ Since the adoption of the new whistle-blowing scheme, the SEC has considered but rejected changing

reward rather than the current scheme: "There is **no maximum reward**: each bug is awarded a bounty based on its severity and creativity." *Bug Bounty Info*, *supra* note 171; *see* Ferziger & Currell, *supra* note 21 (noting the value of a nondiscretionary reward).

175. In the first seven weeks of the program in 2011 there were 334 tips. There were 3001 official tips in fiscal year 2012 and 3238 in fiscal year 2013. In 2013 the attorneys in the office returned 2018 phone calls—all within 24 hours. U.S. SEC. & EXCH. COMM'N, *supra* note 49 at 8. Pre-DFA systems for collecting and reporting tips makes it difficult to make a direct comparison, and as we noted above, the problem has never appeared to one of quantity. *See supra* notes 118–19 & 144–45.

the mechanism to one that requires *qui tam* actions.¹⁷⁶ The Office of the Inspector General (OIG) decided against recommending *qui tam* on the grounds that such actions “could attract unscrupulous bounty hunters” and “may result in undesirable outcomes such as frivolous litigation.”¹⁷⁷ Our model suggests the exact opposite. Unscrupulous whistle-blowing and frivolous lawsuits are more likely to be a concern under the current DFA scheme that has no imposed costs to screen them out.

The *qui tam* mechanism works well in the FCA context precisely because a court-centric system disproportionately places the burden for losses on plaintiffs with poor information. Our model predicts that courts under the FCA are *not* likely inundated with poor tips and non-meritorious claims. This is precisely what the empirical literature bears out.¹⁷⁸

These screening benefits of *qui tam* under the FCA have been curiously overlooked in the literature. Prior work comparing the court-centric mechanism of the FCA to the regulator-centric mechanism of the DFA focuses on other aspects of the mechanism, such as agency capture. Of greater concern is the quality of information that can be generated using the court as a screen. Erecting this screen better achieves the primary purpose of the whistle-blowing regimes: deterring fraud.

176. U.S. SEC. & EXCH. COMM’N, OFFICE OF INSPECTOR GEN., OFFICE OF AUDITS, EVALUATION OF THE SEC WHISTLEBLOWER’S PROGRAM, REPORT NO. 511 (2013), available at <http://www.sec.gov/about/offices/oig/reports/audits/2013/511.pdf>.

177. *Id.* at 28.

178. See Kwok, *supra* note 10, Kwok, *supra* note 29, and Engstrom, *supra* note 19.