

A Service of



Leibniz-Informationszentrum Wirtschaft Leibniz Information Centre

Nyreröd, Theo; Spagnolo, Giancarlo

Working Paper

Myths and Numbers on Whistleblower Rewards

SITE Working Paper, No. 44

Provided in Cooperation with:

Stockholm Institute of Transition Economics (SITE), Stockholm School of Economics

Suggested Citation: Nyreröd, Theo; Spagnolo, Giancarlo (2018): Myths and Numbers on Whistleblower Rewards, SITE Working Paper, No. 44, Stockholm School of Economics, Stockholm Institute of Transition Economics (SITE), Stockholm

This Version is available at: https://hdl.handle.net/10419/204755

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



Stockholm Institute of Transition Economics

WORKING PAPER

April 2018

No. 44

Myths and Numbers on Whistleblower Rewards

Theo Nyreröd and Giancarlo Spagnolo



Working papers from Stockholm Institute of Transition Economics (SITE) are preliminary by nature, and are circulated to promote discussion and critical comment. The views expressed here are the authors' own and not necessarily those of the Institute or any other organization or institution.

Myths and Numbers on Whistleblower Rewards

Abstract

Whistleblower rewards have been used extensively in the US to limit procurement fraud and tax evasion, and their use has been extended to fight financial fraud after the recent financial crisis. There is currently a debate on their possible introduction in Europe, but authorities there appear considerably less enthusiastic than their US counterparts. While it is important that these tools are scrutinized in a lively democratic debate, many things have been written – even by important institutional players – that have no empirical backing or that are in open contrast to the available evidence from independent research. In this paper we review some of the most debated issues regarding the potential benefits and costs of financial incentives for whistleblowers, while trying to separate existing evidence from conjectures with no empirical support, and myths in contrast to available evidence.

Keywords: whistleblowing, rewards

Contents

1.	Inti	roduc	ction and motivation	3
	1.1		ent cases show that protection is insufficient	
	1.2	Ove	erview of existing whistleblower reward programs	6
-	1.3	Des	ign dimensions of reward programs	7
2.	My	ths a	nd numbers in the current debate	10
2	2.1	Effe	ectiveness	10
	2.1	.1	Quality	10
	2.1	.2	Quantity	11
	2.1	.3	Deterrence	13
	2.1	.4	Costly to administer	14
2	2.2	Mal	icious whistleblowers	17
	2.2	.1	Entrapment	17
	2.2	.2	Fraudulent claims	18
3.	Coı	nclus	sions	19
Re	feren	ces		22

1. Introduction and motivation

Whistleblower reward programs, or "bounty regimes", provide financial incentives to witnesses that report information on an infringement that helps authorities to convict culprits and recover or limit the damage they cause. Financial incentives for whistleblowers are not common, and many countries do not even protect whistleblowers from retaliation from reported wrongdoers (often their employers). The only country we are aware of that has experimented extensively with whistleblower rewards in recent times, besides extensive protection, is the US. The False Claims Act (FCA), or the "Lincoln Law" as it is also called, was passed by Congress in 1863 to limit corruption in the procurement of military supplies to the Union Army. The Internal Revenue Service (IRS) has also had a similar program for many years, which was amended in 2006 to make whistleblower rewards non-discretionary. As a response to the recent financial crisis in 2007, the US Congress enacted the Dodd-Frank Act, which allows for rewards for financial and securities fraud and which is managed by the Securities and Exchange Commission (SEC). In Canada, the Ontario Securities Commission (OSC) implemented a reward program in 2016. Other countries have introduced narrow reward programs for witnesses reporting cartels, typically with very low rewards (the UK, South Korea, and Hungary are some examples).

Reward programs are widely praised in the US, with one Assistant Attorney General saying that they are "the most powerful tool the American people have to protect the government from fraud" (National Whistleblower Center 2014, p.2). Similarly, the chairman of the SEC claimed, in a testimony before the House of Representatives, that their whistleblower program "has resulted in investigative staff receiving a substantial volume of high quality information." (National Whistleblower Center 2014, p.3).

However, there is currently a rift across the Atlantic, as the whistleblower reward programs praised in the US appear to not be welcome in Europe. While there are good reasons to be cautious about the ability of European agencies to successfully import tools from the US, the level of the recent policy debate on the relative costs and benefits of these programs has unfortunately been rather low. In the UK, for example, the Bank of England's Prudential Regulation Authority and Financial Conduct Authority came out strongly against rewarding whistleblowers in a note for the UK

Parliament, neglecting available evidence inconsistent with their claims, while not presenting alternative evidence to back their assessment.¹

The subject is of primary policy relevance and deserves a more honest and research-informed debate. Corruption, fraud of various types, and related forms of economic crime are widespread almost everywhere in the world (see e.g. Dyck et al (2013), Global Economic Crime Survey (2016). Criminal organizations such as drug cartels are using these economic crimes to soften enforcement and transfer revenues across countries. Their methods have become increasingly sophisticated and their ability to use international financial markets has made it ever more difficult for law enforcement agencies to discover them with more traditional law enforcement tools (see e.g. Radu (2016)). Programs that encourage whistleblowing can help fighting organized crime, promote the accountability and integrity of public institutions, and foster a culture that supports those values (G20 2011, p.4.). It is also widely held that encouraging whistleblowing tends to increase transparency in organizations, and trust in markets (see, e.g. U.S. Sen. Grassley (2009)).

1.1 Recent cases show that protection is insufficient

Consider, for example, Volkswagen's emissions scandal in 2015, when the public learned that the company had installed defeat devices in millions of diesel cars to 'cheat' on environmental emissions standards. The response of management was to blame a set of "rouge engineers" (see Congressional Hearing of Michael Horn (2015)), while we now know that PowerPoint presentations on how to circumvent US emissions tests by a top technology executive circulated within the company as early as 2006, NY Times (2016, April 26).

One may be surprised that not a single employee was effective at bringing this wrongdoing to light for close to a decade. However, looking at current cross-country legislation on whistleblower protection, it is not surprising that historically so few whistleblowers have come forward in Germany – the country belongs to the group of nations in the EU with some of the weakest protection for whistleblowers Wolfe *et al* (2014). Even after the Siemens scandal in 2008, when the company was discovered pursuing a long-term, extensive and systematic strategy of bribing foreign governments

and purchasing agencies, no steps were taken to our knowledge to improve the country's whistleblower protection.

Perhaps more surprising is the fact that even in countries with the highest level of protection, whistleblowers continue to face severe retaliation. In the UK, which is regarded as having far stronger whistleblower protection than most other European countries (Transparency International 2013, p.83), there are still serious issues. For example, in 2017 the CEO of Barclays bank explicitly instructed his security team to try to unveil the identity of a whistleblower who wrote a letter containing concerns about a longtime associate of the bank, The Guardian (2017, April).

The US, which arguably has the most extensive and best-enforced whistleblower protection system (see e.g. Wolfe *et al* 2014, p.5), still has considerable problems with retaliation. For example, the bank Wells Fargo recognized that it 'forced' its employees to use deceptive tactics, including opening up several additional bank accounts for customers without their conscious consent, to reach crazy sales targets, Financial Times (2017, November). The pressure on these employees to meet a target of "8 accounts per customer", together with management threatening to fire cross-sellers who did not meet the quotas, was determined to be cause of the wrongdoing, The Guardian (2016, September).

Most importantly for this piece, there are reports of employees at Wells Fargo blowing the whistle internally with their management and being fired as a result, Reuters (2016, October). We recently found out that at least some of these whistleblower claims had merit, as Wells Fargo was ordered by the U.S. Department of Labor to pay \$575,000 and reinstate a whistleblower who had complained about the accounts, Reuters (2017, July).

In these high-protection countries, then, retaliation against whistleblowers remains commonplace. The Ethics Resource Center (2014) reports that in 2013, 21% of whistleblowers in the US suffered retaliation. The retaliation can often be quite significant, as shown in interviews with whistleblowers from the US by Rothschild and Miethe (1999), where they found that, among other things, of those retaliated against 84% experienced "severe depression or anxiety", 69% lost their job or were forced to

retire, 64% were blacklisted from getting another job in their field, and 84% experienced feelings of isolation or powerlessness.

If this is the situation in the US, the country with the highest level of protection, one can understand why there is so little whistleblowing in Europe. Transparency International (2013) rated a disappointing four countries in Europe as having 'advanced' legal protection for whistleblowers, the best rating: Luxembourg, Romania, Slovenia and the UK.

According to a report on whistleblower protection in G20 countries from 2014, France is on par with China with respect to its protection programs (Wolfe *et al* 2014, p.4). Germany and Italy are in an even worse situation, lagging significantly behind in almost all aspects of whistleblower protection law.

Even the most extensive legal protection laws are still unable to prevent retaliation against whistleblowers, and whistleblower protection in many European countries is inadequate with respect to at least some dimensions of protection. In the light of this, financial incentives for whistleblowers could, or even should, be thought of as a means of partially compensating truthful whistleblowers for the many forms of retaliation from which they cannot be protected, rather than as a monetary premium for reporting corporate misbehavior.

1.2 Overview of existing whistleblower reward programs

Let us start with some information on existing programs. The US False Claims Act is the most well-known whistleblower reward program and was originally signed into law in 1863 under President Lincoln to curb fraud in military procurement for the Union Army. The program has seen significant changes throughout the years. It was amended in 1943 to reduce the maximum reward from no more than 50% to no more than 25% of recovered money if the relator litigated the case, but if the government litigated the case the maximum reward was only 10% (Doyle 2009, p.7). Between 1943 and 1986 these changes together with restrictions on what kind of information that makes whistleblowers eligible for rewards, led to the whistleblower or "qui tam" provisions falling almost completely out of use (see e.g. Phelps 2000, p.255).

. The most significant amendments came in 1986, which seems to have been pivotal in increasing the claims received; these amendments included retaliation protection for whistleblowers, with an increase in the maximum award to 30% (Doyle 2009, p.8). Other changes included extended statutes of limitations, a lowering of the governments' burden of proof, and allowing for whistleblowers to bring suits with information known to the government but that the government has not released publicly (Metzger and Goldbaum 1993, pp.685-686).

The IRS Whistleblower Office was established with the enactment of The Tax Relief and Health Care Act of 2006. Before that, the IRS could provide rewards "for detecting and bringing to trial and punishment persons guilty of violating the internal revenue laws or conniving at the same" IRS (2018, January), but whether any reward was to be provided at all was completely at the agency's discretion.

The whistleblower provisions of the Dodd-Frank Act were implemented as a response to the financial crisis of 2008. In 2016 the Ontario Securities Commission also implemented a bounty program inspired by that of the SEC, although with fundamental differences.

The Korean Fair-Trade Commission (KFTC) has a narrow bounty regime pertaining to cartels that dates back to 2002, although by 2006 it had been used on only eight occasions. The cap on the reward at that time was 20 million won (\$19,000), but amendments in 2012 increased the maximum possible award to 3 billion won (\$2.8 million) (Stephan 2014, pp.5-7). Due to the limited applicability of this regime (i.e. only to cartels), we mention this program only in passing.

The European Parliament suggested that financial incentives can be provided to whistleblowers by member states to detect and deter infringements of Regulation (EU) No. 596/2014 which covers securities trading, among other things.² Presently, we do not know of any member state that has taken this initiative.

1.3 <u>Design dimensions of reward programs</u>

Under most bounty regimes a whistleblower brings a claim against a wrongdoing party and, in the event of a successful judicial or administrative action, the whistleblower receives a percentage of the fine imposed (or money recovered). In this section we look at some other fundamental design dimensions along which existing whistleblower reward programs differ.

First, programs differ with respect to whether they enthrall individuals with independent enforcement action, sometimes called a *qui tam* approach. Presently, only the FCA give private citizens independent enforcement authority which is not dependent on the Department of Justice (DOJ) to pursue the claim on the citizens' behalf. All other programs are what might be called "administrative", or adopt what some call a "cash for information" approach (Engstrom 2016, p.4). Under the latter approach, it is up to the agency whether the claim should be pursued administratively, judicially or not at all.

Second, programs differ with respect to what percentage the whistleblower is eligible to receive. Under the US programs the minimum varies, but the upper limit is 30%. The exact percentage a whistleblower receives within the range will depend on how vital his or her information was to detecting and sanctioning the wrongdoing. The OSC program instead has a maximum of 15% and a cap at 5 million Canadian dollars.

Third, programs differ in their treatment of complicit whistleblowers. Participation in the wrongdoing *per se* does not usually make the whistleblower ineligible to receive a reward under the mentioned regimes. A whistleblower may however have their reward reduced, or be denied any reward, if he or she "planned and initiated" the wrongdoing. The SEC and OSC programs do not grant rewards to those convicted of criminal conduct related to the wrongdoing (The Wall Street Reform and Consumer Protection Act, 15 U.S.C §78u-6(c)(2)(B), OSC Policy 15-601, 15.(1)(1)). In 1986 the FCA was amended to include the same restriction concerning criminal conduct (Vogel 1992, pp. 599-600). The IRS has granted rewards to those convicted of criminal conduct related to the wrongdoing, an example being the banker Bradley Brinkenfield who received \$104 million despite serving time in jail for his part in the wrongdoing (Pacella 2015, p.345). Under all regimes we mention here, there is the wording that "criminal conduct" makes whistleblowers ineligible, yet there seems to be a difference in practice.

Fourth, these programs differ with respect to the reward "threshold", i.e. the minimum amount needed for a claim to be considered. In the case of Dodd-Frank, the monetary sanction must exceed \$1 million for the case to be considered. To qualify under the IRS's 7623(b), the information provided by the whistleblower must "relate to noncompliance matter in which the tax, penalties, interest, additions to tax, and additional amounts in dispute exceed 2 million USD" (IRS Report 2014, p.3). The FCA rewards whistleblowers based on the recoveries made due to the whistleblower's information. Where the DOJ decides to join the suit, the whistleblower is eligible to receive between 15% and 25% of recoveries, while if the DOJ declines to intervene in the case, the whistleblower is eligible to receive 25% and 30% of recoveries (Engstrom 2016, p.3).

Fifth, some programs cap the absolute amount of the rewards, while others do not. Aside from the upper percentage limit, the OSC's program, for example, caps the absolute value of rewards at 5 million Canadian dollars.

Sixth, the degree of confidentiality granted to the whistleblower is another aspect where programs differ. The SEC allows whistleblower anonymity through legal representation – only when receiving the reward at the end of a successful action must the whistleblower disclose his or her identity to the SEC (SEC Report 2015, p.17). The FCA does not guarantee anonymity to its whistleblowers, as the citizen has to bring the claim to court. It does, however, have the benefit that if the DOJ declines to join the suit, the citizen has the option to take the claim to court anyway. The OSC will "make all reasonable efforts to protect the identities of whistleblowers", but there are conditions, such as the identity being necessary "to permit a respondent to make full answer and defence" or when the disclosure is required by law, under which the identity may be disclosed (OSC Policy 15-601, 11.(1)(a-b)). The IRS writes that it will "protect the identity of the whistleblower to the fullest extent permitted by the law" IRS (2018, January). When the identity of the whistleblower is necessary to pursue investigation or examination, the IRS will inform the whistleblower before deciding whether to proceed. Table 1 presents a summary of the design dimensions.

Table 1: Overview of some design dimensions

	<u>FCA</u>	<u>IRS</u>	<u>SEC</u>	<u>OSC</u>
Private Litigation	Yes	No	No	No
Reward %:	15-30%	15-30%	10-30%	5-15%
Ineligible if:	Criminal Conduct	Criminal Conduct	Criminal Conduct	Criminal Conduct
Threshold:	None	2 Million USD (7623b)	1 Million USD	1 Million CAD
Cap:	No Cap	No Cap	No Cap	5 Million CAD
Confidentiality:	No	Yes	Yes	Yes

2. Myths and numbers in the current debate

In this section we go through some of the central arguments that have been put forward against whistleblower rewards and evaluate these in light of available evidence. We consider four aspects of effectiveness and their relations: quality of claims, quantity of claims, deterrence effects, and administration costs.

2.1 Effectiveness

2.1.1 Quality

A first argument brought against bounty regimes is that they are ineffective with respect to two of their fundamental aims: increasing the *quantity* and the *quality* of information received by the agencies. The Bank of England's Financial Conduct Authority and Prudential Regulation Authority, henceforth (FiCA & PRA's), writes in a note for a UK Parliament Committee that "There is as yet no empirical evidence of incentives leading to an increase in the number or quality of disclosures received by regulators" (PRA and FiCA 2014, p.2, italics in original). However, academic studies and statistics suggest that this statement is at best problematic and at worst incorrect.

Dyck *et al* (2010), circulating since 2007 and published in the most important scientific journal for finance, suggests that the FCA & FiCA statement is incorrect. In comparing whistleblowing in the healthcare sector, where rewards are available through the FCA, with non-healthcare sectors where they are not, the authors found that 41% of fraud cases are detected by employees in the healthcare sector. This number is only 14% for other sectors, a statistically significant difference (at the 1% level) despite a small sample size (Dyck *et al* 2010, p.2247).

More recently, Call *et al.* (2017) examined empirically the link between whistleblowing and (i) penalties, (ii) prison sentences, and (iii) duration of regulatory enforcement actions for financial misrepresentation. They found that whistleblowers' involvement in financial misrepresentation enforcement actions is correlated with higher monetary sanctions for the wrongdoing firm and increased jail time for culpable executives. They also found that enforcement proceedings began quicker, and further that whistleblower involvement increases the likelihood that criminal sanctions are imposed by 8.58%, and the likelihood that criminal sanctions are imposed against the targeted wrongdoer by 6.64% This evidence suggests that whistleblowing do increase the quality of information received by the agencies and is thus inconsistent with the claim that they do not.

2.1.2 Quantity

Assessing the relationship between the quantity of claims and regulatory effectiveness over time is not straightforward. First, monetary thresholds are there to reduce the administrative burden of having to consider too many low-stake claims (Ventry 2008, p.385). Second, the deterrence effects of bounty regimes and the closing of cases by the relevant agency should not lead us to necessarily expect a steady rise in the observed quantity of claims.³ A large initial increase in claims received generated by the introduction of a new policy may be temporary in the sense that a well-run, sufficiently powerful and advertised scheme should have deterrence effects that will reduce the overall number of cases, and therefore of claims received, even if the percentage of cases that are reported increases.

It is still interesting to note that since the IRS made rewards non-discretionary in 2006, the number of claims received has increased significantly in the long run. We do not have pre-enactment data, however, and the number of claims received decreased in the first year after making rewards non-discretionary (which is somewhat counterintuitive). In 2006 the number of claims received was 4,295, in 2007 it was 2,751. In 2013-2015, they received over 10,000 claims annually (IRS Report 2016, p.14).

Similarly, after the FCA's 1986 amendments, the quantity of claims they have received annually has increased, from close to none before 1986 to over 500 claims annually since 2011 (US Department of Justice, Civil Division, 2015).

The SEC has also seen a steady increase in the number of claims received since the enactment of Dodd-Frank, although SEC was allowed to hand out rewards as early as 1988, but whether to hand out rewards was at the SEC's discretion. Between 1988 and 1998 it is believed only one reward was paid out (Ferziger and Currell 1999, p.1144). This changed significantly after the passing of Dodd-Frank, as in 2012 they received 3,001 claims, 3,620 in 2014, and 4,218 in 2016 (SEC Report 2017, p.23). Between 2012 and September of 2017, they have rewarded a total of 46 individuals (SEC Report, 2017, p.1).

These numbers make it hard to understand the empirical basis for the claim in the note by FiCA & PRA (2014) that "[t]here is as yet no empirical evidence of incentives leading to an increase in the number or quality of disclosures received by regulators". The numbers from the agencies are suggestive but cannot really prove that rewards increased the quantity because of the absence of a reliable counterfactual. The steady increase in reported cases may have been caused by other provisions, such as extended statutes of limitations, or by the removing of other barriers to whistleblowers or an increasingly positive view of whistleblowers. Yet since the main intent behind these reward laws is to incentivize whistleblowing, it is a fair assumption that providing for rewards has been central in attracting these additional claims.

There is also experimental evidence on the effects of rewards on the quantity of claims received. Butler *et al.* (2017) found that rewards increased the likelihood of whistleblowing, and Abbink and Wu (2017) also found a positive effect on the likelihood of blowing the whistle in their reward treatment. Bigoni *et al.* (2012) found that detection (reporting) rates were higher in a reward context than in a leniency context alone.

Whether increased quantity of claims is a good measure of regulatory success is harder to assess. It could be that the cost of administering these programs, for example of reviewing larger quantities of claims, outweighs the benefits gained in terms of corporate crime detection and deterrence (see 2.1.4).

In conclusion, the available evidence consistently suggests that a well-designed and administered reward program will likely increase the quantity and quality of disclosures received by regulators, although of course a poorly designed and administered program may not.

2.1.3 Deterrence

As for empirical evidence on deterrence, Johannesen and Stolper (2017) found that whistleblowing had deterrence effects in the off-shore banking sector. They studied the stock market reaction before and after the whistleblower Heinrich Kieber leaked important tax documents from the Liechtenstein-based LGT Bank and found abnormal stock returns in the period after the leak and that the market value of banks known to derive some of their revenues from offshore activities decreased. The authors interpret their results as follows: "Our preferred interpretation is that the leak induced a shock to the detection risk as perceived by offshore account holders and banks, which curbed the use of offshore bank accounts and ultimately lowered the expected future profits of banks providing access to such tax evasion technologies." (Johannesen and Stolper 2017, pp.21-22).

Wilde (2017) also provide evidence that whistleblowing deters financial misreporting and tax aggressiveness. Using a dataset of retaliation complaints filed with the OSHA between 2003 and 2010 on violations of Paragraph 806, which outlaws retaliation against employees who provide evidence of fraud, he finds that firms subject to whistleblower allegations exhibited decreases in financial misreporting and tax aggressiveness. The deterrence effect persists for at least two years after the allegations. The firms were also more likely to have engaged in accounting irregularities in the years before the allegation compared to control firms.

As for experimental evidence, Abbink and Wu (2017) conducted laboratory experiments studying collusive bribery, corruption, and the effects of whistleblower rewards on deterrence. They find that amnesty for whistleblowers and rewards strongly deter illegal transactions in a one-shot setting, but in repeated interactions the deterrence effect is limited. Their results support a reward mechanism, especially for petty forms of bribery (which are more like one-shot games).

Bigoni *et al.* (2012) conducted laboratory experiments on leniency policies and rewards as tools to fight cartel formation. They found that rewards financed by the fines imposed on the other cartel participants had a strong effect on average price (returning it to a competitive level). In the model setting, this implies that rewards have a deterring and desisting effect on cartel formation. The authors also take it that the results are significant for real world scenarios. They also found that cartel formation was significantly lower in a reward environment than in a leniency environment alone.

2.1.4 Costly to administer

Whistleblower reward programs have been considered a cost-effective tool to fight organized economic crime at many times through history, and have received more attention in an age when many countries have adopted austere fiscal policies and want to cut their budgets (see e.g. Engstrom 2014, p.608 and Howse and Daniels 1995, p.525). Giving regular citizens the ability to bring claims to the government or an agency, what is sometimes called "social enforcement", is normally assumed to be cheaper than classical "command and control" enforcement methods. Under the latter enforcement approach, law enforcement personnel must search for information in expensive random investigations, such as tax audits. The cost-effectiveness of financial incentives has also been the main reason for their introduction historically, for example in England in the Middle Ages.

Yet, concerns have recently been expressed that whistleblower rewards come with a costly government structure (PRA & FiCA 2014, p.2), primarily with respect to the administrative burden of having to look at each submitted claim. These concerns are typically misplaced, as they fail to associate the costs of administering these schemes with the benefits they induce in terms of information obtained, or to compare these costs with the costs of alternative methods to obtain the same levels of benefits/amount of information. If one does not keep the benefits stable when considering costs, it follows immediately that the way towards efficient law enforcement is not to enforce the law at all.

Still, these schemes must be administered, and if a bounty regime is poorly designed and implemented, it may attract a lot of low-value claims for a chance of a reward,

producing larger administration costs and few enforcement benefits (Ebersole 2010, p.14).

A reward program that illustrates this issue is the IRS regime. The IRS (under the US tax code Section 7623) has two different sections to their reward program: 7623(b) deals with claims that have the potential to pass a "monetary threshold" of \$2 million of disputed tax money; 7623(a) deals with claims that for whatever reason don't meet the thresholds of 7623(b), primarily because they fail to meet the monetary threshold, and under this law rewards are still discretionary. The number of claims under 7623(a) far outweighs claims that qualify for 7623(b). For example, the number of claims received in fiscal year 2014 under 7623(a) was 12,083 while the number of 7623(b) claims was 2,282 (IRS Report 2014, p.14).

The amount of claims determined to have merit at the IRS suggests that improvements can be made. In 2015 over 35,000 claims at the IRS were still open, while only 2% of all cases closed in 2015 resulted in an award being paid out in full (IRS Report 2015, p.17). The average time between the submission of a claim and the reward payment has not been less than four years since 2006. In 2015 the average time to process rewards was six years. This uncertainty and the damage whistleblowers suffer in the meantime may also deter future whistleblowing. The backlog issues were largely dealt with according to their report to Congress in 2016.

Another cause of worry are statistics from the Occupational Safety and Health Administration (OSHA), which has the task of reviewing whistleblower retaliation complaints under SOX among other statutes (Earl and Madek 2007, p.3). Although not pertinent to rewards per se, the claims submitted to OSHA illuminate the problem, with large quantities of incorrect claims – a problem that rewards may exacerbate. Of the claims closed by OSHA in fiscal year 2016, 50% were dismissed, 21% withdrawn, and the remaining 29% were decided as "positive outcome for complainant", a category that almost exclusively involves settlement as only 63 cases out of 3,405 were determined to "have merit", US Department of Labor (2017). These numbers are not the ones we would like to see, and they are suggestive that there is some inefficiency in how claims are received and dealt with. At a first glance, the numbers suggest that the whistleblowers are bringing bad information or incorrect claims; however, the low

percentage of claims determined to have merit appears to be more complex and the result of a set of factors.

First, OSHA is severely under-resourced (Engstrom 2014, p.631). There have even been accusations by former employees at OSHA that whistleblower claims are not properly investigated at the agency due to resource constraints and the desire to close cases quickly to meet quotas (NBC 2015, February).

Second, Tom Devine, legal director at the Government Accountability Project, also implied the bad numbers may be due to whistleblowers often going up against powerful interests: "Some of these defendants are very powerful special interests: Wells Fargo, JPMorgan, [aerospace manufacturer] Lockheed Martin" Financial Times (2017, November).

Third, the large number of dismissed claims is related to the more stringent burden of proof set by the courts to allow whistleblower protection against retaliation, with respect to whether there was a causal link between the whistleblowing and the retaliatory measure (Moberly 2007, pp.120-130). The mere fact that retaliation took place at around the same time as the whistleblowing is not sufficient to establish cause, and *a fortiori* not sufficient to establish that retaliation took place. This has led many courts to reject retaliation claims from employees who can only establish a temporal proximity between whistleblowing and retaliation. Modesitt (2013) found similar issues with establishing cause at the state level.

Fourth, part of the claims will be based on a misunderstanding of the scope or applicability of whistleblower retaliation protection statutes, leading to instant rejection after the first round of review by the agency. An example of this was a man who filed a whistleblower retaliation claim under the Sarbanes-Oxley Act (SOX) alleging that his employer fired him for complaining about poor ventilation. SOX protects investors and covers fraud, not what the man had filed a claim about, which led to a quick dismissal of the claim, Center for Public Integrity (2014, May).

Incorrect claims are never going to be entirely eliminated even under a well-designed and carefully implemented regime. Adequate and accessible information on the scope of the law should help potential whistleblowers to decide whether their claim will qualify them for protection or reward. This is not unlike other governmental

programs – applications will be submitted and denied from time to time at just about any governmental agency. So, we do not see how these costs are specific to whistleblower rewards (although it may exacerbate them), nor good reasons for why we should consider this a significant differentiating factor between reward regimes and other government programs.

How costly a program is to administer depends heavily on how we choose to adjust the program along the design dimensions. To avoid large amounts of low-stake claims, one can impose a minimal monetary value threshold for claims to be considered. But again, there is no evidence whatsoever that it is costlier to obtain a given enforcement result using reward programs compared to other methods of enforcement. Indeed, they have been considered a cost-effective tool throughout the history of law enforcement, and benefit-to-cost estimates of the FCA suggest that their purely monetary benefits largely outweigh the costs (Carson *et al* (2008) estimate the ratio of costs to benefits to be between 14-1 and 52-1 for recoveries under the FCA).

2.2 Malicious whistleblowers

Concerns have been raised about the risk of various ways of 'gaming' whistleblower reward schemes, including using false or fabricated information, or entrapping other market participants.

2.2.1 Entrapment

Observers have raised the concern that some employees might induce others to break the law in order to report them and cash the reward. PRA & FiCA (2014), for example, writes that: "Some market participants might seek to 'entrap' others into, for example, an insider dealing conspiracy, to blow the whistle and benefit financially." There are, however, straightforward ways to prevent this potential problem.

The FCA states, for example, that when the relator initiated or planned the wrongdoing, courts can reduce the reward below 15% as they see fit (False Claims Act, 31 U.S.C. §3730 (d) (3)). The IRS has the similar restriction that in cases where the whistleblower planned and initiated the tax evasion, they may considerably reduce or deny any reward. If the whistleblower is convicted of criminal conduct related to the

suit, then they should deny her any reward (Internal Revenue Code, 26 U.S.C §7623 (b) (3)). This is probably the reason why, judging from the reports by the US agencies, entrapment has not emerged as a salient issue in the US experience with the various programs. This of course does not exclude the possibility that a poorly run European agency/regulator might mismanage a whistleblower program to the point where this indeed becomes an issue; a sufficiently incompetent administration can generate problems even with the most robust and effective tools.

As for evidence, the National Whistleblower Center claims they did not find a single case of entrapment in over 10,000 cases in which the planner and initiator of the wrongdoing received an award (National Whistleblower Center 2014, p.18).

In terms of research, the only relevant paper we know of is Bigoni *et al.* (2012). In their experiment, the authors found that participants initially tried to entrap others by inducing them to enter an illegal deal when a reward for whistleblowing was present, but quickly realized that this strategy led to bad outcomes (because everyone did the same) and stopped right away. In the cartel context they studied, a player agrees upon a price with the other cartel participants, with the unspoken intention to undercut the cartel participants and at the same time turn them in to reap a reward. This initially led to more cartels forming (the opposite of deterrence) than without rewards, but after this initial learning phase the detection rates generated by rewards kicked in and were astonishing: 118 out of 120 cases of cartel formation were detected in the first period. This may explain why entrapment seems like an issue initially, but not in the long run as subjects learn that other subjects are not stupid enough to be entrapped or are themselves trying to entrap others.

2.2.2 Fraudulent claims

Another common concern raised in the debate is that financial incentives could encourage employees to submit fraudulent claims, i.e. to "fabricate claims of wrongdoing for personal profit" (Howse and Daniels 1995, p.540, see also Rose 2014, p.1283). A similar concern is that "[f]inancial incentives might lead to more approaches from opportunists and uninformed parties passing on speculative rumors or public information. The reputation of innocent parties could be unfairly damaged as a result" (Bank of England, PRA and FiCA 2014, see also Vega 2012, p.510). Analogously,

opportunistic whistleblowers might force "corporations into financial settlements in order to avoid the adverse reputational and related effects caused by highly public, albeit ill-founded, accusations" (Howse and Daniels 1995, pp.526-527).

Although evidence on this is hard to find, judging from the agencies' reports, fraudulent and malicious claims are rare. This is probably the case because fraudulent reporting is a crime, and a whistleblower that reports fake/fraudulent information exposes himself to a legal fight with the falsely accused employer and to sanctions against perjury and defamation. Indeed, in the case of the IRS, the information is submitted under penalty of perjury (Internal Revenue Code, 26 U.S.C §7623 (b)(6)(C)), which is also the case with the SEC (Exchange Act, U.S.C 78u-6(h)). In the case of the FCA, should the whistleblower lie to the court, the person risks felony charges punishable by up to five years in jail for perjury and the possibility of being convicted of other crimes related to lying under oath. Further, the FCA has a reverse fee-shift for obviously frivolous claims (Engstrom 2016, p.10).

Whether fraudulent claims are a concern for the efficacy of a whistleblower reward program is to a large extent dependent on the precision of the court system. Buccirossi et al. (2017) analyze this concern within a formal economic model. They show that this argument is entirely irrelevant for countries with sufficiently precise/competent court systems, provided that strong sanctions against perjury, defamation and lying under oath are there to balance the incentives generated by large bounties. Where the judicial system makes a lot of mistakes, however, this may not be sufficient for the scheme to have crime-deterrence effects, which may make it preferable not to introduce large rewards for whistleblowers.

3. Conclusions

A lively debate is necessary and welcome on the implementation of any new policy. In the case of whistleblower rewards, however, the debate has systematically disregarded available empirical evidence and has put emphasis on claims and potential drawbacks that the US experience has shown that a competently designed program can overcome.

The European hesitation over improving whistleblower protection and introducing rewards may have partially historical roots, as both Nazi Germany and Soviet Russia relied heavily on citizens reporting on one another (Givati 2016, p.26). But the lack of voices speaking out against what the Nazis were doing should suggest the opposite, and it is not clear how these parallels are relevant when we are talking about rewarding whistleblowers in the financial offices of private corporations.

A more likely concern driving European firms' and law-makers' opposition to giving a fair evaluation to available evidence is that fostering whistleblowing can impose costs on firms. Consider the implementation of SOX, during which there was a spike in the number of companies that were privately sold and an increase in the number of companies that cancelled their plans to list on US exchanges (Jahmani and Dowling 2008, p.57). Several non-domestic publicly held companies cited the compliance costs associated with SOX as a reason for not enlisting on the US exchange (Jahmani and Dowling 2008, p.60). Instead, many of them chose to enlist on the London Stock Exchange.

Consider further the benefits of playing loose with regulation of this kind: in Germany bribe payments were tax deductible until 1999 (Berghoff 2017, p.8), and as a result German firms enjoyed a significant advantaged over responsible international competitors with respect to foreign bribery. There are thus strong incentives at the nation-state level to allow national firms to pay bribes to secure procurement contracts when firms from other countries are prevented from doing so.

There is also a concern that policymakers can be guided by special interests to an unreasonable degree in evaluating whistleblower reward laws. Several interest groups have stakes in favor and against rewards. Baloria *et al.* (2017), for example, found that opinions offered on the whistleblower provisions of the Dodd-Frank Act varied drastically depending on whether the opinion came from a corporate lobbyist or not. While 99% (75 out of 76) of individuals supported the possibility of reporting externally and not mandating internal reporting, corporate lobbyists unanimously disapproved of employees being able to go directly to the SEC (N=283) (Baloria *et al* 2017, p.59). While some have also suggested that the trial lawyer lobby is pushing in the opposite direction, in favor of rewards (Ebersole 2011, p.21).

Policymakers should also be aware of present employee incentives. Call *et al.* (2016) found, in a sample of misreporting firms, that during the years of misreporting the

amount of option grants offered to rank and file employees was significantly greater (2.49%), relative to the years before the misreporting (2.17%), and even greater relative to the period after the misreporting ended (1.67%). This is suggestive evidence that the sample of employers incentivize their employees to remain silent by providing them with option grants during the time of misreporting. Further ways employers can chill whistleblowers is by putting non-disclosure provisions in the employee's contracts (Engstrom 2016, p.18). If an employee is under the false impression that reporting wrongdoing would violate his or her employment contract, whistleblowing may be deterred.

The OSC had an admirably rigorous process before adopting their bounty regime, yet we believe that capping rewards at 5 million Canadian dollars is likely to diminish the program's effectiveness in taking on high-stakes cases. Carson *et al.* (2008) suggests that rewards be capped at between \$1 million and \$2 million and that this would "provide adequate compensation for whistle-blowing without making it an alluring temptation to gain windfall rewards." (Carson *et al.* 2008, p.374). We believe that this may be insufficient to incentivize people with quality information to come forward, as those most likely to possess information about serious wrongdoing are higher up in the organization (people who also have more to lose by blowing the whistle) (Engstrom 2016, p.24). Securities is an area where a cap at \$2 million (and, one could argue, even at \$5 million) could prove to be an insufficient incentive relative to the retaliatory measures and economic costs the whistleblower could suffer.

With an urgent need to curb fraud and corruption, and when the evidence shows that whistleblower reward programs can be effective if designed properly, it is irresponsible for important institutional actors like the FiCA and PRA to spread unsubstantiated information to the disadvantage of policies that have proven effective in combating crime and corruption.

If European countries and their regulatory and law enforcement institutions are not capable of having an open and honest debate, based on the available evidence from rigorous research and from previous experiences in other countries, then they would hardly be able to competently design and properly administer a system of rewards for whistleblowers. Following Buccirossi *et al.* (2017), in such weak institutional

environments, high-powered tools like whistleblower rewards should be avoided, as in the hands of incompetent law-makers and corrupt or captured regulators, they would likely produce more harm than good.

References

Abbink K, Wu K. (2017) Reward self-reporting to deter corruption: An experiment on mitigating collusive bribery. *Journal of Economic Behavior & Organization* 133, 256-272.

Baloria V, Marquardt C, Wiedman C (2017) A Lobbying Approach to Evaluating the Whistleblower Provisions of the Dodd-Frank Reform Act of 2010. *Contemporary Accounting Research* 34 (3).

Bank of England: Prudential Regulations Authority & Financial Conduct Authority (2014) Financial Incentives for Whistleblowers. Available at: https://www.fca.org.uk/news/financial-incentives-for-whistleblowers

Berghoff H (2017) 'Organized irresponsibility'? The Siemens corruption scandal of the 1990s and 2000s. *Business History* DOI: 10.1080/00076791.2017.1330332

Bigoni M, Le Coq C, Fridolfsson S, Spagnolo G (2012) Fines, Leniency and Rewards in Antitrust. *RAND Journal of Economics* 43(2), 368-390.

Buccirossi P, Immordno G, and Spagnolo G (2017) Whistleblower Rewards, False Reports, and Corporate Fraud. *Stockholm Institute of Transition Economics Working Paper No.*42.

Butler J, Serra D, Spagnolo G (2017) Motivating Whistleblowers. Unpublished manuscript, 2017. Available at: https://www.aeaweb.org/conference/2017/preliminary/1658

Call A.C, Kedia S, Rajgopal S (2016) Rank and file employees and the discovery of misreporting: The role of stock options. *Journal of Accounting & Economics* 62(2-3), 277-300.

Call A, Martin G, Nathan S, Wilde J (2017) Whistleblowers and Outcomes of Financial Misrepresentation Enforcement Actions. Unpublished Manuscript, Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2506418

Carson T, Verdu M, Wokutch R (2008) Whistle-Blowing for Profit: An Ethical Analysis of the Federal False Claims Act. *Journal of Business Ethics* 77(3), 361-376.

House Committee on Energy and Commerce Subcommittee on Oversight and Investigations (2015) Hearing of CEO of Volkswagen America Michael Horn.

Doyle C (2009) Qui Tam: The False Claims Act and Related Federal Statutes. Congressional Research Service Report for Congress. Available at: https://fas.org/sgp/crs/misc/R40785.pdf

Dyck A, Morse A, Zingales L (2010) Who Blows the Whistle on Corporate Fraud?. *The Journal of Finance* 65(6), 2213-2253.

Dyck A, Morse A, Zingales L (2013) How Pervasive is Corporate Fraud?. *Rotman School of Management Working Paper* no.2222608.

Earle B, Madek G (2007) The Mirage of Whistleblower Protection Under Sarbanes-Oxley: A proposal for Change. *American Business Law Journal* 44(1), 1-54.

Ebersole D (2011) Blowing the Whistle on the Dodd-Frank Whistleblower Provisions. 6 *Ohio St. Entrepen. Bus.* L. J. 123.

Engstrom D (2016) Bounty Regimes. In: Arlen J (ed) *RESEARCH HANDBOOK ON CORPORATE CRIMINAL ENFORCEMENT AND FINANCIAL MISDEALING*.

Engstrom D (2014) Whither Whistleblowing? Bounty Regimes, Regulatory Context, and the Challenge of Optimal Design. *15 Theoretical Inquiries in Law* 605.

Engstrom D (2012) Harnessing the private attorney general: evidence from qui tam litigation. *Columbia Law Review* 112(6), 1244-1325.

Ethics Resource Center (2014) National Business Ethics Survey of the U.S. Workforce. Available at: http://www.ethics.org/ecihome/research/nbes

Ewing J (2016) VM Presentation in '06 Showed How to Foil Emissions Tests. *The New York Times*. Available at: http://www.nytimes.com/2016/04/27/business/international/vw-presentation-in-06-showed-how-to-foil-emissions-tests.html?smid=tw-share&r=1

Ferziger M, Currell D (1999) Snitching for Dollars: The Economics and Public Policy of Federal Civil Bounty Programs, *University of Illinois Law Review* 1, 1141-208.

Fleischer H, Schmolke K (2012) Financial Incentives for Whistleblowers in European Capital Markets Law? Legal Policy Considerations on the Reform of the Market Abuse Regime. *ECGI – Law Working Paper* No. 189/2012.

Freed D (2017) Wells Fargo ordered to pay \$575,000, reinstate whistleblower. *Reuters*. Available at: https://www.reuters.com/article/us-wells-fargo-accounts-whistleblower-idUSKBN1A62AV

Givati Y (2016) A Theory of Whistleblower Rewards. Journal of Legal Studies 45.

G20 Anti-Corruption Action Plan (2012) Protection of Whistleblowers: Study on Whistleblower Protection Frameworks, Compendium of Best Practices and Guiding Principles for Legislation. Available at: https://www.oecd.org/g20/topics/anti-corruption/48972967.pdf

Howse R, Daniels R. J (1995) Rewarding Whistleblowers: The Costs and Benefits of an Incentive-Based Compliance Strategy. *Penn Law Departmental Papers*, 525-549. Available at: http://repository.upenn.edu/law_series/4

Hudson M (2010) Federal bureaucracy dismisses most Sarbanes-Oxley whistleblower claims. *Center for Public Integrity*. Available at: https://www.publicintegrity.org/2010/07/22/2606/federal-bureaucracy-dismisses-most-sarbanes-oxley-whistleblower-claims

Internal Revenue Service, The Whistleblower Office (2014) Annual Report to Congress. Available at: https://www.irs.gov/compliance/whistleblower-office-annual-reports

Internal Revenue Service, The Whistleblower Office (2015) Annual Report to Congress. Available at: https://www.irs.gov/compliance/whistleblower-office-annual-reports

Internal Revenue Service, The Whistleblower Office (2016) Annual Report to Congress. Available at: https://www.irs.gov/compliance/whistleblower-office-annual-reports

Internal Revenue Service (2018) History of the whistleblower informant program. Available at: https://www.irs.gov/uac/history-of-the-whilstleblower-informant-program

Internal Revenue Service (2018) Confidentiality and disclosure for whistleblowers. Available at: https://www.irs.gov/uac/confidentiality-and-disclosure-for-whistleblowers

Jahmani Y, Dowling W (2008) The Impact of Sarbanes-Oxley Act. *Journal of Business & Economic Research* 6(10).

Johannesen N, Stolper T (2017) The Deterrence Effect of Whistleblowing – An Event Study of Leaked Customer Information from Banks in Tax Havens. *Working Paper of the Max Planck Institute for Tax Law and Public Finance* No.2017-4. Available at: https://ssrn.com/abstract=2976321

Kollewe J, Ruddick G (2017) Barclays whistleblower case sparks calls for more protection. *The Guardian*. Available at: https://www.theguardian.com/business/2017/apr/11/barclays-whistleblower-bank-jes-staley-investigation

Lynch S N. (2016) Wells Fargo complaints show flaws in federal whistleblower program. *Reuters*. Available at: http://uk.reuters.com/article/uk-wells-fargo-accounts-whistleblower-idUKKCN12D2MJ

McGee S (2016) Wells Fargo's toxic culture reveals big banks' eight deadly sins. *The Guardian*. Available at: https://www.theguardian.com/business/us-money-blog/2016/sep/22/wells-fargo-scandal-john-stumpf-elizabeth-warren-senate

McLannahan B (2017) The Whistleblowers: When employees reveal wrongdoing, instead of being rewarded they are often punished. *The Financial Times*. Available at: https://ig.ft.com/special-reports/whistleblowers/?utm_content=Whistleblowers

Metzger R, Goldbaum R (1993) Retroactivity of the 1986 Amendments to the False Claims Act. *Public Contract Law Journal* 22(4), 684-705.

Moberly R (2007) Unfulfilled Expectations: An Empirical Analysis of Why Sarbanes-Oxley Whistleblowers Rarely Win. *William & Mary Law Review* 49(1).

Modesitt N (2013) Why Whistleblowers Lose: An Empirical and Qualitative Analysis of State Court Cases. *University of Kansas Law Review* 62(1), 165-194.

Miller N (2009) Strategic Leniency and Cartel Enforcement. *American Economic Review* 99(3), 750-768.

National Whistleblower Center (2014) The Importance Of Whistleblower Rewards in Combating International Corruption. Available at: https://www.whistleblowers.org/storage/docs2/anti-corruption-report.pdf

Nguyen V, Wagner L, Escamilla F (2015) OSHA Whistleblower Investigator Blows Whistle on Own Agency. *NBC Bay Area*. Available at: http://www.nbcbayarea.com/news/local/OSHA-Whistleblower-Investigator-Blows-Whistle-on-Own-Agency--293711041.html

Pacella J (2015) Bounties for bad behavior: rewarding culpable whistleblowers under the Dodd-Frank act and Internal Revenue Code. *University of Pennsylvania Journal of Business Law* 17.

Phelps M (2000) False Claims Act's Public Disclosure Bar: Defining the Line Between Parasitic and Beneficial. *CATH. U. L. REV 49*, 247.

PCW (2016) Global Economic Crime Survey. Available at: https://www.pwc.com/gx/en/economic-crime-survey/pdf/GlobalEconomicCrimeSurvey2016.pdf

Public Concern at Work (2015) Is the law protecting whistleblowers? A review of PIDA claims. Available at: http://www.pcaw.org.uk/files/PIDA%20REPORT%20FINAL.pdf

Radu P (2016) Follow the Money: A Digital Guide for Tracking Corruption. International Center for Journalists, Romanian Centre for Investigative Journalism. Available at: https://www.icfj.org/sites/default/files/Follow Money.pdf

Regulation (EU) No 596/2014 of the European Parliament and the Council of 16 April (2014) On market abuse (market abuse regulation). *Official Journal of the European Union* L173/1., Section (74).

Rose A (2014) Better Bounty Hunting: How the SEC's New Whistleblower Program Changes the Securities Fraud Class Action Debate. *Northwestern University Law Review* 108(4).

Rothschild M, Miethe T (1999) Whistleblower Disclosures and Management Retaliation. *Work and Occupations* 26(1),120-21.

Securities and Exchange Commission (2015) Annual Report to Congress 2015. Available at: https://www.sec.gov/whistleblower/reportspubs/annual-reports/owb-annual-report-2015.pdf

Stephan A (2014) Is the Korean Innovation of Individual Informant Rewards a Viable Cartel Detection Tool?. Forthcoming Draft of Book Chapter in: T Cheng, B Ong, and S Marco Colino, Cartels in Asia (Kluwer 2014), CCP Working Paper 14-3.

Sullivan K, Ball K, Klebolt S (2011) The Potential Impact of Adding a Whistleblower Reward Provision to ACPERA. *the antitrust source*. Available at: https://www.americanbar.org/content/dam/aba/publishing/antitrust_source/oct11_sulliv an 10 24f.authcheckdam.pdf

Transparency International (2013) Whistleblowing in Europe, Legal Protections for Whistleblowers in the EU.

US Department of Labor (2017) Whistleblower Investigation Data Factsheet. Available at: https://www.whistleblowers.gov/factsheets page.html#stats

US Department of Justice, Civil Division (2015) Fraud Statistics. Available at https://www.falseclaimsact.com/wp-content/uploads/2016/05/FCA-Statistics-Update.pdf

US Sen. Grassley (2009). Rose Garden ceremony for whistleblowers release. Available at: http://www.whistleblowers.org/resources/press-room/in-the-news/805

Vega M (2012) Beyond Incentives: Making Corporate Whistleblowing Moral in the New Era of Dodd-Frank Act 'Bounty Hunting', *Connecticut Law Review* 45.

Ventry D (2008) Whistleblowers and *Qui Tam* for Tax. *Tax Lawyer* 61(2).

Vogel R (1992) Eligibility Requirements for Relators under *Qui Tam* Provisions of the False Claims Act. *Public Contract Law Journal*, pp.593-619.

Wilde J (2017) The Deterrent Effect of Employee Whistleblowing on Firms' Financial Misreporting and Tax Aggressiveness. *The Accounting Review* 92(5), pp.247-280.

Wolfe S, Worth M, Dreyfus S, Brown A (2014) Whistleblower Protection Laws in G20 Countries, priorities for Action. Available at https://blueprintforfreespeech.net/wp-content/uploads/2015/10/Breaking-the-Silence-Strengths-and-Weaknesses-in-G20-Whistleblower-Protection-Laws1.pdf

Notes

_

¹ Bank of England, PRA and FiCA (2014). They claim, among other things, that there is no evidence that rewards may increase the quantity and quality of claims. However, several rigorous studies were publicly available at the time, making this claim dubious; see, for example, Dyck *et al.* (2010), Engstrom (2012, 2014). Experimental evidence was also available: Bigoni *et al.* (2012), and Abbink and Wu (2017) but available as a working paper since 2013. Data from the IRS and the SEC, as well as data on the FCA, stands in contrast to this claim as well.

² For a discussion of the European context, see Fleischer and Schmolke (2012).

³ It is notoriously hard to infer from observed cases the total amount of cases for crimes like cartels, fraud and corruption where the victims are not aware of the crime if it is not detected by law enforcers. Miller (2009) provides a way to identify deterrence effects of a policy change from detected or observed cases; see also Perrotta *et al.* (2015).

⁴ A case could be made that whistleblowers are viewed more favorably today than two or three decades ago, and this could have affected the social acceptability of whistleblowing, in turn making employees more willing to report wrongdoing (Pacella, 2015, p.346). We have moved from a culture exemplified by Senator Harry Reid's reference to the IRS whistleblower program as the "Rewards for Rats Program", to a culture that recognizes the social value of whistleblowing.