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**Corporate Monitors:
Overcoming the Classification Failure of Targeted Monitoring Systems**

Sharon Oded*

Targeted monitoring systems have been embraced by many law and economics scholars, demonstrating that regulatory monitoring that prioritizes targets may efficiently increase the level of compliance. Only a few scholars, however, have paused to consider what criteria enforcement authorities should use to classify regulatees into differently-monitored groups. In this paper, I highlight the weaknesses of the classification criteria considered by the scholarly literature to date. Those criteria include (i) violation records, (ii) implementation of compliance programs, and (iii) the self-reporting of violations. I also develop a theoretical model that underlies an improved framework of targeted monitoring. The proposed framework is based on the appointment of independent corporate monitors as a signaling mechanism that creates an efficient targeted monitoring system. The proposed framework, which is applicable in a wide range of regulatory areas, enlists more corporations to become proactive in the battle against misconduct, while economizing the overall costs of public enforcement.

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I. INTRODUCTION

Inducing regulatory compliance has never been an easy task for regulatory enforcement authorities. In determining their policies, many enforcement authorities rely on the *rationality* of corporate regulatees as a fundamental assumption. This assumption is normally taken to imply that corporations comply with regulations whenever the expected sanction associated with violating the regulation is higher than the cost of compliance.¹ Given this analytical framework, regulatory enforcement authorities face the challenging task of making the threat of regulatory sanctions credible. They are required to monitor regulatees in a manner that secures a sufficiently high risk of sanctions, thus making compliance preferable to violation.² However, monitoring is often costly, and enforcement resources are seldom adequate to inspect more than a fraction of potential perpetrators.³ Therefore, many regulatory enforcement authorities have sought to improve their monitoring technology by, inter alia, departing from a random, unified monitoring policy and adopting more tailored policies that take into account meaningful differences across regulatees.

Targeted monitoring is a common strategy followed by diverse enforcement

1. See, e.g., Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169 (1968); George J. Stigler, *The Optimum Enforcement of Laws*, 78 J. POL. ECON. 526 (1970); Anthony G. Heyes, *Making Things Stick: Enforcement and Compliance*, 14 OXFORD REV. ECON. POL'Y 50 (1998); A. Mitchell Polinsky & Steven Shavell, *The Economic Theory of Public Enforcement of Law*, 38 J. ECON. LIT. 45 (2000); David B. Spence, *The Shadow of the Rational Polluter: Rethinking the Role of Rational Actor Models in Environmental Law*, 89 CALIF. L. REV. 917 (2001).

2. See Anthony Ogus, *Enforcing Regulation: Do We Need the Criminal Law?*, in NEW PERSPECTIVES ON ECONOMIC CRIME 42 (Hans Sjogren & Goran Skogh eds., 2004).

3. See Becker, *supra* note 1, at 169; Stigler, *supra* note 1, at 526; A. Mitchell Polinsky & Steven Shavell, *The Optimal Tradeoff between the Probability and Magnitude of Fines*, 69 AM. ECON. REV. 880 (1979); John T. Scholz, *Voluntary Compliance and Regulatory Enforcement*, 6 LAW & POL'Y 385 (1984); Ilya R. Segal & Michael D. Whinston, *Public Vs. Private Enforcement of Antitrust Law: A Survey*, 28 EUR. COMPETITION L. REV. 306 (2007); Janet A. Gilboy, *Compelled Third-Party Participation in the Regulatory Process: Legal Duties, Culture, and Noncompliance*, 20 LAW & POL'Y 135 (1998).

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authorities to tailor their monitoring efforts to different regulatees. The basic idea of targeted monitoring is to allow enforcement authorities to utilize their limited monitoring resources selectively and thus more efficiently. Authorities that employ targeted monitoring use diverse criteria to classify regulatees into different groups, each of which is subject to a unique level of monitoring. Following this logic, compliant corporations representing a low risk of non-compliance would be classified into a group that is subject to a lower level of monitoring than would recalcitrant corporations representing a high risk of non-compliance. Such classifications are commonly used by environmental protection agencies, explicitly⁴ or implicitly.⁵

Targeted monitoring systems have been embraced by law and economics scholars, who have sought to demonstrate that monitoring systems based on a targeted monitoring strategy can efficiently increase the level of compliance. In the most influential law and economics study on targeted monitoring, Harrington analyzes a targeted enforcement framework under which an enforcement authority relies on regulatee violation records to divide a regulated industry into “good apples” and “bad apples.”⁶ The latter group is subject to more frequent inspections. Over time, depending on the outcomes of audits, regulatees may be transferred from one group to another. This targeted monitoring system is shown to augment regulatees’ motivations for compliance beyond the avoidance of immediate sanctions, whereas non-compliance threatens greater scrutiny in the future. Therefore, such a system leverages enforcement resources and produces a higher level of compliance, compared to the one produced by the traditional, non-targeted monitoring systems. Harrington’s analytical framework served as fertile ground for many subsequent scholars who extended the analysis and proposed alternative structures of targeted monitoring systems.⁷

4. See, e.g., Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control), OJ L 334, p. 17. (17.2.2010), according to which plants' compliance records are taken into account in determining the frequency of inspections. See also Wayne B. Gray & Mary E. Deily, *Compliance and Enforcement: Air Pollution Regulation in the U.S. Steel Industry*, 31 J. ENVTL. ECON. & MGMT. 96 (1996). The study shows a clear link between Plant compliance with air pollution regulation and the level of enforcement applied by the environmental protection authority. In particular, steel plants that were evaluated as compliant players faced fewer enforcement activities than did others. See also John T. Scholz, *Cooperation, Deterrence, and the Ecology of Regulatory Enforcement*, 18 LAW & SOC'Y. REV. 179, 212 (1984); John T. Scholz, *Cooperative Regulatory Enforcement and the Politics of Administrative Effectiveness*, 85 AM. POL. SCI. REV. 115 (1991).

5. See, e.g., Michael W. Toffel & Jodi L. Short, *Coming Clean and Cleaning Up: Does Voluntary Self-Reporting Indicate Effective Self-Policing?* 54 J. LAW & ECON. 609 (2011). The study provides empirical evidence according to which, in contrast to its officially stated monitoring policy, the U.S. Environmental Protection Agency (EPA) reduces its scrutiny over facilities that recently stepped forward and self-reported their own regulatory violations.

6. See Winston Harrington, *Enforcement Leverage when Penalties are Restricted*, 37 J. PUB. ECON. 29 (1988).

7. See, e.g., Joseph Greenberg, *Avoiding Tax Avoidance: A (Repeated) Game-Theoretic Approach*,

Few, however, paused to consider the criteria that enforcement authorities use to classify regulatees into differently-monitored groups. In addition to the criterion originally proposed in Harrington (1988)—*i.e.*, regulatee violation records—the scholarly literature also considered two alternative criteria for targeted monitoring systems: the *implementation of compliance programs* and the *self-reporting of violations*.⁸ A close look into these criteria raises substantial doubts regarding their ability to facilitate an efficient targeted monitoring system.

This paper highlights the weaknesses of the criteria for classification of regulatees into differently-monitored groups suggested by the scholarly literature to date, and develops a theoretical model that underlies a new framework of targeted monitoring systems. The proposed framework is based on a credible classification criterion: that is, the appointment of independent corporate monitoring firms (CMs) as a signaling mechanism that facilitates an efficient targeted monitoring system. Specifically, the suggested framework introduces a voluntary program, under which corporations that voluntarily hire CMs to implement their self-policing activities earn a reduction in the level of regulatory scrutiny, as well as a “label” that is translated into a reputational asset. This framework enhances the private benefit gained by corporations that hire CMs and reduces the public monitoring of such corporations. Consequently, it enlists more corporations to become proactive in the battle against misconduct, while economizing the overall costs of public enforcement.

The proposal to establish a targeted monitoring system that is based on a third-party enforcement mechanism is not entirely new. Many European environmental authorities, including some German Länder (states), Portugal, Austria, Finland, and the UK, employ such systems by offering regulatory relief in the form of reduced regulatory inspection frequencies to corporations that adopted a certified Environmental Management System (EMS).⁹ In addition, in

32 J. ECON. THEORY 1 (1984); Harrington, *supra* note 6, at 29; Clifford S. Russell, *Game Models for Structuring Monitoring and Enforcement Systems*, 4 NAT. RESOURCES MODELLING. 143 (1990); Jon D. Harford & Winston Harrington, *A Reconsideration of Enforcement Leverage when Penalties are Restricted*, 45 J. PUB. ECON. 391 (1991); Jon D. Harford, *Measurement Error and State-Dependent Pollution Control Enforcement*, 21 J. ENVTL. ECON. & MGMT. 67 (1991); Jon D. Harford, *Improving on the Steady State in the State-Dependent Enforcement of Pollution Control*, 24 J. ENVTL. ECON. & MGMT. 133 (1993); Mark Raymond, *Enforcement Leverage when Penalties are Restricted: A Reconsideration Under Asymmetric Information*, 73 J. PUB. ECON. 289 (1999); Lana L. Friesen, *Targeting Enforcement to Improve Compliance with Environmental Regulations*, 46 J. ENVTL. ECON. & MGMT. 72 (2003).

8. The alternative classification criteria are discussed in Section II below.

9. See generally B. WEBB ET AL., *IMPROVING BUSINESS ENVIRONMENTAL PERFORMANCE: CORPORATE INCENTIVES AND DRIVERS IN DECISION MAKING* (2006); K. Dahlström et al., *Environmental Management Systems and Company Performance: Assessing the Case for Extending Risk-Based Regulation*, 13 EUR. ENV'T 187 (2003); ECORYS, *STUDY ON INCENTIVES DRIVING IMPROVEMENT OF*

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many European jurisdictions, including Sweden, Austria, Denmark, some German Länder (states), France, Italy, Netherlands, the UK, and Spain, the adoption of certified EMSs results in reduced monitoring or reporting requirements.¹⁰ Yet, unlike many of the prevalent policies, the current proposal is designed to account for the risk of under-deterrence that may result from such regulatory relief. It considers that a reduction in the probability of detection may weaken regulatees' incentive to comply, and therefore secures an optimal level of deterrence by leveraging the severity of fines imposed upon regulatees that opt in to the voluntary program. As such, the proposed structure offers a scientific analytical framework for the analysis and the further improvement of the prevalent targeted monitoring policies.

This paper is organized as follows: in Section II, I present the major challenges involved with the classification of corporate regulatees into differently monitored groups as part of a targeted monitoring system, and I examine the major classification criteria proposed in the existing literature. In Section III, I develop a theoretical model of targeted monitoring that utilizes both liability threats and reputational concerns in inducing corporate proactive compliance. I then discuss in Section IV the welfare implications of the proposed framework, paying particular attention to the credibility of CMs. In Section V, I propose a possible extension of the suggested framework, dealing with the rare state of affairs in which fines for regulatory violations are set at the level of the total value of the corporate asset. Finally, I summarize in Section VI how authorities can cope with the challenge of regulatee classification in targeted monitoring systems by using the voluntary appointment of CMs as a signaling mechanism.

II. THE CHALLENGE OF CLASSIFYING REGULATEES

Regulatees' motivation to comply with legal orders depends on their expected liability, which is composed of the product of the *probability of detection* faced by regulatees and the *sanction* (e.g., fines) imposed on regulatees upon detection of a violation. In fact, law and economics scholarly literature showed long ago that to efficiently induce compliance a regulatee's expected liability should be set at the level of the total social cost generated by the misconduct.¹¹ Once the applicable sanction is set, enforcement authorities are required to exert monitoring efforts at a level that secures an adequate probability of detection. To this end, traditional monitoring policies employ random monitoring techniques, according to which regulatees are randomly selected for in-

ENVIRONMENTAL PERFORMANCE OF COMPANIES (2012), available at http://ec.europa.eu/environment/pubs/pdf/Incentives_Ecorys.pdf.

10. See Dahlström et al., *supra* note 9, at 187, 189.

11. See Stigler, *supra* note 1, at 533.

spectations from the common pool of regulatees. Under such a system, all regulatees face a similar probability of being inspected by enforcement authorities.

The scholarly literature analyzing regulatory monitoring systems has shown that to improve the overall efficiency of these systems, enforcement policies may adopt a *targeted monitoring system*, under which different levels of monitoring efforts are employed with regard to different groups of regulatees.¹² Commentators have shown that a targeted monitoring system, which prioritizes regulatee targets and allocates monitoring resources according to effectiveness considerations, may improve the overall efficiency of the regulatory system. To this end, a targeted monitoring system is required to classify regulatees into different groups, each of which is subject to a particular level of monitoring.

What should the criteria be for such regulatee classification into differently monitored groups? The scholarly literature analyzing targeted monitoring systems has focused attention on a handful of alternative criteria for regulatee classification. One central stream in the scholarly literature suggests that targeted monitoring systems should be based on *regulatee violation* records.¹³ In other words, these studies suggest that enforcement responses should correspond to the regulatees' performance. This means that where monitoring responses are concerned, those regulatees whose violation records are clean should be subject to softer monitoring than regulatees with a history of regulatory violations.¹⁴ As the argument goes, such a regime leverages the benefit of regulatory compliance while increasing the cost of violations. However, an over-reliance on violation records may be misleading. At the outset, violation records include information only about *detected* violations, and therefore may not provide a reliable indication of the level of corporate compliance or of the overall level of corporate law-breaking. Moreover, violation records usually do not capture crucial differences among regulatees, including their activity level, their risk exposure to regulatory violations, and the monitoring technology available to each of them.¹⁵ Consequently, it is doubtful whether such records may facilitate a credible classification of different regulatees.

12. See, e.g., Karine Nyborg & Kjetil Telle, *Firms' Compliance to Environmental Regulation: Is There Really a Paradox?* 35 ENVTL. RESOURCES ECON. 1 (2006); Scholz, *supra* note 3, at 396.

13. See, e.g., Harrington, *supra* note 6, at 29; Scholz, *supra* note 4, at 212; Scholz, *supra* note 4, at 119.

14. See, e.g., Scholz, *supra* note 4, at 179; Scholz, *supra* note 3, at 385; John T. Scholz, *Can Government Facilitate Cooperation? An Informational Model of OSHA Enforcement*, 41 AM. J. POL. SCI. 693 (1997); John T. Scholz, *Enforcement Policy and Corporate Misconduct: The Changing Perspective of Deterrence Theory*, 60 LAW & CONTEMP. PROBS. 253 (1997).

15. See, e.g., Scholz, *supra* note 4, at 179; Scholz, *supra* note 3, at 385; Scholz, *supra* note 4, at 115; Scholz, *supra* note 14, at 693.

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An alternative criterion for the classification of regulatees could, theoretically, be the implementation by corporations of formal *compliance programs*. According to this criterion, which corresponds to various policy proposals made by legal scholars, corporations that adopt official compliance programs are subject to softer regulatory scrutiny than corporations that do not adopt such systems.¹⁶ The idea behind this criterion is that the adoption of compliance programs may signal the corporations' commitment to compliance. Therefore, it may be desirable for corporations that have not signaled their commitment to compliance by adopting compliance programs to undergo closer monitoring than corporations that adopt such programs. However, the adoption of compliance programs may not always credibly signal corporations' genuine commitment to compliance. The scholarly literature has considered that corporations may adopt "window-dressing" programs, and that enforcement authorities are not always able to distinguish genuine compliance programs from "sham" ones.¹⁷ Therefore, the mere fact that corporations adopt compliance programs cannot provide a solid ground for a reduction in the regulatory scrutiny of these corporations.

Last, another criterion that has been suggested in the scholarly literature is *corporate self-reporting*. Stafford, for instance, has suggested that the self-reporting of regulatory violations could be used in determining regulatory monitoring efforts.¹⁸ In Stafford's model, self-reporting corporations are perceived as part of a "good" corporations group, which is subject to reduced monitoring, while other corporations are perceived as part of a "bad" corporations group, which is subject to closer scrutiny.¹⁹ A recent empirical study provides support

16. Various legal scholars have proposed that the adoption of a compliance management system or other adequate internal enforcement mechanisms should be taken into consideration when applying enforcement measures against corporations. See, e.g., William S. Laufer, *Integrity, Diligence, and the Limits of Good Corporate Citizenship*, 34 AM. BUS. L. J. 157 (1996); Andrew Weissmann & David Newman, *Rethinking Criminal Corporate Liability*, 82 IND. L. J. 411 (2007); Andrew Weissmann, *A New Approach to Corporate Criminal Liability*, 44 AM. CRIM. L. REV. 1319 (2007); Harvey L. Pitt & Karl A. Groskaufmanis, *Minimizing Corporate Civil and Criminal Liability: A Second Look at Corporate Codes of Conduct*, 78 GEO. L. J. 1559 (1990); Kevin B. Huff, *The Role of Corporate Compliance Programs in Determining Corporate Criminal Liability: A Suggested Approach*, 96 COLUM. L. REV. 1252 (1996). These studies chiefly concentrate on the impact of internal enforcement measures on corporations' exposure to liability. Policies of a similar spirit could, theoretically, apply with respect to monitoring systems.

17. See, e.g., Sharon Oded, *Inducing Corporate Compliance: A Compound Corporate Liability Regime*, 31 INT'L REV. L. & ECON. 283 (2011); Kimberly D. Krawiec, *Organization Misconduct: Beyond the Principal Agent Model*, 32 FLA. ST. U. L. REV. 571 (2005); Kimberly D. Krawiec, *Cosmetic Compliance and the Failure of Negotiated Governance*, 81 WASH. U. L. REV. 487 (2003).

18. See Sarah L. Stafford, *Self-Policing in a Targeted Enforcement Regime*, 74 S. ECON. J. 934 (2008). This study resembles the model suggested by Harrington, *supra* note 6, at 29-53, while changing the mechanism of regulatee classification.

19. See *id.* at 936. Note that the terminology used by Stafford's study is slightly different from the one used in the current study. The term "self-policing" is used to denote "a situation in which a facility

for the self-reporting criterion— in the study, corporations that had voluntarily disclosed regulatory violations were found to improve their regulatory performance in the subsequent period.²⁰ Hence, Toffel and Short propose that self-reporting may be used as a reliable tool for identifying voluntary self-policing efforts of regulatees, and subsequently classifying regulatees into appropriate differently-monitored groups. A closer look at the self-reporting criterion, however, reveals that it is vulnerable to opportunistic behavior by corporations. Research has shown that corporations may manipulate the regulatory agency by “cherry picking” violations to report.²¹ Hence, targeted monitoring systems that reduce the scrutiny of self-reporting regulatees may encourage corporations to report current minor violations in order to benefit from a reduced scrutiny regarding severe violations in the near future.²²

Targeted monitoring systems may leverage enforcement resources and produce a higher level of compliance compared to that commonly produced by the traditional, non-targeted monitoring systems.²³ Nevertheless, the success of a targeted monitoring system is greatly contingent upon the robustness of the classification of regulatees. It seems that the scholarly polemic still misses a sound mechanism for regulatee classification. In what follows, I propose to fill this gap by establishing a new regulatory monitoring regime structure that utilizes the appointment of CMs as a credible classification mechanism. Such a regime, I believe, encourages more corporations to become proactive in ensuring their compliance, while at the same time economizing public monitoring expenditures.

III. THE PROPOSED FRAMEWORK

After previously describing the regulatee classification challenge involved in the implementation of regulatory targeted monitoring systems, I propose in

voluntarily notifies authorities that it has violated a regulation”—an activity termed “self-reporting” in this study.

20. See Toffel & Short, *supra* note 5.

21. See Alexander A. Pfaff & William Sanchirico, *Big Field, Small Potatoes: An Empirical Assessment of EPA's Self-Audit Policy*, 23 J. POL'Y ANALYSIS & MGMT. 415 (2004).

22. It should be noted that the empirical evidence discussed above, according to which corporations that have voluntarily disclosed regulatory violations were found to improve their regulatory compliance in the subsequent period, is related to compliance with environmental regulatory requirements enforced through the Audit Policy of the U.S. Environmental Protection Agency (EPA). As Toffel & Short acknowledge, however, the EPA has explicitly clarified that self-reporting actions do not affect future EPA monitoring of self-reporting corporations. See Toffel & Short, *supra* note 5, at 11. It is questionable whether the findings of the Toffel & Short study would hold if the EPA's stated policy explicitly announced a scrutiny reduction in all self-reporting corporations.

23. See Harrington, *supra* note 6, at 29.

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this section an alternative structure for a regulatory targeted monitoring system – a third-party-based system that hinges upon the appointment of qualified, stand-alone CMs by self-policing corporations. I believe this system efficiently induces corporate proactive compliance.

A. The Building Blocks

The basic idea regarding the proposed framework involves delegating certain regulatory monitoring tasks from enforcement authorities to independent professional firms that can be trusted as corporate “watchdogs.” Specifically, the delegation of monitoring powers under the proposed system is done through a voluntary program that sustains corporate regulatees’ expected liability but that changes the default combination of the *probability of detection* and *finest* imposed on participating corporations.²⁴ Under the proposed system, corporations are given the opportunity to opt in to a voluntary program in which they are exposed to less certain but more severe liability threats; in return, a reputational asset is conferred upon the corporations as program participants. Specifically, this proposed framework would introduce a voluntary program in which regulators require participating corporations to hire CMs to implement their self-policing activity. In return, these corporations gain a *reduction in regulatory scrutiny*, as well as a *program label*.²⁵ Such a label may become an important asset in bolstering the corporation’s reputation, since it shows corporate customers, potential trading partners, investors, and other stakeholders that the incumbent corporation is genuinely committed to proactive compliance.²⁶ To prevent the program from resulting in under-deterrence, participation in the program should subject corporate regulatees to higher sanctions that compensate for the reduction in expected corporate liability due to their reduced scrutiny.

24. Corporate regulatees are assumed to be risk neutral. The risk neutrality of business corporations is a common assumption in the scholarly literature, due to corporations’ ability to diversify their risks. See, e.g., Roland Kirstein, *Risk Neutrality and Strategic Insurance*, 25 GENEVA PAPERS ON RISK & INS.: ISSUES & PRAC. 251 (2000); Russell, *supra* note 7, at 143.

25. A somewhat similar label is commonly used by voluntary programs aiming to improve corporate environmental performance. A notable example is the “EU Eco-Management and Audit Scheme (EMAS)”, which is a voluntary program administered by the European Commission Directorate-General (DG) Environment to assist corporations to evaluate, report, and improve their environmental performance. As a reward for voluntary participation in EMAS, corporations are entitled to use the “EMAS logo”. See <http://ec.europa.eu/environment/emas/> (last visited Jan 23, 2013).

26. For the central role of reputation in inducing proactive compliance, see, e.g., Vikramaditya S. Khanna & Timothy L. Dickinson, *The Corporate Monitor: The New Corporate Czar*, 105 MICH. L. REV. 1721, 1713-56 (2007). According to these authors, the wish to avoid reputational losses may be significant enough to motivate corporations and executives to accept a DPA/NPA and the appointment of corporate monitors. See also Pitt & Groskaufmanis, *supra* note 16, at 1559: “[...] in recent times, overwhelming numbers of public companies have adopted corporate codes of conduct, often either to stay out of news headlines or to extricate themselves from such headlines”.

CMs comprise a key feature of the proposed framework. This framework utilizes CMs as a signaling mechanism that facilitates an efficient targeted monitoring system. The proposed framework relies on the existence of a market for corporate monitoring services, in which qualified, stand-alone CMs compete in providing regulatory monitoring services.²⁷ Similar markets exist, for instance, in the context of EMSs that are examined by independent monitors before they are certified with ISO 14001.²⁸ To ensure the capacity, proper selection, and credibility of CMs, the regulatory authorities ought to establish a public list of CMs whose qualifications and trustworthiness are verified.²⁹ Furthermore, to strengthen CM independence, the list of CMs should include only corporate monitoring firms set up to provide services to a diversified portfolio of corporate clients. This list would be comprised of a core of monitoring professionals from which corporations wishing to opt in to the voluntary program may choose their CMs. In practical terms, the appointment of CMs would mean that the administration of self-policing operations within corporations had been

27. Such a market in which third-party enforcers compete in providing compliance services was originally developed and theoretically analyzed in Ronald J. Gilson & Reinier Kraakman, *Reinventing the Outside Director: An Agenda for Institutional Investors*, 43 STAN. L. REV. 863 (1991). The study tackles the familiar, but nonetheless unsolved, agency problem between institutional investors and the management of companies in which they invest – a problem that results from the institutional investors’ lack of expertise in monitoring corporate managers. After exploring the imperfections of contemporary mechanisms used to overcome the agency problem – namely, the market for corporate control, shareholder advisory committees, and outside directors – the authors suggest an innovative mechanism that is centered upon the establishment of a *market of independent expert outside directors* that provides institutional investors with compliance monitoring services. The study shows that such a market may comprise a valuable mechanism that strengthens corporate governance. According to the suggested framework, such experts are not tied to particular companies, but monitor the operation of an assortment of corporations to which they were assigned by institutional investors. *Id.* at 880.

28. See David Morrow & Dennis Rondinelli, *Adopting Corporate Environmental Management Systems: Motivations and Results of ISO 14001 and EMAS Certification*, 20 EUR. MGMT. J. 159 (2002).

29. This proposal is inspired by various bills recently presented to the U.S. Congress, dealing with the use of CMs in the context of DPAs and NPAs. See, e.g., Accountability in Deferred Prosecution Act of 2009, H.R. 1947, 111th Cong. (2009), available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111congress_bills&docid=f:h1947ih.txt.pdf (last visited Jan 23, 2013). This bill was referred to the House subcommittee Commercial and Administrative Law on May 26, 2009. See WASHINGTON WATCH, http://www.washingtonwatch.com/bills/show/111_HR_1947.html#toc1 (last visited Jan 23, 2013). The bill requires the Attorney General to create a publicly available “national list of possible corporate monitors.” Such a list shall include “organizations and individuals who have the expertise and specialized skills necessary to serve as independent monitors.” The framework suggested here resembles the “market for outside directors” developed in Gilson & Kraakman, *supra* note 27, at 863-906. It proposes the creation of a pool of qualified corporate monitors that paves the way for a new *market for corporate compliance services*. Such a market may be institutionalized through a central clearinghouse – the regulatory agency or a professional association – that is financed through annual fees collected from the corporations that choose to appoint CMs. See *id.*, at 886-88. For similar frameworks in which non-governmental organizations maintain and regulate the core of professionals, such as auditors, securities analysts, and attorneys, see John C. Coffee Jr., *The Attorney as Gatekeeper: An Agenda for the SEC*, 103 COLUM. L. REV. 1302-03 (2003).

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outsourced to independent professionals. Such operations may include continuous risk assessment, the overhaul of the corporation's governance structure, and the creation and reform of internal standards, manuals, and ethical codes. They could also include employee training and monitoring, investigation of red flags, and the reporting of material up-the-ladder regulatory violations among corporate clients.

From a social-welfare perspective, optimal deterrence is reached when the expected liability faced by regulatees equals the total social costs produced by their misconduct. Achieving a higher probability of detection requires increased enforcement expenditures, while the imposition of larger cash fines is not associated with higher fine collection costs. Therefore, a more socially efficient enforcement policy would allocate resources to make sanctions less certain (*i.e.*, lower the probability of detection) but more severe (*i.e.*, impose larger fines).³⁰ In determining the severity of fines, though, policymakers must ensure that such fines run as high as the total value of regulatees' assets and no higher, since larger fines would have no additional deterrent effect above that level.³¹ In reality, however, the need to secure marginal deterrence requires regulators to develop an escalating schedule of sanctions that reflects the severity of violations from a social perspective.³² Accordingly, in this part of the analysis, the default fine imposed against regulatory violations is assumed to be smaller than the total value of the regulatees' assets.³³ This assumption is relaxed in Section V below.

30. See Becker, *supra* note 1, at 169; ROBERT COOTER & THOMAS ULEN, LAW AND ECONOMICS (5th ed. 2007); Gary S. Becker, *Nobel Lecture: The Economic Way of Looking at Behavior*, 101 J. POL. ECON. 385, 390-91 (1993): "Total public spending on fighting crime can be reduced, while keeping the mathematically expected punishment unchanged, by off-setting a cut in expenditures on catching criminals with a sufficient increase in the punishment of those convicted. However, risk-preferring individuals are more deterred from crime by a higher probability of conviction than by severe punishments. Therefore, optimal behavior by the state would balance the reduced spending on police and courts from lowering the probability of conviction against the preference of risk-preferring criminals for a lesser certainty of punishment. The state should also consider the likelihood of punishing innocent persons". See also, Anthony G. Heyes, *Cutting Environmental Penalties to Protect the Environment*, 60 J. POL. ECON. 251 (1996); Harrington, *supra* note 6, at 29.

31. See Steven Shavell, *The Judgment Proof Problem*, 6 INT'L REV. L. & ECON. 45 (1986); Heyes, *supra* note 1, at 1232.

32. Marginal deterrence refers to the argument made by Stigler in "The Optimum Enforcement of Laws", 526-36, *supra* note 1. According to Stigler, imposing similar sanctions against various violations that differ from each other in the resulting social harm may distort would-be offenders' decisions and induce them to commit crimes that may result in an even greater social harm. See also Steven Shavell, *A Note on Marginal Deterrence*, 12 INT'L REV. L. & ECON. 345 (1992); Dilip Mookherjee & I. P. L. Png, *Marginal Deterrence in Enforcement of Law*, 102 J. POL. ECON. 1039 (1994); David Friedman & William Sjoström, *Hanged for a Sheep: The Economics of Marginal Deterrence*, 22 J. LEGAL STUD. 345 (1993); Becker, *supra* note 1, at 169.

33. This assumption seems to reasonably capture a realistic state of the world, and it corresponds with the theoretical law and economics literature, according to which various considerations such as marginal deterrence may justify actual sanctions being set at a level that is lower than the maximum. See

B. Self-Policing Motivation under the Proposed Framework

To illustrate the application of the proposed framework, suppose that when corporations take no self-policing actions, the probability that corporate employees engage in regulatory violations (denoted “ q ”) is 0.8.³⁴ In this case, the total social harm (denoted “ h ”) generated by the misconduct is \$500, and the default probability of detection (denoted “ p^0 ”) is 0.5. Under these circumstances, an optimal fine for a detected violation (denoted “ l^0 ”) is \$1,000.³⁵ Hence, the payoff of corporations not engaging in self-policing activities (denoted “ U^{NSP} ”) is presented by the following expression: $U^{NSP} = -(l^0 \cdot p^0 \cdot q^0)$, which is -\$400.

In order to simplify the analysis, I assume that the cost of a genuine self-policing scheme (denoted “ c ”) is \$200 across all corporations, whether implemented internally or outsourced, and that corporations differ in the productivity of their self-policing schemes. **Table 1** below presents the reduced probability of misconduct resulting from self-policing activities undertaken by three types of corporations that differ in the probability that corporate employees will engage in violations, along with the payoffs expected to be obtained by these corporations if engaged in self-policing (denoted “ U_i^{SP} ”). Note that the payoff when corporations do not engage in self-policing activities, $U^{NSP} = -\$400$, presents the benchmark payoff for corporations’ decisions as to whether they should self-police. Provided that the payoff when corporations do not self-police is -\$400, corporations will engage in self-policing only if their payoffs increase by doing so. Put differently, given the cost of self-policing activities, corporations engage in self-policing only if these self-policing activities are productive enough to reduce the probability of misconduct to at least 0.4.³⁶ Accordingly, as shown in Table 1, given these circumstances, only Type-1 corporations engage in self-policing.

supra note 32 and the related main text. See also Polinsky & Shavell, *supra* note 3, at 880: “Individuals are rarely if ever fined an amount approximating their wealth, especially for activities which impose relatively small external costs”.

34. An employee violation may be deliberate or inadvertent.

35. The actual sanction is set at the level at which corporate expected liability ($\$1000 \times 0.5$) equals the total social harm ($\$500$). For simplification purposes, I assume that the social harm represents the total social costs of the violation.

36. If as a result of self-policing activities, the probability of misconduct is reduced to 0.4, and a corporation's payoff is $U_i^{SP} = -(l^0 \cdot p^0 \cdot q_1 + c) = -(1000 \cdot 0.5 \cdot 0.4 + 200) = -400$. In this case, corporations are indifferent as to whether to undertake self-policing activities.

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TABLE 1: CORPORATIONS' SELF-POLICING DECISIONS

	Q PROBABILITY OF VIOLATION (WHEN CORPORATIONS SELF-POLICE)	CORPORATE PAYOFF (WHEN CORPORATIONS SELF-POLICE) [\$]	WOULD CORPORATIONS SELF-POLICE? [\$]
TYPE-1	$q_1 = 0.3$	$U_1^{SP} = -(l^0 \cdot p^0 \cdot q_1 + c)$ $= -(1000 \cdot 0.5 \cdot 0.3 + 200) = -350$	Yes (-350 > -400)
TYPE-2	$q_2 = 0.6$	$U_2^{SP} = -(l^0 \cdot p^0 \cdot q_2 + c)$ $= -(1000 \cdot 0.5 \cdot 0.6 + 200) = -500$	No (-500 < -400)
TYPE-3	$q_3 = 0.7$	$U_3^{SP} = -(l^0 \cdot p^0 \cdot q_3 + c)$ $= -(1000 \cdot 0.5 \cdot 0.7 + 200) = -550$	No (-550 < -400)

When the proposed framework is introduced, corporations are offered the opportunity to hire CMs in return for a reduction in regulatory scrutiny and for the program label. Although the reduction in corporate expected liability due to the reduced scrutiny is eventually offset by the higher fines imposed on participating corporations, such corporations benefit from the reputational asset embedded in the program label. Hence, the proposed framework leverages the benefit gained by corporations engaging in self-policing activities. To refer to the example provided above, suppose that a reduced scrutiny implies that the probability of detection faced by participating corporations (denoted “ p^b ”) is 0.35, and that the reputation value of the conferred label (denoted “ r ”) is \$125. Given the reduction of the probability of detection, corporate expected liability would be sustained at its optimal level (*i.e.*, at the level of the total social harm) if the applicable fine increases accordingly. The fine applied to participating corporations (denoted “ l^h ”) is then $500/0.35$, which is \$1,430. **Table 2** below presents corporations’ self-policing decisions, given that the proposed system is introduced.

**TABLE 2: CORPORATIONS’ SELF-POLICING DECISIONS AFTER
THE TPTM SYSTEM IS INTRODUCED**

	<i>q</i> PROBABILITY OF VIOLATION (WHEN CORPORATIO NS SELF- POLICE)	CORPORATE PAYOFF (WHEN CORPORATIONS SELF-POLICE) [\$]	WOULD CORPORATIONS SELF-POLICE? [\$]
TYPE-1	$q_1 = 0.3$	$U_1^{SP} = r - (l^h \cdot p^l \cdot q_1 + c)$ $= 125 - (1430 \cdot 0.35 \cdot 0.3 + 200) = -225$	Yes (-225 > -400)
TYPE-2	$q_2 = 0.6$	$U_2^{SP} = r - (l^h \cdot p^l \cdot q_2 + c)$ $= 125 - (1430 \cdot 0.35 \cdot 0.6 + 200) = -375$	Yes (-375 > -400)
TYPE-3	$q_3 = 0.7$	$U_3^{SP} = r - (l^h \cdot p^l \cdot q_3 + c)$ $= 125 - (1430 \cdot 0.35 \cdot 0.7 + 200) = -425$	No (-425 < -400)

As illustrated in **Table 2** above, the proposed framework strengthens corporations’ incentives to engage in efficient self-policing activities by reinforcing the benefit gained by self-policing. While sustaining expected liability at the optimal level, the proposed framework provides self-policing corporations with a reputational asset that motivates them to engage in self-policing. As clearly seen in the example above, when the proposed framework is introduced, Type-2 corporations that previously did not self-police now engage in self-policing activities.

IV. DISCUSSION

The proposed framework presents a workable targeted monitoring regulatory regime that efficiently induces proactive compliance. Under the suggested framework, regulatees that are motivated to engage in self-policing are subject to reduced scrutiny, while other regulatees are more closely watched. The gains produced by the suggested framework from a social welfare perspective are straightforward. *First*, this framework increases the portion of the corporate regulatee population that engages in self-policing. It thereby efficiently reduces corporate misconduct and its associated social costs. By conferring the program label on corporate regulatees that opt in to the voluntary program, the suggested framework utilizes an important motivating mechanism – namely, reputation – to increase the gain that corporations extract from self-policing activities. The use of such a labeling mechanism normally involves no significant social cost.

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Second, this framework economizes the cost of regulatory monitoring by reducing regulatory scrutiny of an additional portion of the regulatee population. Of course, the net social gain of the suggested framework depends on the social costs associated with the establishment and control of the core of CMs. Therefore, the suggested framework may produce a higher social value when implemented in regulatory areas in which a corporation's reputation for compliance is highly valued. In such contexts, the additional costs associated with the use of CMs may be borne by corporations participating in the voluntary program up to a complete erosion of their reputation gains.³⁷

Third, because the suggested framework encourages delegation of some monitoring tasks to corporate monitors that are financed by monitored corporations, the framework shifts some enforcement costs to the presumptive beneficiaries of that monitoring—*i.e.*, the regulated corporations and their clients. This transformation of costs is not only a matter of wealth distribution. It also increases efficiency in the regulated market by compelling corporations—or their clients, to which these costs will eventually be shifted—to bear the true cost of regulatory monitoring embedded in the production of their relevant goods and services.³⁸

The suggested framework hinges upon the use of CMs in facilitating a targeted monitoring mechanism. Therefore, CM credibility in the performance of monitoring tasks is a crucial prerequisite for their incorporation into regulatory enforcement policies. The scholarly literature has analyzed the credibility of third-party enforcers and the potential mechanisms that may secure it. Traditionally, two common mechanisms have been proposed to ensure the credibility of third-party enforcement.³⁹ The first is *noblesse oblige*: outside professional third-party enforcers are normally chosen from a group of upright citizens with exemplary characters and widespread social ties to the business community, which secures their commitment to adequately fulfilling their role.⁴⁰ The second is the set of incentives created by *market forces*: the market for external professional enforcers, in which corrupted enforcers are punished, has disciplinary power over external enforcers that is believed to play a crucial role in en-

37. The screening and selection costs of CMs to be included in the public list, as well as the cost of controlling CMs, may be financed through an annual fee to be paid by corporations opting in to the voluntary program, or by CMs included in the list of CMs. In the latter case, these costs will be shifted to the CMs' corporate clients through their fees. Given that corporations opting in to the voluntary program have a positive reputation gain, they will be willing to bear these costs up to a complete erosion of their net gain.

38. See Reinier Kraakman, *Gatekeepers: The Anatomy of a Third-Party Enforcement Strategy*, 2 J. L. ECON. & ORG. 53 (1986).

39. See Gilson & Kraakman, *supra* note 27, at 874. The analysis by Gilson and Kraakman that originally refers to outside directors is equally relevant in the context of CMs.

40. See *id.* at 881.

sure their credibility.⁴¹ To ensure CM credibility, the proposed framework relies on a screening mechanism that is designed to satisfy the *noblesse oblige* mechanism.⁴² Accordingly, the risk of being excluded from the list of CMs presents a powerful motivation for adequate performance by current and potential CM participants. CMs simply stand to lose too much if they are found to be incapable or corrupted.⁴³ In addition, CMs are professional monitoring firms operating in a competitive market in which they provide services to a diversified portfolio of corporate clients. Under those circumstances, CMs may not be willing to sacrifice their reputation and their future income to satisfy a single client,⁴⁴ as they will actually lose relatively little by rejecting a bribery offer from one of their clients. Altogether, the proposed framework is designed so that it produces an incentive scheme that leverages CM credibility.⁴⁵

V. EXTENSION: WHEN FINES EQUAL CORPORATE ASSET VALUE

On rare occasions, sanctions imposed for regulatory violations are set at the level of the regulatees' asset value. In such cases, it would be impossible to impose higher fines on corporations that opt in to the voluntary program. Therefore, in such contexts, the proposed framework may require an adjustment. Ra-

41. See *id.* at 886, 890, and Ronald J. Gilson, *The Devolution of the Legal Profession: A Demand Side Perspective*, 49 MD. L. REV. 888 (1990), according to which the best way of establishing and maintaining such a market would be through an independent clearinghouse.

42. Similar to existing frameworks in which incumbents are screened and selected according to their qualifications, including lawyers, auditors, notaries, and securities analysts, CMs are screened and selected according to their capacity, expertise, and integrity before they are included in the list of CMs. See *supra* note 29 and the related main text.

43. See Kraakman *supra* note 38, at 70: “[w]hen entry to a gatekeeping market requires significant capital, including investment in specific human capital or reputation, simple legal penalties such as civil damages, fines, or license revocations can be powerful deterrents”. See also EUGENE BARDACH & ROBERT A. KAGAN, *GOING BY THE BOOK: THE PROBLEM OF REGULATORY UNREASONABLENESS* (1982): “Large corporations now have staffs of professionals concerned with regulatory matters – academically trained industrial hygienists, environmental engineers, toxicologists, safety experts, biologists, lawyers, occupational physicians, and specialists in administering affirmative action programs. These specialists are by no means uninterested in their corporation’s balance sheet, but they also have some loyalty to the standards of their profession. ‘I’m a licensed engineer, I’m not going to risk my license by lying to an agency,’ a corporate environmental engineering told us”. [Emphasis added]

44. See, e.g., Sung H. Kim, *Gatekeepers Inside Out*, 21 GEO. J. OF LEGAL ETHICS 291 (2008); Reinier H. Kraakman, *Corporate Liability Strategies and the Costs of Legal Controls*, 93 YALE L. J. 857 (1984); Coffee, *supra* note 29, at 1305-06; Gilson & Kraakman, *supra* note 27, at 886.

45. As suggested by Kraakman *supra* note 27, at 69, the concern as to the corruption of third-party enforcers is “not to suggest that every [third-party enforcer] has a price; some will presumably resist corruption at any price. Nevertheless, it is the balance of [third-party enforcer] incentives across the entire market that is critical for enforcement purposes [...]”. Compare with Gilson, *supra* note 41, at 887-88, who discusses the normative commitment of lawyers as gatekeepers, arguing that lawyers are a group of normatively committed actors who are normally attracted to the legal practice because of their motivation to serve the public interest, rather than for purposes of profit seeking.

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ther than a direct imposition of higher fines on corporations opting in to the voluntary program, the portion of costs higher than the regulated corporation's asset value may be levied instead against CMs who would be strictly liable for their corporate clients' misconduct. Under such circumstances, the costs of CMs' higher expected liability would be shifted *ex ante* to their corporate clients through the fees paid to the CMs and would offset the reduction gained by participating corporations due to their reduced scrutiny.^{46, 47}

VI. CONCLUDING REMARKS

Wishing to improve regulatory enforcement, many environmental protection agencies explicitly or implicitly employ targeted monitoring systems. The law and economics scholarly literature has embraced these systems on efficiency grounds, without sufficient attention to the quality of the criteria used for regulatee classification. This paper joins the large body of scholarly literature that supports the utilization of targeted monitoring systems. It acknowledges that targeted monitoring may produce a higher level of compliance at a lower cost in comparison to a non-targeted system. Nevertheless, this paper is concerned with the criteria proposed in the literature to date for the classification of regulatees into differently monitored groups. In this paper, I develop a theoretical model that underlies an improved targeted monitoring framework based on the appointment of CMs as a signaling mechanism. The suggested framework increases corporations' motivation to engage in genuine self-policing activity through a voluntary program that awards participating corporations with reputation assets if they appoint CMs to implement their self-policing activity. As such, the proposed framework would induce more corporations to engage in self-policing activities, while economizing public monitoring costs.

The proposed framework—subject to context-dependent adjustments—provides the analytical basis for the evaluation of targeted monitoring in a wide range of regulatory areas. Social welfare may be increased, for instance, by integrating the proposed framework with European environmental policies granting regulatory relief to corporations that adopt certified Environmental Management Systems. The framework proposed in this paper considers the

46. Referring to the example in Section III.B above: due to the reduction in regulatory scrutiny, corporations opting in to the voluntary program face a lower expected liability: that is, $l^o \cdot p^o \cdot p^t$ (or, $1000 \times 0.35 = 350$) rather than $l^o \cdot p^o$ (or, $1000 \times 0.5 = 500$). Therefore, if CMs are held strictly liable for their clients' misconduct, and their expected liability is set equal to €150, these CMs will shift the cost of their expected liability to their corporate clients, and in so doing will completely offset the reduction in expected liability gained by these corporations.

47. The above is contingent upon CMs' ability to accurately estimate their corporate clients' liability exposure. Otherwise, CMs may pool the risk of various clients and distort their compliance motivations. See Assaf Hamdani, *Gatekeeper Liability*, 77 S. CAL. L. REV. 53 (2003).

potentially perverse impact of regulatory relief and secures an optimal level of deterrence while sustaining an efficient level of corporate expected liability, even for those corporations benefiting from reduced scrutiny. As such, this framework both enhances corporations' motivation to engage in proactive compliance and economizes regulatory enforcement costs, while also securing an optimal level of deterrence.