

CORPORATIONS UNDER PROBATION:
THE DETERMINANTS AND CONSEQUENCES OF THE MONITORSHIP REQUIREMENT
IN REGULATORY ENFORCEMENT ACTIONS

by

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To my beloved parents, husband, and son

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The Securities and Exchange Commission (SEC) and the Department of Justice (DOJ) require a set of firms to retain corporate monitors as a part of the pretrial settlement agreements in the enforcement process (hereafter the monitorship requirement). I examine the determinants of the monitorship requirement and its ensuing consequences in terms of firm monetary penalties and audit pricing. Using a dataset of enforcement actions for financial misrepresentation, I find that enforcement actions with bribery allegations under the Foreign Corrupt Practices Act (FCPA) and the number of violations charged against all respondents in an enforcement action are strong predictors of the monitorship requirement. In addition, announcing an internal investigation, the percentage of culpable executives terminated, and analyst following would reduce the likelihood of the monitorship requirement. Next, I investigate the substitutability between the monitorship requirement and firm monetary penalties as regulatory enforcement outcomes. I find no evidence that the monitorship requirement reduces firm monetary penalties. Rather, I find a positive

association between the monitorship requirement and firm monetary penalties. I posit that the positive association exists because, after controlling for severity of the misconduct and other factors known to influence firm monetary penalties, the monitorship requirement proxies for the weak compliance program (or compliance culture) of a firm, which would increase monetary penalties assessed by the SEC and DOJ. Lastly, I examine whether and how the monitorship requirement influences audit pricing of enforcement firms. I find some evidence that auditors charge lower fees to enforcement firms with monitors compared to those without monitors. This result is consistent with auditors decreasing their assessed levels of audit effort and/or risk to a greater extent for enforcement firms with monitors, relative to those without.

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CHAPTER 1

INTRODUCTION

In the wake of Enron, WorldCom, and similar debacles, the Securities and Exchange Commission (SEC) and the Department of Justice (DOJ) (collectively, regulators) began to put greater emphasis on requiring a set of firms to retain corporate monitors as a part of the pretrial settlement agreements in the enforcement process (hereafter the monitorship requirement).¹ Corporate monitors are described as important remediation tools and a “new governance” mechanism to help ensure law compliance and that the firm has policies and procedures in place to prevent future misconduct (Khanna and Dickinson 2007; Ford and Hess 2009, 2011; Khanna 2011; Root 2016). No prior research has empirically examined the specific factors and firm actions that regulators consider in determining the use of corporate monitors in enforcement actions for financial misrepresentation and the consequences of the monitorship requirement.² In this study, I explore the factors and firm actions that are associated with the likelihood of the monitorship requirement. Specifically, I investigate whether and how the seriousness of the misconduct, subsequent remediation efforts undertaken by firms, and the existing monitoring mechanisms impact the likelihood of the monitorship requirement. Next, I examine the

¹ The first modern instance of a monitor is found in the 1994 Prudential Securities Case, where an independent expert was appointed to monitor Prudential’s compliance as part of a Deferred Prosecution Agreement (DPA) (See U.S. Dep’t of Justice, U.S. Attorney, Southern District of New York, Prudential Sec.—Deferred Prosecution Agreement (Oct. 27, 1994), available at <http://www.corporatecrimereporter.com/documents/prudential.pdf>; see also SEC v. Prudential Sec., Inc., No. 93 Civ. 2164, 1993 WL 473189, at *2–3 (D.D.C. Oct. 21, 1993). However, monitors made only limited appearances in the 1990s, and their growth began after the Enron series of scandals.

² Foreign Corrupt Practices Act (FCPA) Guide (2012) indicates the factors the regulators consider when determining whether a monitor is appropriate in enforcement actions against firms that violate the FCPA. The factors include: (1) Seriousness of the offense; (2) Duration of the misconduct; (3) Pervasiveness of the misconduct; (4) Nature and size of the company; (5) Quality of the company’s compliance program at the time of the misconduct; (6) Subsequent remediation efforts.

association between the monitorship requirement and firm monetary penalties as important regulatory enforcement outcomes.³ Lastly, I examine whether and how the monitorship requirement influences the audit pricing of enforcement firms with monitors compared to those without monitors in the post-announcement period, relative to the pre-announcement period. The post-announcement period is defined as the year following the announcement of the monitorship requirement, whereas the pre-announcement period refers to the year preceding the announcement.

Exploring the determinants of the monitorship requirement is meaningful because corporate monitors could exert great influence on firms, and the monitorship requirement could be costly to firms and regulators. First, corporate monitors are independent outsiders whose range of influence may be limited to only compliance issues or may extend more broadly to many (or all) aspects of the firm's operations including compliance culture and corporate governance (Ford and Hess 2009, 2011; Warin, Diamant, and Root 2011). For example, the CEO and general counsel of Bristol-Myers Squibb were dismissed as a result of recommendations by Bristol's monitor. In addition, Judge Rakoff articulated in his final judgment in the WorldCom case: "While the Corporate Monitor's efforts were initially directed at preventing corporate looting and document destruction, his role and duties have steadily expanded, with the parties' full consent, to the point where he now acts not only as financial watchdog... but also as an overseer who has initiated vast improvements in the company's internal controls and corporate

³ The SEC and DOJ can also assess non-monetary penalties against firm respondents, such as cease-and-desist orders, trading suspensions, and injunctions against future law violations. My focus on monetary penalties is driven by the practitioners' focus on penalties over other remedies (see e.g., Low et al. 2007; Tillipman 2008; Aguilar 2010a, 2010b; Terwilliger 2010; Friedman and McKellar 2011; and Hinchey 2011).

governance” (Khanna and Dickinson 2007; O’Hare 2008; Ford and Hess 2009). Second, corporate monitors are compensated by firms. Third, both firms and regulators incur ongoing supervision costs during the term of the monitorship (as compared to the one-time cost of monetary penalties). For example, firms are required to cooperate fully with corporate monitors by providing them with access to the firm’s documents and resources. The monitor is required to present his or her report(s) to the firm’s Board of Directors, General Counsel, Chief Ethics and Compliance Officer, audit committee, senior management, and the regulators.

Both the monitorship requirement and firm monetary penalties are enforcement outcomes. Firm monetary penalties as an outcome of regulatory enforcement actions are of particular interest to firms and regulators because monetary penalties can negatively impact the cash flow and net income reported on firms’ financial statements. For example, monetary penalties are not deductible for tax purpose and may not be funded or reimbursable through insurance proceeds (Files, Martin, and Rasmussen 2016). Lastly, it would be sensible to examine the relation between the monitorship requirement and audit fees since both the monitors and auditors are important monitoring mechanisms of enforcement firms. Economic theory suggests that auditing plays a pivotal role in capital markets by providing independent assurance of the credibility of accounting information when the separation of ownership and control results in information asymmetry and moral hazard problems (Jensen and Meckling 1976; Watts and Zimmerman 1981; Simunic and Stein 1987; DeFond and Zhang 2014). Corporate monitors, on the other hand, are frequently required to examine and make recommendations to internal accounting controls, financial reporting and disclosures, and/or record keeping policies and procedures of enforcement firms. In addition, same as auditors, monitors are required to be

independent and objective; yet they are compensated by enforcement firms. Overall, examining these issues in a systematic way is of interest to firms as they decide on appropriate remedial actions following financial misconduct and evaluate the potential consequences of financial misconduct. These issues should also appeal to regulators as they decide among different types of sanctions to optimally enforce corporate misconduct and deter future crime.

The three categories of factors and actions-namely the seriousness of the misconduct, subsequent remediation efforts, and the existing monitoring mechanisms-that are examined in this study can either increase or decrease the likelihood of the monitorship requirement. First, the seriousness of the misconduct can increase the likelihood of the monitorship requirement in the sense that corporate monitors are more appropriate for firms where more pervasive, serious, and persistent firm-level problems are identified (Ford and Hess 2011). However, if the firm-level problems are deemed too egregious, then the firm must face prosecution, and the likelihood of the monitorship requirement is reduced. Second, remediation efforts such as publicly announcing an internal investigation and terminating culpable executives can reduce the likelihood of the monitorship requirement since both actions represent significant remediation efforts by the firm that are meant to prevent future violations. While subsequent remediation efforts such as restating misreported financial statements can decrease the likelihood of the monitorship requirement, it can also increase the likelihood of the monitorship requirement since the restatement reveals a firm's significant financial reporting and internal control problems that give rise to the need for a corporate monitor. Third, the existing monitoring mechanisms consist of internal and external monitoring mechanisms. Specifically, internal controls and board characteristics are components of internal monitoring mechanisms that I focus on. Inadequate

internal controls are predicted to increase the likelihood of the monitorship requirement since the Morford Memo (2008) points out that monitors may be appropriate in firms that need to establish necessary internal controls, among other factors. Independent, outside directors play a key role in monitoring management's behavior as they are viewed as independent and objective. However, independent directors are not as informed as the executives they govern when it comes to decision making because they largely rely on the executives they are monitoring to provide them with the information necessary to achieve effective corporate governance (e.g., Armstrong, Guay, and Weber 2010). Therefore, the effect of independent directors on the likelihood of the monitorship requirement remains unclear. The existing external monitoring mechanisms are composed of institutional owners, external auditors, and analysts. Since the regulator-imposed corporate monitors and those existing monitoring mechanisms are important parties that are scrutinizing management behavior, I argue that the existing external monitoring mechanisms may substitute for the monitoring roles played by corporate monitors. Thus, I predict that the existing external monitoring mechanisms are negatively associated with the likelihood of the monitorship requirement.

In addition to the determinants of the monitorship requirement, I examine the relation between the monitorship requirement and firm monetary penalties. Both firms and regulators have strong incentives to settle the case. The pretrial settlement agreements would outline the monitorship requirement as well as the magnitude of monetary penalties assessed against enforcement firms. A maintained assumption in this study is that when there is a settlement, the SEC and DOJ staff have significant discretion over the magnitude of monetary penalties assessed against a firm and the types of sanctions they can impose on the firm. Regulators impose

sanctions to deter future misconduct. In the context of firms, in addition to monetary penalties, regulators can impose non-monetary sanctions such as cease-and-desist orders and trading suspensions, or even impose monitor-like sanctions that require ongoing supervision. The monitorship requirement as a non-monetary sanction can act as a substitute to firm monetary penalties in the sense that the monitorship itself and ongoing supervision by regulators and firms during the term of the monitorship can provide sufficient deterrent effect of future misconduct without relying much on the deterrent effect of firm monetary penalties. In this regard, firms with the monitorship requirement are predicted to be assessed smaller magnitude of monetary penalties compared to those without the monitorship requirement. Stated differently, the monitorship requirement would be negatively associated with firm monetary penalties. Some may argue that after controlling for firm and violation characteristics there would be no association between the monitorship requirement and firm monetary penalties since these two types of sanctions are imposed to address arguably different though related concerns.⁴ While monetary penalties are assessed against enforcement firms to punish their historical misconduct and the resulting harm to investors and other stakeholders, the need for a monitor depends on the current state of the firm, i.e., whether or not the firm has fully and credibly remediated its internal controls and strengthened its compliance programs.

Lastly, I examine the incremental change in the audit pricing of enforcement firms with monitors compared to those without monitors from the pre- to post-announcement periods. Extensive prior literature, beginning with Simunic (1980), examines the determinants of external

⁴ Per discussions with Mr. Lee S. Richards III, most government and defense lawyers would not say there is any discernible relation between the monitorship requirement and monetary penalties assessed against enforcement firms.

audit fees using a production view of the audit process. This literature generally proposes that auditors charge higher (lower) fees in response to increases (decreases) in assessed levels of audit effort and risk (e.g., Simunic 1980; Hay, Knechel, and Wong 2006; Erickson, Goldman, and Stekelberg 2016). Both corporate monitors and auditors have responsibilities over assuring the credibility of the accounting information, and systems and control of those enforcement firms that hire and compensate them. In this regard, monitors function in some sense like an internal audit function (one aspect of internal control) and an alternative monitoring mechanism. Consequently, auditors may be able to rely on some of the work done by the monitors, and the assessed level of audit effort would reduce. In addition, the auditing literature discusses audit risk and business risk of an auditor (e.g., Strawser 1991; Thornton and Moore 1993; Houston, Peters, and Pratt 1999; Dusenbury, Reimers, and Wheeler 2000; Seetharaman, Gul, and Lynn 2002; Lyon and Maher 2005; Hogan and Wilkins 2008; Charles, Glover, and Sharp 2010). Auditor's business risk is the probability of "...loss or injury to professional practice from litigation, adverse publicity, or other events arising in connection with financial statements that [the auditor] has examined and reported on..." (American Institute of Certified Public Accountants [AICPA] 1983). From the auditor's business risk perspective, they would have another party like monitors who have deep pockets to share the litigation risk with them. Audit risk model (ARM), on the other hand, is a function of inherent risk, control risk, and detection risk, as discussed in Statement on Auditing Standards (SAS) No. 47 (AICPA 1983). From an ARM perspective, the monitors' responsibilities in reviewing and making recommendations to internal control and corporate governance issues could reduce the assessed levels of control risk and inherent risk components of the audit risk model. When the inherent risk and control risk are high, auditors

must reduce detection risk by performing more substantive testing and/or analytical procedures to maintain overall audit risk at an acceptable level (e.g., Strawser 1991; Houston, Peters, and Pratt 1999; Hogan and Wilkins 2008). Specifically, lower quality and competence of management, a poor attitude toward fair and transparent financial reporting, weak corporate governance practices, and poor internal controls are sources of audit risk that is priced by external auditors (Hogan and Wilkins 2008; Charles, Glover, and Sharp 2010). Since corporate monitors help improve these aspects of a firm, I expect a decrease in the assessed levels of inherent risk and control risk of enforcement firms with monitors in the post-announcement period, relative to the pre-announcement period. Consequently, the audit effort required to reduce detection risk in order to maintain the overall audit risk at an acceptable level would also decrease. To sum up, since audit effort and risk drive external audit fees in the production view of the audit process, I expect that due to decreased assessed levels of audit effort and/or audit risk, the monitorship requirement may potentially reduce audit fees for enforcement firms with monitors compared to those without monitors in the post-announcement period, relative to the pre-announcement period. Some may argue that there could be no relation between the monitorship requirement and audit fees. For instance, monitors could be doing work that is not closely related to auditing or they are not fulfilling their responsibilities mentioned in the settlement agreements.

My sample consists of enforcement actions initiated by the SEC and DOJ against firms from 2001 to 2015 for violations of Section 13(b) of the Securities Exchange Act of 1934 (or rules promulgated thereunder) as amended by the Foreign Corrupt Practices Act (FCPA) of 1977. Corporate monitors are imposed in 6.5% (48 of the 736) of the enforcement actions. My

findings for the determinants of the monitorship requirement suggest that enforcement actions that include bribery allegations under the FCPA and the number of violations charged against all respondents in an enforcement action are strong predictors of the monitorship requirement. These results are consistent with the notion that monitors are more appropriate in firms where more pervasive, serious, and persistent firm-level problems are identified (Ford and Hess 2011). Firms with violations occurred while the firm was involved in a merger, the length of violation period, restatement of misreported financial statements, and percentage of independent directors of a firm are also positively associated with the monitorship requirement. In addition, I find that announcing an internal investigation, the percentage of culpable executives terminated for his or her involvement in the financial misrepresentation, and analyst following would reduce the likelihood of the monitorship requirement. Announcing an internal investigation is a huge sign of remediation efforts that are meant to prevent violations in the future. Terminating culpable executives is a significant remedial action undertaken by the firm to create an environment and culture that is conducive to law compliance and ethical behavior. Analyst following as a proxy for analyst monitoring reduces the likelihood of the monitorship requirement since sell-side analysts undertake private information production that is informative to investors and facilitates the detection and discipline of managerial misbehavior (Irani and Oesch 2013). This evidence suggests some degree of substitutability between monitoring by analysts and corporate monitors. In a separate analysis, I find that deferred prosecution agreements (DPAs) are a strong predictor of the monitorship requirement. This finding is consistent with the general perception that corporate monitors are frequently required as part of the DPAs (Ford and Hess 2009, 2011; Khanna and Dickinson 2007).

My second set of analyses examines the association between the monitorship requirement and firm monetary penalties, defined as the sum of disgorgement of profits, prejudgment interest, and fines assessed against the firm by the SEC and/or DOJ.⁵ A simple comparison of firm monetary penalties shows that firms with monitors are assessed significantly larger monetary penalties, on average, relative to those without (\$217 million versus \$11 million). In my regression models, after controlling for severity of the misconduct and other significant factors known to influence monetary penalties (Files, Martin, and Rasmussen 2016), I continue to find that, on average, firms with monitors are assessed significantly larger monetary penalties compared to those without monitors.

Since the requirement for monitors is not random, endogeneity concerns arise when modeling the relation between the monitorship requirement and firm monetary penalties. The concern is that the results I observe could reflect the effects of unobserved firm and violation attributes rather than an association with the monitorship requirement itself (i.e., unobservable selection). I conduct an assessment of unobservable selection based on recent theory and evidence using bounding arguments to assess bias from correlated omitted variables (Alotnj, Edler, and Taber 2005; Oster 2016; Call, Martin, Sharp, and Wilde 2017). My results are robust based on this assessment.

⁵ Private class action settlements are another form of monetary penalties that can be imposed by the investors on firms involved in financial misrepresentation. Class action lawsuits are often announced soon after the trigger event, and these lawsuits are typically resolved through monetary settlements long before an enforcement action is complete (Cox, Thomas, and Kiku 2003). It is, therefore, unknown at the time of class action settlements whether or not the regulators will require these firms to retain monitors. Since my primary objective is to examine whether and how the monitorship requirement is associated with monetary penalties assessed by regulators, it is not sensible to examine the association between the monitorship requirement and private class action settlements in this setting.

The results from the regression analyses and robustness tests provide no evidence that the monitorship requirement reduces firm monetary penalties. I conjecture that the positive association between the monitorship requirement and firm monetary penalties exists because, after controlling for severity of the misconduct and other factors known to affect firm monetary penalties, the monitorship requirement is a proxy for the weak compliance program (or compliance culture) of a firm, which would increase monetary penalties assessed by the SEC and DOJ.

As for the results on audit pricing, an unconditional comparison of total external audit fees shows that auditors charge greater fees to enforcement firms with monitors compared to those without. Specifically, the incremental change in audit fees of enforcement firms with monitors compared to those without monitors from the pre- to post-announcement periods is \$3.241 million. However, after controlling for severity of the misconduct and factors known to influence audit fees, I find some evidence that, relative to the pre-announcement period, auditors charge lower fees to firms with monitors compared to those without monitors in the post-announcement period. This result is consistent with auditors decreasing their assessed levels of audit effort and/or audit risk to a greater extent for those enforcement firms with monitors, relative to those without.

This study contributes to the extant literature in several ways. It is the first study to empirically examine the determinants of the monitorship requirement and its ensuing consequences in terms of firm monetary penalties and audit pricing. My findings should be of particular interests to accountants and managers as they conduct internal investigations, assess potential enforcement outcomes, and decide on appropriate remedial actions following financial

misconduct. These findings should also have important implications for regulators as they decide among different types of sanctions to optimally enforce corporate misconduct and deter future misconduct. In addition, my study contributes to the recent stream of accounting research that examines the impact of factors such as whistleblower involvement and the receipt of cooperation credit from regulators on firms' regulatory enforcement outcomes.⁶ Finally, corporate monitors are viewed as a "new governance" mechanism, therefore, studying this phenomenon adds to other governance mechanisms examined extensively in the corporate governance literature.

The remainder of the paper is organized as follows: Chapter 2 provides the background on the enforcement process and corporate monitors. Chapter 3 presents the hypotheses development. I describe my sample and data in Chapter 4, and discuss my research design and empirical results in Chapter 5. Chapter 6 concludes.

⁶ See Files, Martin, and Rasmussen (2016); Call, Martin, Sharp, and Wilde (2017).

CHAPTER 2

BACKGROUND ON THE ENFORCEMENT PROCESS AND CORPORATE MONITORS

2.1 The enforcement process

As corporate monitors are required for a set of firms as part of the enforcement process, I outline the enforcement process of the SEC and DOJ before discussing corporate monitors in detail.⁷ The SEC and DOJ have dual responsibilities for the investigation and punishment of federal securities law violations, including those involving financial misrepresentation. Enforcement actions commonly include a mixture of administrative, civil, and criminal proceedings that may implicate the firm itself, other affiliated firms, or individuals employed by or otherwise associated with the firm. In this paper, I examine enforcement actions against the firm itself only. I use the terms “enforcement action” or “enforcement process” to refer to the group of related events, public announcements, and regulatory proceedings related to each case of financial misconduct. Figure 1 illustrates a timeline of an enforcement action that includes the announcement of the monitorship requirement and the term of the monitorship.⁸

An enforcement action typically begins with a trigger event, the first public disclosure of the potential law violation. These trigger events generally are firm-initiated disclosures of potential problems, which most commonly involve the announcement of a related internal

⁷ KLM (2007, 2008a, 2008b, 2014); Correia (2014), deHaan, Keida, Koh, and Rajgopal (2015); Files, Martin, and Rasmussen (2016); Files, Holcomb, Martin, and Mason (2017); and Karpoff, Koester, Lee, and Martin (2017) provide additional details on the enforcement process following financial misrepresentation violations.

⁸ The typical timeline of an enforcement action is illustrated in KLM (2008a) and is being adapted to fit the setting of this paper.

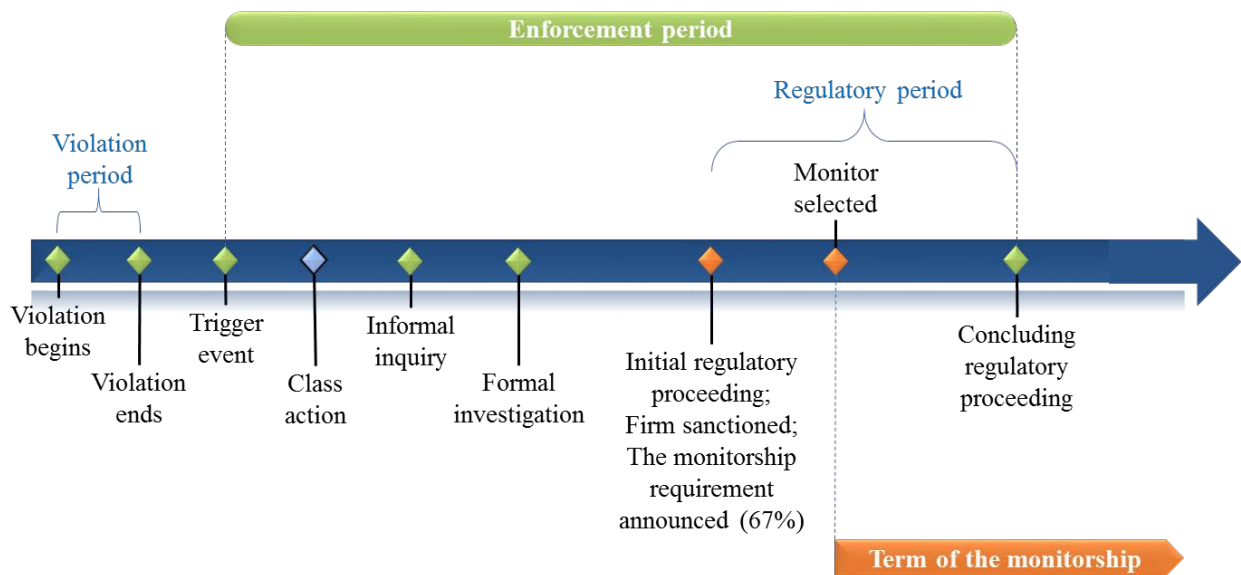


Figure 1. Timeline of an enforcement action

investigation, a notification of restatements, announcements regarding unexpected earnings, losses, or irregularities, related litigations, delayed SEC filings, management departures, and auditor changes or withdrawn audits. Investigations by other federal agencies such as the Department of Defense and Environmental Protection Agency are another source of trigger events, along with whistleblower charges and routine reviews by the SEC (KLM 2008a; Karpoff, Koester, Lee, and Martin 2017). Following a trigger event the SEC may begin a confidential fact-gathering process by requesting additional voluntary information (informal inquiry) and if warranted, follow it up with the issuance of a formal order of investigation or issuance of a subpoena (formal investigation). After the investigation, the SEC may drop the case or proceed to the regulatory period by filing charges against firms and individuals. If the SEC initiates charges against the firms and individuals, it can choose to bring an administrative proceeding and/or civil action, depends on the types of sanction being sought. The DOJ pursues the remaining civil charges and all of the criminal charges. Parallel, but independent, investigations

between the SEC and DOJ are common. Administrative proceedings are heard by an independent administrative law judge (ALJ), whereas civil and criminal charges are filed in federal courts (e.g., U.S. district courts). Dropped cases are not publicly disclosed and do not appear in my sample.

Within the enforcement process, the regulatory period typically begins with the filing of an initial regulatory proceeding and ends with the filing of a concluding regulatory proceeding. It is during the regulatory period that uncertainty regarding enforcement outcomes is resolved. The initial filing of a regulatory proceeding is the first public information released by the SEC and/or DOJ. The initial and concluding regulatory proceedings may be filed on the same day if they are filed against a firm only. The regulatory proceedings can also be ongoing for a period of time if the regulatory proceedings are filed against the firm itself, other affiliated firms, or individuals employed by or otherwise associated with the firm. While the requirement to retain a monitor is predominantly disclosed in the initial regulatory proceeding, the monitorship requirement can be disclosed throughout the regulatory period.⁹ Once the monitorship requirement is announced, a firm usually has two months to engage a monitor. Therefore, the term of the monitorship, typically between 18 and 36 months, could potentially last beyond the concluding regulatory proceeding.¹⁰

⁹ In my sample, the monitorship requirement is disclosed in the initial regulatory proceedings for about 67% of the enforcement firms that have monitors, whereas the monitorship requirement for the remaining enforcement firms with monitors is disclosed 1 to 49 months after the initial regulatory proceedings are filed.

¹⁰ In my sample, the mean (median) for the regulatory period is approximately 27 months (15 months). The term of the monitorship ranges from 5 months to 48 months and has a mean (median) of 29 months (36 months). The term of the monitorship may be terminated early or extended. Specifically, it is mentioned in 16 (33.3%) enforcement actions that the term of the monitorship may be terminated early, and the term of the monitorship may be extended in 20 (41.7%) enforcement actions. The term of the monitorship maybe extended for 6 months to 24 months, with a median of about 12 months based on both the SEC and DOJ settlement agreements.

2.2 Corporate monitors

Following the spate of corporate scandals such as Enron and WorldCom, the SEC and DOJ have increasingly relied upon corporate monitors to help ensure law compliance and that the firm has policies and procedures in place to prevent future misconduct (Khanna and Dickinson 2007; Ford and Hess 2009). Corporate monitors are described as important remediation tools and a “new governance” mechanism (Ford and Hess 2011; Khanna 2011; Root 2016). Monitors are used in different types of cases such as securities fraud cases, bribery and FCPA cases, tax evasion and fraud cases, and healthcare fraud cases. In this paper, I focus on corporate monitors used in securities fraud cases and FCPA cases that involve violations of the two accounting provisions, which are (1) accurate “books and records” and (2) reasonably effective internal controls. Generally speaking, the corporate monitor used in this setting is (1) an independent, private outsider; (2) employed as a part of pretrial settlement agreements between an enforcement firm and regulators; (3) who oversees the firm’s compliance with the settlement agreement and its implementation of required reforms over a period of time; and (4) provides information to regulators about the status of the firm’s remediation efforts (Khanna and Dickinson 2007; Root 2016).

Enforcement firms and regulators must first agree to a pretrial settlement (with or without a monitor). These settlement agreements are termed deferred prosecution agreements (DPAs) or non-prosecution agreements (NPAs) in the criminal context, consent agreements in the civil regulatory context, and administrative proceedings in the administrative regulatory context. The SEC, DOJ, or both can impose the monitorship requirement. In particular, under a DPA, the DOJ files a charging document with the court, but simultaneously requests that the

prosecution be deferred for the purpose of allowing the firm to demonstrate its good conduct. The DPA generally requires the firm to agree to pay a monetary penalty, waive the statute of limitations, cooperate with regulators, and enter into certain compliance and remediation commitments, potentially including a corporate monitor. If the firm successfully completes the term of the agreement, the DOJ will then dismiss the filed charges. Under an NPA, the DOJ maintains the right to file charges but refrains from doing so to allow the firm to demonstrate its good conduct during the term of the NPA. Unlike a DPA, an NPA is not filed with a court but is instead maintained by the DOJ. The requirements of an NPA are similar to those of a DPA. If the firm complies with the agreement, the DOJ does not file criminal charges.

Once the regulators decide to impose the monitorship requirement on enforcement firms, they must set the scope of the monitorship. A monitor's range of influence may be limited to only compliance issues or may extend more broadly to many (or all) aspects of the firm's operations. It appears that the scope of the monitor's powers is increasing. While the large majority of the monitors are charged with overseeing the compliance with settlement agreements, reviewing and recommending changes to the existing compliance programs and processes, and reviewing the effectiveness of the implementation of those changes, there are instances where the monitor is focused on assessing a "company's compliance attitude" or, in other words, the company's culture (Ford and Hess 2009, 2011; Warin, Diamant, and Root 2011). For example, in SEC's administrative proceedings instituted in 2016 for Monsanto, the monitor was instructed to consider "whether the culture is supportive of ethical and compliant conduct, including strong, explicit, and visible support and commitment by the board and senior management". Another example is that the CEO and general counsel of Bristol-Myers Squibb

were dismissed as a result of recommendations by Bristol's monitor. The power of corporate monitors expands to its fullest with the appointment of Richard Breeden as the monitor for WorldCom. Judge Rakoff articulated in his final judgment in the WorldCom case: "While the Corporate Monitor's efforts were initially directed at preventing corporate looting and document destruction, his role and duties have steadily expanded, with the parties' full consent, to the point where he now acts not only as financial watchdog... but also as an overseer who has initiated vast improvements in the company's internal controls and corporate governance" (Khanna and Dickinson 2007; O'Hare 2008; Ford and Hess 2009).

Corporate monitors are selected through a variety of methods after settlement agreements have been negotiated and signed. Regulators may appoint a monitor after consultation with the firm, the firm may select a monitor subject to the regulator's approval, or they may develop a system to jointly select a monitor. In addition, in a few cases the court chooses a monitor from a number of candidates agreed upon by the firm and regulators.¹¹ The Morford Memo (2008), providing the principles and criteria used in selecting monitors, approves of the use of any of these methods. The selected monitor is compensated by the firm. Independent corporate monitor, independent examiner, independent consultant, and independent compliance monitor are used interchangeably as titles for corporate monitors. Appendix A provides typical examples of the wording used in enforcement documents and corporate filings disclosing the use of corporate monitors. Although there are different ways to select and address a monitor, the identities of

¹¹ The monitor for Computer Associates International (CAI) in my sample was selected by the court. It is worth noting that corporate monitors in recent years are primarily selected based on the consent of firms and regulators, with no involvement of the court.

monitors are somewhat uniform. They are primarily former judges, prosecutors, and attorneys with similar training.

A monitorship typically begins with the development of a work plan for the initial review and report. The work plan sets out who the monitor will interview, what documents he or she will review, and other work of the monitor. Negotiated work plans are becoming more common. The settlement agreements specify a process under which the monitor submits a work plan to both the firm and the regulators for comments before initial review begins. In developing a work plan, the monitors I spoke to said that they generally used the settlement agreements to establish the bounds of their investigation. However, the terms of the settlement agreements may contain substantial room for interpretation by the monitor. At the completion of the initial investigation, the monitor is required to draft a written report and present it to the firm's Board of Directors, General Counsel, Chief Ethics and Compliance Officer, audit committee, senior management, and the regulators. Over the course of the monitorship, monitors will continue to perform one to three follow-up reviews and report back to the firm and regulators. The firm is given a certain time period (usually one to four months) to adopt the recommendations in these reports.

CHAPTER 3

HYPOTHESES DEVELOPMENT

3.1 The determinants of the monitorship requirement

To develop my hypotheses, I group the latent factors into three categories, which are the seriousness of the misconduct, subsequent remediation efforts, and the existing monitoring mechanisms. Specifically, when assessing the seriousness of the misconduct, I consider (1) the nature of the misconduct, including whether or not the enforcement action includes bribery allegations under the FCPA; (2) the size of harm inflicted against shareholders and other stakeholders; (3) the duration of the misconduct; and (4) the pervasiveness of the misconduct within the firm, including the total number of unique U.S. Code and Code of Federal Regulation rules charged against all respondents in an enforcement action. Subsequent remediation efforts such as the public announcement of a company-initiated internal investigation, restating financial statements, and the percentage of culpable CEO, Chairman of the Board, or President terminated for his or her involvement in the financial misrepresentation are also examined. The existing monitoring mechanisms consist of internal and external monitoring mechanisms. Internal controls and independent directors are considered as internal monitoring mechanisms, while institutional owners, auditors, and analysts are viewed as external monitoring mechanisms.

Khanna and Dickinson (2007) discuss when it is optimal to require a firm to have a corporate monitor. Regulators impose sanctions to deter future occurrences of misconduct. In the context of firms, monetary penalties are not the only kind of sanction available. The regulators can impose non-monetary sanctions such as cease-and-desist orders, trading suspensions, and

injunctions against future law violations, or even impose ongoing supervision such as a corporate monitor. They argue that these non-monetary sanctions generally carry higher social costs than a monetary penalty. This is because they have ongoing supervision costs (as compared to the one-time cost of monetary penalties). In light of this, regulators may prefer to exhaust the deterrent effects of monetary penalties first before imposing these more-expensive non-monetary sanctions. When the highest-imposable monetary penalties do not generate the desired level of deterrence, other sanctions, such as corporate monitors, merit consideration (Khanna 2011). In addition, Ford and Hess (2009) argue that “worst actor” (but not utterly corrupt) firms are those whose conduct is most appropriate for a monitorship. They define “worst actors” as firms facing serious allegations of intentional wrongdoing, where the degree of harm is significant; firms that are potentially recidivists and for whom there are reasons to believe that pervasive cultural or ethical problems persist, but not firms that are utterly criminal enterprises. In sum, monitors are more appropriate in firms where more pervasive, serious, and persistent firm-level problems are identified (Ford and Hess 2011). Along these lines of reasoning, the seriousness of the misconduct is positively associated with the likelihood of the monitorship requirement. In particular, enforcement actions include bribery allegations under the FCPA, the violation period, and the number of violations charged against all respondents in an enforcement action are likely to increase the likelihood of the monitorship requirement because they reveal serious and systematic problems at the firm. At some point, however, the firm-level problems are deemed too egregious (namely, “worst of the worst”) to be entitled to a monitorship and must face prosecution. The association between the seriousness of the misconduct and the monitorship

requirement remains an empirical question and leads to my first hypothesis (stated in alternative form):

H1a. The seriousness of the misconduct is associated with the likelihood of the monitorship requirement by regulators.

Regulators often cite subsequent remediation efforts undertaken by the firm as a contributing factor in determining whether or not a monitor is appropriate (e.g., the FCPA Guide 2012). Common remediation efforts undertaken by the firm include publicly announcing a company-initiated internal investigation, restating its misreported financial statements, and terminating its culpable executives. Announcing an internal investigation and terminating its culpable executives are huge signs of remediation efforts that are meant to prevent violations in the future and are therefore predicted to reduce the likelihood of the monitorship requirement.

Files, Martin, and Rasmussen (2016) find that an internal investigation is moderately related to the granting of cooperation credit by regulators and is negatively associated with the probability of the firm being named as a respondent in a subsequent enforcement action. As for the relation between terminating culpable executives and the likelihood of the monitorship requirement, regulators are instructed to consider a “company’s compliance attitude” or, in other words, the company’s culture in addition to the compliance program. The McNulty Memo (2006) requires regulators to look for a corporate culture that encouraged misconduct, regardless of any compliance programs when making settlement decisions. Likewise, the Seaboard Report instructs enforcement lawyers to ask: “How did the misconduct arise? Is it the result of pressure placed on employees to achieve specific results, or a tone of lawlessness set by those in control

of the company?”¹² Executives have overall responsibility for the ethics and compliance programs of the firm. The tone at the top that they set by example and action is central to the overall ethical and compliance environment of their firms (Schwartz, Dunfee, and Kline 2005). A monitor’s main responsibility is to oversee the firm’s compliance issues and required reforms in the settlement agreements. Additionally, some monitors that Ford and Hess (2011) interviewed state that, regardless of the precise text of their assignment, they consider issues of corporate culture (including “tone from the top”) based on their tasks from the settlement agreements. For example, one monitor focused on “tone from the top” as the key part of corporate culture that he was investigating. The monitor stated, “You need systematic controls that make it difficult for people to violate the law and you also need a very strong tone from the top... if you don’t have tone from the top, then all your controls, people will just bypass them and work around them.” Another monitor described his job in the following terms: “You have to do enough work, interview enough people, sit in on enough of the meetings where corporate culture can be observed, talk to people about how they feel about the culture, look at the compliance activities that have occurred and you ultimately form a judgment based upon that data.” In sum, terminating culpable executives is a significant remedial action undertaken by the firm to change its “tone from the top” and create an environment that is conducive to law compliance and ethical behavior.

Subsequent remediation efforts can also increase the likelihood of the monitorship requirement. For example, while restating misreported financial statements shows the firm’s

¹² These statements are applicable to the determination of the monitorship requirement as monitors are one of the conditions in the settlement agreements.

remediation effort to correct for the past mistakes, this action can also reveal the firm's significant financial reporting and internal control problems that will give rise to the need of a monitor. Given the alternative predictions, I do not make a signed prediction regarding the association between subsequent remediation efforts and the monitorship requirement. My second hypothesis is listed below (stated in alternative form):

H1b. Subsequent remediation efforts undertaken by the firm are associated with the likelihood of the monitorship requirement by regulators.

Corporate monitors are described as a “new governance” mechanism (Ford and Hess 2011, Khanna 2011). Furthermore, the DOJ posits that “it may be appropriate to use a monitor where a company does not have an effective internal compliance program, or where it needs to establish necessary internal controls” (Morford Memo 2008). Therefore, I consider the adequacy of internal controls and board characteristics when examining the existing internal monitoring mechanisms. I predict that firms that are charged with violations of the internal control provision under the 15 U.S.C. § 78m(b)(2)(B) are more likely to be required to retain a monitor. The board of directors plays a key role in monitoring management and in constructing mechanisms that align executives' objectives with shareholders' interests. The distinction between independent, outside directors and inside directors is the dimension of board characteristics that researchers commonly examine. The independence of outside directors is perceived to have superior objectivity in monitoring management's behavior. However, it is unlikely that an outside, independent director can or will invest the time and effort necessary to become as informed as the executives of the firm they govern when it comes to decision-making. Further, independent directors must largely rely on the executives they are governing to provide them with the

information necessary to achieve effective corporate governance. These executives are unlikely to be entirely forthcoming with information that might have a detrimental effect on the way independent directors view their effort, performance, and ability (e.g., Armstrong, Guay, and Weber 2010). Therefore, I do not make a signed prediction regarding the association between the independent board of directors and the monitorship requirement.

The existing external monitoring mechanisms are composed of institutional owners, external auditors, and analysts. Since the regulator-imposed corporate monitors and these existing monitoring mechanisms are all important parties that are scrutinizing management behavior, I argue that the existing external monitoring mechanisms may substitute for the monitoring roles played by corporate monitors. I predict that the existing external monitoring mechanisms are negatively associated with the likelihood of the monitorship requirement. In particular, sell-side analysts as one of the information intermediaries undertake private information production that is informative to investors and facilitate the detection and discipline of managerial misbehavior (Irani and Oesch 2013). With fewer information intermediaries and less monitors, the threat of action by some claimant may diminish, since it is less likely that managers' misbehavior will be detected. Facing a lower probability of detection and thus a lower expected cost of manipulation, self-interested managers may be more likely to pursue rent-seeking behavior (Kedia and Phillippon 2009). In other words, when managers are faced with more information intermediaries and monitors, they are less likely to pursue rent-seeking behavior. Therefore, analysts may act as a substitute to corporate monitors to help deter future occurrences of misbehavior. I predict that analyst following as a proxy for analyst monitoring reduces the likelihood of the monitorship requirement. Given the different directions of

predictions for the existing internal and external monitoring mechanisms, I form my hypothesis without making a signed prediction (stated in alternative form):

H1c. The existing monitoring mechanisms are associated with the likelihood of the monitorship requirement by regulators.

3.2 The monitorship requirement and firm monetary penalties

Federal and administrative law judges have discretion in determining firm monetary penalties for enforcement actions if the case goes to trial. However, most enforcement actions never go to trial. They are negotiated through pretrial settlement agreements such as DPAs or NPAs, consent judgments, and remedial orders (Hammond 2006; Buckberg and Dunbar 2008; Khuzami 2012). With a few exceptions, the firms and regulators would negotiate a monetary penalty that is then normally accepted by the judge when there is a settlement. The parties normally would discuss whether or not a corporate monitor is necessary in the same negotiations over settlement terms, including the monetary penalties.¹³ Consequently, in addition to the monitorship requirement, pretrial settlement agreements would outline the magnitude of monetary penalties assessed against firm respondents, including the disgorgement of profits received from illegal activities, prejudgment interest, and fines.

A maintained assumption in this study is that when there is a settlement, the SEC and DOJ staff have significant discretion over the magnitude of monetary penalties assessed against a firm and the types of sanctions they can impose on the firm. Both firms and regulators have strong incentives to settle the case. For regulators, it might be better to obtain something certain

¹³ This is based on discussions with Mr. Lee S. Richards III, a founding partner of Richards Kibbe & Orbe LLP. He was appointed as the Independent Examiner in *United States v. Computer Associates International, Inc.*

through a settlement rather than to take its chances with a lengthy, complex, and expensive trial (Khanna and Dickinson 2007). Firms also have an economic incentive to settle with regulators due to collateral consequences of adjudication or harm to the stakeholders of the firm. For instance, the SEC's policy of obtaining consent judgments on a "neither-admit-nor-deny" basis will limit a firm's exposure to additional private lawsuits (Khuzami 2012). Even if the case is adjudicated, Federal Sentencing Guidelines allow for reductions in firm penalties for mitigating factors, including an effective compliance and ethics program (USSC 2016).¹⁴ Furthermore, regulators impose sanctions to deter future misconduct. In the context of firms, monetary penalties are not the only kind of sanction available. Regulators can impose non-monetary sanctions such as cease-and-desist orders, trading suspensions, and injunctions against future law violations, or even impose ongoing supervision (e.g., a corporate monitor).

As part of the pretrial settlement agreements, firms are required to pay monetary penalties, and some firms are required to retain a corporate monitor. The imposition of corporate monitors is viewed as a type of non-monetary sanction and a remediation tool that require ongoing supervision by the regulators and firms. Firms are required to cooperate fully with corporate monitors by providing them with access to the firm's documents and resources, as requested by the monitors that fall within the scope of the monitorship agreements. Monitors are

¹⁴ The determination of firm monetary penalties follows the United States Sentencing Commission Guidelines Manual (USSC 2016, available at <https://www.uscc.gov/guidelines/2016-guidelines-manual>) if the enforcement case is filed in federal court (e.g., U.S. District Court). According to these guidelines, the court assesses the firm a base fine that is then adjusted by a culpability score, which ranges between zero and ten. Every organization begins with a culpability score of five points and points are then added or subtracted for certain aggravating and mitigating factors. Firms can receive up to a three-point reduction for having an effective compliance and ethics program (United States Sentencing Commission Guidelines § 8C2.5(f)). In some cases, the SEC may elect to enforce securities laws through an administrative proceeding before an SEC Administrative Law Judge (ALJ), rather than federal district court. ALJs use a three-tiered system to determine firm monetary penalties. "Each act or omission" that violated or caused a violation of securities laws can result in a civil fine from one of the three tiers.

mandated to develop work plans for the initial review and follow-up review(s). The work plans are submitted to both the firm and the regulator(s) for comments before the review begins. At the completion of each review, the monitor is required to draft a written report and present it to the firm's Board of Directors, General Counsel, Chief Ethics and Compliance Officer, audit committee, senior management, and the regulators. In this regard, the monitorship requirement as a non-monetary sanction can act as a substitute to firm monetary penalties. The rationale is that the monitorship itself and ongoing supervision by regulators and firms during the term of the monitorship can provide sufficient deterrent effect of future misconduct. The deterrent effect required from assessing firm monetary penalties would be less for firms with the monitorship requirement compared to those without the monitorship requirement. In other words, firms with the monitorship requirement are predicted to be assessed smaller magnitude of monetary penalties compared to those without the monitorship requirement. Thus, the monitorship requirement is negatively associated with firm monetary penalties. Some may argue that after controlling for firm and violation characteristics there would be no association between the monitorship requirement and firm monetary penalties since these two types of sanctions are imposed to address arguably different though related concerns. While monetary penalties are assessed against firms to punish their historical misconduct and the resulting harm to investors and other stakeholders, the need for a monitor depends on the current state of the firm, i.e., whether or not the firm has fully and credibly remediated its internal controls and strengthened its compliance programs. In other words, the monitorship requirement is imposed in firms that have weak compliance programs and internal controls to ensure that the firm has policies and procedures in place that will help prevent future misconduct. Given the alternative predictions,

the relation between the monitorship requirement and firm monetary penalties is an empirical question that has yet to be answered. My hypothesis is listed below (stated in alternative form):

H2: The monitorship requirement is negatively associated with firm monetary penalties.

3.3 The monitorship requirement and audit fees

Extensive prior literature, beginning with Simunic (1980), examines the determinants of external audit fees using a production view of the audit process. Simunic models audit fees as $E(C) = cq + E(d) E(\theta)$. $E(C)$, the expected total costs to the auditor or the audit fees, is a function of c the per unit factor cost of external audit resources to the auditor, including all opportunity costs; q the quantity of resources used by the auditor; $E(d)$ the expected present value of future losses that might occur from an audit; and $E(\theta)$ the likelihood that the auditor will have to pay for those losses. An auditor's cost function thus consists of a resource cost component, cq , or an "effort" component of audit fees, and an expected liability loss component, $E(d) E(\theta)$, or a "risk" component of audit fees. This literature generally proposes that auditors charge higher (lower) fees in response to increases (decreases) in assessed levels of audit effort (such as client complexity) and risk (such as client risk) (e.g., Simunic 1980; Hay, Knechel, and Wong 2006; Erickson, Goldman, and Stekelberg 2016).

Economic theory suggests that auditing plays a pivotal role in capital markets by providing independent assurance of the credibility of accounting information when the separation of ownership and control results in information asymmetry and moral hazard problems (e.g., Jensen and Meckling 1976; Watts and Zimmerman 1981; Simunic and Stein 1987; Ahmed, Rasmussen, and Tse 2008; DeFond and Zhang 2014). Corporate monitors, on the other hand, are frequently required to examine and make recommendations to internal

accounting controls, financial reporting and disclosures, and/or record keeping policies and procedures of enforcement firms.¹⁵ Therefore, both corporate monitors and auditors have responsibilities over assuring the credibility of the accounting information, and systems and control of those enforcement firms that hire and compensate them. In this regard, monitors function in some sense like an internal audit function (one aspect of internal control) and an alternative monitoring mechanism. Consequently, auditors may be able to rely on some of the work done by the monitors, and the assessed level of audit effort would reduce.

In addition, the auditing literature discusses audit risk and business risk of an auditor (e.g., Strawser 1991; Thornton and Moore 1993; Houston, Peters, and Pratt 1999; Dusenbury, Reimers, and Wheeler 2000; Seetharaman, Gul, and Lynn 2002; Lyon and Maher 2005; Hogan and Wilkins 2008; Charles, Glover, and Sharp 2010). The audit risk model (ARM) is discussed in SAS No. 47 (AICPA 1983) and primarily addresses the risk associated with issuing unqualified audit opinions on client financial statements that contain material misstatements. Auditor's business risk, on the other hand, is the probability of "...loss or injury to professional practice from litigation, adverse publicity, or other events arising in connection with financial statements that [the auditor] has examined and reported on..." (AICPA 1983). From the business risk perspective of an auditor, auditors would have another party like monitors who have deep pockets to share the litigation risk with them. Thus, I expect the business risk of an auditor would reduce. From an ARM perspective, the monitors' responsibilities in reviewing and making

¹⁵ These are mentioned most often as monitors' responsibilities in settlement agreements (See Table 2). Also, per discussion with Mr. Lee S. Richards III, independent examiner of Computer Associates International, Inc. (CAI), he is required to examine several aspects of the business of CAI, including the Finance Department, the internal control, ethics and compliance system, record keeping policies and procedures, implementation of a new information system, and internal audit. In addition to lawyers from his law firm, he was assisted by an accounting firm that was recommended by him and different from the external auditor of CAI.

recommendations to internal control and corporate governance issues could reduce the assessed levels of control risk and inherent risk components of the audit risk model. The ARM states that audit risk is a function of inherent risk, control risk, and detection risk. More specifically, inherent risk is defined as the probability that an account balance or class of transactions contains a material misstatement before considering the effectiveness of the internal control system. For instance, inherent risk at the client increases with factors such as lower quality and competence of management, a poor attitude toward fair and transparent financial reporting, and weak corporate governance practices (Charles, Glover, and Sharp 2010). Control risk is defined as the probability that a material misstatement is not prevented or detected on a timely basis by the internal control system. Both inherent risk and control risk are documented by auditors on the basis of an assessment of the client. Detection risk is the tolerable level of risk that auditing procedures will not detect material misstatements. When the inherent risk and control risk are high, auditors must reduce detection risk by performing more substantive testing and/or analytical procedures to maintain overall audit risk at an acceptable level (e.g., Strawser 1991; Houston, Peters, and Pratt 1999; Hogan and Wilkins 2008). As discussed above, lower quality and competence of management, a poor attitude toward fair and transparent financial reporting, weak corporate governance practices, and poor internal controls are sources of audit risk that is priced by external auditors. Since corporate monitors help improve these aspects of a firm, I expect the assessed inherent risk and control risk would decrease. Consequently, the audit effort required to reduce detection risk in order to maintain overall audit risk at an acceptable level would also decrease. To sum up, since audit effort and risk drive external audit fees in the production view of the audit process, I expect that due to a decrease in audit effort and/or risk,

the monitorship requirement may potentially reduce audit fees for enforcement firms with monitors compared to those without monitors in the post-announcement period, relative to the pre-announcement period. Some may argue that there could be no relation between the monitorship requirement and audit fees. For instance, monitors could be doing work that is not closely related to auditing or they are not fulfilling their responsibilities mentioned in the settlement agreements. Given the alternative predictions, the relation between the monitorship requirement and audit fees is an empirical question that has yet to be answered. My hypothesis is listed below (stated in alternative form):

H3: Auditors charge lower fees to firms with monitors compared to those without monitors in the post-announcement period, relative to the pre-announcement period.

CHAPTER 4

SAMPLE AND DATA DESCRIPTION

The sample used in this paper consists of enforcement actions initiated by the SEC and DOJ against firms from January 1, 2001 to December 31, 2015 for violations of Section 13(b) of the Securities Exchange Act of 1934 (or rules promulgated thereunder) as amended by the Foreign Corrupt Practices Act of 1977 (N=820). This sample originates from a database created for a series of papers by Karpoff, Lee, and Martin (hereafter KLM) (KLM 2007, 2008a, 2008b, 2014) and further explained in Karpoff, Koester, Lee, and Martin (2017).¹⁶ The sample years represent the years when regulatory proceedings were initiated by the SEC and DOJ. I further limit my sample to enforcement actions involving firms whose class of securities is registered as either common equity or American depository receipt (ADR) in order to ensure that valuation measures related to common stock are available for my analysis (N=736).

Corporate monitors are installed during the regulatory period and are usually seen in pretrial settlement agreements. In the wake of Enron, WorldCom, and similar debacles, the SEC and DOJ began to put greater emphasis on corporate monitors (Ford and Hess 2011, Khanna 2011). Therefore, to assemble the database on monitors, I start the sample time period with the

¹⁶ The enforcement actions in the 13(b) database include charges of financial misrepresentation under one of three sections of the Securities Exchange Act of 1934 as amended by the Foreign Corrupt Practices Act of 1977 since its codification into law on December 19, 1977: 15 USC § 78.m(b)(2)(A) and (B) and § 78.m(b)(5) and two rules under the Code of Federal Regulations 17 CFR 240.13b2-1 and 13b2-2. Collectively, these regulations require that (1) every firm make and keep books and records which accurately reflect the transactions of the issuer; (2) every firm devise and maintain a system of internal accounting controls; and (3) no person shall knowingly circumvent a system of internal accounting controls; knowingly falsify any book or record required under these regulations; or make a materially false or misleading statement to an accountant. This database, originally created for a series of research by Karpoff, Lee and Martin has been used in 47 publications by over 200 individuals as of January 2016. The data has also been referred to as the FSR database.

Enron series of scandals, and their corresponding regulatory proceedings were initiated by the SEC and DOJ in 2001.

The 13(b) database contains: (a) the scope, duration, and seriousness of the misconduct; (b) the respondents or parties sanctioned by regulators, including the firm, employees or agents of the firm, and other affiliated parties; (c) the magnitude of monetary penalties assessed against each respondent, including the firm (if applicable); (d) any remedial action undertaken by the firm in response to allegations of misconduct; and (e) selected financial statement and stock return measures of firms being sanctioned. Each enforcement action includes at least one administrative, civil, or criminal regulatory proceeding, while the majority have multiple regulatory proceedings against one or more respondents under a myriad of charges.

For each respondent KLM track information on whether or not a monitor is required and types of pretrial motion used (DPA or NPA), among other items.¹⁷ My main variable of interest is *monitor flag*, which takes the value of 1 if the firm is required to retain a monitor, and 0 otherwise. I further hand collect detailed information about the monitorship for firms that are required to retain a monitor from several sources: (a) SEC press releases; (b) SEC administrative proceedings or litigation releases; (c) consent agreements between the SEC and firm respondents; (d) DOJ press releases; (e) DPAs, NPAs, or plea agreements between the DOJ and firm respondents; and (f) corporate filings such as Form 8-K. For each firm with a monitor I

¹⁷ I searched all regulatory proceedings and corporate filings to ensure the accuracy and completeness of the information on whether a monitor is required by regulators. The regulatory proceedings are obtained from several sources: (1) the SEC website; (2) the DOJ website; (3) Stanford Law School Foreign Corrupt Practices Act Clearing House at <http://fcpa.stanford.edu/enforcement-actions.html>; (4) Sherman FCPA website at http://fcpa.shearman.com/?s=matter&mode=list&tab=list&tabmode=list&so_list_from04ff1aad45ab4a779ced52eb51756690=20&so_list_from04ff1aad45ab4a779ced52eb51756690_page=2; (5) Thomson Reuters Westlaw database; and (6) EDGAR.

collect the following categories of information when it is available: (a) monitor's title; (b) qualifications required for a monitor such as expertise with respect to the FCPA and experience designing or reviewing corporate compliance policies; (c) monitor's name; (d) whether a monitor is required by the SEC, DOJ, or both; (e) selection process for a monitor including whether firms or regulators propose monitor candidate and the time length allowed for a firm to engage a monitor; (f) monitor's monitoring responsibilities and power; (g) monitor's retention terms including extension or early termination of the monitorship and monitor's right to retain assistants, at the expense of respondent firms; (h) monitor's reviewing and reporting responsibilities including frequency of regular communication between the monitor and regulators, monitor's review methodology and process, content of monitor's initial and follow-up reports, parties to whom the monitor shall deliver reports, and dispute resolution of monitor's work plans, reports, and recommendations; (i) whether the monitor is required to certify the firm's compliance matters; (j) whether the monitor is required to disclose the firm's improper activities to regulators and relevant parties within the firm; and (k) availability of monitor's report.

The monitor sample has 48 unique enforcement actions. 6.5% (48 of the 736) of the enforcement actions are required to obtain monitors. Table 1, Panel A presents details on the frequency of total enforcement actions and enforcement actions with and without monitors by years. Financial misrepresentation enforcement actions occur most often in 2003 (70 or 9.5%), 2007 (65 or 8.8%), and 2009 (61 or 8.3%). Enforcement actions with monitors occur most often in 2010 (7 or 14.6%), 2004 (6 or 12.5%), 2005 (6 or 12.5%), 2007 (6 or 12.5%), 2006 (4 or 8.3%), 2008 (4 or 8.3%), and 2013 (4 or 8.3%). No other year accounts for more than 8.0% of

the enforcement actions. I report the frequency of total enforcement actions by industry (using the Fama and French 12-industry classification) in Table 1, Panel B. The most frequent industries with financial misrepresentation enforcement actions are Business Equipment (188 or 25.5%), Finance (87 or 11.8%), and Wholesale, Retail, and Some Services (79 or 10.7%). Enforcement actions with monitors occur most often in Wholesale, Retail, and Some Services (10 or 20.8%), Healthcare, Medical Equipment, and Drugs (7 or 14.6%), Business Equipment (6 or 12.5%), Oil, Gas, and Coal Extraction and Products (5 or 10.4%), and Finance (5 or 10.4%). No other industry accounts for more than 10% of the enforcement actions.

Table 1. Frequencies of Enforcement Actions with and without Monitors

This table presents details on the frequency of enforcement actions with and without monitors in our sample of 736 enforcement actions by each year (Panel A) and by industry using the Fama and French 12-industry classification (Panel B). For each enforcement action, all regulatory proceedings are searched to determine whether a monitor is required by regulators.

| Panel A: Frequencies of Enforcement Actions with and without Monitors by Year | | | | | | |
|--|------------------|--------|--------------------------|-------|---------------------------|-------|
| Year | Total (n=736) | | Monitor flag=1 (n=48) | | Monitor flag=0 (n=688) | |
| | Freq. | Pct. | Freq. | Pct. | Freq. | Pct. |
| 2001 | 42 | 5.7% | 1 | 2.1% | 41 | 6.0% |
| 2002 | 58 | 7.9% | 3 | 6.3% | 55 | 8.0% |
| 2003 | 70 | 9.5% | 1 | 2.1% | 69 | 10.0% |
| 2004 | 49 | 6.7% | 6 | 12.5% | 43 | 6.3% |
| 2005 | 55 | 7.5% | 6 | 12.5% | 49 | 7.1% |
| 2006 | 51 | 6.9% | 4 | 8.3% | 47 | 6.8% |
| 2007 | 65 | 8.8% | 6 | 12.5% | 59 | 8.6% |
| 2008 | 45 | 6.1% | 4 | 8.3% | 41 | 6.0% |
| 2009 | 61 | 8.3% | 1 | 2.1% | 60 | 8.7% |
| 2010 | 53 | 7.2% | 7 | 14.6% | 46 | 6.7% |
| 2011 | 35 | 4.8% | 1 | 2.1% | 34 | 4.9% |
| 2012 | 32 | 4.3% | 2 | 4.2% | 30 | 4.4% |
| 2013 | 29 | 3.9% | 4 | 8.3% | 25 | 3.6% |
| 2014 | 40 | 5.4% | 2 | 4.2% | 38 | 5.5% |
| 2015 | 51 | 6.9% | 0 | 0.0% | 51 | 7.4% |
| Total | 736 | 100.0% | 48 | 6.5% | 688 | 93.5% |

Table 1. Continued

Panel B: Frequencies of Enforcement Actions with and without Monitors by Industry (Using the Fama and French 12 Industry Classification)

| Industry | Total (n=736) | | Monitor flag=1 (n=48) | | Monitor flag=0 (n=688) | |
|--|------------------|---------------|--------------------------|-------------|---------------------------|--------------|
| | Freq. | Pct. | Freq. | Pct. | Freq. | Pct. |
| Consumer Non-Durables: food, tobacco, textiles, apparel, leather, toys | 42 | 5.7% | 1 | 2.1% | 41 | 6.0% |
| Consumer Durables: cars, TVs, furniture, household appliances | 23 | 3.1% | 2 | 4.2% | 21 | 3.1% |
| Manufacturing: machinery, trucks, planes, paper, office furniture, commercial printing | 70 | 9.5% | 4 | 8.3% | 66 | 9.6% |
| Oil, Gas, and Coal Extraction and Products | 33 | 4.5% | 5 | 10.4% | 28 | 4.1% |
| Chemicals and Allied Products | 22 | 3.0% | 3 | 6.3% | 19 | 2.8% |
| Business Equipment: computers, software, and electronic equipment | 188 | 25.5% | 6 | 12.5% | 182 | 26.5% |
| Telephone and Television Transmission | 23 | 3.1% | 2 | 4.2% | 21 | 3.1% |
| Utilities | 15 | 2.0% | 0 | 0.0% | 15 | 2.2% |
| Wholesale, Retail, and Some Services (Laundries, Repair Shops) | 79 | 10.7% | 10 | 20.8% | 69 | 10.0% |
| Healthcare, Medical Equipment, and Drugs | 62 | 8.4% | 7 | 14.6% | 55 | 8.0% |
| Finance | 87 | 11.8% | 5 | 10.4% | 82 | 11.9% |
| Other: mines, construction, building maintenance, trans, hotels, business services, entertainment | 92 | 12.5% | 3 | 6.3% | 89 | 12.9% |
| Total | 736 | 100.0% | 48 | 6.5% | 688 | 93.5% |

Table 2 presents details on the monitor’s responsibilities mentioned most often in settlement agreements. To examine and make recommendations to internal accounting controls as well as to examine and make recommendations to financial reporting and disclosures, and/or record keeping policies and procedures are mentioned most often as monitors’ responsibilities (both occur in 43 or 89.6% of enforcement actions involving monitors). Other responsibilities commonly mentioned include to examine and make recommendations to regulatory and/or corporate compliance policies and procedures (40 mentions or 83.3% of enforcement actions involving monitors), examine and make recommendations to internal anti-bribery and corruption controls (32 mentions or 66.7% of enforcement actions involving monitors), and monitor compliance with settlement agreements (24 mentions or 50.0% of enforcement actions involving monitors).

Table 2. Monitors’ Specific Responsibilities Mentioned in Settlement Agreements

This table presents details on monitors’ responsibilities mentioned most often in settlement agreements. The percent column provides the relative frequency of 48 enforcement actions that require monitors and are not intended to add to 100 percent because (a) multiple monitor’s responsibilities per enforcement action may occur, and (b) this list includes only those responsibilities that are mentioned in four or more regulatory proceedings during our sample period (a list of all the unique responsibilities cited in settlement agreements would be quite lengthy).

| | Monitor Flag =1 (n=48) | |
|--|---------------------------|-------|
| | Freq. | Pct. |
| Examine and make recommendations to internal accounting controls | 43 | 89.6% |
| Examine and make recommendations to financial reporting and disclosures, and/or record keeping policies and procedures | 43 | 89.6% |
| Examine and make recommendations to regulatory and/or corporate compliance policies and procedures | 40 | 83.3% |
| Examine and make recommendations to internal anti-bribery and corruption controls | 32 | 66.7% |
| Monitor compliance with settlement agreements | 24 | 50.0% |

| | | |
|---|----|-------|
| Oversee implementation of policies and procedures or internal controls relating to FCPA compliance | 14 | 29.2% |
| Ensure the appropriate design of policies, procedures, or internal controls relating to FCPA compliance | 13 | 27.1% |
| Gather information at the SEC's request (Mentioned in DOJ settlement agreements) | 6 | 12.5% |
| Examine and make recommendations to training and education program | 5 | 10.4% |
| Evaluate the Board of Directors' and senior management's commitment to, and effective implementation of, the corporate compliance program | 4 | 8.3% |

CHAPTER 5

RESEARCH DESIGN AND EMPIRICAL RESULTS

5.1 The determinants of the monitorship requirement

I start my tests by examining the cross-sectional factors associated with a firm being required to retain a monitor by regulators. I estimate the following logistic regression using the 736 enforcement actions in my sample:

$$\begin{aligned} \text{Monitor flag} = & \alpha + \beta_{1-3}[\text{Nature of misconduct}] + \beta_4[\text{Size of harm}] \\ & + \beta_5[\text{Duration of misconduct}] + \beta_6[\text{Pervasiveness of misconduct}] \\ & + \beta_{8-12}[\text{Subsequent remediation efforts}] + \beta_{13-14}[\text{Internal monitoring}] \\ & + \beta_{15-16}[\text{External monitoring}] + \beta_{17-18}[\text{Firm characteristics}] + \varepsilon \end{aligned} \quad (1)$$

The dependent variable (*Monitor flag*) is a dummy variable that takes the value of 1 if the firm is required to retain a monitor as part of the settlement agreements, and 0 otherwise. As previously discussed, I group the latent factors for independent variables into three categories, which are the seriousness of the misconduct, subsequent remediation efforts, and the existing monitoring mechanisms. These three categories are further partitioned into seven groups. I also control for firm characteristics. These groupings are chosen because they are mentioned as factors the SEC and DOJ consider when determining whether a monitor is appropriate (FCPA Guide 2012), or are viewed as important monitoring mechanisms and information intermediaries that facilitate the detection and discipline of managerial misbehavior (e.g., Armstrong, Guay, and Weber 2010, Cheng and Warfield 2005, DeFond and Zhang 2014, Irani and Oesch 2013). Table 3, Panel A includes a list of proxy variables I use to model these latent factors that the SEC and DOJ might consider when determining whether or not to require a monitor in the enforcement

actions for financial misrepresentation. Detailed definitions of all variables are provided in Appendix B.

Table 3 presents the logistic regression coefficient estimates, odds ratios (exponentiated coefficients), and their corresponding p-values for the models that predict the monitorship requirement. Column (1) of Panel A shows the regression results for the full sample of 736 enforcement actions using model (1). I find that an enforcement action that includes bribery allegations under the FCPA and the total number of unique U.S. Code and Code of Federal Regulation rules charged against all respondents in an enforcement action significantly increase the likelihood of the monitorship requirement. Specifically, the coefficients on *Bribery charges included* and *Log[# Violations]* are both significant using robust standard errors (both have $p=0.000$). The strength of the association between the *Monitor flag* and independent variables can be assessed using the odds ratios. *Log[# Violations]* is associated with the largest odds ratio (403.999), following by *Bribery charges included* (90.807), which suggest that these two variables are strong predictors of the monitorship requirement. Firms with violations occurred while the firm was involved in a merger (*Merger related*), the length of violation period (*Log[violation period (months)]*), restating misreported financial statements (*Restate financial statements*), and percentage of independent directors of a firm (*% Independent directors*) are also positively associated with the monitorship requirement ($p=0.007$, $p=0.042$, $p=0.009$, and $p=0.053$, respectively). In addition, announcing internal investigation (*Announce internal investigation*) and the percentage of culpable CEO, Chairman of the Board, or President terminated for his or her involvement in the financial misrepresentation (*% Executive respondents terminated*) reduces the likelihood of firms being required to retain a monitor

($p=0.045$). Column (2) of Panel A presents the regression results for the auditor monitoring sample where audit fee data is available on Audit Analytics ($N=458$). Specifically, the natural logarithm of total external audit fees in millions of dollars ($\text{Log}[\text{Audit fees } (\$mm)]$) is included in this model and is insignificant in this specification. Column (3) of Panel A reports regression results for the analyst monitoring sample where missing coverage in I/B/E/S is coded as zero analyst following ($N=736$). I find that the number of analysts issuing an annual earnings forecast for a firm reduces the likelihood of the firm being required to retain a monitor ($p=0.058$). The results for other independent variables in Columns (2) and (3) are generally consistent with those for the full sample in Column (1). Table 3, Panel B presents the results for pretrial agreements after controlling for variables included in Panel A. I find that DPAs are positively associated with the monitorship requirement in all samples, whereas NPAs are positively associated with the monitorship requirement in the auditor monitoring sample only. Furthermore, DPAs are associated with larger odds ratios than those of NPAs, which suggest that DPAs are a stronger predictor of the monitorship requirement. These findings are consistent with the general perception that corporate monitors are frequently required as part of the DPAs (Ford and Hess 2009, 2011; Khanna and Dickinson 2007).

Table 3. Predicting the Monitorship Requirement

This table reports the results of a logit regression which examines whether or not a firm was required to retain a monitor in a regulatory enforcement action for financial misrepresentation between 2001 and 2015. The dependent variable takes the value of 1 if the firm was required to retain a monitor, and 0 otherwise (Monitor flag). All continuous independent variables are winsorized at the 1 percent and 99 percent levels. Independent variable definitions are presented in Appendix B. Two-tailed p-values are shown for variables without a signed prediction; one-tailed p-values are shown for variables with a signed prediction if the coefficient sign is in the predicted direction; otherwise (1- one-tailed p-values) are shown. P-values are calculated using robust standard errors. Panel A presents the regression results excluding pretrial agreements. Panel B shows the regression results including pretrial agreements. Control variables for Panel B are those variables included in Panel A. For both Panel A and Panel B, column (1) reports results for the full sample. Column (2) reports results for the auditor monitoring sample where audit fee data is available on Audit Analytics. Column (3) reports results for the analyst monitoring sample where missing coverage in I/B/E/S is coded as zero analyst following.

Table 3. Continued

| Panel A: Determinants Excluding Pretrial Agreements | | | | | | | | | | |
|--|---------|--------------------|----------------|--------------|---------------------------|----------------|--------------|---------------------------|----------------|--------------|
| Logistic Regression with Dependent Variable=Monitor flag | | | | | | | | | | |
| Variable | Predict | (1) Full Sample | | | (2) Auditor Monitoring | | | (3) Analyst Monitoring | | |
| | | Coeff. | Odds Ratio | P>z | Coeff. | Odds Ratio | P>z | Coeff. | Odds Ratio | P>z |
| Nature of misconduct | | | | | | | | | | |
| Fraud charges included | (+) | -0.717 | 0.488 | 0.810 | 0.384 | 1.469 | 0.343 | -0.701 | 0.496 | 0.805 |
| Bribery charges included | (+) | 4.509 | 90.807 | 0.000 | 6.077 | 435.504 | 0.000 | 4.515 | 91.420 | 0.000 |
| Merger related | (?) | 1.620 | 5.055 | 0.007 | 2.116 | 8.298 | 0.016 | 1.524 | 4.593 | 0.013 |
| Size of harm | | | | | | | | | | |
| Announcement CAR | (-) | -0.308 | 0.735 | 0.388 | 0.155 | 1.167 | 0.541 | -0.268 | 0.765 | 0.403 |
| Duration of misconduct | | | | | | | | | | |
| Log[Violation period (months)] | (+) | 0.634 | 1.885 | 0.042 | 0.512 | 1.669 | 0.126 | 0.583 | 1.792 | 0.056 |
| Pervasiveness of misconduct | | | | | | | | | | |
| # Respondents | (+) | 0.022 | 1.022 | 0.361 | 0.145 | 1.156 | 0.049 | 0.023 | 1.024 | 0.354 |
| Log[# Violations] | (+) | 6.001 | 403.999 | 0.000 | 3.712 | 40.936 | 0.006 | 6.012 | 408.142 | 0.000 |
| Subsequent remediation efforts | | | | | | | | | | |
| Cooperation credit | (?) | 0.847 | 2.331 | 0.137 | 1.128 | 3.090 | 0.115 | 0.824 | 2.281 | 0.145 |
| Announce internal investigation | (-) | -0.595 | 0.551 | 0.072 | -0.678 | 0.508 | 0.094 | -0.486 | 0.615 | 0.118 |
| Restated financial statements | (?) | 1.574 | 4.825 | 0.009 | 2.230 | 9.302 | 0.008 | 1.500 | 4.483 | 0.010 |
| % Executive respondents terminated | (-) | -2.381 | 0.092 | 0.010 | -3.002 | 0.050 | 0.014 | -2.248 | 0.106 | 0.015 |
| % Respondents terminated | (?) | 0.373 | 1.453 | 0.563 | 0.964 | 2.622 | 0.268 | 0.347 | 1.414 | 0.593 |
| Internal monitoring | | | | | | | | | | |
| Inadequate internal controls | (+) | -0.147 | 0.863 | 0.577 | 0.900 | 2.459 | 0.211 | -0.190 | 0.827 | 0.604 |
| % Independent directors | (?) | 2.243 | 9.419 | 0.053 | 2.988 | 19.851 | 0.041 | 2.555 | 12.874 | 0.039 |
| External monitoring | | | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|-----|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|
| % Institutional ownership | (-) | 0.947 | 2.579 | 0.867 | 0.479 | 1.615 | 0.651 | 1.133 | 3.105 | 0.912 |
| Big 8 auditor | (-) | 0.516 | 1.675 | 0.718 | 0.225 | 1.252 | 0.584 | | | |
| Log[Audit fees (\$mm)] | (-) | | | | -0.242 | 0.785 | 0.163 | | | |
| Analyst following | (-) | | | | | | | -0.052 | 0.949 | 0.058 |
| Firm characteristics | | | | | | | | | | |
| Log[Market cap (\$mm)] | (?) | 0.138 | 1.148 | 0.152 | 0.276 | 1.318 | 0.128 | 0.232 | 1.261 | 0.007 |
| Log[Market-to-book ratio] | (?) | 0.955 | 2.598 | 0.001 | 0.812 | 2.253 | 0.031 | 0.920 | 2.510 | 0.001 |
| Constant | | -33.788 | 0.000 | 0.000 | -28.639 | 0.000 | 0.000 | -33.880 | 0.000 | 0.000 |
| Industry fixed effects | | Yes | | | Yes | | | Yes | | |
| N | | 736 | | | 458 | | | 736 | | |
| N of monitors | | 48 | | | 36 | | | 48 | | |
| Pseudo R ² | | 0.417 | | | 0.459 | | | 0.425 | | |

Panel B: Determinants Including Pretrial Agreements

| Logistic Regression with Dependent Variable=Monitor flag | | | | | | | | | | |
|--|-----|--------------------|--------------|--------------|---------------------------|---------------|--------------|---------------------------|--------------|--------------|
| Predict | | (1) Full Sample | | | (2) Auditor Monitoring | | | (3) Analyst Monitoring | | |
| | | Coeff. | Odds Ratio | P>z | Coeff. | Odds Ratio | P>z | Coeff. | Odds Ratio | P>z |
| Pretrial agreements | | | | | | | | | | |
| DPA | (+) | 2.179 | 8.835 | 0.000 | 3.478 | 32.386 | 0.000 | 2.075 | 7.963 | 0.001 |
| NPA | (+) | 0.735 | 2.085 | 0.126 | 2.028 | 7.602 | 0.012 | 0.704 | 2.022 | 0.147 |
| Constant | | -28.187 | 0.000 | 0.000 | -7.911 | 0.000 | 0.073 | -27.817 | 0.000 | 0.000 |
| Controls | | Yes | | | Yes | | | Yes | | |
| Industry fixed effects | | Yes | | | Yes | | | Yes | | |
| N | | 736 | | | 458 | | | 736 | | |
| N of monitors | | 48 | | | 36 | | | 48 | | |
| Pseudo R ² | | 0.388 | | | 0.386 | | | 0.462 | | |

5.2 The monitorship requirement and firm monetary penalties

Following prior studies, I define firm monetary penalties (*Firm penalty (\$mm)*) as the sum of disgorgement of profits, prejudgment interest, and fines (in millions of dollars) assessed against the firm by the SEC, DOJ, or both in financial misrepresentation enforcement actions (Files, Martin, and Rasmussen 2016; Call, Martin, Sharp, and Wilde 2017). Disgorgement and prejudgment interest are compensatory damages representing the ill-gotten gains and interest earned, whereas fines are typically punitive in nature.¹⁸

5.2.1 Descriptive statistics

Table 4 provides a univariate comparison of each variable in firm monetary penalties models, partitioned by whether or not a monitor is required by regulators. The results suggest firms with the monitorship requirement are assessed significantly larger monetary penalties. The mean (median) *Firm penalty (\$mm)* assessed by the SEC, DOJ, or both for all sample firms is \$24.087 (\$0.000) million. Firms with the monitorship requirement are assessed a significantly higher average firm penalties of \$216.828 million versus an average firm penalty of \$10.640 million for firms without the monitorship requirement ($p=0.002$). While the median firm monetary penalties for all firms and firms without the monitorship requirement are zero, the median firm monetary penalties assessed by regulators for firms with the monitorship

¹⁸ The definition of monetary penalties often differs across studies. For example, Files (2012) defines monetary penalties as fines and disgorgement of profits assessed by only the SEC, which she separately examines for firm and individual respondents. KLM (2007) look at disgorgement, prejudgment interest, and fines assessed against all parties (e.g., the firm, individual respondents, auditors, etc.) in enforcement actions by both the SEC and DOJ.

requirement are \$22.541 million. In addition to firm monetary penalties, regulators can also seek monetary damages from individual managers or other agents of the firm. *Other penalty (\$mm)* represents the sum of disgorgement of profits, prejudgment interest, and fines (in millions of dollars) against all other individuals or agents of the firm. The average *Other penalty (\$mm)* is moderately higher for firms with the monitorship requirement, but the medians for *Other penalty (\$mm)* do not differ significantly between firms with and without the monitorship requirement. Another possible outcome of financial misrepresentation is class action lawsuits. Firms with the monitorship requirement incur a significantly higher average class action settlement amounts (*Private settlement (\$mm)*) of \$104.085 million compared to an average class action settlement amounts of \$29.794 for firms without the monitorship requirement. A t-test indicates that the magnitude difference of class action settlement amount is moderately significant ($p=0.039$) between the two groups. Finally, a significantly greater proportion of firms with the monitorship requirement are resolved with pretrial agreements in the form of DPAs and NPAs (*Pretrial agreement*) compared to firms without the monitorship requirement (54.167% versus 7.122%; $p<0.000$). This is consistent with the claim that corporate monitors are frequently conditions of DPAs or NPAs (Ford and Hess 2009, 2011; Khanna and Dickinson 2007).

A comparison of proxy variables for firm characteristics and subsequent remediation efforts by firms reveals several differences between firms with and without monitors. The mean (median) of blockholder ownership (*% Blockholder ownership*) is significantly lower for firms with monitors at 26.740% (17.965%) compared to 41.438% (38.790%) for firms without monitors, as is the proportion of firms restate their misreported financial statements (*Restated financial statements*). The average percentage of executive respondents terminated (*% Executive*

respondents terminated) is also lower for firms with monitors compared to those without monitors (14.583% versus 25.291%). While the median firm in both groups have zero percent of executive respondent terminated, a Wilcoxon rank-sum test indicates the distributions for the two groups differ significantly ($p=0.009$). A larger proportion of firms with monitors self-report the violation to regulators (*Self-reported violation*), receive credit for cooperating with regulators (*Cooperation credit*), and impede an investigation (*Impeded investigation*). Firms that are required to retain a monitor are also significantly larger in size (*Market cap (\$mm)*).

When comparing variables proxy for violation characteristics, the descriptive statistics show that a larger proportion of firms with the monitorship requirement have a violation related to foreign bribery (*Bribery charges included*) and a violation occurred while the firm was involved in a merger (*Merger related*). The percentage of enforcement actions included charges related to the offering of securities (*Offering related*) are lower for firms with monitors. The mean (median) violation period is significantly longer at 67.495 (60.009) months compared to 38.962 (32.970) months for firms without monitors. The total number of unique U.S. Code and Code of Federal Regulation rules charged against all respondents in an enforcement action (*# Violations*) is moderately lower for firms with monitors. With respect to shareholder harm resulting from the violation, the mean (median) investor loss during the violation period (*% Maximum loss*) is moderately lower at 48.587% (48.905%) for firms with monitors versus 59.038% (58.018%) for firms without monitors ($p=0.021$ and $p=0.052$, respectively). In conclusion, I find significant differences between the two groups in many of the independent variables used in the determination of monetary penalties by the SEC and DOJ, which support the need to control for these variables in the regression analyses.

Table 4. Descriptive Statistics for Variables in Firm Monetary Penalties Models

This table reports descriptive statistics for the variables in firm monetary penalties models, partitioned by whether or not a monitor is required. The 736 enforcement actions represent enforcement actions for financial misrepresentation against publicly traded firms with common equity or ADRs from 2001 - 2015. All continuous independent variables are winsorized at the 1 percent and 99 percent levels. All variables are defined in Appendix B. P-values are presented for a parametric two-sample t-test for means, non-parametric two-sample Wilcoxon rank-sum (Mann-Whitney) test where medians are reported, and a test of equal proportions for frequency counts. T-tests were used assuming unequal variances in lieu of equal variances based on the rejection of a variance ratio test of equal variances at the 0.05 significance level. Variables indicated with § are presented in their non-transformed metric but are log transformed in the regression analyses. Firm penalty (\$mm) is log transformed in regression analyses in Tables 6 and 7. ***, **, and * indicate significance at $p < 0.01$, 0.05, and 0.10 significance levels, respectively.

| Dependent Variable | | Monitor flag | | | Difference (0)-(1) | P-value |
|---------------------------------|--------|--------------|-----------------|-----------------|-----------------------|---------|
| | | All (736) | No (0) (688) | Yes (1) (48) | | |
| Firm penalty (\$mm) | Mean | 24.087 | 10.640 | 216.828 | -206.189*** | 0.002 |
| | Median | 0.000 | 0.000 | 22.541 | -22.541*** | 0.000 |
| Independent Variables | | | | | | |
| Self-reported violation | N | 108 | 86 | 22 | 64 | |
| | Col % | 14.674% | 12.500% | 45.833% | -33.333%*** | 0.000 |
| # Prior public announcements § | Mean | 4.379 | 4.368 | 4.542 | -0.174 | 0.387 |
| | Median | 4.000 | 4.000 | 3.000 | 1.000 | 0.682 |
| Announce internal investigation | N | 346 | 322 | 24 | 298 | |
| | Col % | 47.011% | 46.802% | 50.000% | -3.198% | 0.334 |
| Cooperation credit | N | 277 | 239 | 38 | 201 | |
| | Col % | 37.636% | 34.738% | 79.167% | -44.428%*** | 0.000 |
| Impeded investigation | N | 16 | 12 | 4 | 8 | |
| | Col % | 2.174% | 1.744% | 8.333% | -6.589%*** | 0.001 |
| Market cap (\$mm) § | Mean | 9699.393 | 8720.096 | 23735.980 | -15015.890*** | 0.004 |
| | Median | 443.679 | 401.252 | 9504.657 | -9103.405*** | 0.000 |
| Market-to-book ratio § | Mean | 4.331 | 4.492 | 2.012 | 2.481*** | 0.000 |
| | Median | 1.598 | 1.598 | 1.577 | 0.022 | 0.882 |
| Enforcement action completed | N | 676 | 630 | 46 | 584 | |
| | Col % | 91.848% | 91.570% | 95.833% | -4.264% | 0.148 |
| Bribery charges included | N | 133 | 100 | 33 | 67 | |
| | Col % | 18.071% | 14.535% | 68.750% | -54.215%*** | 0.000 |
| Private settlements (\$mm) § | Mean | 34.639 | 29.794 | 104.085 | -74.291** | 0.039 |
| | Median | 0.000 | 0.000 | 0.000 | 0.000 | 0.459 |
| Other penalty (\$mm) § | Mean | 13.181 | 11.916 | 31.312 | -19.396* | 0.087 |
| | Median | 0.156 | 0.175 | 0.043 | 0.131 | 0.195 |
| % Blockholder ownership | Mean | 40.470% | 41.428% | 26.740% | 14.688%*** | 0.000 |
| | Median | 36.900% | 38.790% | 17.965% | 20.825%*** | 0.000 |
| % Maximum loss | Mean | 58.357% | 59.038% | 48.587% | 10.451%** | 0.021 |
| | Median | 57.153% | 58.018% | 48.905% | 9.113%* | 0.052 |
| Violation period (months) § | Mean | 40.823 | 38.962 | 67.495 | -28.533*** | 0.000 |
| | Median | 32.986 | 32.970 | 60.009 | -27.04*** | 0.000 |

| | | | | | | |
|------------------------------------|--------|---------|---------|---------|-------------|-------|
| Option backdating related | N | 37 | 37 | 0 | 37 | |
| | Col % | 5.027% | 5.378% | 0.000% | 5.378%** | 0.050 |
| Offering related | N | 355 | 342 | 13 | 329 | |
| | Col % | 48.234% | 49.709% | 27.083% | 22.626%*** | 0.001 |
| IPO related | N | 14 | 13 | 1 | 12 | |
| | Col % | 1.902% | 1.890% | 2.083% | -0.194% | 0.462 |
| Merger related | N | 58 | 50 | 8 | 42 | |
| | Col % | 7.880% | 7.267% | 16.667% | -9.399%*** | 0.010 |
| # C-level respondents | Mean | 1.394 | 1.436 | 0.792 | 0.644*** | 0.001 |
| | Median | 1.000 | 1.000 | 0.000 | 1.000*** | 0.000 |
| # Employee respondents | Mean | 1.011 | 0.983 | 1.417 | -0.434* | 0.091 |
| | Median | 0.000 | 0.000 | 0.500 | -0.500 | 0.376 |
| # Other respondents | Mean | 1.356 | 1.326 | 1.792 | -0.466 | 0.123 |
| | Median | 0.000 | 0.000 | 1.000 | -1.000*** | 0.010 |
| # Violations § | Mean | 11.826 | 11.948 | 10.083 | 1.864** | 0.020 |
| | Median | 11.500 | 12.000 | 9.000 | 3.000** | 0.013 |
| Restated financial statements | N | 464 | 443 | 21 | 422 | |
| | Col % | 63.043% | 64.390% | 43.750% | 20.640%*** | 0.002 |
| % Executive respondents terminated | Mean | 24.592% | 25.291% | 14.583% | 10.707%*** | 0.008 |
| | Median | 0.000% | 0.000% | 0.000% | 0.000%*** | 0.009 |
| Recidivist respondent | N | 134 | 127 | 7 | 120 | |
| | Col % | 18.207% | 18.459% | 14.583% | 3.876% | 0.251 |
| Pretrial agreement | N | 75 | 49 | 26 | 23 | |
| | Col % | 10.190% | 7.122% | 54.167% | -47.045%*** | 0.000 |

5.2.2 Regression analyses

In this section, I examine the association between the monitorship requirement and firm monetary penalties using the following Poisson Pseudo-Maximum Likelihood (PPML) regression:

$$Firm\ penalty\ (\$mm) = \alpha + \beta Monitor\ flag + \gamma Controls + \varepsilon \quad (2)$$

The dependent variable is *Firm penalty (\$mm)*, and my primary variable of interest is *Monitor flag*, as previously defined. The control variables are proxies for significant factors considered by the SEC and DOJ when assessing monetary penalties against firms (Files, Martin,

and Rasmussen 2016). I also control for firm size (*Log[Market cap (\$mm)]*), market valuation multiple (*Log[Market-to-book ratio]*), and whether the enforcement action is completed as of the point of data collection (*Enforcement action completed*), since an ongoing enforcement action may indicate the assessment of additional monetary penalties.

Two challenges arise when estimating outcomes of firm monetary penalties. The first issue is the large number of enforcement actions without any resultant penalties, and the second issue is the severe positive skewness in the dependent variable due to some extremely large penalties.¹⁹ As a result, standard tobit regressions and logarithmic transformation commonly used in ordinary least squares (OLS) or tobit regressions for highly skewed data suffer from potentially severe bias when estimating regressions using data with these attributes (Santos Silva and Tenreyro 2006, 2011). Standard tobit regressions are problematic because the censored values would contain a mixture of unobserved monetary penalties for firms not named as a respondent in the enforcement action and “true” zero monetary penalties for firm respondents in the enforcement actions. The logarithmic transformation also causes problems because the logarithm of zero values in the dependent variable is undefined. The standard practice of adding a constant (commonly 1.00, 0.01, 0.0001, or 0.0000001) to zeros before a log transformation can bias the results, especially when monetary penalties are expressed in millions of dollars. Prior research shows that the PPML estimator is a particularly effective modeling technique for distributions characterized by a disproportionate number of zeros and severe skewness (Santos

¹⁹ In my sample, 326 of the 588 (55.44%) enforcement actions where the firm was named as a respondent there are no (zero) monetary penalties assessed against the firm, while each of the largest 30 enforcement actions has \$100 million or more in firm penalties (with three enforcement actions exceeding \$1 billion). I confirm in an untabulated test that firm penalties exhibit highly skewed, non-normal distributions ($p < 0.001$).

Silva and Tenreyro 2006, 2011; Tenreyro 2007; Cameron and Trivedi 2010; Wooldridge 2010; Irarrazabal, Moxnes, and Opromolla 2013; Karolyi and Taboada 2015). In order to mitigate estimation problems caused by using data with these distributions (i.e., many observations with zeros and severe skewness), I use the PPML estimator (Gourieroux, Monfort, and Trognon 1984) for my regression analyses.²⁰

Table 5 presents the regression results testing the association between the monitorship requirement and firm monetary penalties (model 2). I find that *Monitor flag* is associated with significantly higher firm monetary penalties in the univariate regression in Column (1) (coefficient of 3.015, $p=0.000$), the regression excluding proxies for severity of misconduct in Column (2) (coefficient of 1.709, $p=0.000$), and the regression including all control variables in Column (3) (coefficient of 1.322, $p=0.000$). The regression results provide no evidence that the monitorship requirement would reduce firm monetary penalties. I conjecture that the positive association between the monitorship requirement and firm monetary penalties is because after controlling for severity of the misconduct and other factors known to affect firm monetary penalties, the monitorship requirement is a proxy for the weak compliance program (or compliance culture) of a firm, which would increase monetary penalties assessed by the SEC and DOJ. First, the DOJ points out that “it may be appropriate to use a monitor where a company does not have an effective internal compliance program, or where it needs to establish necessary internal controls” (Morford Memo 2008). In addition to the compliance program, regulators are

²⁰ The primary difference between PPML and conventional Poisson regression is that PPML does not impose the assumption of equality in the first and second moments of the distribution. In Table 6, Panel A, I provide the results of sensitivity tests using OLS as an alternative estimate technique. The general implication is that my results are insensitive to the estimators used.

also instructed to consider a “company’s compliance attitude” or, in other words, the corporation’s culture (McNulty Memo 2006; Seaboard Report 2001). Second, the Statement of the Securities and Exchange Commission Concerning Financial Penalties and Federal Sentencing Guidelines list effective compliance program as one of the criteria the SEC and DOJ consider in determining monetary penalties.²¹ The SEC and DOJ would assess higher penalties for firms that fail to have an effective compliance program at the time of the offense, after taking into account severity of the misconduct and other factors considered by the regulators.

In addition to the monitorship requirement (*Monitor flag*), firm monetary penalties are positively associated with the size of the firm ($\text{Log}[\text{Market cap } (\$mm)]$), the effect on injured shareholders ($\text{Log}[1 + \text{Private settlements } (\$mm)]$), the length of the violation period ($\text{Log}[\text{Violation period (months)}]$), and the number of violations ($\text{Log}[\# \text{ Violations}]$). On the other hand, I find that *Announce internal investigation*, *Restated financial statements*, violation relating to stock option backdating (*Option backdating related*), and violation occurred while the firm was involved in a merger (*Merger related*) are each associated with lower monetary penalties. Firm monetary penalties are also negatively associated with *Market-to-book ratio*. With the exception of a positive coefficient estimate for cooperation (*Cooperation credit*), these

²¹ The Statement of the Securities and Exchange Commission Concerning Financial Penalties (SEC 2006, available at <http://www.sec.gov/news/press/2006-4.htm>) and Chapter 8 – Sentencing of Organizations from the United States Sentencing Commission Guidelines Manual (USSC 2016, available at <https://www.ussc.gov/guidelines/2016-guidelines-manual>) describe the factors the SEC and DOJ consider when submitting recommendations to the court in the sentencing hearing or in the penalty phase of the legal proceedings.

findings are consistent with my expectations based on the SEC's and DOJ's criteria in determining penalties.²²

Table 5. Enforcement Outcome - Firm Monetary Penalties

This table presents Poisson pseudo-maximum likelihood (PPML) regression results examining the association between monitorship requirement and firm monetary penalties. The dependent variable is Firm penalty (\$mm), which is the sum of total fines, disgorgement of profits, and prejudgment interest in millions of dollars that are assessed by the SEC and DOJ against the firm for financial misrepresentation enforcement actions from 2001 to 2015. All continuous independent variables are winsorized at the 1 percent and 99 percent levels. Variable definitions are presented in Appendix B. Two-tailed p-values are calculated using robust standard errors. ***, **, and * indicate significance at $p < 0.01$, 0.05, and 0.10 significance levels, respectively.

| | PPML Regression with Dependent Variable=Firm penalty (\$mm) | | | | | |
|-----------------------------------|---|--------------|--|--------------|-----------------|--------------|
| | (1) | | (2) | | (3) | |
| | Univariate | | Exclude Proxies for Severity of Misconduct | | Full Model | |
| | Coeff. | P>t | Coeff. | P>t | Coeff. | P>t |
| Monitor flag | 3.015*** | 0.000 | 1.709*** | 0.000 | 1.322*** | 0.000 |
| Self-reported violation | | | -0.203 | 0.497 | -0.359 | 0.287 |
| Log[# Prior public announcements] | | | 1.187*** | 0.005 | 0.560 | 0.337 |
| Announce internal investigation | | | -0.632** | 0.036 | -0.608** | 0.034 |
| Cooperation credit | | | 0.396 | 0.244 | 0.335 | 0.204 |
| Impeded investigation | | | 0.470 | 0.432 | -0.058 | 0.895 |
| Log[Market cap (\$mm)] | | | 0.547*** | 0.000 | 0.461*** | 0.000 |
| Log[Market-to-book ratio] | | | -0.535*** | 0.000 | -0.500*** | 0.006 |
| Enforcement action completed | | | -1.043* | 0.054 | -0.448 | 0.392 |
| Bribery charges included | | | | | 0.202 | 0.599 |
| Log[1+Private settlements (\$mm)] | | | | | 0.138** | 0.030 |
| Log[1+Other penalty (\$mm)] | | | | | 0.083 | 0.363 |
| % Blockholder ownership | | | | | -0.562 | 0.593 |
| % Maximum loss | | | | | -0.324 | 0.296 |
| Log[Violation period (months)] | | | | | 0.554** | 0.019 |
| Option backdating related | | | | | -2.133*** | 0.001 |
| Offering related | | | | | -0.071 | 0.846 |

²² Cooperation is one of the criteria that the SEC and DOJ consider in determining monetary penalties, and the Federal Sentencing Guides allow for reductions in firm penalties for mitigating factors such as cooperation (the United States Sentencing Commission Guidelines Manual §8C2.5(g)). Files, Martin, and Rasmussen (2016) find that cooperation credit is negatively associated with the magnitude of firm monetary penalties using the Heckman selection model.

| | | | | | | |
|------------------------------------|-------|-------|----------|-------|------------|-------|
| IPO related | | | | | -1.122 | 0.280 |
| Merger related | | | | | -1.044** | 0.038 |
| # C-level respondents | | | | | -0.217 | 0.291 |
| # Employee respondents | | | | | 0.079 | 0.395 |
| # Other respondents | | | | | -0.051 | 0.179 |
| Log[# Violations] | | | | | 3.126*** | 0.002 |
| Restated financial statements | | | | | -0.639* | 0.058 |
| % Executive respondents terminated | | | | | 0.111 | 0.814 |
| Recidivist respondent | | | | | 0.114 | 0.776 |
| Pretrial agreement | | | | | 0.159 | 0.590 |
| Constant | 2.365 | 0.000 | -3.232** | 0.024 | -14.133*** | 0.000 |
| N | 736 | | 736 | | 736 | |
| Pseudo R ² | 0.340 | | 0.725 | | 0.803 | |

5.2.3 Robustness tests

Although I believe PPML is the most appropriate estimator for my data, I also examine the sensitivity of the main results from Table 5 using the OLS estimator (with $\log[1+Firm\ penalty\ (\$mm)]$ as the dependent variable). I present the results of the OLS regressions in Table 6, Panel A. The results of the OLS regressions are generally consistent with the main results using PPML but have more significant control variables than those in PPML regressions. I find that the association between firm penalties and the monitorship requirement is consistently positive and significant across different model specifications in Columns (1) – (3). In addition to control variables that are significant in Table 5, I find that impeding an investigation (*Impeded investigation*), a violation related to foreign bribery (*Bribery charges included*), and *pretrial agreement* are positively associated with firm monetary penalties. On the other hand, the variables *Self-reported violation*, *% Blockholder ownership*, and *% Executive respondents terminated* are each associated with lower firm monetary penalties.

I acknowledge the inherent endogeneity in my setting. The requirement for monitors is not random, which raises concerns that results I observe could reflect the effects of unobserved firm and violation attributes rather than an association with the monitorship requirement (i.e., unobservable selection). In Table 6, Panel B, I conduct an assessment of unobservable selection based on recent theory and evidence using bounding arguments to assess bias from correlated omitted variables (Oster 2016, Alotnj, Edler, and Taber 2005). This analysis draws on a proportional selection relationship (Alotnj, Edler, and Taber 2005) to incorporate both movements in the coefficient of interest and R-squares (between linear regression models with and without observable controls) to identify omitted variable bias. Oster (2016) proposes a coefficient of proportionality, δ , which uses information from movement in the coefficient of interest (β) and explanatory power (R^2) of linear regression models with and without observable controls. The calculation of δ also takes into account the explanatory power of hypothetical linear regression models with both observed and unobserved controls (R_{\max}), and target value of coefficient of interest (β_0). For example, a δ of 2.00 indicates that for unobservable factors to overturn the result, they would need to be two times as important as observables.

Oster (2016) observes that R-squares movements are a critical component when assessing unobservable selection. Thus, estimating unobservable selection relies on R_{\max} . Oster (2016) argues that because of measurement error, even a full set of controls (i.e., if one could include both unobserved and observed controls in the regression) would fail to fully explain outcomes in many settings. Therefore, based on replication results of dozens of recent empirical studies in top economic journals, she recommends that researchers use an estimate of R_{\max} equal to $1.3 \times$ the R^2 from the OLS regression that includes observable controls. Oster (2016) recommends that

researchers report the value of δ for which the coefficient of interest equals 0 ($\beta_0=0$). Values of δ greater than 1 suggest a robust result, which means that for unobservable factors to result in a treatment effect of zero, they would need to be as important as the observable controls.

In Table 6, Panel B, I report that the estimate of δ is greater than 1 for firm monetary penalties using OLS regressions. Specifically, a δ of 1.384 for firm monetary penalties suggests that unobservable factors would need to be 1.384 times as important as the observable controls to render a null effect. Overall, these results imply that my results are insensitive to the estimators used and provide me with increased confidence that endogeneity caused by unobservable selection is unlikely to explain my results.²³

5.2.4 Additional analysis

Regulators posit that “it may be appropriate to use a monitor where a company does not have an effective internal compliance program, or where it needs to establish necessary internal controls” (Morford Memo 2008). Accordingly, I examine the association between the monitorship requirement and firm monetary penalties using a subsample of firms with no internal control violations under 15 USC § 78.m(b)(2)(B). OLS regression results with logged *firm penalty (\$mm)* shows a negative association (coefficient of -0.865, $p=0.065$) between the monitorship requirement and firm monetary penalties (untabulated). The result is consistent with

²³ In addition to the robustness tests presented in Table 6, I perform a battery of additional robustness tests (untabulated). First, to reduce the effect of possibly spurious outliers, the dependent variables *Firm penalty (\$mm)* and *Log [1+Firm penalty (\$mm)]* are winsorized at the 1 percent and 99 percent levels, in addition to the winsorization for all continuous independent variables in the regression results tabulated. In another test, I remove the largest three penalties exceeding \$1 billion in the regression analyses. The results from both tests remain consistent with those presented in Tables 5 and 6. Second, to address the concern that firm penalties level on average could be attributable to different political agenda resulting from changes in the SEC and DOJ leadership, I control for year fixed effects in regression analyses, and the regression results remain robust. Third, I scale firm penalties by size of the firm, and regression results remain robust.

my expectation based on the regulators' guidance on when it is appropriate to use a monitor and their criteria in determining penalties.²⁴

Table 6. Sensitivity Tests of Enforcement Outcome - Firm Monetary Penalties

This table presents the results of sensitivity tests for firm monetary penalties. Panel A shows the results using ordinary least squares (OLS) regression as an alternative estimation technique. The dependent variable is Log [1+ Firm penalty (\$mm)], which is natural logarithm of one plus the sum of total fines, disgorgement of profits, and prejudgment interest in millions of dollars that are assessed by the SEC and DOJ against the firm for financial misrepresentation enforcement actions from 2001 to 2015. Panel B reports the result of a test to evaluate the sensitivity of the results to unobservable selection and coefficient stability (Oster 2016). Oster (2016) proposes a coefficient of proportionality, δ , which uses (1) differences in the coefficient of interest between linear regression models with and without observable controls (β), (2) differences in the explanatory power of linear regression models with and without observable controls (R^2), (3) explanatory power of hypothetical linear regression models with both observed and unobserved controls (R_{\max}), and (4) Target value of coefficient of interest (β_0). All continuous independent variables are winsorized at the 1 percent and 99 percent levels. Variable definitions are presented in Appendix C. Two-tailed p-values are calculated using robust standard errors. ***, **, and * indicate significance at $p < 0.01$, 0.05, and 0.10 significance levels, respectively.

| Panel A: Alternative Estimator | | | | | | |
|--|-----------------|--------------|--|--------------|-----------------|--------------|
| OLS Regression with Dependent Variable=Log [1+ Firm penalty (\$mm)] | | | | | | |
| | (1) | | (2) | | (3) | |
| | Univariate | | Exclude Proxies for Severity of Misconduct | | Full Model | |
| | Coeff. | P>t | Coeff. | P>t | Coeff. | P>t |
| Monitor flag | 2.670*** | 0.000 | 1.949*** | 0.000 | 1.170*** | 0.000 |
| Self-reported violation | | | -0.153 | 0.354 | -0.656*** | 0.000 |
| Log[# Prior public announcements] | | | -0.076 | 0.589 | 0.133 | 0.380 |
| Announce internal investigation | | | -0.179* | 0.058 | -0.145* | 0.093 |
| Cooperation credit | | | 0.227* | 0.051 | -0.025 | 0.816 |
| Impeded investigation | | | 1.118** | 0.011 | 1.120*** | 0.002 |
| Log[Market cap (\$mm)] | | | 0.230*** | 0.000 | 0.151*** | 0.000 |
| Log[Market-to-book ratio] | | | -0.078** | 0.019 | -0.047 | 0.131 |
| Enforcement action completed | | | -1.001*** | 0.000 | -0.484* | 0.060 |
| Bribery charges included | | | | | 0.660*** | 0.001 |
| Log[1+Private settlements (\$mm)] | | | | | 0.087** | 0.024 |
| Log[1+Other penalty (\$mm)] | | | | | 0.068 | 0.196 |
| % Blockholder ownership | | | | | -0.367* | 0.055 |

²⁴ Although the result is consistent with my expectation, I caution the reader in drawing conclusion from this result due to the small number of observations of monitors in this subsample of firms.

| | | | | | | | |
|------------------------------------|----------|-------|--------|-------|--------|-----------|-------|
| % Maximum loss | | | | | | 0.115 | 0.310 |
| Log[Violation period (months)] | | | | | | 0.359*** | 0.000 |
| Option backdating related | | | | | | -0.902*** | 0.000 |
| Offering related | | | | | | 0.240** | 0.027 |
| IPO related | | | | | | -0.432** | 0.016 |
| Merger related | | | | | | -0.233* | 0.087 |
| # C-level respondents | | | | | | -0.039 | 0.404 |
| # Employee respondents | | | | | | 0.025 | 0.515 |
| # Other respondents | | | | | | -0.021 | 0.397 |
| Log[# Violations] | | | | | | 0.385 | 0.442 |
| Restated financial statements | | | | | | -0.327*** | 0.003 |
| % Executive respondents terminated | | | | | | -0.309** | 0.013 |
| Recidivist respondent | | | | | | 0.145 | 0.241 |
| Pretrial agreement | | | | | | 1.220*** | 0.000 |
| Constant | 0.702*** | 0.000 | 0.512* | 0.069 | -2.463 | 0.171 | |
| N | 736 | | 736 | | 736 | | |
| Adjusted R ² | 0.178 | | 0.403 | | 0.535 | | |

Panel B: Unobservable Selection and Coefficient Stability (Oster 2016)

| | β (Coefficient on Monitor flag without observable controls) | β (Coefficient on Monitor flag with observable controls) | R ² without observable controls | R ² with observable controls | Π | R _{max} | β_0 (Target value of coefficient on Monitor flag) | δ ($\delta > 1$ suggests coefficient stability, i.e., a robust result) |
|--------------------------------------|---|---|--|---|-------|------------------|--|--|
| Log [1+Firm penalty (\$mm)] | 2.670 | 1.170 | 0.179 | 0.552 | 1.300 | 0.717 | 0.000 | 1.384 |

5.3 The monitorship requirement and audit fees

To test H3 that auditors charge lower fees to enforcement firms with monitors compared to those without monitors in the year following the announcement of the monitorship requirement, relative to the year preceding the announcement, I estimate the following regression model:

$$\begin{aligned} \text{Log}[\text{Audit fees } (\$mm)] = & \alpha + \beta_1 \text{Monitor flag} + \beta_2 \text{Post} + \beta_3 \text{Monitor flag} * \text{Post} \\ & + \gamma \text{Controls} + \varepsilon \end{aligned} \quad (3)$$

The dependent variable, *Log[Audit fees (\$mm)]*, is the natural logarithm of the firm's total external audit fees in millions of dollars. As previously defined, the independent variable, *Monitor flag*, is a dummy variable equal to 1 if a firm is required to retain a corporate monitor as part of a settlement agreement related to an enforcement action, and 0 otherwise. The primary question of interest is whether and how the audit pricing of firms with monitors change compared to those changes for firms without monitors from the year preceding the announcement of the monitorship requirement to the year following the announcement. To examine this issue, I also construct a dummy variable, *Post*, equal to 1 if the fiscal year of a firm is one year following the year of the initial regulatory proceeding (post-announcement period), and 0 if the fiscal year of a firm is one year prior to the year of initial regulatory proceeding (pre-announcement period). I use the initial filing of a regulatory proceeding as a cut-off point because 67% of the monitorship requirement in my sample is announced at the time of the initial regulatory proceeding.²⁵ I interact this variable with *Monitor flag* and interpret the coefficient on the *Monitor flag * Post* interaction term as the incremental change in the audit pricing of enforcement firms with monitors compared to those without monitors from the pre- to post-announcement period. Based on my hypothesis that auditors charge lower audit fees to enforcement firms with monitors compared to those without monitors from pre- to post-announcement period, I predict a negative coefficient on this interaction term.

²⁵ The initial filing of a regulatory proceeding and the announcement of the monitorship requirement are used interchangeably for the purpose of testing this hypothesis.

Importantly, I control for severity of the misconduct using $\text{Log}[1 + \text{Firm penalty} (\$mm)]$ since firm penalty is a general proxy for severity of the misconduct, which is shown as a key determinant of the monitorship requirement. I also include a battery of control variables that are known to influence external audit fees from prior literature (e.g., Hay, Knechel, and Wong 2006; Dao, Raghunandan, and Rama 2012; Fung, Gul, and Krishnan 2012; DeFond and Zhang 2014; Erickson, Goldman, Stekelberg 2016). First, I control for firm size (calculated as the natural logarithm of total assets; defined as *Size*) since prior literature shows that larger and more complex firms pay higher audit fees. I also control for whether the firm uses a *Big 4 auditor* (defined as a dummy variable equal to 1 if the firm's auditor was one of the Big 4 auditing firms in the year before and after the initial filing of a regulatory proceeding related to an enforcement action, and 0 otherwise) since prior research finds a positive association between using a *Big 4 auditor* and audit fees. I control for firm performance using return on assets (calculated as net income scaled by total assets; defined as *ROA*) and expect a negative association between *ROA* and audit fees. I next control for a number of variables that capture the general riskiness of the firm. Specifically, I control for debt (calculated as the total liabilities scaled by total assets; defined as *Leverage*), short-term liquidity (calculated as total current assets scaled by total current liabilities; defined as *Quick ratio*), foreign sales (a dummy variable equal to 1 if foreign income is reported, and 0 otherwise; defined as *Foreign income*), and number of business segments (calculated as the natural logarithm of one plus the number of business segments of a firm; defined as $\text{Log}[1 + \# \text{Business segments}]$). Since prior studies find a positive association between firm risk and audit fees, I expect *Leverage*, *Foreign income*, and $\text{Log}[1 + \# \text{Business segments}]$ to be positively associated with audit fees, and *Quick ratio* to be negatively related to

audit fees as it is an inverse measure of risk. Finally, I control for two factors regarding the relationship between the firm and its auditor that may influence audit fees. First, I control for whether the firm changed auditor (a dummy variable equal to 1 if the firm changed auditors either during the one year before or after the initial filing of a regulatory proceeding related to an enforcement action, and 0 otherwise; defined as *Auditor change*). Prior studies show that a new auditor is likely to charge lower fees in order to “win” the bid. Next, I control for whether the firm has a calendar year-end (a dummy variable equal to 1 if the firm has a calendar year-end, and 0 otherwise; defined as *Calendar year-end*) since prior literature finds that non-calendar-year-end firms frequently receive fee discounts from their auditors. Thus, this variable is expected to be positively related to audit fees. I also include industry fixed effects in the regression and clustered standard errors by firm.

Table 7 presents the descriptive statistics for audit fees (\$mm) charged to enforcement firms with and without monitors in the year before and after the initial filing of regulatory proceedings (Panel A) and the results of estimating Model 3 to test H3 that auditors charge lower fees to firms with monitors compared to those without monitors in the post-announcement period, relative to the pre-announcement period. Based on the unconditional comparison of audit fees (\$mm) in Panel A, I find that auditors charge higher fees to enforcement firms with monitors compared to those without monitors in the year before (\$10.714 million for firms with monitors versus \$5.392 million for firms without monitors; $p=0.069$) and after the regulatory proceeding begins (\$13.673 million for firms with monitors versus \$5.110 for firms without monitors; $p=0.030$). Collectively, the incremental change in audit fees of firms with monitors compared to those without monitors from the pre-announcement period to the post-

announcement period is \$3.241 million. However, after controlling for severity of the misconduct and factors known to influence audit fees in the OLS regression in Panel B, I find that consistent with H3, the coefficient on the *Monitor flag * Post* interaction term is negative (coefficient = -0.226) and moderately significant (p=0.064). I also note that the coefficient on the *Post* variable is negative (coefficient = -0.093) and moderately significant (p=0.065), indicating an overall decreasing trend in audit fees after the initial filing of regulatory proceedings. Regarding coefficients on control variables, I find that the majority are statistically significant in the predicted direction. Finally, the adjusted R² of this model specification exceeds 80 percent. Overall, the results reported in Panel B provide us with some evidence that, relative to the year prior to the announcement of the monitorship requirement, auditors charge lower audit fees to enforcement firms with monitors compared to those without monitors in the year following the announcement. This result is consistent with auditors decreasing their assessed levels of audit effort and/or audit risk to a greater extent for those enforcement firms with monitors, relative to those without.

Table 7. Enforcement Outcome - Audit Fees

This table presents the results of audit fees (\$mm) charged to firms as an enforcement outcome. Panel A reports descriptive statistics for audit fees (\$mm) charged to firms with and without monitors in the year before and after the initial regulatory proceedings. The audit fees variable is presented in its non-transformed metric in Panel A but is log transformed in the regression analysis in Panel B. Panel B presents the ordinary least squares (OLS) regression results of estimating model 3 to test that auditors charge lower fees to firms with monitors compared to those without monitors in the year following the announcement of the monitorship requirement, relative to the year preceding the announcement. The dependent variable is Log [Audit fees (\$mm)], which is the natural logarithm of external audit fees in millions of dollars. Variable definitions are presented in Appendix B. Two-tailed p-values are shown for variables without a signed predictions; one-tailed p-values are shown for variables with a signed prediction if the coefficient sign is in the predicted direction; otherwise (1- one-tailed p-values) are shown. P-values are calculated using standard errors clustered by firms. ***, **, and * indicate significance at p < 0.01, 0.05, and 0.10 significance levels, respectively.

Table 7. Continued

| Panel A: Descriptive Statistics for Audit Fees (\$mm) | | | | | |
|--|---------------------------------|---------------------|---------------|---------------------------------|----------------|
| | | Monitor Flag | | Difference (1) - (0) | P-value |
| | | Yes (1) | No (0) | | |
| Post | Yes (1) | 13.673 | 5.110 | 8.563** | 0.030 |
| | No (0) | 10.714 | 5.392 | 5.322* | 0.069 |
| | Difference (1) - (0) | 2.959 | -0.282 | 3.241 | 0.300 |
| | P-value | 0.296 | 0.367 | 0.300 | |

| Panel B: Regression Results | | | |
|---|----------------|----------------|---------------|
| OLS Regression with Dependent Variable=Log [Audit fees (\$mm)] | | | |
| | Predict | Coeff. | P>t |
| Monitor flag | (?) | 0.189 | 0.197 |
| Post | (?) | -0.093* | 0.065 |
| Monitor flag * Post | (-) | -0.226* | 0.064 |
| Size | (+) | 0.494*** | 0.000 |
| Big 4 auditor | (+) | 0.218** | 0.029 |
| ROA | (-) | -0.066 | 0.287 |
| Leverage | (+) | 0.604*** | 0.000 |
| Quick ratio | (-) | -0.011 | 0.334 |
| Foreign income | (+) | 0.340*** | 0.001 |
| Auditor change | (-) | 0.117 | 0.857 |
| Calendar year-end | (+) | 0.103 | 0.128 |
| Log[1+# Business segments] | (+) | 0.171** | 0.011 |
| Log[1+Firm penalty (\$mm)] | (+) | 0.110*** | 0.000 |
| Constant | | -4.076*** | 0.000 |
| Industry fixed effects | | Yes | |
| N | | 486 | |
| N of monitors | | 44 | |
| Adjusted R ² | | 0.824 | |

CHAPTER 6

CONCLUSION

In this study, first, I explore the contributing factors and firm actions that are associated with the likelihood of the monitorship requirement. Specifically, I investigate whether and how the seriousness of the misconduct, subsequent remediation efforts undertaken by firms, and the existing monitoring mechanisms impact the likelihood of the monitorship requirement. My findings show that enforcement actions with bribery allegations under the FCPA and the number of violations charged against all respondents in an enforcement action are strong predictors of the monitorship requirement. These results suggest that firms with more pervasive, serious, and persistent firm-level problems are more likely to be subject to the monitorship requirement. I also find that firms with violations occurred while the firm was involved in a merger, the length of violation period, restating misreported financial statements, and percentage of independent directors of a firm are positively associated with the monitorship requirement. In addition, announcing internal investigation, the percentage of culpable executives terminated, and analyst following would reduce the likelihood of the monitorship requirement. Announcing an internal investigation is a huge sign of remediation efforts that are meant to prevent violations in the future, and terminating culpable executives is a significant remedial action undertaken by the firm to create an environment and culture that is conducive to law compliance and ethical behaviors. The evidence also suggests that analyst monitoring may act as a substitute to monitoring by corporate monitors to deter future occurrences of misbehavior. Second, I examine the substitutability between the monitorship requirement and firm monetary penalties as regulatory enforcement outcomes. The results from the regression analyses and robustness tests

provide no evidence that the monitorship requirement reduces firm monetary penalties. Rather, I find a positive association between the monitorship requirement and firm monetary penalties. I conjecture that the positive association between the monitorship requirement and firm monetary penalties exists because, after controlling for severity of the misconduct and other factors known to influence firm monetary penalties, the monitorship requirement is a proxy for the weak compliance program (or compliance culture) of a firm, which would increase monetary penalties assessed by the SEC and DOJ. Lastly, I examine the incremental change in audit fees of enforcement firms with monitors compared to those without monitors from the pre- to post-announcement period. After controlling for severity of the misconduct and other factors known to influence audit fees, I find some evidence that, relative to the pre-announcement period, auditors charge lower audit fees to firms with monitors compared to those without monitors in the post-announcement period due to decreases in assessed levels of audit effort and/or risk.

This is the first study to empirically examine the determinants and enforcement outcomes of the monitorship requirement. My findings should be of particular interests to accountants, managers, and regulators as they decide on the appropriate course of action following financial misconduct. In addition, my study contributes to the recent stream of accounting research that examines the impact of factors such as whistleblower involvement and the receipt of cooperation credit from regulators on firms' regulatory enforcement outcomes. This study provides a first look into the relation between the monitorship requirement and firm monetary penalties as well as audit fees as regulatory enforcement outcomes. Finally, corporate monitors are viewed as a "new governance" mechanism, therefore, studying this phenomenon

adds to other governance mechanisms examined extensively in the corporate governance literature.

APPENDIX A

EXAMPLES OF ENFORCEMENT DOCUMENTS AND CORPORATE FILINGS

DISCLOSING THE USE OF CORPORATE MONITORS

| Firm | Excerpt of Enforcement Document and Corporate Filing | Name and Date of Enforcement Document and Corporate Filing |
|--|--|---|
| Computer Associates International, Inc. Respondent | <p>“Forward looking remedial relief, including, for at least 18 months, that Computer Associates will be subject to the review of an <u>Independent Examiner</u>, reporting to the SEC, the Justice Department and Computer Associates' Board of Directors.”</p> | <p>SEC Press Release 2004-134 and SEC Litigation Release No. 18891; September 22, 2004</p> |
| | <p>“CA will retain and compensate an independent individual or entity to examine CA’s compliance with this Final Judgment and to conduct a comprehensive review of the areas specified in Subparagraphs (1) through (6) below, and to make recommendations to the Board of Directors for review and implementation, after consultation with the USAO and Commission, regarding best practices in these areas (the <u>“Independent Examiner”</u>).”</p> | <p>SEC Final Consent Agreement 04 Civ. (ILG); September 21, 2004</p> <p>DOJ Deferred Prosecution Agreement Cr. No. 04-837 (ILG); September 22, 2004</p> |
| | <p>“CA has also agreed to appoint an <u>Independent Examiner</u> to conduct a comprehensive review of CA’s practices for the recognition of software license revenue, its ethics and compliance policies and other matters. “</p> | <p>Form 8-K; September 22, 2004</p> |
| | <p>“The Securities and Exchange Commission today announced that United States District Court Judge I. Leo Glasser has issued an order appointing attorney Lee S. Richards to act as <u>Independent Examiner</u> for Computer Associates International, Inc.”</p> | <p>SEC Press Release 2005-37 ; March 16, 2005</p> |
| MBIA Inc. Respondent | <p>“In accordance with the procedure specified in subparagraph 71(k) below, retain, pay for, and enter into an agreement with <u>an independent consultant</u>, not unacceptable to the Staff (“Independent Consultant”)”</p> | <p>SEC Administrative Proceeding File No. 3-12551; January 29, 2007</p> |
| | <p>“In a related administrative proceeding, MBIA has agreed, without admitting or denying the Commission's findings, to the issuance of a cease-and-desist order that requires MBIA to cease and desist from further violations of Section 17(a) of the Securities Act of 1933 and Sections 10(b), 13(a), 13(b)(2)(A) and 13(b)(2)(B) of the Exchange Act of 1934 and Rules 10b5, 12b20, 13a1, 13a11,13a13, and 13b21 thereunder, and to comply with various undertakings, including an undertaking to retain <u>an independent consultant</u> to examine a number of specified transactions.”</p> | <p>SEC Litigation Release No. 19982; January 29, 2007</p> |
| FARO Technologies, Inc. Respondent | <p>“Respondent Faro Technologies, Inc. has undertaken to:</p> <ol style="list-style-type: none"> 1. Retain, through Faro’s Board of Directors, within 60 days after the entry of this order, <u>an independent consultant</u> | <p>SEC Administrative Proceeding File No. 3-13059; June 5, 2008</p> |

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| | <p>("<u>Independent Consultant</u>"), not unacceptable to the staff of the Commission for a period of two (2) years to review and evaluate Faro's internal controls, record-keeping, and financial reporting policies and procedures as they relate to its compliance with the anti-bribery, books and records, and internal accounting controls of the FCPA, codified at Sections 30A, 13(b)(2)(A), 13(b)(2)(B) of the Exchange Act."</p> | |
| | <p>"In recognition of Faro's voluntary disclosure and thorough review of the improper payments, its cooperation with the Department's investigation, the company's implementation of and commitment to implement in the future enhanced compliance policies and procedures, and the company's agreement to engage <u>an independent corporate monitor</u>, the Department has agreed to enter into a non-prosecution agreement with a term of two years."</p> | DOJ Press Release; June 5, 2008 |
| | <p>"Within sixty (60) calendar days of the execution of this Agreement, Faro Technologies, Inc. and its subsidiaries and affiliates (collectively, "FARO") agrees to engage <u>an independent corporate monitor (the "Monitor")</u> for a period of two (2) years to monitor the Company's compliance program with respect to the Foreign Corrupt Practices Act ("FCPA"), 15 U.S.C. §§ 78dd-1, et seq., and other relevant anti-corruption laws."</p> | DOJ Non-Prosecution Agreement; June 3, 2008 |
| Innospec, Inc. Respondent | <p>"ordering it to comply with certain undertakings regarding its FCPA compliance program, including <u>an independent monitor</u> for a period of three years."</p> | SEC Litigation Release No. 21454; March 18, 2010 |
| | <p>"Innospec agrees to engage <u>an independent compliance monitor (the "Monitor")</u> within sixty (60) calendar days of the entry of the Final Judgment."</p> | SEC Consent; March 18, 2010 SEC Final Judgment; March 26, 2010 |
| | <p>"As part of the plea agreement with the Department of Justice, Innospec agreed to pay a \$14.1 million criminal fine and to retain <u>an independent compliance monitor</u> for a minimum of three years to oversee the implementation of a robust anticorruption and export control compliance program and report periodically to the Department of Justice."</p> | DOJ Press Release; March 18, 2010 |
| | <p>"The parties agree that a five-year term of organizational probation is appropriate in this case and shall include, as a condition of probation, the retention of <u>an independent corporate monitor</u> as described in Attachment D, as well as any other conditions ordered by the Court."</p> | DOJ Plea Agreement; March 18, 2010 |
| Louis Berger International, Inc. Respondent | <p>"Promptly after the Offices' selection pursuant to Paragraph 12 below, BGH agrees to retain <u>an independent compliance monitor (the "Monitor")</u> for the term specified in Paragraph 13."</p> | DOJ Deferred Prosecution Agreement; July 7, 2015 |
| | <p>"Pursuant to the DPA, LBI has agreed to pay a \$17.1 million criminal penalty, to implement rigorous internal controls, to continue to cooperate fully with the department and to retain <u>a compliance monitor</u> for at least three years."</p> | DOJ Press Release; July 17, 2015 |

APPENDIX B

VARIABLE DEFINITIONS

This table defines variables used in my analyses. An “x” indicates an independent variable, and an “o” indicates a dependent variable. Unless otherwise noted, the variables are constructed in the FSR database. See KLM (2007, 2008a, 2008b, 2014, 2017) for details on the FSR database.

| Table | | | | | Variable | Definition |
|-------|---|---|---|---|---------------------------------|--|
| 3 | 4 | 5 | 6 | 7 | | |
| x | | | | | Analyst following | Number of analysts issuing an annual earnings forecast for a firm at the end of its fiscal year prior to the initial filing of a regulatory proceeding related to an enforcement action; winsorized at 1 st and 99 th percentiles. This variable is calculated using data from I/B/E/S. |
| x | x | x | x | | Announce internal investigation | A dummy variable equal to 1 if the firm publicly disclosed that they conducted an internal investigation related to an enforcement action, and 0 otherwise. |
| x | | | | | Announcement CAR | Cumulative compounded abnormal returns of all public announcements related to an enforcement action using the value-weighted return of all stocks as the benchmark; winsorized at 1 st and 99 th percentiles. |
| | | | | x | Auditor change | A dummy variable equal to 1 if the firm changed auditors either during the one year before or after the initial filing of a regulatory proceeding related to an enforcement action, and 0 otherwise. This variable is calculated using data from Audit Analytics. |
| x | | | | o | Log[Audit fees (\$mm)] | The natural logarithm of total external audit fees in millions of dollars for a firm. In Table 3, audit fees are measured at the fiscal year-end closest to but one-year preceding the initial filing of a regulatory proceeding related to an enforcement action. In Table 7, audit fees are measured at the fiscal year-end closest to but one-year preceding and following the initial filing of a regulatory proceeding related to an enforcement action; winsorized at 1 st and 99 th percentiles. This variable is calculated using data from Audit Analytics. |
| x | | | | | Big 8 auditor | A dummy variable equal to 1 if the firm’s auditor was one of the Big 8 auditing firms prior to the first public announcement the firm may be (is) subject to an enforcement action, and 0 otherwise. |
| | | | | x | Big 4 auditor | A dummy variable equal to 1 if the firm’s auditor was one of the Big 4 auditing firms in the year before and after the initial filing of a regulatory proceeding related to an enforcement action, and 0 otherwise. This variable is calculated using data from Audit Analytics. |
| | x | x | x | | % Blockholder ownership | The percentage of outstanding shares owned by blockholders, defined as owners with at least five percent of common shares outstanding from the last 10-K or DEF 14A prior to the first public announcement the firm may be (is) subject to an enforcement action; winsorized at 1 st and 99 th percentiles. |
| x | x | x | x | | Bribery charges included | A dummy variable equal to 1 if an enforcement action included bribery allegations under the Foreign Corrupt Practices Act, and 0 zero otherwise. |
| | | | | x | Log[1+# Business segments] | The natural logarithm of one plus the number of business segments of a firm; winsorized at 1 st and 99 th percentiles. This variable is calculated using data from Compustat. |
| | | | | x | Calendar year-end | A dummy variable equal to 1 if the firm has a calendar year-end, and 0 otherwise. This variable is calculated using data from Compustat. |
| | x | x | x | | # C-level respondents | The total number of chief-level executives employed by the firm and named as respondents in an enforcement action; winsorized at 1 st and 99 th percentiles. |
| x | x | x | x | | Cooperation credit | A dummy variable equal to 1 if the firm was given credit for cooperating with authorities in documents filed in the regulatory |

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| | | | | | | proceedings, and 0 otherwise. |
| x | | | | | DPA | A dummy variable equal to 1 if the firm entered into a Deferred Prosecution Agreement (DPA) with regulators, and 0 otherwise. |
| | x | x | x | | # Employee respondents | Total number of non-executive respondents directly employed by the firm; winsorized at 1 st and 99 th percentiles. |
| | x | x | x | | Enforcement action completed | A dummy variable equal to 1 if the regulatory enforcement action has been completed as of the point of data collection, and 0 otherwise. |
| x | x | x | x | | % Executive respondents terminated | The proportion of executive respondents that were terminated by the firm; winsorized at 1 st and 99 th percentiles. |
| | o | o | o | x | Firm penalty (\$mm) | The sum of disgorgement of profits, prejudgment interest, and regulatory penalties in millions of dollars assessed against the firm by the SEC and DOJ in an enforcement action. This variable is log transformed in regression analyses in Tables 6 and 7. |
| | | | | x | Foreign income | A dummy variable equal to 1 if foreign income is reported, and 0 otherwise. This variable is calculated using data from Compustat. |
| x | | | | | Fraud charges included | A dummy variable equal to 1 if the violations included fraud charges under either Section 17(a) or Section 10(b) of the Securities and Exchange Acts, and 0 otherwise. |
| | x | x | x | | Impeded investigation | A dummy variable equal to 1 if the firm asserted Fifth Amendment rights, failed to waive attorney/client privilege or otherwise impeded the investigation by regulatory authorities, and 0 otherwise. |
| x | | | | | Inadequate internal controls | A dummy variable equal to 1 if the charges included violations to 15 U.S.C. § 78m(b)(2)(B), and 0 otherwise. |
| x | | | | | % Independent directors | The percentage of the firm's board of directors that are considered independent from the last 10-K or DEF 14A prior to the first public announcement the firm may be (is) subject to an enforcement action during the violation period; winsorized at 1 st and 99 th percentiles. |
| x | | | | | % Institutional ownership | The percentage of outstanding shares owned by institutions from the last 10-K or DEF 14A prior to the first public announcement the firm may be (is) subject to an enforcement action during the violation period; winsorized at 1 st and 99 th percentiles. |
| | x | x | x | | IPO related | A dummy variable equal to 1 if the violation was related to the firm's initial public offering, and 0 otherwise. |
| | | | | x | Leverage | Total liabilities scaled by total assets; winsorized at 1 st and 99 th percentiles. This variable is calculated using data from Compustat. |
| x | x | x | x | | Log[Market cap (\$mm)] | The natural logarithm of the market value of equity measured in millions of dollars prior to the first public announcement the firm maybe (is) subject to an enforcement action; winsorized at 1 st and 99 th percentiles. This variable is presented in its non-transformed metric in Table 4. |
| x | x | x | x | | Log[Market-to-book ratio] | The natural logarithm of the sum of market value of equity plus total assets minus total debt divided by total assets. Market value of equity, total assets, and total debt are measured at the last fiscal year prior to the first public announcement the firm maybe (is) subject to an enforcement action; winsorized at 1 st and 99 th percentiles. This variable is presented in its non-transformed metric in Table 4. |
| | x | x | x | | % Maximum loss | Abnormal loss an investor would experience that purchased the firm's stock at its highest point during the violation period and sold at the close following the first public announcement related to an enforcement action less the return on a valuated index of all stocks; winsorized at 1 st and 99 th percentiles. |
| x | x | x | x | | Merger related | A dummy variable equal to 1 if the violation occurred while the firm was involved in a merger, and 0 otherwise. |
| | x | x | x | x | Monitor flag | A dummy variable equal to 1 if a firm is required to retain a corporate monitor as part of a settlement agreement related to an enforcement action, and 0 otherwise. This variable is hand collected. |
| x | | | | | NPA | A dummy variable equal to 1 if the firm entered into a Non-Prosecution Agreement (NPA) with regulators, and 0 otherwise. |
| | x | x | x | | Offering related | A dummy variable equal to 1 if an enforcement action included charges related to the offering of securities, and 0 otherwise. |
| | x | x | x | | Option backdating related | A dummy variable equal to 1 if the violation was related to stock option backdating, and 0 otherwise. |
| | x | x | x | | Log[1+ Other penalty (\$mm)] | The natural logarithm of one plus the sum of fines plus disgorgement and interest in millions of dollars assessed against individuals and agents in an enforcement action; winsorized at 1 st and 99 th percentiles. |

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| | | | | | | This variable is presented in its non-transformed metric in Table 4. |
| | x | x | x | | # Other respondents | Total number of other respondents named in the enforcement action excluding the firm and its employees; winsorized at 1 st and 99 th percentiles. |
| | | | | x | Post | A dummy variable equal to 1 if the fiscal year of a firm is one year following the year in which the regulatory proceeding related to an enforcement action is initially filed (post-announcement period), and 0 if the fiscal year of a firm is one year preceding the year in which the regulatory proceeding related to an enforcement action is initially filed (pre-announcement period). |
| | x | x | x | | Pretrial agreement | A dummy variable equal to 1 if the firm entered into either a Deferred Prosecution Agreement (DPA) or Non-Prosecution Agreement (NPA) with regulators, and 0 otherwise. |
| | x | x | x | | Log[# Prior public announcement] | The zero-skewness log transformation of the total number of public announcements made by the firm regarding the occurrence, investigation, related litigation, restatement, and enforcement prior to the first filing or public release by regulators in an enforcement action; winsorized at 1 st and 99 th percentiles. This variable is presented in its non-transformed metric in Table 4. |
| | x | x | x | | Log[1+ Private settlements (\$mm)] | The natural logarithm of one plus the total value of private class action settlements against the firm in millions of dollars net of recoveries in derivative actions; winsorized at 1 st and 99 th percentiles. This variable is presented in its non-transformed metric in Table 4. |
| | | | | x | Quick ratio | Total current assets scaled by total current liabilities; winsorized at 1 st and 99 th percentiles. This variable is calculated using data from Compustat. |
| | x | x | x | | Recidivist respondent | A dummy variable equal to 1 if any of the named respondents were named in a previous regulatory enforcement, and 0 otherwise. |
| x | | | | | % Respondents terminated | The proportion of employee respondents that were terminated by the firm; winsorized at 1 st and 99 th percentiles. |
| x | | | | | # Respondents | The total number of respondents named in an enforcement action; winsorized at 1 st and 99 th percentiles. |
| x | x | x | x | | Restated financial statements | A dummy variable equal to 1 if the firm restated its financial statements covering the violation period, and 0 otherwise. |
| | | | | x | ROA | Net income scaled by total assets; winsorized at 1 st and 99 th percentiles. This variable is calculated using data from Compustat. |
| | x | x | x | | Self-reported violation | A dummy variable equal to 1 if the firm self-reported the violation to regulatory authorities, and 0 otherwise. |
| | | | | x | Size | The natural logarithm of total assets; winsorized at 1 st and 99 th percentiles. This variable is calculated using data from Compustat. |
| x | x | x | x | | Log[Violation period (months)] | The zero-skewness log transformation of the total time the violation occurred in months as indicated in the regulatory enforcement proceedings; winsorized at 1 st and 99 th percentiles. This variable is presented in its non-transformed metric in Table 4. |
| x | x | x | x | | Log[# Violations] | The zero-skewness log transformation of the total number of unique U.S. Code and Code of Federal Regulation rules charged against all respondents in an enforcement action; winsorized at 1 st and 99 th percentiles. This variable is presented in its non-transformed metric in Table 4. |

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BIOGRAPHICAL SKETCH

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RESEARCH

Research Interests

Regulatory Enforcement Actions, Financial Reporting and Disclosure, Security Market Regulation

Dissertation

“Corporations under Probation: The Determinants and Consequences of the Monitorship Requirement in Regulatory Enforcement Actions”

Dissertation Committee: William M. Cready (Co-Chair), Rebecca F. Files (Co-Chair), Umit G. Gurun, Yibin Zhou

Work in Progress

[1] “Disclosure Requirement in Public Equity Offering and Capital Structure: Evidence from the JOBS Act”, with Shuai (Mark) Ma.

[2] “Does FASB Staff Position FAS115-2 Change Banks Accounting Choice Over Securities Investment”, with Weiwei Wang.

TEACHING

Teaching Interests

Financial Accounting, Managerial Accounting, Auditing

Instructor, University of Texas at Dallas

Introductory Financial Accounting

Fall 2015 Overall Instructor Rating: 4.96/5.00 (60 students),

Fall 2016 Overall Instructor Rating: 4.90/5.00 (60 students), 4.93/5.00 (58 students)

Tutor, University of Oklahoma

Athletic Academic Services Introductory Financial Accounting

Fall 2007, Spring 2008

CONFERENCE ATTENDANCE AND PRESENTATION

| | |
|---|------|
| Notre Dame Accounting Research Conference, Notre Dame, IN (Invited) | 2017 |
| AAA Annual Meeting, San Diego, CA (Discussant) | 2017 |
| Lone Star Accounting Research Conference, Arlington, TX | 2017 |
| AAA Annual Meeting, New York, NY (Discussant) | 2016 |
| AAA FARS Midyear Meeting, Newport Beach, CA (Doctoral Consortium Participant) | 2016 |
| Notre Dame Accounting Research Conference, Notre Dame, IN (Invited) | 2015 |
| AAA Annual Meeting, Chicago, IL | 2015 |
| AAA IAS Midyear Meeting, Palm Springs, CA (Doctoral Consortium Participant) | 2015 |
| AAA FARS Midyear Meeting, Nashville, TN | 2015 |
| Lone Star Accounting Research Conference, Richardson, TX | 2015 |
| Lone Star Accounting Research Conference, Dallas, TX | 2014 |

HONORS AND AWARDS

| | |
|---|-------------|
| Finalist for PHD STUDENT OF YEAR Category in the OWLIE (Outstanding Worthy Leaders Involved Exceptionally) Award, University of Texas at Dallas | Spring 2018 |
| Dean's Excellence Scholarship, University of Texas at Dallas | 2017-2018 |
| Graduate Studies Scholarship, University of Texas at Dallas | 2012-2017 |
| Master of Science in Accountancy Program Merit Based Scholarship, University of Notre Dame | 2008-2009 |
| President's Honor Roll, University of Oklahoma | 2005-2007 |
| Cleo Cross International Student Scholarship, University of Oklahoma | Spring 2008 |
| ConocoPhillips Business Scholarship, University of Oklahoma | Spring 2008 |
| Kailan & Becky Rao Scholarship, University of Oklahoma | Fall 2007 |
| Rosemary Close Scholarship, University of Oklahoma | Spring 2007 |
| International Leadership Class Scholarship, University of Oklahoma | Fall 2006 |

PROFESSIONAL EMPLOYMENT

Deloitte & Touche LLP

Audit Senior, Financial Services Industry

New York, NY

September 2009-June 2012

KPMG Huazhen

Audit Intern

Guangzhou, China

Summer 2006

EXTERNAL SERVICE ACTIVITIES

Ad-Hoc Reviewer: Conferences

| | |
|------------------------------------|------|
| AAA Annual Meeting, Washington, DC | 2018 |
| AAA Annual Meeting, New York, NY | 2016 |

ACADEMIC AND PROFESSIONAL ACTIVITIES

| | |
|---|--------------|
| American Accounting Association (AAA) Student Member | 2014-Present |
| Chinese Accounting Professors' Association of North America (CAPANA) Member | 2014-Present |
| Professional Member of ASCEND | 2010-2012 |

SKILLS

Language: English (Fluent), Mandarin and Cantonese (Native)
Programming: SAS and Stata