

SEC Enforcement: Does Forthright Disclosure and Cooperation Really Matter?

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ABSTRACT: This study examines the conditions under which the Securities and Exchange Commission (SEC) exercises enforcement leniency following a restatement. I explore whether cooperation with SEC staff and forthright disclosure of a restatement (e.g., disclosures reported in a timely and visible manner) reduce the likelihood of an SEC sanction or SEC monetary penalties. After controlling for restatement severity, I find that cooperation increases the likelihood of being sanctioned, perhaps because it improves the SEC's ability to build a successful case against the firm. However, cooperation and forthright disclosures are rewarded by the SEC through lower monetary penalties.

Keywords: *SEC enforcement actions, accounting restatements, cooperation, voluntary disclosure, press release prominence, AAERs, investigations*

Data Availability: *The data used in this study are publicly available from the sources indicated in the text.*

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I. INTRODUCTION

Various regulatory agencies use leniency programs to promote self-reporting of corporate misconduct. Examples include the U.S. Environmental Protection Agency (EPA) and U.S. Department of Justice (DOJ), both of whom have leniency programs in place to encourage the voluntary disclosure of environmental violations or antitrust violations, respectively. However, little is known about the leniency policies of the Securities and Exchange Commission (SEC), especially as it relates to financial misreporting. In this study, I explore the conditions under which the SEC exercises leniency. Specifically, I investigate whether forthright disclosures and cooperation with SEC staff following corporate misconduct impacts the likelihood of an SEC enforcement action and/or SEC monetary penalties.¹

While an emerging literature suggests that the manner in which bad news is reported can influence the decisions of investors and litigants (Files et al. 2009; Gordon et al. 2009; Myers et al. 2010), prior research has not examined the effect of these choices on the SEC's decision to sanction a firm. In addition, the impact of firm cooperation on the enforcement decisions of the SEC has received little attention to date. This issue is important because SEC sanctions are costly to not only the firm (monetary penalties), but also management (job loss), auditors (sanctions and lost reputation), and investors (stock price declines) (Feroz et al. 1991; Karpoff et al. 2008a,b). Therefore, determining if forthright disclosures and cooperation reduce SEC sanctions and penalties in a systematic way is of interest to these parties as they evaluate the possible consequences of a law violation.

¹ SEC enforcement actions represent the formal summaries of events following an investigation by the SEC and can take the form of either an Administrative Proceeding or Litigation Release. Each enforcement action summarizes the events leading to the sanction and the punishments against the respondents. Note that I use the terms "SEC enforcement action" and "SEC sanction" interchangeably throughout the text.

I focus on corporate disclosures and cooperation because they are inputs in the SEC's decision model. Although not a formal policy, the SEC's 2001 Seaboard Report lists several criteria that SEC staff evaluate before making enforcement decisions, including whether "the company cooperated completely with the appropriate regulatory and law enforcement bodies" and whether "the company *promptly, completely, and effectively* disclosed the existence of the misconduct to the public [and] to regulators" (SEC 2001; emphasis added).² Satisfying one or all of these criteria should result in leniency, either through a reduction in sanctions or a reduction in penalties.

Despite the claims of the Seaboard Report, circumstances exist in which cooperation and forthright disclosures may actually *increase* the likelihood of an SEC sanction or the amount of monetary penalties. First, cooperation provides SEC staff with valuable information at a steeply discounted price. Self-reporting the existence of a law violation can significantly reduce enforcement costs by minimizing the effort needed to identify wrongdoers (Kaplow and Shavell 1994). The SEC, faced with time and monetary constraints, may therefore choose to target firms for which its upfront costs are the lowest. Second, voluntarily providing information to SEC staff may improve their ability to build a successful case against the firm or its managers by providing information the SEC may have overlooked. As the case is strengthened, the likelihood of an enforcement action increases, as does the potential for higher penalties. Finally, limited attention theory (Hirshleifer and Teoh 2003) predicts that SEC staff will be attracted to cases announced in a more visible manner. As SEC employees often rely on news reports and company press

² The Seaboard Report represented the SEC's first widely publicized case of leniency towards a company based on its response to a law violation. The SEC refrained from sanctioning Seaboard Corporation, which was being investigated by the SEC following an earnings restatement, because of the company's prompt and thorough response to its problem. It then used the Seaboard Report to discuss and highlight the SEC's willingness to give credit for cooperative behavior. See AAER No. 1470 (<http://www.sec.gov/litigation/investreport/34-44969.htm>) for more details.

releases to determine which law violations merit additional scrutiny, forthright disclosure of the problem may attract attention to a case that the SEC would have otherwise ignored (Feroz et al. 1991; DeFond et al. 2011). Under these scenarios, cooperation with SEC staff and forthright disclosure of the misconduct may actually increase SEC sanctions and penalties.

In this study, I develop models that explain SEC sanctions and SEC monetary penalties, and then assess the incremental impact of cooperation and forthright disclosures. I consider a firm to have cooperated with the SEC if it voluntarily initiates an independent investigation into its misconduct. Forensic accountants, legal counsel, or independent committees of directors usually perform the investigations and subsequently pass the information on to the SEC. I follow the Seaboard Report in defining forthright disclosures as those that are timely, complete, and effective (SEC 2001). Timeliness captures the speed with which managers release information to market participants, and it is defined as the number of days between the end of the violation period and the first public announcement of the misconduct. I define complete and effective disclosures in two ways, with both capturing the visibility of misconduct-related disclosures to investors and the SEC. The first identifies where information about the misconduct is placed within a press release. I consider information disclosed in the headline of a press release (rather than the text or footnotes) to be the most effective form of disclosure, as it increases the likelihood that investors and SEC staff will notice and react to the information (Files et al. 2009; Gordon et al. 2009). The second identifies the type of SEC filing used to report the misconduct, with disclosure in a Form 8-K or an amended periodic filing considered the most effective.

My sample consists of a comprehensive set of earnings restatements compiled by the General Accounting Office (GAO 2003, 2006a,b) during the 1997-2005 time period.³ Ten

³ I use restatements as the basis of my study for several reasons. First, at a conceptual level, a restatement represents a violation of securities laws and therefore falls under the jurisdiction of the SEC to sanction if they choose.

percent (127) of the 1,249 restatements in my sample receive a formal sanction from the SEC against the firm, its managers, or both. The small percentage of firms receiving an SEC sanction is consistent with prior research (Burns and Kedia 2006; Kedia and Rajgopal 2011; Gordon et al. 2009; Peterson 2008) and the notion that the SEC has limited resources.

In a model predicting SEC enforcement actions, I include the proxies for cooperation and forthright disclosures along with several measures of restatement severity, shareholder harm, and other firm and restatement characteristics. I find that investigations undertaken by a restatement firm more than double the odds of being issued a formal enforcement action, all else equal. This finding suggests that: (1) company-investigations aid SEC staff in developing a stronger case against the firm or its managers, which in turn lead to more enforcement actions, and/or (2) SEC staff are more attracted to cases in which the cost of enforcement is lower. The effect of forthright disclosures on the SEC is mixed. I find that restatements disclosed in the headline of a press release (instead of the text) have an increased likelihood of being sanctioned. However, timely disclosure of an accounting misstatement decreases the likelihood of an SEC enforcement action, consistent with the criteria outlined in the Seaboard Report.⁴ The type of SEC filing used by the firm (e.g., Form 8-K, 10-K/A, etc.) is not significantly associated with the likelihood of an SEC enforcement action.

Since issuing no enforcement action is only one avenue through which the SEC can reward cooperation, a thorough investigation of SEC leniency should also examine the nature of corporate penalties. Using the 127 observations in my sample that receive an SEC enforcement

Second, the Seaboard Report (2001) was written following the SEC's investigation into a restatement. Thus, examining restatements provides the cleanest test of the criteria laid out in that report. Finally, this sample allows me to analyze a large pool of law violators and separate them into two groups—those with and without an SEC sanction. Other law violations (e.g., bribery, insider trading) are often not disclosed unless discovered and ultimately sanctioned by the SEC. An important caveat of this design choice, however, is that my results may not generalize to other (non-restatement-related) law violations.

⁴ A “misstatement” refers to the incorrect financial report(s) in prior periods, while a “restatement” represents the subsequently disclosed and corrected financial statements.

action, I examine whether the SEC imposes fewer penalties against restatement firms or their managers when they cooperate with SEC staff. I find that monetary penalties are incrementally lower for firms that voluntarily initiate an internal investigation *and* for those that provide timely, complete, and effective disclosures. As a reward for cooperation, the SEC reduces firm penalties by \$27.2 million, on average, when the firm initiates its own investigation into the law violation. Therefore, this form of cooperation is rewarded by the SEC, although the reward is often manifested through lower penalties rather than a lower likelihood of being sanctioned. Additionally, for each week earlier that the restatement is announced to the public, corporate (individual) penalties are reduced by \$434,000 (\$112,000). Therefore, timely disclosure of a restatement benefits the firm through both a reduction in SEC sanctions and a reduction in regulatory penalties. Finally, I also find that individuals pay significantly smaller fines when the restatement is disclosed in a Form 8-K or amended filing.

Endogeneity concerns arise when modeling the relation between firm actions (e.g., cooperation and/or disclosure) and SEC actions (e.g., sanctions and/or penalties) in response to a restatement. I include multiple measures of restatement severity to control for endogeneity that arises if managers cooperate with the SEC and provide forthright disclosures only when a restatement surpasses certain severity thresholds. I use a treatment-effects model to control for other unobservable sources of endogeneity (such as a manager's underlying knowledge about the likelihood of an SEC sanction).⁵ My results are robust to these controls.

This study contributes to the extant literature in several ways. It is the first study to empirically examine the SEC's criteria for leniency by determining if firm cooperation with the SEC and forthright disclosure of a restatement limits SEC sanctions and/or penalties. Prior research examining SEC enforcement actions or AAERs (Accounting and Auditing Enforcement

⁵ Details about the endogeneity correction are presented in Sections V and VI.

Release) fails to recognize that the SEC has discretion over whether to sanction a firm (see, e.g., Dechow et al. 1996; Beneish 1999; Erickson et al. 2006; Dechow et al. 2011; Armstrong et al. 2010; Johnson et al. 2009). I attempt to fill this void by examining some of the factors that influence the SEC's choice. I also extend prior research examining restatement disclosure and its influence on external parties (Files et al. 2009; Myers et al. 2010; Gordon et al. 2009). From a practical perspective, the results inform the decisions of lawyers, auditors, and firm managers as they decide on the appropriate course of action following a law violation.

In Section II, I provide background information on SEC enforcement actions. In Section III, I review the relevant literature and develop my hypotheses, and in Section IV, I describe my sample selection procedures. I develop models and report results pertaining to the likelihood of an enforcement action and the penalties associated with enforcement actions in Sections V and VI, respectively. Finally, I report sensitivity tests in Section VII and conclude in Section VIII.

II. BACKGROUND ON SEC ENFORCEMENT ACTIONS

The Enforcement Division of the SEC oversees the investigation and punishment of violations of the law, including those involving financial misstatements. This process involves several different steps, which I refer to collectively as the *enforcement process*. *Enforcement actions* are the formal summaries of events and subsequent injunctions against each respondent (i.e., the firm, its managers, or other relevant individuals). In trying to explain the SEC's criteria for leniency, it is useful to understand the sequence of events that lead to an enforcement action.

The enforcement process can be triggered by various events, including the voluntary announcement of misconduct by the company, the delayed filing of an SEC report, the firing of an auditor, or routine reviews by the SEC. After the identification of a potential law violation, SEC staff privately request information from the firm and carry out an informal investigation. If

the case warrants additional attention, a formal investigation is then initiated during which the SEC can use subpoena power to gather information from the company. At the conclusion of the formal investigation, which can take up to several years, the SEC chooses between two possible paths of actions: (1) stop the investigation and take no action, or (2) issue a formal enforcement action against the respondent(s). According to the Seaboard Report, cooperation and forthright disclosures may influence the SEC's decision to drop a case.

The filing of a formal enforcement action is the first information released by the SEC that is publicly available for review. In general, minor violations are disclosed in Administrative Proceedings and more egregious violations in Litigation Releases.⁶ As shown in Figure 1, the SEC tends to issue between 450 and 650 enforcement actions in a given year.⁷ Within each enforcement release, the SEC details the respondents' penalties, which can include fines or the disgorgement of any gains received from illegal activity. If a firm adequately cooperated with SEC staff and issued sufficiently forthcoming disclosures about the restatement, the SEC may exercise leniency by reducing the value of these penalties. In addition to monetary penalties, potential non-monetary punishments include cease-and-desist orders, censures, trading suspensions, injunctions against future law violations, or suspensions/bars from serving as an officer, director, or financial professional at a public company.

<Insert Figure 1 Here>

⁶ Beginning in 1982, the SEC also began assigning the secondary designation of AAER to certain actions that involved accountants, auditors, or CPAs. Over 95 percent of the SEC enforcement actions in my sample are designated as an AAER. Given that my sample consists only of restatements, which tend to involve accountants, this relatively high percentage is not surprising. When I eliminate the five observations that received a non-AAER enforcement action, my results are unchanged. Therefore, although I use the terminology "SEC enforcement action," my results can also apply more specifically to a sample of "AAERs."

⁷ The data in Figure 1 is compiled from the SEC's Annual Reports for 1997-2005. It summarizes the number of enforcement actions issued against *all* law violations (including bribery, Regulation FD violations, broker-dealer cases, insider trading, etc.), not just misstatements. Enforcement actions issued in response to the restatements in my sample represent a sub-set of about eight percent of the total shown in Figure 1.

Prior research often uses SEC enforcement actions or AAERs as a proxy for fraudulent reporting. The research to-date has generally focused on two themes: the *ex ante* determinants of fraud and the *ex post* consequences of fraud (see, e.g., Dechow et al. 1996; Beneish 1999; Erickson et al. 2006; Karpoff et al. 2008a,b,c; Dechow et al. 2011; Armstrong et al. 2010; Johnson et al. 2009). These studies, however, overlook the fact that the SEC has a choice in who it sanctions. I attempt to fill this void by exploring some of the firm and restatement characteristics that make a firm more or less likely to receive a sanction. Peterson (2008) analyzes a sample of firms restating revenue and, in supplementary tests, also predicts which will be sanctioned by the SEC. He finds that firms with more complex revenue recognition policies are less likely to receive an AAER. Mergenthaler (2009) also investigates the likelihood of an SEC enforcement action and finds that violations of rules-based accounting standards (compared to principles-based standards) are less likely to be sanctioned by the SEC, but do not influence SEC penalties. Despite the overlap of a few control variables, the model developed in my paper differs significantly from that in Peterson (2008) and Mergenthaler (2009). Most importantly, neither paper includes measures of forthright disclosures or firm cooperation in their tests.

My examination of SEC monetary penalties follows that of Karpoff et al. (2008c), who analyze the determinants of both SEC penalties and class action litigation settlement amounts. They find that regulatory penalties are positively associated with the amount of shareholder harm and the defendants' ability to pay, and negatively associated with the complexity of the violation and class action lawsuit settlement amounts. Accordingly, I control for these findings in my regression models. Karpoff et al. (2008c) do not analyze the likelihood of receiving an SEC enforcement action.

III. HYPOTHESES DEVELOPMENT

In its 2001 Seaboard Report, the SEC indicates that it considers cooperation and the manner in which misconduct is disclosed when deciding on the appropriate course of action following a law violation. However, the actual impact of forthright disclosures and cooperation on the decisions of the SEC is an empirical question that has yet to be answered. I develop my hypotheses below.

Cooperation

Firm cooperation with SEC staff can manifest itself in several ways. I focus on company-initiated investigations because the Seaboard Report explicitly identifies them as a factor the SEC considers when making enforcement decisions. When determining the amount of leniency to grant a respondent, the SEC asks:

“Did the company commit to learn the truth, fully and expeditiously? Did it do a thorough review of the nature, extent, origins, and consequences of the misconduct? Did the company promptly make available to our staff the results of its review?”

2001 Seaboard Report (AAER No. 1470)

Prior research on company investigations is limited. Bernile and Jarrell (2009) report that 89 percent of firms implicated in the option backdating scandal conduct an internal investigation into the matter, with the cost of these investigations reaching as high as \$70 million (Mercury Interactive) and 27,000 person-hours (Apple Computer). Hennes et al. (2008) use data on company-initiated investigations to classify restatements as *errors* or *irregularities*. Specifically, they consider a restatement to be more severe (i.e., an irregularity) if any one of three conditions is met: (1) variants of the words “fraud” or “irregularity” are used to describe the restatement, (2) the SEC or DOJ investigates the restatement, or (3) the restating firm independently investigates

the misstatement. They conclude that controlling for the type of restatement, error versus irregularity, is critical to interpreting CEO and CFO turnover rates following a restatement.⁸

Despite the potential costs, firms are often encouraged by their external auditors or legal counsel to undertake investigations (Young 2002; Foley and Lardner LLP 2005; Deloitte 2009). According to a partner at Deloitte LLP, launching an investigation and presenting the findings to the SEC is a “win-win situation” for both the SEC and the firm (Deloitte 2009). From the SEC’s perspective, it saves valuable time by allowing SEC staff to review the preliminary findings of the company and then focus their investigation on the key issues. From the company’s perspective, it allows management to retain a measure of control over the situation and may result in leniency by the SEC. If the SEC routinely rewards cooperative behavior on the part of a company, independent investigations may reduce the likelihood of an SEC sanction and/or reduce SEC penalties.

However, there are several scenarios in which investigations could *increase* SEC sanctions and penalties, rather than decrease them. Details discovered during an independent investigation may assist SEC staff in building a more successful case against the firm. As the case is strengthened, the likelihood of an enforcement action may increase, as does the potential for higher penalties. Additionally, when businesses voluntarily provide information about a misstatement to the SEC, “large expenditures of government...resources can be avoided (SEC 2001).” Consistent with Kaplow and Shavell’s (1994) model of probabilistic law enforcement, self-reporting will significantly reduce the cost of enforcement and the SEC, faced with limited

⁸ The nature of my study limits the use of Hennes et al.’s (2008) *error* versus *irregularity* classification scheme as a control for severity. For example, of the three inputs into their measure of irregularity, one (SEC enforcement action) is the dependent variable in my model and another (company-initiated investigation) is a variable of interest. I include their third input, use of the words “fraud” or “irregularity,” as a control variable in my model. Hennes et al. (2008) find that abnormal three-day returns around the restatement announcement and the existence of a class action lawsuit, both of which I include in my models, are suitable in separating *errors* from *irregularities*.

resources, may target firms for which its upfront costs are reduced. Finally, as Feroz et al. (1991) point out, the disclosure of an internal investigation may attract the attention of SEC staff and motivate the SEC to begin its own inquiries. This is especially likely if SEC staff believe companies only initiate investigations for the most severe cases. The association between company-initiated independent investigations and SEC enforcement actions and/or penalties remains an empirical question and leads to my first two hypotheses (stated in alternative form):

H1a: Following a misstatement, company-initiated independent investigations are associated with the likelihood of an SEC enforcement action.

H1b: Following a misstatement and subsequent SEC enforcement action, company-initiated independent investigations influence the value of monetary penalties levied against the firm or individuals within the firm.

Timely Disclosures

Much of the research to-date has examined timely disclosure of bad news in the context of management forecasts. As documented in these papers, the primary benefit to promptly announcing bad news is a reduction in both litigation likelihood and class action settlement amounts (Skinner 1994; Field et al. 2005). Myers et al. (2010) extend this research stream by examining the timeliness of restatement disclosures (rather than management forecasts). They explore the determinants of firms' disclosure choices and find that monitoring by institutional investors improves the speed with which restatement information is announced. Additionally, income-decreasing restatements and those associated with internal control weaknesses are disclosed more quickly, perhaps in an effort to reduce litigation costs. I provide new evidence on the potential benefits of timely disclosure by testing whether the SEC is more lenient towards firms who promptly disclose bad news.

Anecdotal evidence suggests that timeliness is important to the SEC. In addition to specifically citing timeliness as a factor it considers before making enforcement decisions, the

SEC also states that “the paramount issue in every enforcement judgment is...what best protects investors (SEC 2001).” Since early disclosure of a restatement benefits investors by allowing them to more quickly update their beliefs about the firm, I predict that timely disclosures will reduce the likelihood of an SEC sanction and the value of penalties associated with a sanction.

My hypotheses, stated in the alternative form, are listed below:

H2a: Following a misstatement, more timely disclosure of the restatement to the public reduces the likelihood of an SEC enforcement action.

H2b: Following a misstatement and subsequent SEC enforcement action, more timely disclosure of the restatement to the public reduces the monetary penalties levied against the firm or individuals within the firm.

Complete and Effective Disclosures

I measure complete and effective disclosures using two proxies. The first addresses the notion that managers have discretion over the prominence they give restatement information within a press release. This is important as recent literature has shown that investors and lawyers respond differently to press release information placed in different locations. For example, Bowen et al. (2005) compare the emphasis given to pro forma and GAAP earnings within a press release and find that investors react more strongly to the metric placed in a more prominent location. Specifically focusing on restatement disclosures, Files et al. (2009) and Gordon et al. (2009) find that restatement information displayed more prominently in a press release influences investors. The results in Files et al. (2009) suggest that investors initially overestimate the importance of restatements disclosed in the headline of a press release (as opposed to the text of the press release), but subsequently correct their over-reaction. In addition, they document that firms prominently disclosing a restatement are more likely to be involved in a class action lawsuit. My study extends and complements this research by determining how more prominent press release disclosures influence another external party: the SEC.

While press release prominence addresses the transparency of information *within* a press release, my second measure focuses on the *type* of SEC filing used to disclose the restatement (e.g., Form 8-K, amended filing, regular filing, no filing). The filing choices of restatement companies have been carefully scrutinized in recent years. A 2006 report by Glass Lewis & Co., LLP identified a large number of firms that disclosed their restatements only in regular filings (i.e., 10-K, 10-Q) or not at all, which they labeled “stealth restatements.” This discovery increased the emphasis on restatement disclosures and led to recommendations that the government “take appropriate corrective action against the companies determined to have filed a deficient filing (GAO 2006a).”⁹

In response to the Glass Lewis (2006) report, Myers et al. (2010) analyze the restatement disclosure methods of firms. They identify whether a restatement is disclosed in a Form 8-K, an amended filing, or a regular periodic filing with no amendment and find that more transparent disclosures (i.e., those in a Form 8-K) lead to more negative stock price reactions at the restatement announcement date. In a similar study, Plumlee and Yohn (2008) also find a more negative price reaction to restatement information disclosed in a Form 8-K. I extend the results of Myers et al. (2010) and Plumlee and Yohn (2008) by determining whether the type of SEC filing impacts the likelihood of an SEC enforcement action and the penalties associated with a sanction.

The Seaboard Report suggests that firms disclosing information in a forthright manner will be rewarded by the SEC. If this is the case, I expect both proxies to be negatively associated

⁹ The manner in which restatements are disclosed in SEC filings varies. A Form 8-K is designed to report important changes in a firm’s operations or financial condition between periodic reports. As a restatement often fits this description, many firms prior to 2004 elected to disclose their restatement on a Form 8-K. In 2004, the SEC passed the “Final Rule: Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date” (SEC 2004b), which instituted the mandatory use of a Form 8-K (Item 4.02) when investors should “no longer rely on” past financial statements (i.e., a restatement). Despite the new rule, 16 percent of the restating companies in my sample failed to make an 8-K filing after 2004. In sensitivity tests, I re-examine the SEC’s enforcement decisions in the periods before and after this rule.

with the likelihood of an enforcement action and negatively related to SEC penalties. On the other hand, limited attention theory (Hirshleifer and Teoh 2003) predicts that SEC staff will be attracted to cases announced in a more visible manner. Individuals can only attend to a limited number of cues and, when different cues compete for attention, more salient or vivid ones capture greater attention. Since staff members scan numerous news reports, company press releases, and SEC filings to identify potential violations of the law (Feroz et al. 1991; DeFond et al. 2011), restatement information displayed in a prominent location in a press release or in a noticeable SEC filing may attract the attention of SEC staff and increase the likelihood of a sanction. Additionally, the visibility of misconduct-related disclosures likely increases the publicity of the case. In an effort to sanction the highest profile cases, the SEC may choose to investigate those restatements that are disclosed in a more visible manner.

Given the alternative predictions, I do not make a signed prediction regarding the effect of press release prominence or SEC filings on the likelihood of an SEC enforcement action or the amount of monetary penalties. My hypotheses are listed below (in alternative form):

H3a: The prominence of restatement disclosures in a press release influences the likelihood of an SEC enforcement action.

H3b: Following a misstatement and subsequent SEC enforcement action, the prominence of restatement disclosures in a press release influences the value of monetary penalties levied against the firm or individuals within the firm.

H4a: The type of SEC filing used to disclose a restatement influences the likelihood of an SEC enforcement action.

H4b: Following a misstatement and subsequent SEC enforcement action, the type of SEC filing used to disclose a restatement influences the value of monetary penalties levied against the firm or individuals within the firm.

IV. SAMPLE SELECTION AND DATA DESCRIPTION

My sample of restatement observations spans nine years, 1997-2005, and is taken from the databases compiled by the General Accounting Office (GAO 2003, 2006a,b).¹⁰ In total, the GAO identified 2,443 press releases announcing a restatement during this time period.

Restatement announcements involving stock splits, changes in accounting principles, and other restatements that were not made to correct errors in the application of accounting principles are generally excluded from this dataset (GAO 2003, 2006a,b).¹¹

Table 1 reconciles my sample to the GAO list. Eight hundred and ninety four observations are eliminated due to missing Compustat and CRSP data.¹² To mitigate the influence of outliers, I remove those observations whose abnormal returns around the announcement date fall in the top or bottom one percent of the distribution (31 observations). Using the remaining sample of just over 1,500 observations, I hand collect information from each press release announcement, including the misstated periods, the dollar earnings effect of the misstatement, the prominence of the restatement information within the release, and whether the company initiated its own investigation into the misstatement.¹³ I omit 185 firms from the final sample because I could not find a press release announcing a restatement and another 50

¹⁰ The GAO prepared a report for the U.S. Senate Committee on Banking, Housing and Urban Affairs in 2002 and two additional reports in 2006. The first report identified 919 unique restatements spanning from January 1, 1997 to June 30, 2002. The second identified 1,390 restatements spanning from July 1, 2002 to September 30, 2005 and the third identified 134 restatements between October 1, 2005 and December 31, 2005. I end my sample in 2005 to allow sufficient time to track the results of SEC actions.

¹¹ Some restatements included in this dataset, however, still appear to be unintentional, technical errors, rather than serious accounting irregularities. I use eleven different measures of severity (see Section V) to control for the effect less severe restatements may have on my results.

¹² Eight hundred and twenty-one observations are dropped because of missing total assets (on Compustat) as of the fiscal year prior to the restatement announcement. Another 73 are deleted because restatement date returns data are unavailable through CRSP. The number of observations with missing data is consistent with prior restatement studies (Scholz 2008; Peterson 2008; Files et al. 2009; Gordon et al. 2009). However, it is unclear whether my results will generalize to these (smaller) restatement firms.

¹³ In most instances, the GAO announcement date captures the first press release disclosure of the restatement to the market. While manually retrieving the press release announcements, however, I found 12 observations (one percent of the sample) in which a restatement disclosure preceded the GAO announcement date. In these cases, I use the earlier restatement announcement date rather than the date reported by the GAO.

that did not report the misstated periods. As the GAO database is organized by restatement-level observations, rather than firm-level observations, some firms appear in the original sample more than once. In these instances, I carefully review the restatement announcements and eliminate 34 observations that were simply reiterating or repeating a restatement already documented in an earlier press release. In each case, I retain only the earliest announcement of the restatement. My final sample consists of 1,249 unique restatement observations.

<Insert Table 1 Here>

For each observation, I also determine the type of SEC filing used to disclose the restatement. I first merge restatement filing data from the Audit Analytics (AA) restatement database into my sample, keeping only those SEC filings made within 60 days of the original press release announcement. When the AA database provides no information about a particular firm, or the filing occurs more than 60 days after the press release, I hand collect information from the SEC's website (www.sec.gov). Each SEC filing is carefully reviewed to ensure that it correctly matches the restatement in question.

Information on SEC enforcement actions is a combination of data from Karpoff et al.'s (hereafter KLM) (2008a,b,c) sample of enforcement actions from 1977-2006 and hand collection from the SEC's website.¹⁴ I match KLM's data to my sample of restatement firms, and then confirm each match is accurate by verifying that the enforcement action is issued in direct response to the misstatement. For those restatement-firms which did not match their data, I search the SEC's website for additional SEC enforcement actions against them.¹⁵ I consider a

¹⁴ KLM's (2008a,b,c) sample includes all enforcement actions initiated by the SEC or DOJ for financial misrepresentation. This includes violations of sections 15(b)(2)(A), 15(b)(2)(B), or 15(b)(5) of the Securities and Exchange Act of 1934, as amended by the Foreign Corrupt Practices Act of 1977.

¹⁵ For restatements announced between 1997 and 2003, I search the SEC's website through December 2007 and for restatements announced in either 2004 or 2005, I extend the search window through May 2010. Therefore, for each observation in my sample, I allow a minimum (maximum) of four (ten) years for the SEC to issue a formal sanction

restatement observation to have an enforcement action if any employee of the firm, or the firm itself, is a respondent in an SEC Administrative Proceeding or Litigation Release. I find 127 of the 1,249 restatements (10 percent) lead to one or more enforcement actions, with an average of almost four regulatory proceedings per restatement.

Table 2 provides descriptive information about the sample. The first two columns of Panel A report the distribution of restatements in my sample over time. Consistent with prior research, the frequency of restatements increases almost monotonically across time, with the largest number of restatements ($n = 407$, 32.6 percent of the sample) occurring in 2005. Scholz (2008) attributes this rise to the increasing level of financial statement scrutiny following the collapse of Enron (in 2001), and the implementation of internal control reporting under SOX, among other factors.

Column 3 of Table 2, Panel A, reports the number of restatement firms in my sample each year that are *eventually* sanctioned by the SEC (the actual sanction is often issued in a subsequent year, following the completion of the investigative process). For example, 166 restatements are announced in 2003, twenty-three (13.9 percent) of which led to eventual sanctions by the SEC against either the firm or its managers. SEC staff also issued enforcement actions against 25 of the firms that announced a restatement in 2005 and 24 of those that announced in 2002. As shown in column 4 of Table 2, Panel A, the proportion of restatements that are sanctioned by the SEC also varies significantly by year. The SEC sanctioned a high of almost 22 percent of all restatements announced in 2000, but only 5.6 percent of those announced in 2004. This proportional decline in SEC sanctions is not surprising, given that cases of aggressive or abusive accounting practices represent a smaller proportion of total restatement

against the misstatement firm or its managers. The length of the search window appears to be sufficient as the average time to enforcement in my sample is 2.2 years (see Table 2, Panel A).

announcements in the post-SOX period (2002-2005) relative to the pre-SOX period (1997-2001) (Hennes et al. 2008; Scholz 2008; Burks 2011). For example, fraud is a contributing factor in 29 percent of restatements in 1997, compared to only 2 percent in 2005 (Scholz 2008). As the SEC tends to pursue only the most egregious cases of law violations, the percentage of restatements sanctioned by the SEC should therefore vary according to the nature of those restatements.¹⁶

<Insert Table 2 Here>

Finally, column 5 of Table 2, Panel A, details the average length of the enforcement process for restatements announced in a given year. Time to enforcement is calculated as the number of days between the first public announcement of the restatement and the SEC's initial regulatory proceeding against the restating firm or its managers, divided by 365. The SEC required approximately three years to investigate and sanction the restatements announced between 1997 and 2000. However, the average time to enforcement shortens considerably (to less than two years) for restatements announced between 2002 and 2004. This improvement is likely driven by the SEC's substantial budget increase in 2003 (which allowed the hiring of nearly 1,000 new employees) and its implementation of new performance measures intended to improve the timeliness of enforcement (SEC 2004a).

Table 2, Panel B, provides a detailed breakdown of each cooperation measure, including the number and percentage of each category receiving an SEC sanction. One-hundred and twenty-nine firms in my sample initiate their own investigation into the restatement. Of these firms, 34 percent are sanctioned by the SEC, while only seven percent of those without an

¹⁶ Recall that my sample is comprised of only those SEC enforcement actions directly related to the restatements in my sample. This constitutes a sub-set of roughly eight percent of all SEC sanctions issued during the sample time period. Therefore, a reduction in the sanction rate of *restatements* in 2004 and 2005 does not imply that the overall level of enforcement is also going down. In fact, the opposite is true – total enforcement actions for all law violations (including, but not limited to, misstated financial statements, bribery, Regulation FD violations, broker-dealer cases, and insider trading) have been increasing each year (see Figure 1).

investigation are sanctioned. Prior to controlling for restatement severity, it appears that the SEC is more likely to sanction firms that initiate their own investigations. In addition, firms using headline press release disclosure are sanctioned more often than firms disclosing the restatement in the text of a press release (13 percent versus eight percent). On the other hand, relatively timely disclosure of a restatement (i.e., the number of days between the misstatement end date and the restatement announcement date is less than the median) leads to only a seven percent sanction rate, compared to a 13 percent sanction rate for those providing less timely disclosure. Eleven and nine percent of firms in the Form 8-K and amended filing categories, respectively, are issued an enforcement action by the SEC. The sanction rate increases to 14 percent for firms relegating the restatement announcement to a regular filing (e.g., 10-K or 10-Q), but drops to only four percent in instances where no restatement filing was issued. The lack of a clear pattern in sanction rates across the four SEC filing categories suggests that there is no association between poorly disclosed restatements and SEC enforcement actions.

I explore both the likelihood of receiving an SEC sanction (Section V) and the determinants of SEC monetary penalties (Section VI) in regression models below.

V. LIKELIHOOD OF AN SEC SANCTION

Empirical Model and Variable Descriptions

To test H1a-H4a, I estimate the following logistic regression on my sample of restatement firms from 1997 to 2005:

$$SEC\ ENFORCEMENT = \alpha + \beta_{1-4}[Cooperation\ and\ Disclosure] + \beta_{5-15}[Restatement\ Severity] + \beta_{16-18}[Firm\ Characteristics] + \beta_{19-22}[Other\ Controls] + \varepsilon \quad (1)$$

where *SEC ENFORCEMENT* is an indicator variable equal to 1 if the SEC issued an enforcement action against the company or its managers as a result of its restatement and 0 otherwise. Cooperation and forthright disclosures are measured using four different constructs.

INVESTIGATION takes the value of 1 if the company initiated an independent investigation into its accounting misstatement and 0 otherwise. I define an independent investigation as one undertaken by non-management individuals, including an independent audit committee, a special committee of outside directors, an outside forensic firm or legal counsel, or an auditing firm which is not the usual auditor for the client (Hennes et al. 2008).¹⁷ *TIMELINESS* is defined as the number of days between the misstatement period end and the restatement announcement date, multiplied by negative one.¹⁸ *PROMINENCE* takes on the value of 3 (high prominence) if the restatement is mentioned in the headline of the press release announcing the restatement, a value of 2 (medium prominence) if the restatement is not mentioned in the headline, but discussed in some detail in the body of the text, and a value of 1 (low prominence) if the restatement is only mentioned in the footnotes of the press release. *SEC DISCLOSURE* is assigned a value of 1 if the restatement is announced in a Form 8-K or an amended periodic filing (i.e., 10-K/A, 10-Q/A, etc.), and a 0 if it is announced in a routine periodic filing (i.e., 10-K, 10-Q) or no filing at all.¹⁹

Restatement Severity and Shareholder Harm

I include eleven measures of restatement severity in my model, each capturing some aspect of the seriousness of the misconduct and its effect on investors. The first measure, *LITIGATION*, takes the value of 1 if a class action lawsuit was filed in response to the restatement and 0 otherwise. Class action lawsuits are often used as proxies for more severe accounting irregularities (Palmrose and Scholz 2004; Hennes et al. 2008; Armstrong et al. 2010).

¹⁷ I require investigations to be “independent” because the Seaboard Report specifically asks, “Did management, the Board or committees consisting solely of outside directors oversee the review?” This concept was reiterated in a 2007 interview with an assistant director of the Division of Enforcement, who stated that the SEC “would prefer to see someone brought in who is independent [and] not employed by the company or its counsel (McTague 2007).”

¹⁸ I multiply by negative one to improve the interpretation of this variable. Larger (i.e., less negative) values indicate more timely disclosures.

¹⁹ I generate information on SEC filings from both Audit Analytics and my own hand collection. The lack of SEC filing data for some observations could therefore be an outcome of my hand collection techniques rather than non-disclosure by the firm. However, these observations can justifiably still be considered the least effective form of disclosure as the restatement was not visible even when explicitly searching for it.

Using hand-collected data from Stanford's Securities Class Action Clearinghouse, I find that 149 firms in my sample are subject to class action lawsuits as a result of their restatement (untabulated), slightly more than the number with SEC sanctions (127). *RESTATE MAGNITUDE* is the cumulative earnings effect of the restatement as a percent of total assets.²⁰ If prior year's earnings were overstated (understated), this has a negative (positive) sign. I expect that the SEC will sanction those restatements having a more negative impact on earnings.

My third severity measure, *CONCURRENT RETURN*, is the cumulative abnormal return (raw return minus the CRSP equally-weighted portfolio return) in the three-day window around the restatement announcement period. I expect the likelihood of enforcement to increase as share prices drop, as this usually indicates a more severe accounting problem (Hennes et al. 2008; Scholz 2008). In fact, Hennes et al. (2008) document that short-window returns around a restatement announcement date are an adequate proxy for intentional misreporting (a.k.a., irregularity). Although three-day returns reflect severity reasonably well, they are shown to be overstated (i.e., less negative) for restatements disclosed in a less prominent manner (Files et al. 2009). To capture any price correction that occurs in the following month, I include the compounded raw returns in the month after the restatement announcement (*POST RETURNS* (+2, +20)). Consistent with prior research, when a firm delists I use the delisting return from CRSP in the cumulated returns calculation. If the delisting return is missing, I use a replacement value equal to the average daily delisting return for all firms in the same restatement announcement year with the corresponding three-digit delisting code (Beaver et al. 2007).

²⁰ I collect the after-tax cumulative earnings effect of the restatement from the press release announcing the restatement. 75% of my sample (941 out of 1249) firms quantify the magnitude of the restatement in the initial announcement. For the other 25% of my sample, I use conditional mean imputation (Allison 2002) to infer the magnitude of the restatement. This process involves running a first stage regression predicting *RESTATE MAGNITUDE* and using the coefficients of this model to predict the values for the missing observations. My results are robust to this procedure, though, as excluding those firms with missing data do not change my results.

My fourth measure of severity is a dummy variable (*FRAUD/IRREG*) equal to 1 if any variants of the words “fraud” or “irregularity” are used in the press release announcement or SEC filing to describe the restatement. Next, I include a measure that estimates shareholder’s potential losses due to the restatement (*DAMAGES*). I calculate *DAMAGES* as the market capitalization of a firm at its highest point during the misstated period minus its market capitalization on the day immediately following the restatement announcement. I expect that the SEC will sanction those firms whose shareholders suffered more harm.²¹ *MISSTATEMENT LENGTH* is the number of days between the beginning of the misstated period and the end of the misstated period. I predict that the SEC will be more likely to sanction firms where the misstatement occurred for a longer period of time. *DELIST* equals 1 if the restatement firm delisted for performance-related reasons in the 12 months following its restatement announcement and 0 otherwise. I follow Shumway (1997) in classifying CRSP delisting codes 500 and 520-584 as performance-related. Restatements severe enough to trigger delisting are also likely to garner attention from the SEC and lead to an increased likelihood of enforcement.

My final four proxies have been used in prior research to capture characteristics of the restatement (Wu 2002; Palmrose and Scholz 2004; Palmrose et al. 2004; Scholz 2008; Files et al. 2009). *REVENUE* takes on the value of 1 if any portion of the restatement is due to revenue recognition problems and 0 otherwise. I predict a positive association between *REVENUE* and SEC enforcement actions, as improper recognition of revenue is often viewed as a more severe problem. *LEASE* takes on the value of 1 if any portion of the restatement is related to the accounting for leases and 0 otherwise. Lease restatements peaked in 2005 after the SEC clarified

²¹KLM (2008c) use the same measure of shareholder harm and find that it is highly correlated with regulator’s estimates of shareholder losses for several cases in which explicit estimates were made public. My findings are unchanged if I use the consumer price index (CPI) to calculate an inflation-adjusted measure of shareholder damages (untabulated).

the treatment of certain lease and leasehold improvements. *RULE CHANGE* is an indicator variable equal to 1 if the company mentions an accounting rule (e.g., FAS 133, SAB 101, etc.) as the reason behind its restatement and 0 otherwise. I predict that the SEC will be less likely to pursue restatements caused by either a change in rules or a new interpretation of existing rules; as such, I predict negative signs on both *LEASE* and *RULE CHANGE*. Finally, *COUNT* contains the number of different accounting issues per restatement, as identified by the GAO. I expect the SEC to pursue cases involving more GAAP violations and therefore predict a positive sign.

Firm Characteristics and Other Controls

I control for the size of the restatement firm by including *MKTCAP*, the market capitalization of the firm measured as of the end of the fiscal year prior to the restatement announcement. As fraudulent restatements are more (less) common in the technology (financial) industry (Scholz 2008), I also include dummy variables for these industries (*TECH*, *FINANCIAL*). *PRIOR RETURNS* (-252,-2) controls for the SEC's potential interest in firms with more negative stock returns in the year before the restatement announcement, and is calculated as the compounded raw return over the one-year period ending two days before the restatement announcement. *SHARE TURNOVER* measures the probability that a share was traded during a given period. When shares trade rapidly, more investors are potentially harmed by any mispricing caused by the restatement. I calculate *SHARE TURNOVER* using the following formula from Field et al. (2005): $[1 - \prod_t (1 - \text{volume traded}_t / \text{total shares}_t)]$, accumulated from daily trading volume (for each day t) in the misstatement period. Finally, I include an indicator variable for whether the restatement firm filed for *BANKRUPTCY* in the three years following its restatement announcement. The Appendix provides a detailed definition of all variables.

Results

Descriptive Statistics

Table 3 provides the mean and median for each variable in model (1). The average (median) number of days between the end of the misstatement period and the restatement announcement is 189 (133) days, whereas the average (median) length of the misstatement period is 640 (453) days. On average, stock prices drop -3.07 percent during the three-day announcement window (*CONCURRENT RETURN*), but rebound slightly in the following month (average *POST RETURNS* of 1.91 percent). Twenty-seven percent of the restatements in my sample are driven, at least partially, by revenue recognition issues.

<Insert Table 3 Here>

Table 3 also compares variable means across observations with and without SEC enforcement actions. Several variables are significantly different across groups, including *LITIGATION*, *FRAUD/IRREG*, *DAMAGES*, *DELIST*, and *REVENUE*, whose means are higher for those firms sanctioned by the SEC. Additionally, the SEC targets larger firms (*MKTCAP*) and those whose misstatement lasted for a longer period (*MISSTATEMENT LENGTH*), involved more issues (*COUNT*), and required more negative adjustments to income (*RESTATE MAGNITUDE*). Firms sanctioned by the SEC have, on average, greater *SHARE TURNOVER* and more negative stock returns around the restatement announcement and in the previous year (*CONCURRENT RETURN*, *PRIOR RETURNS*). Finally, firms announcing *LEASE* restatements or those related to a *RULE CHANGE* tend to be sanctioned less often.

Table 4 provides pairwise correlations between variables. *SEC ENFORCEMENT* is correlated with several variables, including *INVESTIGATION* and *PROMINENCE*. The four measures of cooperation and forthright disclosures are generally correlated, although the highest

correlation coefficient is only 0.25. Correlation coefficients between other variables are in the expected directions.

<Insert Table 4 Here>

Regression Analysis

Table 5 presents regression results testing the incremental impact of cooperation and forthright disclosures on the likelihood of an SEC enforcement action (model 1). After controlling for restatement severity and other firm and restatement characteristics, I find that timely disclosure of a restatement significantly reduces the likelihood of receiving an SEC enforcement action ($p = 0.015$). In addition to supporting the claims of the Seaboard Report, this finding also provides new evidence on the benefits of timely disclosure of bad news.

However, I find that company-initiated investigations and prominent press release disclosures are positively associated with SEC enforcement actions. Specifically, the coefficients on *INVESTIGATION* and *PROMINENCE* are both significant at the $p = 0.001$ and $p = 0.051$ levels, respectively. Corporations initiating an investigation into the accounting misstatement more than double their odds of an SEC sanction. This finding is in contrast to the advice often given to managers that initiating an investigation may limit their exposure to SEC sanctions. Rather, the result suggests that cooperation with the SEC may (1) strengthen the SEC's case against a firm, thus leading to more sanctions, or (2) increase the SEC's interest in the case, perhaps because the cost of enforcement is lower. Additionally, firms choosing to disclose their restatements in the headline of their press releases are almost twice as likely to be issued an SEC sanction as firms using the text of a press release. Thus, it appears that SEC staff, similar to investors and litigants (Files et al 2009; Myers et al. 2010), are influenced by the visibility of restatement-related disclosures. The coefficient on *SEC DISCLOSURE* is insignificant in this

specification of the model, although sensitivity tests (Section VII) reveal that the SEC does reward the use of more visible SEC filings in the years after the Seaboard Report (2002-2005).

In an effort to assess the incremental impact of cooperation and disclosure, I include all four proxies in the model simultaneously. However, in untabulated analysis, I insert each measure separately and find the same results (same sign and significance levels). In sum, I find that company-initiated investigations increase the likelihood of an SEC sanction. The findings for forthright disclosures are mixed as the SEC appears to reward timely disclosures but not those announced in a prominent manner within a press release.

<Insert Table 5 Here>

Although my study focuses on cooperation and forthright disclosures, I also provide evidence on other firm and restatement characteristics that influence the SEC's decision to issue an enforcement action. Of my restatement severity measures, I find that seven are significant in predicting the likelihood of an SEC sanction. Specifically, the presence of a class action lawsuit increases the likelihood of sanction, consistent with *LITIGATION* acting as a proxy for severe cases of misconduct. Additionally, firms whose shareholders have suffered larger declines in market value (*DAMAGES*) are more likely to receive SEC enforcement actions. Consistent with my expectations, longer misstated periods (*MISSTATEMENT LENGTH*) and revenue recognition problems (*REVENUE*) also increase the likelihood of an SEC sanction. Comparing standardized coefficients (untabulated), I find that *LITIGATION* is the most important predictor of enforcement actions, followed closely by *REVENUE*.²² Performance-related delistings in the year following a restatement announcement (*DELIST*) also increase the likelihood of an SEC sanction. *LEASE* accounting problems and those due to a *RULE CHANGE* are less likely to

²² Standardized coefficients measure changes in standard deviation units, therefore enabling me to compare the relative importance of each explanatory variable. However, odds ratios are more useful for the interpretation of individual coefficients, especially in the case of dummy variables. Therefore, I report odds ratios in Table 5.

result in enforcement. The four additional measures of severity do not influence the SEC's selection criteria after controlling for other severity measures. Of my other controls, only *PRIOR RETURNS* is significant (negative and significant at the 0.001 level).

Controlling for Self-Selection

Self-selection is a potential problem when modeling the relation between cooperation and SEC enforcement actions. That is, underlying (and unobservable) factors may drive the decision to initiate an internal investigation or provide forthright disclosures about a misstatement. If the same unobservable factors are also correlated with the SEC's sanction decision, the coefficients on the cooperation and forthright disclosure variables will be biased. I use a treatment-effects model to control for this potential endogeneity.²³

First, I run four selection equations predicting *INVESTIGATION*, *TIMELINESS*, *PROMINENCE*, and *SEC DISCLOSURE*, respectively.²⁴ In each selection equation, I include all control variables from model (1) plus three additional instrumental variables: (1) the level of institutional ownership at the end of the quarter prior to the restatement announcement (*INST_OWN*), (2) whether the restatement firm is audited by a Big 4 auditor at the time of their restatement announcement (*BIGN*), and (3) the number of management earnings forecasts in the year prior to the restatement announcement (*MGMT_FORECAST*). These variables satisfy the requirements necessary to be valid instruments. Specifically, they are correlated with the dependent variable(s) in the first stage (at least one instrument is significant in each of the four

²³ Treatment-effect models address selectivity that arises when an independent variable included on the right hand side of a model is not random but rather is determined by an endogenous decision process. The Heckman (1979) two-step procedure can be used to estimate treatment effects (Greene 2008; Li and Prabhala 2007). This method involves estimating a selection model predicting the endogenous choice variable (e.g., *INVESTIGATION*) and calculating an inverse Mill's ratio (IMR) for the event (*INVESTIGATION* = 1) and non-event (*INVESTIGATION* = 0) firms. The IMR calculations differ slightly for the two groups (see Greene 2008 or Tucker 2007 for details). The IMR is then added to the outcome regression as an additional independent variable.

²⁴ To model disclosure timeliness, I create an indicator variable equal to 1 (0) if the value for *TIMELINESS* is below (above) the median. I then use probit models to predict *INVESTIGATION*, *TIMELINESS* (0,1), and *SEC DISCLOSURE* and an ordered probit model to predict *PROMINENCE*.

selection equations) and they are not associated with the dependent variable in the second stage, namely SEC sanctions. Several variables significantly increase the likelihood of a company-initiated investigation, including *LITIGATION*, *FRAUD*, *MISSTATEMENT LENGTH*, and *REVENUE*, among others (untabulated). Determinants of restatement timeliness, press release prominence, and SEC filings are consistent with my expectations and prior literature (Files et al. 2009; Myers et al. 2010).

Next, I calculate the appropriate inverse Mill's ratio (IMR) from each selection equation above and add the IMRs to model (1).²⁵ After controlling for endogeneity, *INVESTIGATION* (positive coefficient), *PROMINENCE* (positive coefficient), and *TIMELINESS* (negative coefficient) continue to significantly influence the likelihood of an SEC sanction (untabulated). The coefficient on *SEC DISCLOSURE* remains insignificant, consistent with previous tests. Only one inverse Mill's ratio (related to *SEC DISCLOSURE*) is significant in the regression ($p = 0.094$), suggesting that self-selection is only a minor concern.

VI. SEC MONETARY PENALTIES

Empirical Model and Variable Descriptions

The SEC may choose to reward firms for certain behavior by seeking lighter penalties, rather than eliminating the sanction entirely. In this section, I explore the relation between cooperation, forthright disclosures, and monetary penalties. For my sample of 127 SEC enforcement actions, I use monetary penalty data from KLM's (2008a,b,c) database and information from the SEC enforcement reports, when necessary. I separately analyze the

²⁵ I perform diagnostic tests for multicollinearity and find the highest variance inflation factor (VIF) score (for any variable in the model, including IMRs) is 4.3, which is well under the standard cutoff of 10 (Kennedy 1998).

penalties charged to individuals and the restatement firm, as the SEC's decision to show leniency towards an individual and/or the firm may be based on different factors.²⁶

To test H1b-H4b, I estimate the following OLS model:

$$\begin{aligned} \text{Monetary Penalties} = & \alpha + \beta_{1-4}[\text{Cooperation and Disclosure}] + \beta_{5-9}[\text{Shareholder Harm}] \quad (2) \\ & + \beta_{10-11}[\text{Deep Pockets}] + \beta_{12-14}[\text{Enforcement Complexity}] \\ & + \beta_{15-16}[\text{Litigation}] + \varepsilon \end{aligned}$$

I define monetary penalties in four ways. The first, *IND_PENALTY*, equals the total dollar value of fines and disgorgement of profits paid by individuals, winsorized at the 99th percentile.

Monetary penalties are summed across all individuals in a given firm who are sanctioned for the restatement. Second, *FIRM_PENALTY* equals the total dollar value of fines and disgorgement of profits paid by the restating firm, winsorized at the 99th percentile. To reduce the positive skew present in *IND_PENALTY* and *FIRM_PENALTY*, I also run model (2) using transformed versions of these variables. Specifically, I take the natural logarithm of penalties as a percentage of shareholder damages: $\ln\text{IND_PENALTY}\% = \ln[(\text{IND_PENALTY}/\text{DAMAGES}) * 100]$ and $\ln\text{FIRM_PENALTY}\% = \ln[(\text{FIRM_PENALTY}/\text{DAMAGES}) * 100]$.^{27, 28}

Model (2) includes the proxies for cooperation and forthright disclosures, along with other characteristics known to predict penalties (KLM 2008c). I control for the severity of the restatement announcement using five variables defined in the previous section (*RESTATE*

²⁶ In previous tests, I do not distinguish between enforcement actions issued against the firm or individuals employed by the firm. To ensure the robustness of my results, I re-run model 1 after excluding (1) the 18 enforcement actions that *only* cite individuals, and (2) the 12 enforcement actions that *only* cite the restatement-firm. In both specifications, my variables of interest have the same sign and significance levels as discussed earlier.

²⁷ The transformed variables, $\ln\text{IND_PENALTY}\%$ and $\ln\text{FIRM_PENALTY}\%$, are normally distributed around their mean with a skewness value of less than |0.8|. Normality is not achieved when taking the natural logarithm of *IND_PENALTY* and *FIRM_PENALTY* without first scaling (skewness > |0.9|), nor when scaling without also logging (skewness > |4.0|).

²⁸ Scaling by shareholder damages has intuitive appeal as the SEC is likely to choose the level of both firm and individual penalties based on the severity of the violation and the extent to which shareholders are harmed. Damages are equal to zero for eight observations in my sample. Thus, the calculation of $\ln\text{IND_PENALTY}\%$ and $\ln\text{FIRM_PENALTY}\%$ is infeasible for these observations and they are dropped from the regression. In unreported sensitivity tests, I set *DAMAGES* equal to one for these observations and recalculate my dependent variables. My results are robust to this change.

MAGNITUDE, *CONCURRENT RETURN*, *FRAUD/IRREG*, *DAMAGES*, and *SHARE TURNOVER*). *MKTCAP* and *BANKRUPTCY* are included to capture the notion that monetary penalties may be influenced by the defendant's ability to pay. The complexity of the restatement, including the length of the misstatement period (*MISSTATEMENT LENGTH*), the number of law violations that have occurred (*NUM VIOLATIONS*), and the number of Litigation Releases and/or Administrative Proceedings issued (*NUM PROCEEDINGS*), may influence the amount of fines issued by the SEC. Finally, *LITIGATION* and *SETTLEMENT AMT* are included to control for the substitutability of SEC penalties with class action lawsuit settlement amounts. Lawsuits tend to be filed and settled more quickly than SEC investigations. Thus, I expect the SEC to reduce monetary penalties in those cases where the litigation settlement was large (KLM 2008c). *SETTLEMENT AMT* is defined as the total amount paid by the restating company, including attorney's fees, winsorized at the 1st and 99th percentiles. All regressions are reported with White (1980) corrected standard errors.

Descriptive Statistics and Regression Results

Table 6, Panel A, describes the SEC monetary penalties imposed on both individuals and firms as a result of a restatement. Individuals are sanctioned in 115 of the 127 cases and pay an average of \$3.9 million in fines. The median individual is penalized \$145,000. Firms are sanctioned in 109 of the cases, with average fines of \$35.5 million. The SEC requires no monetary payment, however, from over half of the firms sanctioned (median firm pays \$0 in penalties). In the majority of these cases, the SEC chooses to impose monetary penalties on individuals rather than the firm for the law violation (untabulated). Average individual and firm penalties as a percentage of shareholder damages are 0.67 percent and 1.21 percent, respectively.

<Insert Table 6 Here>

Table 6, Panel B, documents the distribution of monetary penalties across each of the four cooperation and disclosure measures. Firms that independently investigate their restatements pay, on average, \$30.3 million less in SEC penalties than firms not initiating an investigation, consistent with cooperation being rewarded by the SEC. The presence of a company-investigation, however, does not influence the penalties imposed on individuals within the firm. This is not surprising given that the decision to initiate an investigation is likely made by multiple people, including top management and the Board of Directors. Individuals, however, are rewarded for forthright disclosure of the misconduct. When a restatement is announced in a timely manner, individual penalties are \$4.2 million lower than when the restatement disclosure is less timely. Restatements not disclosed in a Form 8-K or amended filing result in average individual penalties of \$10.2 million; however, reporting the restatement on a Form 8-K or amended filing reduces this average penalty by \$8.9 million.

Columns 1 and 2 of Table 7 present regression results predicting *IND_PENALTY* and *lnIND_PENALTY%*, respectively (model 2). Consistent with the descriptive evidence above, I find that timely and forthright disclosures reduce individual penalties, even after controlling for restatement severity, enforcement complexity, and litigation. In both columns, the coefficients on *TIMELINESS* and *SEC DISCLOSURE* are negative and significant at the $p = 0.05$ level. However, neither the initiation of a company investigation nor headline disclosure of a restatement influences individual penalties.

<Insert Table 7 Here>

The results of predicting *FIRM_PENALTY* and *lnFIRM_PENALTY%* are reported in columns 3 and 4 of Table 7, respectively. The coefficient on *INVESTIGATION* is negative and significant in both regression models, supporting H1b. It appears that restatement firms initiating

an *INVESTIGATION* are, on average, fined \$27.2 million less than firms not initiating an investigation, after controlling for the severity of the restatement and other factors (column 3). Therefore, although my previous findings suggest that the SEC is more likely to sanction a firm with an independent investigation, the SEC does reward this form of cooperative behavior with smaller penalties. In addition, the coefficient on *TIMELINESS* is negative and significant in both model specifications ($p = 0.076$ and $p = 0.001$, respectively). It appears that *TIMELINESS* not only reduces the likelihood of an SEC sanction, but also the penalties imposed by the SEC when a sanction is warranted. Press release prominence and the type of SEC filing used to disclose a restatement do not significantly influence firm penalties. Control variable results are consistent with my expectations and the findings of KLM (2008c).

Controlling for Self-Selection

Endogeneity concerns also arise when predicting SEC penalties. For example, a manager's underlying (and unobservable) beliefs about potential regulatory penalties may influence her decision to initiate an investigation or provide forthright disclosures about a restatement. Similar to the procedures outlined in Section V, I run four individual models predicting *INVESTIGATION*, *TIMELINESS*, *PROMINENCE*, and *SEC DISCLOSURE*, respectively. Each selection equation includes the control variables found in model (2), plus the instruments *INST_OWN*, *BIGN*, and *MGMT_FORECAST*. At least one of the three instrumental variables is significant in each selection equation. Additionally, each can be validly excluded from the outcome equation as they are unrelated to the magnitude of SEC monetary penalties.

The inverse Mill's ratios calculated from the four selection equations above are added to outcome equations predicting either *IND_PENALTY*, *lnIND_PENALTY%*, *FIRM_PENALTY*, or

lnFIRM_PENALTY% (untabulated).²⁹ The conclusions drawn from Table 7 are unchanged after controlling for endogeneity, with one exception: *SEC DISCLOSURE* now significantly reduces the dollar value of firm penalties ($p = 0.053$). However, it remains an insignificant predictor of firm penalties as a percent of damages ($p = 0.387$). The sign and significance level of *TIMELINESS* and *INVESTIGATION* remain similar in each specification of model (2). I find at least one inverse Mill's ratio is significant in each outcome equation, suggesting that unobservable factors explain both the decision to cooperate and the magnitude of monetary penalties following a restatement.³⁰

VII. SENSITIVITY TESTS

The Final Rule on 8-K Disclosures

The SEC issued its “Final Rule: Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date (SEC 2004b)” in August 2004, after which any “non-reliance on past financial statements” must be disclosed in a Form 8-K. In my sample alone, however, I find that sixteen percent ($n = 79$) of restatements announced after this date are not announced on a Form 8-K. To determine if the SEC’s response to 8-K filings has changed after this rule, I create a dummy variable (*8-K RULE*) which is equal to 1 if the restatement is announced after August 2004 and 0 otherwise, and interact it with *SEC DISCLOSURE* in each of my models.

In untabulated analyses, I find that the type of SEC filing does not impact the likelihood of an SEC sanction or firm-level penalties in either period. However, individual penalties are

²⁹ Diagnostic tests for multicollinearity reveal only one issue: In each outcome equation, the VIFs are close to 20 for both *PROMINENCE* and the IMR associated with *PROMINENCE*. The high collinearity between these two variables prevents precise estimation of their individual coefficients and significance levels (Hamilton 1992). Therefore, I limit my discussion to the remaining three variables, *INVESTIGATION*, *TIMELINESS*, and *SEC DISCLOSURE*, for which multicollinearity is not a concern (VIFs are below three for all remaining variables in the outcome equations).

³⁰ Specifically, I find the IMR associated with *INVESTIGATION* is significant at the $p = 0.05$ level when predicting *lnIND_PENALTY%*, *FIRM_PENALTY*, and *lnFIRM_PENALTY%*. The IMR related to *SEC DISCLOSURE* is significant when predicting *IND_PENALTY* ($p = 0.019$) and *FIRM_PENALTY* ($p = 0.014$), and the IMR related to *TIMELINESS* is significant only when predicting *lnFIRM_PENALTY%* ($p = 0.009$).

significantly lower in both periods when a more visible SEC filing (e.g., Form 8-K or amended filing) is used to disclose the restatement. Specifically, when predicting individual penalties (using either *IND_PENALTY* or *lnIND_PENALTY%* as the dependent variable), the coefficients on *SEC DISCLOSURE* and *SEC DISCLOSURE*8-K RULE* are both negative and significant. The coefficients from the model predicting *IND_PENALTY* suggest that, prior to the 8-K Rule, individual penalties are \$2.98 million lower when a Form 8-K or amended filing is used to disclose a restatement than when a regular SEC filing is used. After the 8-K Rule, individuals experience an average reduction in penalties of \$52.35 million. Although a reduction of this magnitude appears large, especially given that individual fines are rarely as high as \$52 million, further analysis reveals that the coefficient on *SEC DISCLOSURE*8-K RULE* is driven by one firm (Hollinger International, Inc.) that failed to disclose its restatement on a Form 8-K or amended filing. Managers and other employees of Hollinger were fined over \$65 million, compared to an average fine of only \$3.2 million for individuals whose firms used a Form 8-K in the post-Rule period. When removing Hollinger from the analysis, it does not appear that the SEC rewards individuals for using a Form 8-K or amended filing following the Final 8-K Rule.³¹

Pre- and Post-Seaboard Report

The issuance of the Seaboard Report in 2001 may indicate that the SEC changed its policies towards rewarding cooperative behavior. As such, I re-estimate models (1) and (2) for the pre-Seaboard (1997-2001) and post-Seaboard (2002-2005) periods separately and test coefficient differences between the two time periods.³² In untabulated analyses, I find that the

³¹ In unreported tests, I also re-run each of the regression models reported in Table 7 after excluding Hollinger International. I find that *SEC DISCLOSURE* significantly impacts individual penalties as a percentage of damages ($p = 0.063$); however, it is no longer significantly associated with the raw dollar value of individual penalties ($p = 0.160$). All remaining inferences are consistent with those presented.

³² I statistically compare coefficients across the pre- and post-SOX models by combining the parameter-estimates and associated (co)variance matrices of the two models into a single parameter vector and simultaneous covariance

impact of *INVESTIGATION* and *PROMINENCE* on the likelihood of an SEC sanction (model 1) does not differ across time periods. However, the SEC appears to reward *TIMELINESS* and *SEC DISCLOSURE* more in the years after 2001. In the pre-Seaboard period, the coefficients on *TIMELINESS* and *SEC DISCLOSURE* are not significant predictors of the likelihood of an SEC sanction. After 2001, though, announcing a misstatement in a timely manner ($p = 0.006$) and using a more visible SEC filing ($p = 0.017$) significantly reduce the likelihood of a sanction. Thus, the SEC does reward the use of a Form 8-K or amended filing by reducing the likelihood of a sanction, although the reward is only present in the post-2001 period. For model (2), I find evidence consistent with the SEC rewarding cooperation and forthright disclosures only in the post-Seaboard period.³³

VIII. CONCLUSION

I investigate SEC enforcement leniency by exploring whether the SEC rewards firm cooperation and forthright disclosures following a restatement. I find that company-initiated investigations significantly increase the likelihood of an SEC enforcement action, but decrease firm-level penalties associated with a sanction. This finding suggests that firms are rewarded for cooperative behavior, although the reward is manifested through lower penalties rather than a reduction in sanctions. Managers, auditors, and lawyers may find this result informative as they evaluate the pros and cons of initiating an internal investigation. Regarding forthright disclosures, I find somewhat mixed results. Headline disclosure of a restatement increases the likelihood of an SEC sanction, suggesting that SEC staff is influenced by the visibility of press release disclosures when choosing its enforcement targets. However, I find some evidence that

matrix. This design is similar to including interactions, but is easier to interpret and does not assume equal residual variance between periods.

³³ The number of observations in the pre-Seaboard period is limited to 41 (when predicting individual penalties) and 34 (when predicting firm penalties). Therefore, the insignificant findings in the pre-Seaboard period may be due to a lack of power.

individuals pay significantly smaller fines when the restatement is disclosed in a Form 8-K or amended filing. Placing restatement information in a Form 8-K or amended filing also significantly reduces the likelihood of an SEC sanction, but only in the post-2001 period. Consistent with the Seaboard Report, timely disclosure of a restatement reduces the likelihood of being sanctioned *and* results in lower individual and firm penalties.

This is the first study to explore the SEC's criteria for leniency following a law violation. Prior research examining SEC enforcement actions or AAERs fail to recognize that the SEC has a choice in whether to sanction a firm. I attempt to fill this void by examining some of the criteria used by the SEC when making its choice. This is important given the significant cost of an SEC sanction to firms, managers, auditors, and investors (Feroz et al. 1991; KLM 2008a,b). My results also extend prior research (Bowen et al. 2005; Files et al. 2009; Gordon et al. 2009; Myers et al. 2010) by providing the first evidence on how press release prominence and the type of SEC filing used to disclose a restatement affect the SEC's decision to issue an enforcement action. Finally, I provide additional evidence on the benefits of timely disclosure – namely, the increased potential for SEC leniency.

Although the focus of this study is on SEC enforcement following an earnings restatement, future research might examine the impact cooperation and forthright disclosures have on the SEC following other (non-restatement-related) law violations. Additionally, the SEC has recently renewed its commitment to rewarding cooperation and to providing sufficient information to the public about the nature and extent of cooperation (SEC 2010). Future research might explore whether reputational penalties following a law violation are mitigated if individuals and/or companies are known to have cooperated with regulators.

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APPENDIX
Variable Definitions

Variable Name	Variable Definition
<i>SEC ENFORCEMENT</i>	An indicator variable equal to 1 if the SEC issued an enforcement action against the company as a result of a restatement, and 0 otherwise. This data is a combination of information from Karpoff et al. (2008a,b,c) and hand collection from the SEC's website: www.sec.gov/. For restatements announced between 1997 and 2003, I search for SEC enforcement actions through the end of 2007. For restatements announced in either 2004 or 2005, I search for SEC enforcement actions through May, 2010.
<i>INVESTIGATION</i>	An indicator variable equal to 1 if the company initiated an independent investigation into its accounting issues and 0 otherwise. I define an independent investigation as one undertaken by non-management individuals, counsel, and/or auditing firms that are not the usual auditor for the client. This data is hand-collected from the press release and SEC filing announcing the restatement.
<i>TIMELINESS</i>	The number of days between the end of misstated period and the restatement announcement date, multiplied by -1. As this number gets larger (i.e., less negative), the timeliness of disclosures improves.
<i>PROMINENCE</i>	Coded 3 for restatements mentioned in the headline of the press release; 2 for restatements not mentioned in the headline, but discussed in some detail within the body of the text; and 1 for restatements only mentioned in the footnotes of the press release. This data is hand-collected from the press release announcing the restatement.
<i>SEC DISCLOSURE</i>	<p>An indicator variable equal to 1 if a restatement was reported on either a Form 8-K or an amended filing and equal to 0 for restatements reported in regular annual or quarterly filings or not reported in any SEC report. Data is collected from Audit Analytics (AA). I hand collect information using EDGAR if AA did not have information on the firm in my sample or the SEC disclosure date in AA is more than 60 days after the press release disclosure date or more than 3 days before.</p> <p>The specific SEC reports included in each category are as follows: <u>Level 1:</u> 8-K, 8-K/A, 10-K/A, 10-Q/A, 10-KSB/A, 10-QSB/A, 10-K405/A, 10-Q405/A <u>Level 0:</u> 10-K, 10-Q, 6-K, NT 10-K, NT 10-K, 10-K405, 10-Q405, or no SEC report was found on Edgar that discussed the restatement in question</p>
<i>IND_PENALTY</i>	The total dollar value of fines and disgorgement of profits paid by individuals to the SEC as a result of an SEC enforcement action, winsorized at the 99 th percentile. Monetary penalties are summed across all individuals sanctioned for the same underlying restatement. In regression models, this variable is divided by \$1,000,000 to allow for more interpretable coefficient values. Data is collected from Karpoff et al. (2008a,b,c) and the SEC's website (www.sec.gov).

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APPENDIX (continued)

Variable Name	Variable Definition
<i>IND_PENALTY%</i>	Individual penalties (as described above), scaled by shareholder damages and multiplied by 100. This variable is winsorized at the 99 th percentile and the natural logarithm is used in regression models.
<i>FIRM_PENALTY</i>	The total dollar value of fines and disgorgement of profits paid by the restatement firm to the SEC as a result of an SEC enforcement action, winsorized at the 99 th percentile. In regression models, this variable is divided by \$1,000,000 to allow for more interpretable coefficient values. Data is collected from Karpoff et al. (2008a,b,c) and the SEC's website (www.sec.gov).
<i>FIRM_PENALTY%</i>	Firm penalties (as described above), scaled by shareholder damages and multiplied by 100. This variable is winsorized at the 99 th percentile and the natural logarithm is used in regression models.
<i>LITIGATION</i>	An indicator variable equal to 1 if a class action lawsuit was filed in response to the misstated financial statements and 0 otherwise. This information is hand-collected from Stanford's Securities Class Action Clearinghouse.
<i>SETTLEMENT AMT</i>	The total litigation settlement amount (in millions) paid by the company in question, including attorney's fees. This variable is winsorized at the 1 st and 99 th percentiles. Data is hand collected from Stanford's Securities Class Action Clearinghouse.
<i>RESTATE MAGNITUDE</i>	The cumulative after-tax earnings effect of the restatement scaled by total assets measured as of the fiscal year end prior to the restatement announcement, multiplied by 100 and winsorized at 1 and 99%. If prior year's earnings were overstated (understated), <i>MAGNITUDE</i> has a negative (positive) sign. This data is hand-collected from the press releases announcing the restatement. Missing data is imputed using the mean conditional imputation method discussed in Allison (2002). A first stage regression is run on those firms that included an amount in their press release, predicting <i>MAGNITUDE</i> . The coefficients from this regression are used to generate predicted values for those observations with missing amounts. Missing values are imputed for less than 25% of my observations (308/1249).
<i>CONCURRENT RETURN (-1,+1)</i>	The cumulative abnormal return, calculated as the raw stock return minus the CRSP equally-weighted market portfolio return, measured over the three-day period centered on the restatement announcement date, collected from CRSP.
<i>FRAUD/IRREG</i>	An indicator variable equal to 1 if any variants of the words "fraud" or "irregularity" are used when disclosing an accounting restatement and 0 otherwise. This data is hand-collected from the press release and SEC filing announcing the restatement.

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APPENDIX (continued)

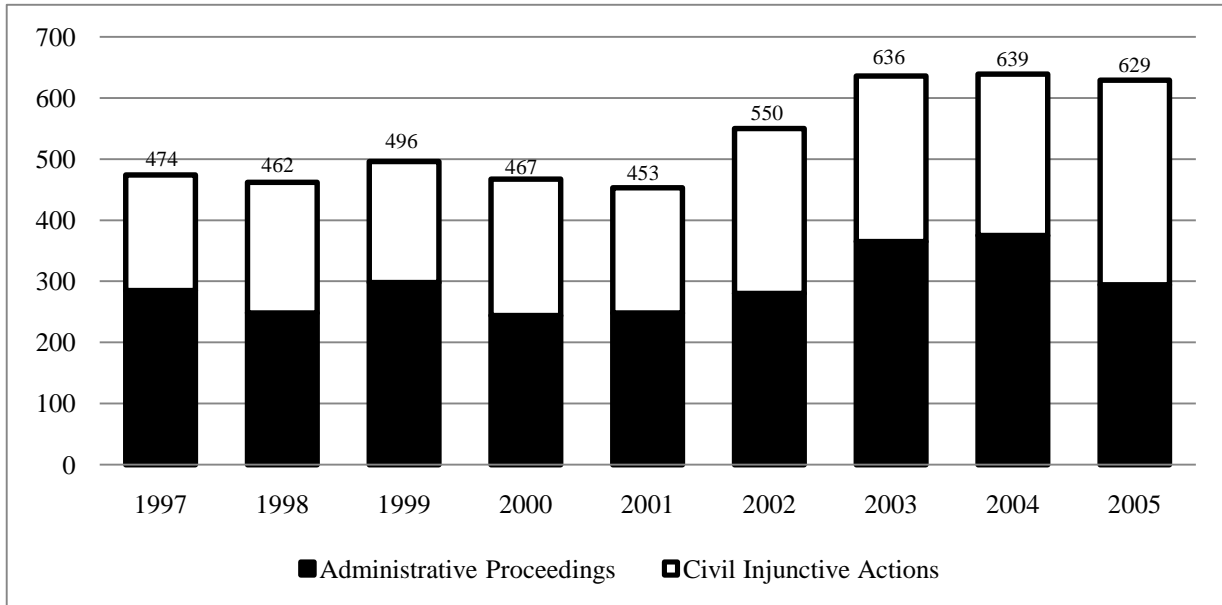
Variable Name	Variable Definition
<i>DAMAGES</i>	<p>The firm's market capitalization at its highest point during the violation period (time 0), minus its market capitalization on the day after the restatement announcement (or, if unavailable, on the day of the restatement announcement) (time 1), truncated at zero.</p> <p>= Market Cap_{t=0 FIRM} – Market Cap_{t=1 FIRM}</p>
<i>MISSTATEMENT LENGTH</i>	The number of days between the beginning of the misstated period and the end of the misstated period.
<i>DELIST</i>	An indicator variable equal to 1 if a restating firm was delisted from its exchange for performance-related reasons in the 12 months following its restatement announcement, and 0 otherwise. CRSP delisting codes 500 and 520-584 are considered performance-related.
<i>REVENUE</i>	An indicator variable equal to 1 if any part of the restatement is due to revenue recognition problems and 0 otherwise. This data is reported in the GAO database.
<i>LEASE</i>	An indicator variable equal to 1 if any part of the restatement is related to the accounting for leases and 0 otherwise. This data is hand-collected from the press release announcing the restatement.
<i>RULE CHANGE</i>	An indicator variable equal to 1 if the company mentions an accounting rule (e.g., FAS 133, EITF 00-10, SAB 101, etc.) as the reason behind their upcoming restatement and 0 otherwise. This data is hand-collected from the press release announcing the restatement.
<i>COUNT</i>	The number of different accounting issues per restatement, as reported in the GAO database.
<i>MKTCAP</i>	The market capitalization (closing stock price*common shares outstanding) of the firm measured as of the end of the fiscal year prior to the restatement announcement, in millions.
<i>FINANCIAL</i>	An indicator variable equal to 1 if the firm operates in the financial services sector (SIC codes 6000-6999) and 0 otherwise.
<i>TECH</i>	An indicator variable equal to 1 if the firm operates in a technology industry (SIC codes 2833-2836, 3570-3577, 3600-3674, 7371-7379, 8731-8734) and 0 otherwise.
<i>PRIOR RETURNS (-252,-2)</i>	The compounded raw return over the one-year period ending two days before the restatement announcement, collected from CRSP.

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APPENDIX (continued)

Variable Name	Variable Definition
<i>POST RETURNS (+2,+20)</i>	The compounded raw returns over the (+2,+20) interval following the restatement announcement, collected from CRSP. When a firm delists, I use the return from the beginning of the accumulation period (day +2) through the delisting date, including the delisting return, as a proxy. If the delisting return is missing, I use a replacement value equal to the average daily delisting return for all firms in the same restatement announcement year with the corresponding three-digit delisting code (see Beaver et al. 2007).
<i>SHARE TURNOVER</i>	A continuous variable measuring the probability that a share was traded within a given time period. It is calculated as: $[1 - \Pi_i(1 - \text{volume traded}_i / \text{total shares}_i)]$, accumulated over the misstatement period for each restatement firm in the sample.
<i>BANKRUPTCY</i>	An indicator variable equal to 1 if the restatement firm announced bankruptcy in the three years following its restatement announcement, and 0 otherwise.
<i>INST_OWN</i>	The level of institutional ownership at the end of the quarter prior to the restatement announcement, scaled by total shares outstanding on the same date. This data is collected from Thompson Financial and is set equal to zero if missing.
<i>BIG N</i>	An indicator variable equal to 1 if the restatement firm was audited by a Big N firm (Arthur Andersen, Deloitte & Touche, Ernst & Young, KPMG, and/or PriceWaterhouseCoopers) in the year of its restatement announcement and 0 otherwise.
<i>MGMT_FORECAST</i>	A count of the number of annual or quarterly management earnings forecasts made by the restatement firm in the year prior to its restatement announcement, per the First Call dataset.
<i>NUM PROCEEDINGS</i>	The number of Administrative Proceedings and/or Litigation Releases issued in response to any given restatement. This data is collected from Karpoff et al. (2008a,b,c) and the SEC's website (www.sec.gov).
<i>NUM VIOLATIONS</i>	A count variable ranging from 1 to 3, depending on the number of different law violations caused by the misstatement. I focus on violations of the following provisions of the Securities and Exchange Act of 1934, as amended by the Foreign Corrupt Practices Act of 1977: 15(b)(2)(A) (books and records provision), 15(b)(2)(B) (internal controls provision), and/or 15(b)(5) (circumvention provision). This data is collected from Karpoff et al. (2008a,b,c) and the SEC's website (www.sec.gov).
<i>8-K RULE</i>	An indicator variable equal to 1 if the restatement was announced after August 2004 (the date of the SEC's "Final Rule: Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date") and 0 otherwise.

FIGURE 1
Total SEC Enforcement Actions across Time



The data in this figure is taken from SEC Annual Reports for the years 1997-2005. These enforcement actions relate to *all* law violations including, but not limited to, misstated financial statements, bribery, Regulation FD violations, broker-dealer cases, and insider trading.

TABLE 1
Sample Selection Procedures

	Number of Observations
Restatement firms per GAO study (1997-2005) ^a	2443
Less: firms without Compustat and CRSP data ^b	(894)
Less: outliers ^c	(31)
Less: firms without press release information available	(185)
Less: misstatement period unknown ^d	(50)
Less: repeat observations ^e	<u>(34)</u>
Final Restatement Sample	1249

^a The General Accounting Office (GAO) prepared a report for the U.S. Senate Committee on Banking, Housing and Urban Affairs, chaired by Senator Sarbanes in 2002 and two reports in 2006. The first report identified 919 unique firm restatements spanning from January 1, 1997 to June 30, 2002. The second identified 1,390 restatements spanning from July 1, 2002 to September 30, 2005. The third identified 134 restatements between October 1, 2005 and December 31, 2005.

^b Eight hundred and twenty-one observations are dropped because of missing total assets (on Compustat) as of the fiscal year prior to the restatement announcement. Another 73 are deleted because restatement date returns data are unavailable through CRSP.

^c Outliers were identified as those observations in which the abnormal returns around the restatement date fell in the top or bottom 1% of the distribution.

^d I eliminate observations without adequate data to determine the misstated periods.

^e In some cases, one restatement may be discussed in multiple company-issued press releases. I only retain the observation if it is the first time the restatement has been disclosed; all other repeat observations are eliminated.

TABLE 2
Sample Description

Panel A: Distribution of Restatements and SEC Enforcement Actions over Time^a

Restatement Announcement	(1) # of Sample Restatement Announcements	(2) Percent of Sample Restatements (n = 1,249)	(3) # of Restate Firms with Subsequent SEC Enforcements	(4) Percent of Restate Firms with SEC Enforcement	(5) Average Time to Enforcement
Year					
1997	33	2.6%	5	15.2%	3.4 years
1998	24	1.9%	4	16.7%	3.4 years
1999	70	5.6%	7	10.0%	2.9 years
2000	83	6.7%	18	21.7%	3.0 years
2001	111	8.9%	10	9.0%	2.3 years
2002	158	12.7%	24	15.2%	1.6 years
2003	166	13.3%	23	13.9%	1.8 years
2004	197	15.8%	11	5.6%	1.9 years
2005	<u>407</u>	32.6%	<u>25</u>	6.1%	<u>2.1 years</u>
<i>Sample Total</i>	1249		127	<i>Sample Avg.</i>	2.2 years

Panel B: Breakdown of Corporate Disclosure Measures with SEC Enforcement Actions^b

	<i>Total Frequency</i>	<i>Number with SEC sanction</i>	<i>Percent with SEC sanction</i>
<u>Indep. Investigation</u>			
Yes	129	44	34%
No	<u>1,120</u>	<u>83</u>	7%
<i>Total</i>	1,249	127	
<u>Timeliness</u>			
High	620	46	7%
Low	<u>629</u>	<u>81</u>	13%
<i>Total</i>	1,249	127	
<u>Prominence</u>			
Headline (3)	653	83	13%
Text (2)	537	44	8%
Footnote (1)	<u>59</u>	<u>0</u>	0%
<i>Total</i>	1,249	127	
<u>SEC Disclosure</u>			
8-K (1)	679	72	11%
Amended Filing (1)	185	17	9%
Regular Filing (0)	227	32	14%
No Filing (0)	<u>158</u>	<u>6</u>	4%
<i>Total</i>	1,249	127	

^a Panel A details the distribution of restatements in my sample across time (columns 1 and 2), along with the number of restatements each year that result in an eventual SEC sanction (the actual SEC sanction is issued in a subsequent year) (columns 3 and 4). Time to enforcement is calculated as the number of days between the first public announcement of the restatement and the SEC's initial regulatory proceeding against the restatement firm or its managers, divided by 365.

^b Panel B provides a detailed breakdown of the four proxies for cooperation and forthright disclosure, including the number and percent of each category receiving an SEC sanction. Independent Investigations are those initiated by the restatement company and undertaken by non-management individuals, counsel, and/or auditing firms who are not the usual auditor for the client. An observation is classified as having high (low) timeliness if the number of days between the misstatement end date and the restatement announcement date is below (above) the median. Prominence is coded 3 for any restatement that is mentioned in the headline of a press release; coded 2 for those restatements not mentioned in the headline, but discussed in some detail within the body of the text; and coded 1 for those

restatements only mentioned in the footnotes of the press release. SEC Disclosure is coded 1 for any restatement that was reported on a Form 8-K or in an amended filing and 0 for any restatement reported in a regular annual or quarterly filing or those restatements not reported in any SEC report.

TABLE 3
Descriptive Statistics and Comparison between Observations with and without an SEC Sanction

<u>Variable^a</u>	<u>Descriptive Stats</u>			<u>Comparison of Means – With and Without SEC Sanction</u>	
	<u>N</u>	<u>Mean</u>	<u>Median</u>	<u>SEC Sanction</u>	<u>No SEC Sanction</u>
<i>SEC ENFORCEMENT</i>	1249	0.10	0	1.00	0.00***
<i>INVESTIGATION</i>	1249	0.10	0	0.35	0.08***
<i>TIMELINESS</i>	1249	-189	-133	-203	-187
<i>PROMINENCE</i>	1249	2.48	3.00	2.65	2.46***
<i>SEC DISCLOSURE</i>	1249	0.69	1.00	0.70	0.69
<i>LITIGATION</i>	1249	0.12	0.00	0.46	0.08***
<i>RESTATE MAGNITUDE^b</i> (Percent of total assets)	1247	-0.91%	-0.39%	-1.20%	-0.87%*
<i>CONCURRENT RETURN (-1,+1)</i>	1249	-3.07%	-1.20%	-6.57%	-2.67%***
<i>FRAUD/IRREG</i>	1249	0.03	0	0.12	0.02***
<i>DAMAGES (\$MM)</i>	1249	\$1,908	\$92	\$10,426	\$944***
<i>MISSTATEMENT LENGTH</i>	1249	640	453	896	611***
<i>DELIST</i>	1249	0.02	0	0.06	0.02**
<i>REVENUE</i>	1249	0.27	0	0.51	0.24***
<i>LEASE</i>	1249	0.11	0	0.02	0.12***
<i>RULE CHANGE</i>	1249	0.15	0	0.06	0.16***
<i>COUNT</i>	1249	1.21	1.00	1.36	1.19***
<i>MKTCAP (\$MM)</i>	1246	\$3,372	\$425	\$8,782	\$2,758*
<i>PRIOR RETURNS (-252,-2)</i>	1249	14.59%	14.90%	-11.41%	17.53%***
<i>POST RETURNS (+2,+20)</i>	1245	1.91%	1.24%	2.69%	1.82%
<i>SHARE TURNOVER</i>	1249	0.67	0.75	0.81	0.65***
<i>BANKRUPTCY</i>	1249	0.01	0.00	0.03	0.01

*, **, and *** indicate the variable means are significantly different between the “SEC Sanction” and “No SEC Sanction” groups at the p = 0.10, 0.05, and 0.01 levels, respectively.

^a All variables are defined in the Appendix.

^b Negative (positive) values denote initial overstatement (understatement) of net income. Missing values are imputed using the conditional mean imputation approach outlined in Allison (2002). Before imputation and winsorization, the average value of magnitude as a percent of total assets is -0.93% and the median is -0.22% (n = 959).

TABLE 4
Pearson Correlation Table

<u>Variable</u>	<u>SEC Action</u>	<u>Investig</u>	<u>Timely</u>	<u>Prom.</u>	<u>SEC Disclose</u>	<u>Magn</u>	<u>Concurr Return</u>	<u>Fraud/ Irreg</u>	<u>Damage</u>	<u>Misstate Length</u>	<u>Delist</u>	<u>Rev.</u>	<u>Lease</u>	<u>Rule Change</u>	<u>Count</u>	<u>Mktcap</u>	<u>Prior Returns</u>	<u>Post Returns</u>	<u>Share Turn.</u>
INVESTIGATION	0.27																		
TIMELINESS	-0.02	-0.00																	
PROMINENCE	0.10	0.11	0.15																
SEC DISCLOSURE	0.01	0.05	0.03	0.25															
RESTATE MAGNITUDE	-0.05	-0.04	-0.01	-0.01	0.11														
CONCURRENT RETURN	-0.12	-0.12	-0.07	-0.05	0.03	0.18													
FRAUD/IRREG	0.15	0.28	-0.01	0.03	0.00	-0.05	-0.07												
DAMAGES	0.25	0.04	-0.04	0.05	0.03	-0.01	-0.00	0.01											
MISSTATEMENT LENGTH	0.15	0.15	0.04	0.10	0.19	-0.01	0.06	0.07	0.08										
DELIST	0.10	0.10	0.02	0.02	0.01	-0.11	-0.10	0.07	-0.02	0.02									
REVENUE	0.19	0.09	0.04	-0.10	-0.10	-0.09	-0.09	0.07	0.08	-0.05	0.02								
LEASE	-0.09	-0.06	-0.03	0.12	0.15	0.07	0.11	-0.07	-0.04	0.24	-0.03	0.17							
RULE CHANGE	-0.08	-0.12	0.03	-0.24	-0.16	-0.04	0.07	-0.04	-0.01	-0.09	-0.04	0.16	-0.12						
COUNT	0.11	0.04	-0.05	0.06	0.03	-0.04	-0.05	0.09	0.12	0.06	-0.01	0.18	-0.06	-0.04					
MKTCAP	0.12	0.01	0.00	0.02	0.02	0.09	0.04	-0.00	0.33	0.01	-0.03	-0.00	-0.02	0.04	0.02				
PRIOR RETURNS	-0.15	-0.03	0.01	-0.03	0.03	0.11	0.02	-0.02	-0.04	0.04	-0.09	-0.08	0.02	0.03	-0.08	-0.02			
POST RETURNS	0.02	-0.05	0.03	-0.01	0.03	-0.04	-0.04	-0.00	-0.00	-0.03	-0.01	0.02	-0.03	0.01	-0.00	-0.00	-0.06		
SHARE TURNOVER	0.15	0.12	0.04	0.05	0.12	-0.05	0.01	0.06	0.10	0.51	0.02	0.06	0.16	-0.03	0.08	0.03	0.01	-0.01	
LITIGATION	0.35	0.24	0.08	0.08	0.00	-0.10	-0.32	0.16	0.03	0.03	0.02	0.17	-0.12	-0.09	0.10	-0.00	-0.15	0.01	0.15

Bold values are significant at the 0.05 level (two-tailed).

TABLE 5
The Likelihood of an SEC Enforcement Action following a Restatement

$$SEC\ ENFORCEMENT = \alpha + \beta_{1-4}[Cooperation\ and\ Disclosure] + \beta_{5-15}[Restatement\ Severity] + \beta_{16-18}[Firm\ Characteristics] + \beta_{19-22}[Other\ Controls] + \varepsilon$$

Logistic Regression with Dependent Variable = <i>SEC ENFORCEMENT</i>				
<u>Variable^a</u>	<u>Predict</u>	<u>Coefficient</u>	<u>P-value</u>	<u>Odds Ratio</u>
Intercept		-5.140	(<0.001)	
<u>Cooperation and Disclosure</u>				
<i>INVESTIGATION</i>	?	0.976	(< 0.001)	2.653
<i>TIMELINESS</i>	(-)	-0.001	(0.015)	0.999
<i>PROMINENCE</i>	?	0.439	(0.051)	1.704
<i>SEC DISCLOSURE</i>	?	-0.410	(0.113)	0.664
<u>Restatement Severity</u>				
<i>LITIGATION</i>	?	1.723	(< 0.001)	5.599
<i>RESTATE MAGNITUDE</i>	(-) ^b	0.100	(0.103)	1.105
<i>CONCURRENT RETURN (-1,+1)</i>	(-)	-1.008	(0.176)	0.365
<i>FRAUD/IRREG</i>	(+)	0.097	(0.418)	1.102
<i>DAMAGES</i>	(+)	0.000	(< 0.001)	1.000
<i>MISSTATEMENT LENGTH</i>	(+)	0.001	(< 0.001)	1.001
<i>DELIST</i>	(+)	1.405	(0.005)	4.076
<i>REVENUE</i>	(+)	1.105	(< 0.001)	3.020
<i>LEASE</i>	(-)	-1.303	(0.022)	0.272
<i>RULE CHANGE</i>	(-)	-0.816	(0.038)	0.442
<i>COUNT</i>	(+)	-0.043	(0.420)	0.958
<u>Firm Characteristics</u>				
<i>MKTCAP</i>	?	0.000	(0.127)	1.000
<i>FINANCIAL</i>	?	-0.003	(0.993)	0.997
<i>TECH</i>	?	-0.205	(0.489)	0.815
<u>Other Controls</u>				
<i>PRIOR RETURNS (-252,-2)</i>	(-)	-0.695	(< 0.001)	0.499
<i>POST RETURNS (+2,+20)</i>	?	0.821	(0.198)	2.273
<i>SHARE TURNOVER</i>	?	0.458	(0.343)	1.581
<i>BANKRUPTCY</i>	(-)	0.869	(0.145)	2.385
n		1242 ^c		
Pseudo R ²		18.91%		
-2 log likelihood		806.63		
Model chi-square		260.30		
p-value		<0.001		
Correctly Classified		88.3		

P-values are in parentheses to the right of the logistic regression coefficients. Two-tailed tests are shown for variables without a signed prediction; one-tailed tests are shown for variables with a signed prediction.

^a See the Appendix for variable definitions.

^b A negative (positive) sign on *RESTATE MAGNITUDE* would indicate that restatements resulting in more negative adjustments to earnings increase (decrease) the likelihood of an SEC sanction.

^c Seven firms were excluded from the regression due to missing *POST RETURNS* and *MKTCAP* data.

TABLE 6
Monetary Penalties after an SEC Enforcement Action

Panel A: Monetary Penalties per Restatement^a

<u>Monetary Penalties (\$000)</u>	<u>N</u>	<u>Mean</u>	<u>Median</u>	<u>Min</u>	<u>Max</u>
<i>Individuals</i>	115	\$3,989	\$145	\$0	\$75,204
<i>Firms</i>	109	\$35,496	\$0	\$0	\$548,000
<u>Monetary Penalties/Damages (%)</u>					
<i>Individuals</i>	110	0.67%	0.02%	0.00%	17.30%
<i>Firms</i>	106	1.21%	0.00%	0.00%	24.16%

Panel B: Average Monetary Penalties per Restatement by Corporate Disclosure Measures (\$000)

	<u>Independent Investigation</u>			<u>Timeliness^b</u>			<u>Prominence</u>			<u>SEC Disclosure</u>		
	<u>Investigation</u>	<u>No Investigation</u>	<u>Difference</u>	<u>High</u>	<u>Low</u>	<u>Difference</u>	<u>High Prominence</u>	<u>Medium/Low Prominence</u>	<u>Difference</u>	<u>8-K and 10-K/A</u>	<u>Other Forms</u>	<u>Difference</u>
Individual(s)	\$4,066	\$3,949	\$117	\$1,278	\$5,491	\$-4,213**	\$3,432	\$5,032	\$-1,600	\$1,268	\$10,208	\$-8,940**
Firm	\$14,927	\$45,225	\$-30,298**	\$37,000	\$34,691	\$2,309	\$39,952	\$27,171	\$12,781	\$28,310	\$52,047	\$-23,737

*, **, and *** indicate the average monetary penalties differ between groups at the p = 0.10, 0.05 and 0.01 levels, respectively.

^a Panel A reports both the raw dollar value of penalties and penalties as a percentage of shareholder damages. Shareholder damages are calculated as the restatement firm's market capitalization at its highest point during the violation period minus its market capitalization on the day after the restatement announcement, truncated at zero. The sample size drops slightly when using this measure of monetary penalties, as eight firms have damages equal to zero. Each measure of firm and individual monetary penalties is winsorized at the 99th percentile to limit the influence of outliers.

^b An observation is classified as having high (low) timeliness if the number of days between the misstatement end date and the restatement announcement date is below (above) the median.

TABLE 7
Determinants of Individual and Firm Monetary Penalties

$$Y = \alpha + \beta_{1-4}[\text{Cooperation and Disclosure}] + \beta_{5-9}[\text{Shareholder Harm}] + \beta_{10-11}[\text{Deep Pockets}] + \beta_{12-14}[\text{Enforcement Complexity}] + \beta_{15-16}[\text{Litigation}] + \varepsilon$$

OLS Regression (dependent variable reported above each column)					
<u>Variable^a</u>	Predict	(1) <u>IND PENALTY</u>	(2) <u>lnIND PENALTY%</u>	(3) <u>FIRM PENALTY</u>	(4) <u>lnFIRM PENALTY%</u>
Intercept		1.466 (0.852)	-0.585 (0.674)	67.548 (0.500)	0.399 (0.665)
<u>Cooperation and Disclosure</u>					
<i>INVESTIGATION</i>	?	1.519 (0.462)	0.024 (0.960)	-27.170 (0.083)	-0.695 (0.015)
<i>TIMELINESS</i>	(-)	-0.016 (0.024)	-0.003 (<0.001)	-0.062 (0.076)	-0.001 (0.001)
<i>PROMINENCE</i>	?	-1.987 (0.289)	-0.280 (0.501)	-8.870 (0.647)	-0.020 (0.916)
<i>SEC DISCLOSURE</i>	?	-4.386 (0.055)	-0.921 (0.039)	-7.805 (0.649)	-0.110 (0.590)
<u>Shareholder Harm</u>					
<i>RESTATE MAGNITUDE</i>	(-)	-1.911 (<0.001)	-0.167 (0.052)	-10.578 (0.102)	0.054 (0.404)
<i>CONCURRENT RETURN</i>	(-)	5.295 (0.415)	0.153 (0.927)	-14.700 (0.422)	0.166 (0.819)
<i>FRAUD/IRREG</i>	(+)	-1.477 (0.256)	-0.213 (0.711)	43.815 (0.045)	0.407 (0.107)
<i>DAMAGES</i>	?	0.000 (0.546)	-0.000 (<0.001)	0.001 (0.144)	-0.000 (<0.001)
<i>SHARE TURNOVER</i>	?	-8.314 (0.142)	-2.876 (0.002)	-51.666 (0.190)	-0.738 (0.053)
<u>Deep Pockets</u>					
<i>MKTCAP</i>	(+)	-0.000 (0.744)	0.000 (0.086)	0.000 (0.102)	-0.000 (0.269)
<i>BANKRUPTCY</i>	(-)	-5.439 (0.029)	0.405 (0.682)	-50.708 (0.018)	0.013 (0.969)
<u>Enforcement Complexity</u>					
<i>MISSTATEMENT LENGTH</i>	(+)	0.003 (0.007)	0.001 (0.004)	0.020 (0.061)	0.000 (0.032)
<i>NUM PROCEEDINGS</i>	(+)	2.051 (<0.001)	0.066 (0.098)	10.849 (<0.001)	0.071 (0.022)
<i>NUM VIOLATIONS</i>	(+)	0.715 (0.275)	0.208 (0.248)	-22.065 (0.142)	-0.058 (0.762)
<u>Litigation</u>					
<i>LITIGATION</i>	?	-1.530 (0.291)	-0.335 (0.485)	11.107 (0.477)	0.264 (0.217)
<i>SETTLEMENT AMT</i>	(-)	-0.003 (0.369)	-0.002 (0.073)	-0.161 (0.004)	-0.004 (<0.001)
n		114 ^b	109 ^b	108 ^b	105 ^b
Adjusted R ²		51.50%	25.83%	24.11%	47.40%

P-values are in parentheses under the logistic regression coefficients. Two-tailed tests are shown for variables without a signed prediction; one-tailed tests are shown for variables with a signed prediction if the coefficient sign is in the predicted direction; otherwise two-tailed tests are shown. All regressions are reported with White corrected standard errors.

Columns 1 and 2 include restatements leading to one or more enforcement actions against individuals. If more than one individual is sanctioned for a given restatement, the penalties are summed across all individuals. Columns 3 and 4 include restatements leading to one or more enforcement actions against the restatement firm.

^a See the Appendix for variable definitions.

^b One observation is excluded from each model due to missing *RESTATE MAGNITUDE* data. The sample sizes in columns 2 and 4 are smaller due to observations for which damages equal zero.
