

**DO MORE TRANSPARENT CORPORATE ACTIONS FOLLOWING A
RESTATEMENT INFLUENCE THE SEC'S DECISION TO ISSUE AN
ENFORCEMENT ACTION?**

A Dissertation

by

REBECCA LYNN FILES

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2009

Major Subject: Accounting

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Approved by:

Chair of Committee,	Edward P. Swanson
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	Michael Wilkins
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ABSTRACT

Do More Transparent Corporate Actions Following a Restatement Influence the SEC's
Decision to Issue an Enforcement Action? (August 2009)

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Chair of Advisory Committee: Dr. Edward P. Swanson

This study examines whether corporate transparency about a restatement influences the Securities and Exchange Commission's (SEC) decision to issue an enforcement action. I consider corporate transparency to be higher when firms initiate an independent investigation into the restatement, display the restatement in a more prominent press release location, and/or report the restatement in a more visible SEC filing (i.e., Form 8-K). My sample of restatement observations spans nine years, 1997-2005, and is taken from the databases compiled by the General Accounting Office. For each restatement observation, I hand-collect information on SEC enforcement actions from the SEC's website and information on corporate transparency from company press releases and SEC filings. In order to determine the influence of corporate transparency, I develop a model predicting which restatement firms will be sanctioned by the SEC that includes measures of restatement severity, restatement characteristics, firm characteristics, and all three measures of corporate transparency.

I find that, on average, greater restatement transparency increases the likelihood of an SEC sanction. This result is strongest before the Sarbanes-Oxley Act of 2002

(SOX), where all three proxies for corporate transparency are positive and significant predictors of SEC enforcement actions. After SOX, however, more visible SEC filings decrease the likelihood of an SEC sanction, suggesting that the SEC rewards this type of transparent behavior. In addition, the SEC also rewards corporate transparency by reducing monetary penalties when an enforcement action is issued. These results extend prior research (Bowen et al. 2005; Files et al. 2008; Gordon et al. 2008; Myers et al. 2008) by providing the first evidence on how corporate transparency affects the SEC's decision to issue an enforcement action. The results may be useful to managers of restating firms and academics researching SEC enforcement actions.

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NOMENCLATURE

AA	Audit Analytics
AAER	Accounting and Auditing Enforcement Release
CRSP	Center for Research in Security Prices
GAO	General Accounting Office or Government Accountability Office
SEC	Securities and Exchange Commission
SOX	Sarbanes-Oxley Act of 2002

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1. INTRODUCTION

The Securities and Exchange Commission (SEC) faces the daunting task of penalizing and deterring financial misconduct across all publicly traded firms. This task has become exceedingly more difficult in the past decade as the number of firms announcing earnings restatements has dramatically increased (Scholz 2008). Each restatement represents a case of *potential* fraud that could lead to the formal issuance of an SEC enforcement action.¹ However, the SEC, by its own admission, lacks sufficient resources to investigate every case of potential fraud. Accordingly, only a small percentage of restatement firms (generally less than 20%) are officially sanctioned by the SEC (Kedia and Rajgopal 2007; Gordon et al. 2008; Peterson 2008).

This study examines the factors that determine which restatement firms will receive an SEC enforcement action. Specifically, I explore whether corporate transparency about a restatement influences the SEC's choice to sanction a firm. I define corporate transparency as those actions taken by a firm that allow restatement information to be more easily extracted and used by the SEC. While an emerging literature suggests that the transparency of restatement information can influence the decisions of investors and litigants (Files et al. 2008; Gordon et al. 2008; Myers et al.

This dissertation follows the style of *The Accounting Review*.

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. The SEC publicly discloses information on enforcement actions on their website (www.sec.gov); however, they do not disclose information on investigations not resulting in enforcement actions. Note that I use the words SEC enforcement action and SEC sanction interchangeably throughout the text.

2008), prior research has not examined the effect of these choices on the SEC's decision to sanction a firm. This is an important question as SEC sanctions are costly to the firm (monetary penalties), management (job loss), auditors (sanctions and lost reputation), and investors (stock price declines) (Feroz et al. 1991; Karpoff et al. 2008a,b).

Therefore, determining whether corporate transparency influences the likelihood of an enforcement action is of interest to these parties as they evaluate the possible consequences of a restatement.

I measure corporate transparency in three ways. First, I consider corporate transparency to be higher for those firms that voluntarily initiate an independent investigation of the accounting misstatement.² These investigations are usually performed by outside forensic firms or legal counsel and the information they generate may be passed on to the SEC. My second measure of corporate transparency reflects a manager's decision on where to place restatement information within a press release. I consider information disclosed in the headline of a press release to have high transparency. Information excluded from the headline, but discussed in the text of the press release is considered medium transparency, and information mentioned in the footnotes of the press release is considered low transparency. My third and final measure of corporate transparency is the type of SEC filing used to disclose the restatement. I develop this measure using an index that captures four SEC filing choices available to a company when disclosing its restatement: (1) a Form 8-K, (2) an amended periodic filing, (3) a periodic filing that does not indicate an amendment, and

² A "misstatement" refers to the incorrect financial report(s) in prior periods, while a "restatement" represents the subsequently disclosed and corrected financial statements.

(4) no SEC filing. Similar to Myers et al. (2008), I consider information reported on a Form 8-K to be the most transparent, with transparency decreasing respectively across the above options.

I hypothesize that corporate transparency could affect SEC enforcement decisions in several different ways. First, more transparent disclosures reduce agency costs by limiting information asymmetry between the firm and outside parties—in this case the SEC, and by lowering the cost of monitoring (Diamond and Verrecchia 1991; Leuz and Verrecchia 2000; Core 2001; Healy and Palepu 2001). The SEC, faced with time and monetary constraints, may choose to target firms with more transparent disclosures to limit their information generating costs. This suggests a positive association between corporate transparency and SEC enforcement actions. Second, SEC employees often rely on external cues, including news reports and company press releases, to determine which restatement merits additional scrutiny (Feroz et al. 1991; DeFond et al. 2008). This practice suggests that transparent disclosures are more likely to come to the attention of the SEC and are, therefore, more likely to result in a sanction. This also indicates a positive association between corporate transparency and SEC enforcement actions. On the other hand, anecdotal evidence suggests that the SEC looks favorably upon more transparent voluntary actions taken by the firm following their restatement (Young 2002; Foley & Lardner LLP 2005; Hennes et al. 2008). If the SEC believes the company is being fully transparent about its restatement and is making efforts to fix the issue internally, the SEC may be more lenient when it comes to filing a formal complaint against the company. This suggests a negative association between

corporate transparency and SEC enforcement actions. Finally, transparency may have no effect on the SEC if it chooses targets based solely on the merits of the case rather than on actions taken by the restating company. To address these alternative predictions, I develop a model that predicts SEC sanctions following a restatement and then assess the incremental impact of corporate transparency.

For my analyses, I collect a sample of 1,249 restatements that were announced in a press release during the 1997-2005 time period. I hand-collect information on subsequent SEC enforcement actions and find that 10 percent (119) of the restatements end with a formal sanction by the SEC against the firm, its managers, or both.³ The small percentage of firms in my sample that receive an SEC sanction is consistent with prior research (Burns and Kedia 2006; Kedia and Rajgopal 2007; Gordon et al. 2008; Peterson 2008) and the notion that the SEC has limited resources.

In a logistic regression predicting SEC enforcement actions, I include all three proxies for corporate transparency along with measures of restatement severity and other firm and restatement characteristics.⁴ I find that, on average, increased corporate transparency about a restatement increases the likelihood of an SEC enforcement action. Specifically, initiating an independent investigation and announcing the restatement in the headline of a press release (instead of the text) increases the odds of an SEC sanction by 344 percent and 68 percent, respectively. The type of SEC filing used by the firm

³ I consider an enforcement action to exist if the SEC issues a sanction against the firm in question, its managers, or both. For ease of exposition, I do not distinguish between the type of respondent in the text of the paper, but consider this issue in sensitivity tests.

⁴ The inclusion of severity controls is important because the SEC may target more transparent restatements if they believe the increased transparency reflects the severity of the restatement. Therefore, I include five measures of restatement severity to control for this alternative explanation.

(e.g., Form 8-K, 10-K/A, etc.) is insignificant in a model including all sample years. These results suggest that the SEC targets more transparent restatements because they attract SEC employees' attention and/or because they limit the information-generating costs of the SEC.

I further explore these findings by examining the likelihood of enforcement actions before and after the Sarbanes-Oxley Act of 2002 (SOX). SOX influenced the SEC in several ways and initiated changes that may have altered the impact of corporate transparency on its enforcement decisions. For example, Congress doubled the SEC's budget from 2002 through 2005. This budget increase resulted in the hiring of over 1,000 new employees, enabling the SEC to investigate and sanction more cases (SEC 2004a, 2005). In conjunction with the staff increase, SOX also mandated that the SEC review the financial disclosures of every public company at least once every three years. This requirement undoubtedly improved the chances of SEC staff identifying violations that may have otherwise remained undiscovered, possibly due to less transparent disclosure of the restatement. Due to these changes, I hypothesize that the impact of corporate transparency on SEC sanctions will be altered in the post-SOX time period.

I find that in the pre-SOX period (1997-2002) all three measures of restatement transparency are positive and significant predictors of SEC enforcement actions. This suggests that, prior to the changes initiated by SOX, the SEC was more likely to sanction restatements disclosed in a transparent manner. I find several noteworthy changes, however, in the post-SOX period (2003-2005). Press release prominence loses its significance in the model, suggesting that restatements are no longer sanctioned because

headline disclosure attracts the attention of SEC staff. Also, the use of more transparent SEC filings now *lessens* the likelihood of receiving an SEC enforcement action. This evidence suggests that more transparent SEC filings are rewarded by the SEC in the post-SOX period.⁵ The existence and disclosure of company-initiated independent investigations, however, still increases the likelihood of an SEC sanction in the post-SOX era. This finding contradicts the conventional wisdom that independent investigations will limit SEC involvement after a misstatement (Foley & Lardner LLP 2005).

To provide a more complete picture of the SEC's response to corporate transparency, I also explore whether the SEC rewards transparency by reducing the penalties associated with a given enforcement action. I find that monetary penalties are significantly lower when an independent investigation is initiated. This result suggests that, although the likelihood of an SEC enforcement action is greater when an independent investigation is undertaken by the restating firm, the SEC rewards this cooperative behavior with smaller monetary penalties. Additionally, I find that individuals pay significantly smaller fines when the restatement is disclosed on a Form 8-K, providing additional evidence that using transparent SEC filings is rewarded by the SEC.

⁵ Stated differently, firms not disclosing their restatement in a Form 8-K are more likely to be sanctioned by the SEC. This finding may be influenced by the "Final Rule on 8-K Disclosure Requirements" (SEC 2004b), which was issued in 2004 and mandates that any "non-reliance on past financial statements" (i.e., restatements) be reported on a Form 8-K (Item 4.02). Despite the new rule, 16 percent all restating companies in my sample failed to make an 8-K filing after 2004, perhaps leading to the SEC's deliberate focus on these firms.

This study contributes to the extant literature in several ways. First, I extend prior research examining disclosure transparency and its influence on external parties (Maines and McDaniel 2000; Bowen et al. 2005; Files et al. 2008; Myers et al. 2008; Gordon et al. 2008). I also develop a model predicting which restatement firms are more likely to become targets of the SEC. The findings of this model provide information to managers about how the transparency of their actions can influence the likelihood of an SEC sanction. The findings may also interest academics doing research involving SEC enforcement actions or AAERs, as they shed light on the characteristics that make a firm more likely to be included in these samples. For example, I find that revenue misstatements are more likely than other types of accounting issues to be sanctioned by the SEC. Thus, the SEC's selection criterion inflates the percentage of revenue misstatements in AAER samples relative to the overall number of firms misstating revenue (e.g., 53 percent in Dechow et al.'s (2008) AAER sample versus 20 percent in Scholz's (2008) restatement sample). Finally, I present preliminary evidence on the regulatory changes brought about by increased funding and staffing at the SEC.

In Section 2, I provide background information on SEC enforcement actions. In Section 3, I review the relevant literature and develop my hypotheses. I describe my sample selection procedures in Section 4 and my empirical models in Section 5. Section 6 contains my descriptive statistics and multivariate results and Section 7 reports sensitivity tests. Finally, I analyze SEC penalties in Section 8 and conclude in Section 9.

2. 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 selection criteria for enforcement targets, it is useful to understand the sequence of events that lead to an enforcement action.

The enforcement process is often triggered by the voluntary announcement of a financial restatement by the firm. Other trigger events may include auditor switches, firing of top management, delayed filing of SEC reports, or routine reviews by the SEC. For the purposes of this study, only 29 percent of the enforcements in my sample are triggered by something other than the company press release announcing a restatement.⁶ After the identification of a potential law violation, SEC staff privately request information from the firm and carry out an informal investigation. Following the informal investigation, the SEC chooses between two possible paths of actions: (1) stop the investigation and take no action, or (2) commence a formal investigation. As the SEC does not publicly announce preliminary investigations, restatements that trigger an informal investigation, but are subsequently dropped, will appear as a “no-enforcement” observation in my sample.

⁶ In sensitivity tests, I exclude those firms whose trigger events were something other than the press release announcing their restatement and re-run my models. I find that the results are identical for my variables of interest.

At the conclusion of the formal investigation, which can take up to several years, the SEC formally files an enforcement action against each respondent summarizing the complaint and detailing the punishment. This 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. Beginning in 1982, the SEC also began assigning the secondary designation of Accounting and Auditing Enforcement Release (AAER) to certain actions that involved accountants, auditors, or CPAs.⁷ Within each enforcement release, the SEC details the respondents' penalties. Potential non-monetary punishments include cease-and-desist orders, censures, trading suspensions, or suspensions/bars from serving as an officer, director, or financial professional at a public company. The SEC can also order respondents to pay fines or disgorge any gains received from illegal activity. In supplemental analyses (Section VIII), I explore the relationship between corporate transparency and the amount of these fines.

⁷ 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."

3. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Prior research often uses SEC enforcement actions or AAERs as a proxy for fraudulent reporting (Dechow et al. 1996; Beneish 1999; Erickson et al. 2006; Dechow et al. 2008; Armstrong et al. 2008; Johnson et al. 2009; Peterson 2008, among others). These samples have been used to answer questions such as: (1) which *ex ante* characteristics of firms are most likely to predict fraudulent reporting, or (2) how are managers and firms punished after an enforcement action or AAER is issued against them? This literature stream generally compares SEC sanctioned firms to others in the population, whereas I compare characteristics between those firms that *could* have been sanctioned (i.e., those with a restatement) to those that *are* sanctioned (i.e., those with a restatement and SEC enforcement action).

Peterson (2008) also predicts which restatement firms will be sanctioned by the SEC, but he does so only on a select group of restatements, namely those involving revenue. In the main analysis, he documents that firms with complex revenue recognition processes are more likely to restate revenue. In trying to distinguish between two potential theories, he develops an AAER prediction model and finds that firms with complex revenue recognition policies are less likely to receive an AAER. My paper adds to Peterson (2008) by incorporating a broader set of restatements (i.e., those stemming from a wide range of accounting issues) and exploring the effect of corporate transparency on the SEC's decision to issue an enforcement action.

Firms are encouraged to be fully transparent about their financial statements, especially when faced with a restatement. SEC Chairman Christopher Cox recently

made the following comment: “What hasn’t changed in 75 years is the importance of full disclosure—sunlight remains the best disinfectant for problems in our capital markets (Taub 2008).” The SEC has also indicated that transparency is an important consideration when deciding on the appropriate course of action following a violation of the law. They pose the question, “Did the company promptly, completely, and effectively disclose the existence of the misconduct to the public [and] to regulators?” and suggest that an affirmative answer may reduce SEC sanctions (SEC 2001). This anecdotal evidence suggests that more transparent corporate actions following a restatement may be rewarded by regulators; however, the actual effect of corporate transparency is an empirical question. I explore the influence of three corporate actions on the likelihood of receiving an SEC sanction from a restatement and develop hypotheses for each below.

Company-Initiated Independent Investigations

Upon the discovery of a potential accounting misstatement, a firm may choose to conduct its own internal investigation into the problem. Bernile and Jarrell (2009) report that 89 percent of firms implicated in the options backdating scandal conduct an internal investigation into the matter, with the cost of these investigations being 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/CFO turnover rates following a restatement.⁸

Despite the potential costs, a firm may initiate an independent investigation for several reasons. First, independent investigations provide unbiased information about the extent of the accounting problem, the individuals responsible, and any systematic control failures that contributed to the misstatement. This information is often an important precursor to additional actions taken by the firm, including the firing of the responsible individual(s). Second, managers may use independent investigations as a way to restore trust with investors. If shareholders view the initiation of an independent investigation as a sign of corporate transparency and trust, the negative stock price response to the restatement may be mitigated (Feroz et al. 1991). Finally, an independent investigation may be initiated in the hopes of eliminating the need for regulatory action against the firm. Anecdotal evidence suggests that the SEC may “give the company credit for self-disclosure...ranging from a decrease in penalties to a decision not to bring charges at all” (Foley & Lardner LLP 2005). For example, after investigating the restatement of Seaboard Corporation in 2001 the SEC announced that it would not take action against the firm because of its prompt and thorough response to the problem, including hiring an outside law firm to conduct an inquiry and giving

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 independent 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.

complete cooperation to SEC staff.⁹ If the SEC routinely rewards cooperative behavior on the part of a company, independent investigations may reduce the likelihood of an SEC sanction.

However, I present two potential scenarios in which investigations may increase the likelihood of an SEC sanction, rather than decrease it. First, when businesses voluntarily provide information about a misstatement to the SEC, “large expenditures of government...resources can be avoided (SEC 2001).” This occurs because the SEC’s cost of identifying misstatement firms and gathering additional information about them is reduced. The SEC, faced with limited resources, may therefore decide to target investigative firms because its upfront costs are decreased. Second, 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. The association between company-initiated independent investigations and SEC enforcement actions remains an empirical question and leads to my first hypothesis (stated in null form):

H1: Following a misstatement, company-initiated independent investigations are not associated with the likelihood of an SEC enforcement action.

Press Release Prominence

In addition to initiating an independent investigation, managers also have discretion over the prominence they give restatement information within a press release. This is an important decision as recent literature has shown that investors and lawyers

⁹ Specifically, a cease-and-desist order was issued against Gisela de Leon-Meredith, the former controller of Chestnut Hill Farms, a subsidiary of Seaboard Corporation. However, no action was taken against Seaboard Company itself. See AAER No. 1470 (<http://www.sec.gov/litigation/investreport/34-44969.htm>) and AAER No. 1471 (<http://www.sec.gov/litigation/admin/34-44970.htm>) for additional information on this case.

respond differently to press release information placed in different locations (Bowen et al. 2005; Files et al. 2008; Gordon et al. 2008). 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 in the press release. Specifically focusing on restatement disclosures, Files et al. (2008) and Gordon et al. (2008) find that restatement information displayed more prominently in a press release influences investors. The results in Files et al. (2008) 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. Following a significant downward price drift of -2.4 percent for medium prominence firms, monthly returns for the high and medium prominence firms are not significantly different from one another. This price correction has important implications because it suggests that restatement severity does not differ between high and medium prominence firms. In addition, Files et al. (2008) document that restating firms with more prominent disclosures are also more likely to be involved in a class action lawsuit. My study extends and complements this research by determining how more transparent press release disclosures influence another external party: the SEC.

SEC staff often scan news reports and company press releases to identify potential violations of the law (DeFond et al. 2008). In fact, Feroz et al. (1991) document that one-third of all SEC leads arise from the financial press. However, as limited attention theory (Hirshleifer and Teoh 2003) suggests, individuals can only attend to a limited set of cues and, when different cues compete for attention, more

salient or vivid ones capture greater attention. As such, I hypothesize that restatement information displayed in a more prominent location in a press release will attract the attention of SEC staff and increase the likelihood of an enforcement action. In addition, more prominently disclosed restatements may increase the publicity of the restatement in the eyes of media and investors. In an effort to sanction the highest profile cases, the SEC may therefore choose those restatements that are disclosed in a more visible manner. I make a one-directional hypothesis as follows (stated in null form):

H2: Greater prominence given to a restatement in a press release does not increase the likelihood of an SEC enforcement action.

SEC Filings

While press release prominence addresses the transparency of information *within* a press release, my third measure of corporate transparency focuses on the *type* of SEC filing used to disclose the restatement. Myers et al. (2008) analyze the restatement disclosure methods of firms using a classification scheme similar to mine but, unlike my research, also identify restatements that are announced only in SEC filings (and not a press release). They find that more transparent disclosures result in more negative stock price reactions to the restatement announcement. However, disclosure transparency does not affect market reactions for firms with high levels of institutional ownership, suggesting that sophisticated investors uncover poorly disclosed restatements. In concurrent research, Plumlee and Yohn (2008b) also analyze the stock market reaction to restatement announcements and find results similar to those in Myers et al. (2008).

I extend the results of Myers et al. (2008) and Plumlee and Yohn (2008b) by determining whether the type of SEC filing impacts the SEC's response to the

restatement. Although the market generally reacts less to SEC filings than to press releases (Foster et al. 1983; Stice 1991; Chung et al. 2003; Amir and Livnat 2005), I argue that SEC staff will pay special attention to these filings because they are directly disclosed to the SEC. If staff members identify restatements by scanning SEC reports then, as with press releases, more transparent disclosure (i.e., Form 8-K) could lead to a higher probability of being issued an enforcement action.

On the other hand, the SEC may purposefully reward firms using more transparent SEC filings. Glass Lewis & Co., LLP (2006) recently identified many firms that disclosed their restatements only in regular periodic filings (i.e., 10-K, 10-Q) or not at all, which they label “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).”¹⁰ If the SEC is actively pursuing cases of poor restatement disclosure, then high transparency may actually reduce the likelihood of an SEC sanction. The association between the type of SEC filings used to disclose the restatement and the likelihood of an SEC sanction is an empirical question and leads to my third hypothesis (stated in null form):

H3: The type of SEC filing used to disclose a restatement is not associated with the likelihood of an enforcement action.

¹⁰ 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). Restatements are also often disclosed in an amended filing (i.e., 10-K/A or 10-Q/A) with the “A” alerting investors that something has changed.

The Sarbanes-Oxley Act of 2002

Finally, the Sarbanes-Oxley Act of 2002 changed the SEC's Enforcement Division in several ways, potentially altering any associations between corporate transparency and the likelihood of an enforcement action. SOX authorized increased funding for the SEC, more than doubling its budget over a four-year period, from \$414 million in 2001 to \$888 million in 2005. This budget increase led to the hiring of over 1,000 new employees. As shown in Figure 1, these additional resources have allowed the SEC to increase the number of cases it pursues each year and have therefore led to an increase in the number of enforcement actions issued after SOX (U.S. Chamber of Commerce 2006).¹¹

In addition, SOX mandated that the SEC review the financial statements of each public company once every three years. This work is accomplished through the Division of Corporate Finance and the Office of Compliance and Inspections. When serious deficiencies or violations of the law are discovered, they are referred to the SEC's Division of Enforcement for further investigation. In the last few years, the number of deficiencies detected by the examination staff has increased substantially (from 393 cases in 2003 to 917 cases in 2004). This suggests that SEC staff is able to identify more potential violations of the law internally and may no longer rely on the transparency of information to aid their search. The changes initiated by SOX lead to the following

¹¹ The data in Figure 1 is compiled from the SEC's Annual Reports for 1997-2005. It includes more enforcement actions than my sample because it covers all law violations (including bribery, Regulation FD violations, broker-dealer cases, insider trading, etc.), not just misstatements.

three hypotheses addressing the impact of SOX on corporate transparency (stated in null form):

H4a: The Sarbanes-Oxley Act of 2002 did not alter the association between company-initiated independent investigations and the likelihood of an SEC enforcement action.

H4b: The Sarbanes-Oxley Act of 2002 did not alter the association between press release prominence and the likelihood of an SEC enforcement action.

H4c: The Sarbanes-Oxley Act of 2002 did not alter the association between the type of SEC filing used to disclose a restatement and the likelihood of an SEC enforcement action.

4. 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).¹² In total, the GAO identified 2,443 press releases announcing a restatement during this time period. The GAO database tracks restatements based on the date the company first announced the restatement in a press release, not the date on which adjusted financial statements are filed. 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).¹³

Table 1 reconciles my sample to the GAO list. Eight hundred and ninety four observations are eliminated due to missing Compustat and CRSP data. 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 (acquired using Lexis-Nexis and the date provided by the GAO), including the misstated periods, the dollar earnings

¹² The GAO prepared a report for the U.S. Senate Committee on Banking, Housing and Urban Affairs, chaired by Senator Sarbanes, in 2003 and two additional 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. This database also identified an additional 262 observations through June 30, 2006. I end my sample in 2005, however, to allow three years to track the results of SEC actions.

¹³ Some restatements included in this dataset, however, still appear to be unintentional, technical errors, rather than serious accounting irregularities. I use five different measures of severity, along with additional restatement characteristics, to control for the effect less severe restatements may have on my results.

effect of the misstatement, the prominence of the restatement information within the release, and whether the company initiated its own investigation into the misstatement. I omit 185 firms from the final sample because I could not find a press release announcing a restatement and another 50 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.

Information on SEC enforcement actions is a combination of data from Karpoff et al.'s (2008a,b,c) sample of enforcement actions from 1977-2006 and hand collection from the SEC's website (www.sec.gov).¹⁴ I match Karpoff et al.'s (2008a,b,c) data to my original sample of restatement firms, 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. I consider a restatement observation to have an enforcement action if any employee of the firm, or the firm itself, is a

¹⁴ More specifically, Karpoff et al.'s (2008a,b,c) sample includes all enforcement actions initiated by the SEC and DOJ for financial misrepresentation. This includes violations of one or more of three provisions of the Securities and Exchange Act of 1934, as amended by the Foreign Corrupt Practices Act of 1977: (i) 15(b)(2)(A), which requires firms to keep and maintain books and records that accurately reflect all transactions; (ii) 15(b)(2)(B), which requires firms to devise and maintain a system of internal accounting controls, and (iii) 15(b)(5), which establishes that no person shall knowingly circumvent or knowingly fail to implement a system of internal accounting controls or knowingly falsify any book, record, or account.

respondent in an SEC Administrative Proceeding or Litigation Release. I find 119 of my 1,249 restatements (10 percent) result in one or more enforcement actions.

Finally, for each firm in my sample, I collect the type of SEC filing used to disclose its 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 filing. 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. I carefully review each SEC filing to ensure that it correctly matches the restatement in question.

Table 2 provides descriptive information about the sample. Table 2, Panel A, reports the distribution of restatement firms over time. The frequency of reported restatements increases almost monotonically across time, with the largest number of restatements ($n = 407$) occurring in 2005. This increase in restatements is especially evident when looking at the frequency before and after SOX: 479 restatements were announced during the six year period of 1997-2002 and 770 restatements were announced in the three year period of 2003-2005. For each year, Panel A also provides information on the number of restatements that *eventually* lead to an SEC enforcement action (the actual sanction is often issued in a subsequent year, following the completion of the investigative process). For example, 158 restatements were announced in 2002, twenty-four of which (20 percent) led to eventual sanctions by the SEC. Despite the higher frequency of restatements in the post-SOX era, the SEC has actually sanctioned a lower percentage of these restatement firms (43 percent in the post-SOX era versus 57

percent in the pre-SOX era), consistent with restatements after 2002 being less severe (Hennes et al. 2008; Plumlee and Yohn 2008a; Scholz 2008). Figure 2 provides a graphical depiction of the number of restatements and the number of SEC sanctions (relating to a given restatement) in my sample by year.

Table 2, Panel B, provides the percentage of observations receiving an SEC sanction under each corporate transparency category. Thirty-one percent of firms initiating an independent investigation are sanctioned by the SEC (44 percent and 26 percent in the pre- and post-SOX periods, respectively), while only seven percent of those without an investigation are sanctioned. Firms using headline press release disclosure are more likely to be sanctioned by the SEC (12 percent) than firms disclosing the restatement in the text of a press release (eight percent). In the pre-SOX period, 25 percent of firms disclosing a restatement on a Form 8-K are sanctioned by the SEC, compared to only six percent in the post-SOX period. Additionally, while the SEC only sanctioned two percent of firms using the least transparent SEC filing method in the pre-SOX period, the sanction rate rises to 12 percent in the post-SOX period. It appears that, after SOX, the SEC is better able to identify (or is more inclined to sanction) poorly disclosed restatements.

5. EMPIRICAL MODEL AND VARIABLE DESCRIPTIONS

To test H1-H3, I estimate the following logistic regression on my full sample of restatement firms (1997-2005). To address H4, I use two different designs. First, I run the following regression on the pre- (1997-2002) and post-SOX (2003-2005) periods and test coefficient differences between the two time periods.¹⁵ Second, I estimate the model using all sample years and interact *POST-SOX* (equal to 1 if an observation falls in the post-SOX period) with each corporate transparency measure:

$$\begin{aligned}
 SEC\ ENFORCEMENT = & \alpha + \beta_{1-3}[Corporate\ Transparency] + \beta_{4-8}[Restatement\ Severity] \\
 & + \beta_{9-12}[Restatement\ Characteristics] + \beta_{13-15}[Firm \\
 & Characteristics] + \beta_{16-x}[Other\ Controls] + \varepsilon
 \end{aligned} \tag{1}$$

where *SEC ENFORCEMENT* is an indicator variable equal to 1 if the SEC issued an enforcement action against the company as a result of its restatement and 0 otherwise. Corporate transparency is measured using three different constructs, as mentioned earlier. I code *INVESTIGATION* as 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). *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

¹⁵ 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 matrix. This design is similar to including interactions, but is easier to interpret and does not assume equal residual variance between periods.

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 INDEX is assigned a value of 4 if the restatement was announced on a Form 8-K, 3 if it was announced in an amended periodic filing (i.e., 10-K/A, 10-Q/A, etc.), 2 if it was announced in a routine periodic filing (i.e., 10-K, 10-Q), and 1 if no SEC filing was found that discussed the restatement.¹⁶

Control Variables

Restatement Severity

I include five measures of restatement severity in my model. The first measure, *RESTATEMENT MAGNITUDE*, is the cumulative earnings effect of the restatement scaled by total assets.¹⁷ 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 second 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;

¹⁶ 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 transparent form of disclosure as the restatement was not visible even when explicitly searching for it.

¹⁷ 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) quantifies 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 *RESTATEMENT 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 does not change my results.

Scholz 2008). My third 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 to describe the restatement. I expect the likelihood of an enforcement action will be greater for these restatements. My fourth measure 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, both divided by the total market capitalization of the NYSE on the same date. I expect that the SEC will be more likely to sanction those firms whose shareholders suffered more harm (Billings 2008; Karpoff et al. 2008c).¹⁸ Finally, I measure the number of days between the beginning of the misstated period and the end of the misstated period (*MISSTATEMENT LENGTH*), and predict that the SEC will be more likely to sanction firms where the misstatement occurred for a longer period of time.

Restatement Characteristics, Firm Characteristics, and Other Controls

I include four variables used by prior research to capture the characteristics of the restatement (Wu 2002; Palmrose and Scholz 2004; Palmrose et al. 2004; Files et al. 2008; Scholz 2008). *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

¹⁸ Karpoff et al. (2008c) use a similar 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.

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 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*. My fourth measure, *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.

I control for the size of the restatement firm by including *MKTCAP*, the natural log of market capitalization 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*). *POST-SOX* takes on the value of 1 if the restatement was announced after the passage of SOX (2003-2005) and 0 if the restatement was announced before the passage of SOX (1997-2002). *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. Market-based indicators of financial problems may attract the attention of the SEC,

leading to a greater likelihood of sanctions (Feroz et al. 1991; Johnson et al. 2009). *POST RETURNS (+2,+20)* measures the compounded raw return in the month after the restatement announcement. I include this variable because stock price drift after the restatement announcement is associated with headline disclosure of the restatement (Files et al. 2008). *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) over the 1-year period ending two days prior to the restatement announcement date. *DISCLOSE INTERVAL* captures the number of days between the misstatement period end and the restatement announcement date. I predict that SEC sanctions will be more likely for firms delaying disclosure of the restatement. Please see Appendix A for a more detailed definition of all variables.

6. RESULTS

Descriptive Statistics

Table 3, Panel A, provides the mean and median for each variable in my model for the full sample and across pre- and post-SOX periods. The average *RESTATEMENT MAGNITUDE* is higher in the pre-SOX period, as is the average market reaction (*CONCURRENT RETURN*) to each restatement. The proportion of restatements dealing with revenue recognition problems is also higher in the pre-SOX period. Firms announcing restatements after SOX tend to have longer misstatement periods (*MISSTATEMENT LENGTH*), more positive *PRIOR RETURNS* in the year before the restatement announcement, and longer disclosure intervals (*DISCLOSE INTERVAL*).

Table 3, Panel B, compares variable means across observations with and without SEC enforcement actions. Several variables are significantly different across groups, including *FRAUD/IRREG* and *REVENUE*, whose means are higher for those firms sanctioned by the SEC. Additionally, the SEC targets larger firms (*MKTCAP*), those whose misstatement caused larger damages to shareholders (*DAMAGES*) and lasted for a longer period (*MISSTATEMENT LENGTH*), those with higher *SHARE TURNOVER*, and those with more negative stock returns around the restatement announcement and in the previous year (*CONCURRENT RETURN*, and *PRIOR RETURNS*).

Table 4 provides pairwise correlations between variables. *SEC ENFORCEMENT* is correlated with several variables, including *INVESTIGATION* and *PROMINENCE*. The measures of corporate transparency (*INVESTIGATION*, *PROMINENCE*, and *SEC DISCLOSURE INDEX*) are positively correlated with one

another, although the highest correlation coefficient is only 0.24. Correlation coefficients between other variables are in the expected directions.

Multivariate Analysis

Corporate Transparency Results

Table 5 presents regression results testing the incremental impact of corporate transparency on the likelihood of an SEC enforcement action using all years in my sample (model 1). After controlling for restatement severity and other firm and restatement characteristics, I find that two of the three corporate transparency measures are positively associated with SEC enforcement actions. Specifically, the coefficients on *INVESTIGATION* and *PROMINENCE* are both highly significant at the 0.001 and 0.011 levels, respectively. Corporations initiating an investigation into the accounting misstatement increase their odds of an SEC sanction by 344 percent. This finding is in sharp contrast to the advice often given to managers that initiating an investigation may limit their exposure to SEC regulation. Rather, the results suggest that increased transparency about the problem may save the SEC time and money by reducing its initial information-generating costs and thus increasing its interest in the case. Additionally, firms choosing to disclose their restatement in the headline of a press release are 1.7 times more likely to be issued an SEC sanction than those firms using the text of the press release. My third measure of corporate transparency, *SEC DISCLOSURE INDEX*, is insignificant ($p = 0.928$) in this specification of the model.

In an effort to assess the incremental impact of each transparency measure, I include all three in the model simultaneously. However, in untabulated analysis, I insert

each measure separately and find identical results to those discussed above (same sign and significance levels on corporate transparency measures and control variables). In sum, I find that more transparent corporate actions following a restatement, specifically company-initiated independent investigations and higher press release prominence, increase the likelihood of an SEC sanction, rejecting null hypotheses 1 and 2.

In Table 6, I analyze whether the passage of the Sarbanes-Oxley Act has impacted the association between corporate transparency and SEC enforcement actions. Column 1 includes only those restatements announced in the years 1997-2002. During this period, I find a significant and positive association between all three measures of corporate transparency and the likelihood of an SEC enforcement action. The results on *INVESTIGATION* and *PROMINENCE* are consistent with those presented in Table 5, while the coefficient on *SEC DISCLOSURE INDEX* is now positive and significant at the 0.043 level. Improving SEC filing transparency by one level (i.e., from an amended filing to an 8-K or from a regular filing to an amended filing) increases the odds of an SEC enforcement action by 39 percent.

Column 2 includes only those restatements announced in the years 2003-2005. Company-initiated investigations are again positively associated with SEC enforcement actions (significant at the 0.001 level), indicating a consistent relationship across both the pre- and post-SOX periods. Although, the coefficient on press release prominence is now insignificant ($p = 0.198$) in the post-SOX era, it is not statistically different from the coefficient in the pre-SOX period (untabulated, $p = 0.499$). The same is true for the pre- and post-SOX coefficients on *INVESTIGATION* (untabulated, $p = 0.436$), indicating that

independent investigations and more transparent press release disclosures are not incrementally more or less important predictors of enforcement actions after 2002 than before. Based on these results, I fail to reject H4a and H4b.

The result on *SEC DISCLOSURE INDEX* is intriguing as the coefficient is significant ($p = 0.040$), but now with a negative sign. After SOX, increasing the transparency of an SEC filing by one level cuts the odds of having an SEC enforcement action in half, or alternatively, decreasing transparency by one level more than doubles the likelihood of an SEC sanction. This result should be of particular interest to managers because it supports the idea that the SEC rewards transparent restatement disclosures. The significant association between SEC filings and SEC enforcement actions in the pre- and post-SOX periods allows me to reject H3, although the coefficients have different signs in each period. The 0.330 coefficient on *SEC DISCLOSURE INDEX* in the pre-SOX period is significantly different from the -0.368 coefficient in the post-SOX period (untabulated, $p = 0.002$), indicating a change in the association between transparent SEC filings and SEC sanctions after SOX. I therefore reject H4c, which states that SOX did not alter the association between SEC filings and the likelihood of an enforcement action.

In Column 3, model 1 is estimated using the full sample of firms and includes interaction terms between *POST-SOX* and all three corporate transparency measures. Two of the three interaction term coefficients (*INVESTIGATION*POST-SOX* and *PROMINENCE*POST-SOX*) are insignificant ($p = 0.671$ and 0.547 , respectively), confirming that the impact of investigations and press release disclosures on SEC

enforcement actions does not significantly differ across time periods. The significant ($p = 0.003$) negative coefficient on *SEC DISCLOSURE INDEX*POST-SOX* again suggests that SOX has altered the association between transparent SEC filings and the SEC's decision to issue an enforcement action, consistent with the results in Columns 1 and 2. The insignificant ($p = 0.251$) coefficient on *POST-SOX* indicates that the likelihood of receiving an SEC sanction does not change pre- and post-SOX, after controlling for restatement severity and the interaction between *POST-SOX* and corporate transparency.

Overall, I find that SOX has changed how certain aspects of corporate transparency affect the SEC's decision to issue an enforcement action. Specifically, I find evidence that the SEC rewards transparent behavior in the post-SOX period by reducing the likelihood of a sanction for those firms disclosing the restatement in a transparent SEC filing. However, companies that voluntarily initiate an investigation into the restatement have an increased likelihood of an SEC sanction in both time periods.

Control Variable Results

Although my study focuses on corporate transparency and its influence on the likelihood of SEC sanctions, I also provide one of the first analyses of firm and restatement characteristics that influence the SEC's decision to issue an enforcement action after a restatement announcement. As such, I discuss my control variable findings in some detail in this section, focusing first on the results in Table 5.

Of my five restatement severity measures, I find that three are significant in predicting the likelihood of an SEC sanction. Specifically, for a one standard deviation

decrease in stock prices around the announcement of a restatement (*CONCURRENT RETURN*), the odds of an enforcement action increase by 29 percent, possibly because large stock price declines attract more attention to the case. 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*) also increase the likelihood of an SEC sanction. The two additional measures of severity, *RESTATEMENT MAGNITUDE* and *FRAUD/IRREG*, do not influence the SEC's selection criteria after controlling for other severity measures.

Revenue recognition problems (*REVENUE*) also increase the likelihood of an enforcement action. Comparing standardized coefficients (untabulated), I find that *REVENUE* is the most important predictor of enforcement actions.¹⁹ *LEASE* accounting problems and those due to a *RULE CHANGE* are less likely to result in enforcement. The coefficients on *POST-SOX* and *PRIOR RETURNS* are negative and significant at the 0.001 and 0.002 levels, respectively. Additionally, the coefficient on *DISCLOSE INTERVAL* is positive and significant ($p = 0.017$), with a one standard deviation increase in *DISCLOSE INTERVAL* increasing the odds of an SEC sanction by 17 percent.

It is also instructive to analyze how the control variable results change across the pre- and post-SOX time periods (Table 6). Statistical comparison of coefficients across Columns 1 and 2 of Table 6 reveal that only three variables, *FINANCIAL*, *TECH*, and

¹⁹ 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.

DISCLOSE INTERVAL, have a significantly different effect on SEC sanctions in the pre- and post-SOX periods. The coefficients on *FINANCIAL* and *DISCLOSE INTERVAL* are positive and significant ($p = 0.027$ and 0.006 , respectively) in the post-SOX period only. The coefficient on *TECH* is negative (-0.321) in the pre-SOX period, but positive (0.733) in the post-SOX period, although neither coefficient is statistically significant at conventional levels ($p = 0.421$ and 0.108 , respectively).²⁰

The control variable results may be of interest to managers and academics as they provide evidence on other characteristics (beyond transparency) that influence the SEC's decision to issue an enforcement action after a misstatement. I explore the robustness of my results below, followed by an analysis of SEC penalties associated with enforcement actions.

²⁰ In untabulated analyses, I also include measures of CEO compensation (salary, bonus, in-the-money options, and option grants) and CEO trading (proceeds from stock sales and net number of shares sold) during the misstated periods as additional control variables in my model. I find that firms whose CEO received larger option grants and sold more shares during the misstated period are more likely targets of the SEC; other results do not change.

7. SENSITIVITY TESTS

SEC Involved Prior to the Initial Restatement Announcement

As mentioned earlier, the initiation of an enforcement action may be triggered by events other than the restatement announcement. In these instances, initial inquiries by the SEC may have begun before the restatement is announced and corporate actions may be influenced by the SEC's involvement in the case. To ensure my results are robust to this possibility, I search the initial announcement of the restatement and identify those firms that mention any form of involvement by the SEC. Of the 119 firms with an SEC enforcement action, 34 (29 percent) mention some SEC involvement prior to their decision to restate. I exclude these 34 firms from my main models and find identical results (same sign and significance level) on my variables of interest for the full sample and pre- and post-SOX periods. Control variable results are also the same, with the exception of *DISCLOSE INTERVAL* which is no longer significant in the full sample or post-SOX sub-sample ($p = 0.407$ and 0.287 , respectively).

Creating One Measure of Corporate Transparency

To examine the concept of corporate transparency more broadly, I combine the three proxies for transparency into one variable. I create a dummy variable (*HIGH TRANSPARENCY*) equal to one if the company initiates an investigation, *or* the restatement is disclosed in the headline of a press release, *or* the restatement is disclosed on a Form 8-K, and 0 otherwise. Under this specification, 948 observations are classified as having high transparency. Consistent with my prior findings, the coefficient on *HIGH TRANSPARENCY* is positive and significant in both the full sample

($p = 0.011$) and in the pre-SOX period ($p = 0.011$), with transparency more than doubling the odds of having an SEC enforcement action. In the post-SOX period, the coefficient on *HIGH TRANSPARENCY* is no longer significant ($p = 0.723$).

Controlling for Self-Selection

Self-selection is a potential problem when modeling the relationship between corporate transparency and SEC enforcement actions. That is, underlying (and unobservable) factors may drive the decision to undertake more transparent corporate actions following a restatement, including manager's beliefs about the likelihood of an SEC sanction. I use the Heckman (1979) procedure to control for this potential endogeneity. In my selection equation (run on the full sample and both SOX subsamples), I predict *HIGH TRANSPARENCY* and include each variable from my main model plus two additional instrumental variables: (1) the level of institutional ownership at the end of the quarter prior to the restatement announcement (*INST_OWN*), and (2) whether the restatement firm is audited by a Big 4 auditor at the time of their restatement announcement (*BIGN*).²¹ I find that both *INST* (positive coefficient) and *BIGN* (negative coefficient) are significant predictors of *HIGH TRANSPARENCY* at the 0.024 and 0.004 levels, respectively (untabulated).²² Neither instrumental variable is associated with the likelihood of an SEC enforcement action.

²¹ Multicollinearity problems arise when I individually predict each corporate transparency measure and include multiple inverse Mills ratios into the outcome equation. To avoid this problem, I instead predict *HIGH TRANSPARENCY* and include only one inverse Mills ratio in the second stage model.

²² Several other variables are significant predictors of *HIGH TRANSPARENCY*. I find significant positive coefficients on *DAMAGES*, *MISSTATEMENT LENGTH*, *TECH*, and *POST-SOX*. I find significant negative coefficients on *RULE CHANGE*, *PRIOR RETURNS*, *MKTCAP*, and *DISCLOSE INTERVAL*.

In Table 7, I include the inverse Mills ratio (generated from the selection equation) in my outcome equation and find that *HIGH TRANSPARENCY* continues to significantly increase the likelihood of an SEC sanction in the full sample ($p = 0.022$) and pre-SOX sub-sample ($p = 0.027$). Similar to the analysis of a single measure of *HIGH TRANSPARENCY* in the section above, the coefficient is no longer significant ($p = 0.438$) in the post-SOX period. The inverse Mills ratio is not significant in any model, suggesting that the unobservable factors driving corporate transparency do not explain SEC sanctions (Li and Prabhala 2005).

Class Action Lawsuits as a Measure of Severity

Class action lawsuits are often used as proxies for more severe accounting irregularities (Palmrose and Scholz 2004; Armstrong et al. 2008; Hennes et al. 2008). Although my main model includes five different controls for restatement severity, I also hand-collect litigation data from Stanford's Securities Class Action Clearinghouse to ensure my results are robust to various measures of severity. I report the frequency of class action lawsuits in Table 8, Panel A, along with the overlap of litigation and SEC enforcement actions. In total, 149 firms in my sample are subject to class action lawsuits as a result of their restatement, slightly more than the number with SEC sanctions (119).

I include a class action lawsuit indicator variable (*LITIGATION*) in my model, which takes on the value of 1 if a class action lawsuit was filed in response to the restatement and 0 otherwise. As shown in Table 8, Panel B, the coefficient on *LITIGATION* is positive and significant in my full sample ($p = <0.001$), after controlling for transparency and other severity measures. *LITIGATION* is also positive and

significant in both the pre- and post-SOX sub-samples ($p < 0.001$ in both models, untabulated). Importantly, the sign and significance levels of the corporate transparency variables do not change.

Distinguishing between Enforcement Actions Issued Against the Firm, Its

Managers, or Both

My sample selection procedures involve matching restatements to SEC sanctions if the firm, or anyone employed by the firm, is a respondent in an SEC enforcement action. Within my sample, 18 (out of 119) enforcement actions *only* cite individuals employed by the firm, rather than the firm itself. As the SEC usually credits the restating firm as a whole for independent investigations, I exclude the 18 observations against only individuals and find that my corporate transparency results are identical to those discussed earlier. Additionally, 11 (out of 119) SEC enforcement actions are issued against *only* the firm and not any individuals. In a separate regression, I exclude these 11 observations and also find identical results. The remaining 90 enforcement actions are issued against both the firm and one or more individuals.

Alternative Definitions of Pre- and Post-SOX Time Periods

Hypotheses 4a-c examine the SEC's enforcement decisions in the pre- and post-SOX periods, defined in previous tests as years 1997-2002 and 2003-2005, respectively. I include year 2002 observations (the year in which SOX was passed) in the pre-SOX period because the effects of SOX on the SEC were unlikely to occur until the following year. However, in untabulated analyses, I perform two additional tests: (1) I include year 2002 in the post-SOX period, and (2) I exclude year 2002 from my analyses

entirely. Under both specifications, the results of *INVESTIGATION* and *SEC DISCLOSURE INDEX* are the same as those reported in Tables 5 and 6. The coefficient on *PROMINENCE* varies slightly, though, as the definition of pre- and post-SOX changes. For the sake of brevity, I only discuss the results found when re-running my interaction model (Table 6, column 3), as this specification examines both the pre- and post-SOX periods simultaneously. In test (1), I find that press release prominence significantly influences the likelihood of an SEC sanction in *both* the pre- and post-SOX periods (*PROMINENCE* is significant at the $p = 0.027$ and the joint test of *PROMINENCE + PROMINENCE*POST-SOX* is significant at the $p = 0.030$ level). In test (2), the coefficient on *PROMINENCE* is significant in the pre-SOX period ($p = 0.037$), but is no longer significant in the post-SOX period (chi-square $p = 0.266$), consistent with the results presented in Table 6.

8. SUPPLEMENTAL ANALYSIS: MONETARY PENALTIES

Results in the previous sections suggest that the likelihood of receiving an SEC enforcement action, on average, is higher when a firm is more transparent in its response to a restatement. However, the SEC may choose to reward firms for transparent behavior by seeking lighter penalties, rather than eliminating the enforcement action entirely. In this section, I explore the relationship between corporate transparency and monetary penalties.

For my sample of 119 SEC enforcement actions, I separately collect data on the monetary penalties paid by individuals and the restatement firm. On average, individuals pay \$4.2 million in fines during my sample period, while firms pay an average of \$37.3 million (Table 9, Panel A). Table 9, Panel B, documents the distribution of these penalties across each of the three corporate transparency measures. Firms that independently investigate their restatements pay, on average, \$31.5 million less in SEC penalties than firms not initiating an investigation. Individual penalties, on the other hand, decrease an average of \$5.4 million when the restatement is disclosed on a Form 8-K, rather than an amended or regular SEC filing.

To further explore the relationship between corporate transparency and SEC penalties, I estimate the following OLS model on all years in my sample (1997-2005) and interact each corporate transparency variable with *POST-SOX*.²³

²³ I also run a truncated tobit regression which employs a lower bound of zero for *IND_PENALTY* and *FIRM_PENALTY*. The corporate transparency results are consistent with those presented.

$$\begin{aligned}
 IND_PENALTY \text{ or } FIRM_PENALTY = & \alpha + \beta_{1-7}[Corporate Transparency Pre- and Post- \\
 & SOX] + \beta_{8-13}[Shareholder Harm] + \\
 & \beta_{14}[Deep Pockets] + \beta_{15-17}[Enforcement \\
 & Complexity] + \varepsilon
 \end{aligned} \quad (2)$$

where *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.

FIRM_PENALTY equals the total dollar value of fines and disgorgement of profits paid by the restating firm, winsorized at the 99th percentile. Model 2 includes each of the three corporate transparency measures, along with other characteristics known to predict penalties (Karpoff et al. 2008c).²⁴

Column 1 of Table 9, Panel C, shows the results of predicting *IND_PENALTY*. The SEC appears to levy higher fines on individuals after SOX, as indicated by the positive and significant ($p = 0.061$) coefficient on *POST-SOX*. Additionally, the joint test of *SEC DISCLOSURE INDEX + SEC DISCLOSURE INDEX*POST-SOX* is negative and significant ($F = 8.68$), suggesting that individual penalties are lower in the post-SOX period when more transparent SEC filings are used. Thus, in conjunction with my previous finding, the SEC rewards Form 8-K disclosure in the post-SOX period by lowering the likelihood of a sanction and requiring a smaller monetary penalty if sanctioned. The other two transparency measures do not significantly influence individual penalties.

²⁴ *RESTATEMENT MAGNITUDE*, *CONCURRENT RETURN (-1,+1)*, *FRAUD/IRREG*, *DAMAGES*, *SHARE TURNOVER*, and *DISCLOSE INTERVAL* are included as proxies for the level of shareholder harm due to the restatement. *MKTCAP* captures the idea that penalties may be influenced by the defendant's ability to pay. *MISSTATEMENT LENGTH*, *NUM PROCEEDINGS*, and *NUM VIOLATIONS* are included as proxies for the complexity of the enforcement action. Please see the Appendix for detailed definitions of each variable.

Column 2 of Table 9, Panel C, shows the results of predicting *FIRM_PENALTY*. Firms initiating an independent investigation in the pre-SOX period are, on average, fined \$92.4 million less than firms not initiating an investigation, after controlling for the severity of the restatement and other factors. Therefore, although my previous findings suggest that the SEC is more likely to sanction a firm with an independent investigation, the SEC does appear to reward cooperative behavior with smaller penalties. In the post-SOX period, however, independent investigations are not significantly associated with lower penalties. Press release prominence and the type of SEC filing used to disclose a restatement do not influence firm penalties in either period. Control variable results are untabulated, but the results are consistent with my expectations and the findings of Karpoff et al. (2008c).

These findings extend previous research that examines the determinants of penalties following an SEC enforcement action (Karpoff et al. 2008c). Additionally, they supplement my previous tests which predict the likelihood of an SEC sanction by providing a more complete picture of the SEC's response to corporate transparency.

9. CONCLUSION

I investigate whether corporate transparency about a restatement influences the SEC's decision to issue an enforcement action against the restating firm. My results suggest that, prior to SOX, restatements disclosed in a more transparent manner either in the press release (i.e., headline disclosure) or SEC filing (i.e., 8-K disclosure) are more likely to be sanctioned by the SEC. Also, the initiation of an independent investigation increases the likelihood of an SEC enforcement action, but reduces the monetary penalties paid by the restating firm as a result of a sanction. Following SOX, more transparent SEC filings now reduce the likelihood of an SEC enforcement action *and* are associated with a smaller penalty when an individual is sanctioned, providing evidence of a reward for transparency in the post-SOX era.

These results extend prior research (Bowen et al. 2005; Files et al. 2008; Gordon et al. 2008; Myers et al. 2008) by providing the first evidence on how corporate transparency affects the SEC's decision to issue an enforcement action. Managers of restating firms may be interested in the findings as they document how managerial actions following a misstatement affect the likelihood of an SEC sanction. More specifically, my results speak to the consequences of company-initiated investigations, namely, an increased likelihood of SEC sanction, but with a reduction in penalties. Additionally, my post-SOX analysis provides preliminary evidence on the benefits of increased funding to the SEC, as it appears the SEC is using its resources to, among other things, penalize accounting restatements that are disclosed in a less transparent manner.

Finally, in order to determine the influence of corporate transparency, I develop a model predicting which restatement firms will be sanctioned by the SEC that includes measures of restatement severity, restatement characteristics, and firm characteristics. The findings of this model may be of interest to academics doing research on SEC enforcement actions and/or AAERs as it documents characteristics of firms in the different samples. For example, revenue is the most important predictor of SEC enforcement actions in my model, suggesting that revenue misstatements may be overrepresented in AAER samples.

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APPENDIX A

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 .
<i>INVESTIGATION</i>	An indicator variable equal to 1 if the company initiated an independent (non-SEC) 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>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 INDEX</i>	<p>Coded 4 for restatements reported on a Form 8-K; 3 for restatements reported in an amended filing; 2 for restatements reported in regular annual or quarterly filings; and 1 for restatements 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: Level 4: 8-K or 8-K/A Level 3: 10-K/A, 10-Q/A, 10-KSB/A, 10-QSB/A, 10-K405/A, 10-Q405/A Level 2: 10-K, 10-Q, 6-K, NT 10-K, NT 10-K, 10-K405, 10-Q405 Level 1: no SEC report was found on Edgar that discussed the restatement in question</p>
<i>RESTATEMENT 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, 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.

(continued on next page)

Variable Name	Variable Definition
<i>CONCURRENT RETURN (-1,+1)</i>	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). 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.
<i>DAMAGES (\$MM)</i>	The firm’s market capitalization at its highest point during the violation period (time 0) divided by the total market capitalization of the NYSE at the same date, minus its market capitalization on the day after the restatement announcement (or, if unavailable, on the day of the restatement announcement) (time 1) divided by the total market capitalization of the NYSE on the same date, truncated at zero. This variable is winsorized at the 95 th percentile. $= (\text{Market Cap}_{t=0 \text{ FIRM}} / \text{Market Cap}_{t=0 \text{ NYSE}}) - (\text{Market Cap}_{t=1 \text{ FIRM}} / \text{Market Cap}_{t=1 \text{ NYSE}})$
<i>MISSTATEMENT LENGTH</i>	The number of days between the beginning of the misstated period and the end of the misstated period.
<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.

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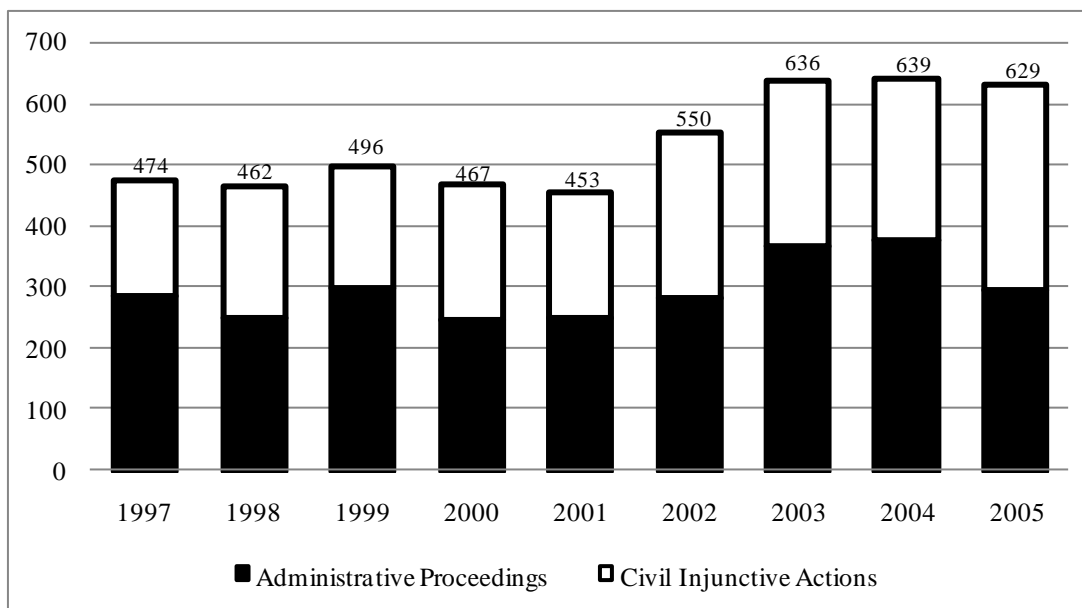
Variable Name	Variable Definition
<i>COUNT</i>	The number of different accounting issues per restatement, as reported in the GAO database.
<i>MKTCAP</i>	Natural log of market capitalization (closing stock price*common shares outstanding) of the firm measured as of the end of the fiscal year prior to the restatement announcement.
<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>POST-SOX</i>	An indicator variable equal to 1 if the restatement was announced after the Sarbanes-Oxley Act of 2002 (2003-2005) and 0 if it was announced before the Sarbanes-Oxley Act of 2002 (1997-2002).
<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.
<i>POST RETURNS (+2,+20)</i>	The compounded raw returns over the (+2,+20) interval following the restatement announcement, collected from CRSP.
<i>SHARE TURNOVER</i>	A continuous variable measuring the probability that a share was traded within a given time period. It is calculated as: $[1 - \prod_t (1 - \text{volume}_t / \text{total shares}_t)]$, accumulated over the 1-year period ending two days prior to the restatement announcement date.
<i>DISCLOSE INTERVAL</i>	The number of days between the end of misstated period and the restatement announcement date.
<i>HIGH TRANSPARENCY</i>	An indicator variable equal to 1 if <i>INVESTIGATION</i> = 1, OR <i>PROMINENCE</i> = 3 (i.e., headline disclosure), OR <i>SEC DISCLOSURE INDEX</i> = 4 (i.e., 8-K disclosure) 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 is data is collected from Thompson Financial.
<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.

(continued on next page)

Variable Name	Variable Definition
<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>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 multivariate regressions, this variable is divided by \$1,000,000 to allow for more interpretable coefficient values. This data is collected from Karpoff et al. (2008a,b,c) and the SEC's website (www.sec.gov).
<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 multivariate regressions, this variable is divided by \$1,000,000 to allow for more interpretable coefficient values. This data is collected from Karpoff et al. (2008a,b,c) and the SEC's website (www.sec.gov).
<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 0 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).

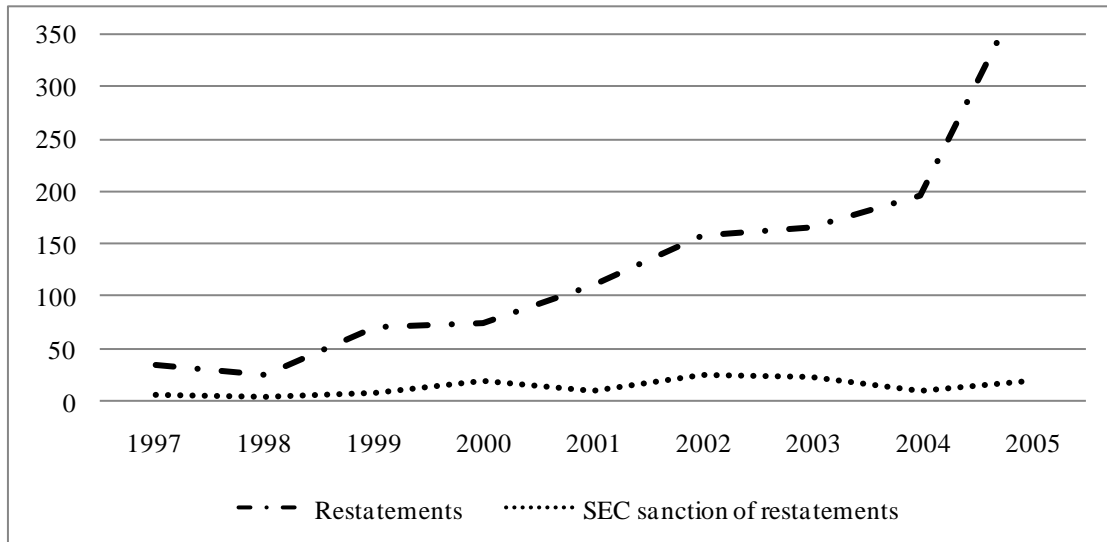
APPENDIX B

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 misstated financial statements, bribery, Regulation FD violations, broker-dealer cases, and insider trading. The increasing trend in the number of enforcement actions confirms that the SEC is sanctioning more violations after the Sarbanes-Oxley Act of 2002.

FIGURE 2
Restatements and SEC Enforcement Actions across Time



This graph depicts the number of restatements in my sample across years and the corresponding number of SEC sanctions issued against the restatement firms or its managers.

TABLE 1
Sample Selection Procedures

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

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

^d 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 Restatement Firms and SEC Enforcement Actions over Time

Year	Total # of Restatements	Percent of All Restatements	# of Restatement Firms with Subsequent SEC Enforcements	Percent of All SEC Enforcements
1997	33	2.6%	5	4.2%
1998	24	1.9%	4	3.3%
1999	70	5.6%	7	5.9%
2000	83	6.7%	18	15.1%
2001	111	8.9%	10	8.4%
2002	<u>158</u>	<u>12.7%</u>	<u>24</u>	<u>20.2%</u>
<i>Pre-SOX Total</i>	479	38.4%	68	57.1%
2003	166	13.3%	23	19.3%
2004	197	15.8%	9	7.6%
2005	<u>407</u>	<u>32.6%</u>	<u>19</u>	<u>16.0%</u>
<i>Post-SOX Total</i>	770	61.6%	51	42.9%
<i>Sample Total</i>	1249		119	

Panel B: Breakdown of Corporate Transparency Measures with SEC Enforcement Actions

	Full Sample		Pre-SOX Sample		Post-SOX Sample	
	Total Frequency	Percent with SEC sanction	Pre-SOX Frequency	Percent with SEC sanction	Post-SOX Frequency	Percent with SEC sanction
<u>Indep. Investigation^a</u>						
Yes	129	31%	36	44%	93	26%
No	<u>1120</u>	7%	<u>443</u>	12%	<u>677</u>	4%
Total	1249		479		770	
<u>Prominence^b</u>						
High (3)	653	12%	207	21%	446	7%
Medium (2)	537	8%	226	11%	311	6%
Low (1)	<u>59</u>	0%	<u>46</u>	0%	<u>13</u>	0%
Total	1249		479		770	
<u>SEC Disclosure Index^c</u>						
8-K (4)	679	9%	118	25%	561	6%
Amended Filing (3)	185	9%	115	13%	70	3%
Regular Filing (2)	227	14%	122	17%	105	11%
No Filing (1)	<u>158</u>	4%	<u>124</u>	2%	<u>34</u>	12%
Total	1249		479		770	

^a 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.

^b Press Release Prominence is coded 3 (High Prominence) for any restatement that is mentioned in the headline of a press release; coded 2 (Medium Prominence) for those restatements not mentioned in the headline, but discussed in some detail within the body of the text; and coded 1 (Low Prominence) for those restatements only mentioned in the footnotes of the press release.

^c SEC Disclosure Index is coded 4 for any restatement that was reported on a Form 8-K; coded 3 for any restatement that was reported in an amended filing; coded 2 for any restatement reported in a regular annual or quarterly filing; and coded 1 for any restatement that was not reported in any SEC report.

TABLE 3
Descriptive Statistics

Panel A: Descriptive Statistics for Full Sample, Pre-SOX, and Post-SOX Periods

<i>Variable^a</i>	Full Sample			Pre-SOX Sample			Post-SOX Sample		
	<i>N</i>	<i>Mean</i>	<i>Median</i>	<i>N</i>	<i>Mean</i>	<i>Median</i>	<i>N</i>	<i>Mean</i>	<i>Median</i>
<i>SEC ENFORCEMENT</i>	1249	0.10	0	479	0.14	0	770	0.07***	0
<i>INVESTIGATION</i>	1249	0.10	0	479	0.08	0	770	0.12***	0
<i>PROMINENCE</i>	1249	2.48	3.00	479	2.34	2.00	770	2.56***	3.00
<i>SEC DISCLOSURE INDEX</i>	1249	3.11	4.00	479	2.47	2.00	770	3.50***	4.00
<i>RESTATEMENT MAGNITUDE^b</i> (% of total assets)	1245	-0.90%	-0.39%	475	-1.23%	-0.68%	770	-0.70%***	-0.29%
<i>CONCURRENT RETURN (-1,+1)</i>	1249	-3.07%	-1.20%	479	-4.71%	-2.32%	770	-2.04%***	-0.80%
<i>FRAUD/IRREG</i>	1249	0.03	0	479	0.05	0	770	0.03*	0
<i>DAMAGES^c</i>	1249	0.25	0.05	479	0.24	0.05	770	0.25	0.06
<i>MISSTATEMENT LENGTH</i>	1249	640	453	479	447	364	770	760***	637
<i>REVENUE</i>	1249	0.27	0	479	0.37	0	770	0.20***	0
<i>LEASE</i>	1249	0.11	0	479	0.01	0	770	0.17***	0
<i>RULE CHANGE</i>	1249	0.15	0	479	0.23	0	770	0.10***	0
<i>COUNT</i>	1249	1.21	1.00	479	1.19	1.00	770	1.22	1.00
<i>MKTCAP^c (\$000)</i>	1246	\$3,371.7	\$424.7	477	\$3,022.8	\$278.3	769	\$3,588.1***	\$514.6
<i>PRIOR RETURNS (-252,-2)</i>	1249	14.59%	14.90%	479	6.30%	9.59%	770	19.74%***	17.66%
<i>POST RETURNS (+2,+20)</i>	1241	1.92%	1.25%	473	1.45%	0.92%	768	2.21%	1.29%
<i>SHARE TURNOVER</i>	1249	0.66	0.71	479	0.65	0.68	770	0.67	0.72
<i>DISCLOSE INTERVAL</i>	1249	189	133	479	171	131	770	200***	133

Panel B: Variable Means - Comparison between Observations With and Without an SEC Enforcement Action

<i>Variable^a</i>	Full Sample		Pre-SOX Sample		Post-SOX Sample	
	<i>SEC Sanction</i>	<i>No SEC Sanction</i>	<i>SEC Sanction</i>	<i>No SEC Sanction</i>	<i>SEC Sanction</i>	<i>No SEC Sanction</i>
<i>INVESTIGATION</i>	0.34	0.08***	0.24	0.05***	0.47	0.10***
<i>PROMINENCE</i>	2.65	2.46***	2.65	2.28***	2.65	2.56
<i>SEC DISCLOSURE INDEX</i>	3.17	3.10	3.07	2.37***	3.29	3.52

(continued on next page)

TABLE 3 (continued)

<i>Variable^a</i>	Full Sample		Pre-SOX Sample		Post-SOX Sample	
	<i>SEC Sanction</i>	<i>No SEC Sanction</i>	<i>SEC Sanction</i>	<i>No SEC Sanction</i>	<i>SEC Sanction</i>	<i>No SEC Sanction</i>
<i>RESTATEMENT MAGNITUDE^b</i>						
(<i>% of total assets</i>)	-1.23%	-0.87%*	-1.31%	-1.23%	-1.13%	-0.70%
<i>CONCURRENT RETURN (-1,+1)</i>	-6.71%	-2.68%***	-8.71%	-4.05%**	-4.04%	-1.90%*
<i>FRAUD/IRREG</i>	0.12	0.03***	0.13	0.03**	0.10	0.02*
<i>DAMAGES^c</i>	0.53	0.22***	0.44	0.21***	0.65	0.23***
<i>MISSTATEMENT LENGTH</i>	874	615***	668	410***	1147	732***
<i>REVENUE</i>	0.52	0.24***	0.56	0.34***	0.47	0.18***
<i>LEASE</i>	0.03	0.12***	0.01	0.01	0.04	0.18***
<i>RULE CHANGE</i>	0.05	0.16***	0.04	0.26***	0.06	0.10
<i>COUNT</i>	1.37	1.19***	1.35	1.16**	1.39	1.20*
<i>MKTCAP (\$000)</i>	\$5,860.4	\$3,108.9*	\$6,275.3	\$2,482.0*	\$5,307.2	\$3,466.0
<i>PRIOR RETURNS (-252,-2)</i>	-10.25%	17.20%***	-21.97%	10.98%***	5.37%	20.76%**
<i>POST RETURNS (+2,+20)</i>	3.42%	1.77%	5.21%	0.87%	1.14%	2.29%
<i>SHARE TURNOVER</i>	0.75	0.65***	0.75	0.63***	0.76	0.66***
<i>DISCLOSE INTERVAL</i>	197	188	164	172	242	197

*, **, and *** indicate the variable means are significantly different across groups (Pre-SOX versus Post-SOX in Panel A; SEC sanction versus No SEC sanction in Panel B) at the $p = 0.10$, 0.05 , and 0.01 levels, respectively.

^a All variables are defined in Appendix A.

^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% ($n = 959$).

^c This number is market adjusted (see Appendix A for detailed definition) and represents how much the firm's market capitalization as a percentage of the market changed from the highest point during their manipulation period to the day after the restatement announcement.

TABLE 4
Pearson Correlation Table

<u>Variable</u>	<u>SEC Action</u>	<u>Investig</u>	<u>Prom</u>	<u>SEC Disclose Index</u>	<u>Magnitude</u>	<u>Concurr Return</u>	<u>Fraud/ Irreg</u>	<u>Damage</u>	<u>Misstate Length</u>	<u>Rev.</u>	<u>Lease</u>	<u>Rule Change</u>	<u>Count</u>	<u>Mktcap</u>	<u>Prior Return</u>	<u>Post Return</u>	<u>Share Turn.</u>
<i>INVESTIG.</i>	0.25																
<i>PROM.</i>	0.09	0.11															
<i>SEC DISCLOSE</i>	0.02	0.09	0.24														
<i>MAGNITUDE</i>	-0.06	-0.04	-0.02	0.13													
<i>CONCURR. RETURN</i>	-0.12	-0.12	-0.05	0.04	0.18												
<i>FRAUD/ IRREG</i>	0.15	0.28	0.03	0.03	-0.05	-0.07											
<i>DAMAGES</i>	0.20	0.06	-0.01	0.05	0.08	0.06	0.07										
<i>MISSTATE LENGTH</i>	0.14	0.15	0.10	0.25	-0.01	0.06	0.07	0.13									
<i>REVENUE</i>	0.19	0.09	-0.10	-0.11	-0.09	-0.09	0.07	0.01	-0.05								
<i>LEASE</i>	-0.09	-0.06	0.12	0.20	0.07	0.11	-0.07	-0.01	0.24	0.17							
<i>RULE CHANGE</i>	-0.09	-0.12	-0.24	-0.17	-0.04	0.07	-0.04	0.02	-0.09	0.16	-0.12						
<i>COUNT</i>	0.11	0.04	0.06	0.04	-0.04	-0.05	0.09	0.08	0.06	0.18	-0.06	-0.04					
<i>MKTCAP</i>	0.11	0.02	-0.10	0.08	0.22	0.08	0.03	0.71	0.09	0.02	0.06	0.04	0.06				
<i>PRIOR RETURNS</i>	-0.14	-0.03	-0.03	0.02	0.11	0.02	-0.02	-0.06	0.04	-0.08	0.02	0.03	-0.08	-0.06			
<i>POST RETURNS</i>	0.03	-0.05	-0.01	0.02	-0.04	-0.04	-0.00	-0.01	-0.03	0.01	-0.02	0.01	-0.01	-0.02	-0.06		
<i>SHARE TURNOVER</i>	0.11	0.07	-0.05	0.06	-0.02	-0.04	0.02	0.19	0.06	0.09	0.09	-0.04	0.02	0.36	-0.00	-0.02	
<i>DISCLOSE INTERVAL</i>	0.01	0.00	-0.15	0.01	0.01	0.07	0.01	-0.02	-0.04	-0.04	0.03	-0.03	0.05	-0.01	-0.01	-0.03	0.01

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

TABLE 5
Likelihood of an SEC Enforcement Action following a Restatement (All Years)

$SEC\ ENFORCEMENT = \alpha + \beta_{1-3}[Corporate\ Transparency] + \beta_{4,8}[Restatement\ Severity] + \beta_{9-12}[Restatement\ Characteristics] + \beta_{13-15}[Firm\ Characteristics] + \beta_{16-20}[Other\ Controls] + \varepsilon$

Logistic Regression with Dependent Variable = <i>SEC ENFORCEMENT</i>				
Variable ^a	Predict	Coefficient	P-value	Odds Ratio
Intercept		-5.679	(<0.001)	
<u>Corporate Transparency</u>				
<i>INVESTIGATION</i>	?	1.490	(<0.001)	4.438
<i>PROMINENCE</i>	(+)	0.520	(0.011)	1.682
<i>SEC DISCLOSURE INDEX</i>	?	0.011	(0.928)	1.011
<u>Restatement Severity</u>				
<i>RESTATEMENT MAGNITUDE</i>	(-) ^b	6.479	(0.191)	651.633
<i>CONCURRENT RETURN (-1,+1)</i>	(-)	-2.491	(0.009)	0.083
<i>FRAUD/IRREG</i>	(+)	-0.030	(0.474)	0.970
<i>DAMAGES</i>	(+)	0.993	(<0.001)	2.699
<i>MISSTATEMENT LENGTH</i>	(+)	0.001	(<0.001)	1.001
<u>Restatement Characteristics</u>				
<i>REVENUE</i>	(+)	1.314	(<0.001)	3.719
<i>LEASE</i>	(-)	-1.271	(0.035)	0.281
<i>RULE CHANGE</i>	(-)	-1.424	(0.002)	0.241
<i>COUNT</i>	(+)	0.138	(0.256)	1.148
<u>Firm Characteristics</u>				
<i>MKTCAP</i>	?	0.007	(0.945)	1.007
<i>FINANCIAL</i>	?	0.258	(0.462)	1.294
<i>TECH</i>	?	0.159	(0.577)	1.172
<u>Other Controls</u>				
<i>POST-SOX</i>	?	-1.375	(<0.001)	0.253
<i>PRIOR RETURNS (-252,-2)</i>	(-)	-0.564	(0.002)	0.569
<i>POST RETURNS (+2,+20)</i>	?	0.977	(0.118)	2.657
<i>SHARE TURNOVER</i>	?	0.842	(0.112)	2.320
<i>DISCLOSE INTERVAL</i>	(+)	0.001	(0.017)	1.001
	n	1238 ^c		
	Pseudo R ²	16.23%		
	-2 log likelihood	760.96		
	Model chi-square	219.27		
	p-value	<0.001		
	Correctly Classified	87.4		

The 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 Appendix A for variable definitions.

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

^c 11 firms were excluded from the regression due to missing *POST RETURN* and *MKTCAP* data.

TABLE 6
Likelihood of an SEC Enforcement Action following a Restatement
(Pre- and Post-SOX Periods)

$SEC\ ENFORCEMENT = \alpha + \beta_{1-7}[\text{Corporate Transparency Pre- and Post-SOX}] + \beta_{8-12}[\text{Restatement Severity}] + \beta_{13-16}[\text{Restatement Characteristics}] + \beta_{17-19}[\text{Firm Characteristics}] + \beta_{20-23}[\text{Other Controls}] + \varepsilon$

		Logistic Regression with Dependent Variable = <i>SEC ENFORCEMENT</i>			
		(1)	(2)	(3)	
Variable ^a	Predict	Pre-SOX (1997-2002)	Post-SOX (2003-2005)	With Interactions	
Intercept		-7.293 (<0.001)	-5.053 (<0.001)	-6.888 (<0.001)	
<u>Corporate Transparency</u>					
<i>INVESTIGATION</i>	?	1.178 (0.023)	1.687 (<0.001)	1.301 (0.008)	
<i>PROMINENCE</i>	(+)	0.609 (0.029)	0.296 (0.198)	0.679 (0.013)	
<i>SEC DISCLOSURE INDEX</i>	?	0.330 (0.043)	-0.368 § (0.040)	0.300 (0.051)	
<i>POST-SOX</i>	?			1.542 (0.251)	
<i>INVESTIGATION*POST-SOX</i>	?			0.250 (0.671)	
<i>PROMINENCE* POST-SOX</i>	?			-0.278 (0.547)	
<i>SEC DISCLOSURE*POST-SOX</i>	?			-0.701 (0.003)	
<u>Restatement Severity</u>					
<i>RESTATEMENT MAGNITUDE</i>	(-) ^b	8.164 (0.191)	7.092 (0.296)	7.375 (0.163)	
<i>CONCURRENT RETURN (-1,+1)</i>	(-)	-2.293 (0.040)	-3.596 (0.036)	-2.642 (0.007)	
<i>FRAUD/IRREG</i>	(+)	0.182 (0.389)	-0.289 (0.342)	-0.088 (0.426)	
<i>DAMAGES</i>	(+)	0.701 (0.071)	1.124 (0.003)	0.979 (<0.001)	
<i>MISSTATEMENT LENGTH</i>	(+)	0.001 (<0.001)	0.001 (<0.001)	0.001 (<0.001)	
<u>Restatement Characteristics</u>					
<i>REVENUE</i>	(+)	1.346 (<0.001)	1.417 (<0.001)	1.314 (<0.001)	
<i>LEASE</i>	(-)	0.092 (0.473)	-0.953 (0.129)	-1.114 (0.057)	
<i>RULE CHANGE</i>	(-)	-1.724 (0.008)	-0.364 (0.301)	-1.233 (0.008)	
<i>COUNT</i>	(+)	0.348 (0.133)	0.024 (0.470)	0.117 (0.291)	
<u>Firm Characteristics</u>					
<i>MKTCAP</i>	?	0.046 (0.744)	-0.035 (0.809)	0.006 (0.949)	
<i>FINANCIAL</i>	?	-0.952 (0.138)	1.032 § (0.027)	0.236 (0.501)	
<i>TECH</i>	?	-0.321 (0.421)	0.733† (0.108)	0.114 (0.692)	

(continued on next page)

TABLE 6 (continued)

<u>Variable^a</u>	<u>Predict</u>	(1) Pre-SOX (1997-2002)	(2) Post-SOX (2003-2005)	(3) With Interactions
<u>Other Controls</u>				
<i>PRIOR RETURNS</i> (-252,-2)	(-)	-0.611 (0.006)	-0.532 (0.063)	-0.578 (0.001)
<i>POST RETURNS</i> (+2,+20)	?	1.211 (0.102)	0.057 (0.969)	0.910 (0.150)
<i>SHARE TURNOVER</i>	?	1.363 (0.075)	0.497 (0.544)	0.956 (0.075)
<i>DISCLOSE INTERVAL</i>	(+)	0.000 (0.472)	0.002‡ (0.006)	0.001 (0.034)
<u>Joint Tests</u>				<u>Chi-square</u>
<i>Investigation + Investigation*Post-SOX</i>				19.37
<i>Prominence + Prominence*Post-SOX</i>				1.36
<i>SEC Disclosure Index + SEC Disclosure*Post-SOX</i>				5.28
n		471 ^c	767 ^c	1238 ^c
Pseudo R ²		22.19%	13.56%	16.91%
-2 log likelihood		374.37	369.71	760.96
Model chi-square		118.17	111.75	229.36
p-value		<0.001	<0.001	<0.001
Correctly Classified		87.0	89.5	88.0

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.

§, ‡, and † indicate the coefficients in the pre- and post-SOX periods are significantly different at the p = 0.01, 0.05, and 0.10 levels, respectively.

^a See Appendix A for variable definitions.

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

^c 11 firms were excluded from the regression due to missing *POST RETURN* and *MKTCAP* data (this corresponds to 8 and 3 observations for the pre- and post-SOX models, respectively).

TABLE 7
Likelihood of SEC Enforcement Actions with Inverse Mills Ratio

$SEC\ ENFORCEMENT = \alpha + \beta_1 HIGH\ TRANSPARENCY + \beta_{2-6}[Restatement\ Severity] + \beta_{7-10}[Restatement\ Characteristics] + \beta_{11-13}[Firm\ Characteristics] + \beta_{14-18}[Other\ Controls] + \beta_{19} Inverse\ Mills\ Ratio + \varepsilon$

Logistic Regression with Dependent Variable = <i>SEC ENFORCEMENT</i>				
<u>Variable^a</u>	<u>Predict</u>	<u>All Years</u>	<u>Pre-SOX (1997-2002)</u>	<u>Post-SOX (2003-2005)</u>
Intercept		-3.372 (0.004)	-4.907 (0.001)	-5.022 (0.002)
<u>Corporate Transparency</u>				
<i>HIGH TRANSPARENCY</i>	?	0.844 (0.022)	0.967 (0.027)	0.579 (0.438)
<u>Restatement Severity</u>				
<i>RESTATEMENT MAGNITUDE</i>	(-)	6.971 (0.180)	10.384 (0.155)	4.379 (0.364)
<i>CONCURRENT RETURN (-1,+1)</i>	(-)	-2.734 (0.008)	-2.663 (0.029)	-3.919 (0.028)
<i>FRAUD/IRREG</i>	(+)	0.112 (0.413)	0.223 (0.366)	0.530 (0.215)
<i>DAMAGES</i>	(+)	1.052 (<0.001)	0.296 (0.357)	1.496 (<0.001)
<i>MISSTATEMENT LENGTH</i>	(+)	0.001 (<0.001)	0.001 (0.006)	0.001 (0.011)
<u>Restatement Characteristics</u>				
<i>REVENUE</i>	(+)	1.481 (<0.001)	1.434 (<0.001)	1.503 (<0.001)
<i>LEASE</i>	(-)	-1.566 (0.012)	-0.390 (0.399)	-1.184 (0.079)
<i>RULE CHANGE</i>	(-)	-1.078 (0.051)	-1.607 (0.134)	-0.444 (0.258)
<i>COUNT</i>	(+)	0.056 (0.399)	0.170 (0.343)	0.080 (0.397)
<u>Firm Characteristics</u>				
<i>MKTCAP</i>	?	-0.033 (0.753)	0.134 (0.530)	-0.150 (0.311)
<i>FINANCIAL</i>	?	0.171 (0.640)	-1.011 (0.156)	1.076 (0.020)
<i>TECH</i>	?	-0.041 (0.896)	-0.457 (0.311)	0.589 (0.285)
<u>Other Controls</u>				
<i>POST-SOX</i>	?	-2.031 (<0.001)	n/a	n/a
<i>PRIOR RETURNS (-252,-2)</i>	(-)	-0.384 (0.044)	-0.402 (0.139)	-0.517 (0.088)
<i>POST RETURNS (+2,+20)</i>	?	1.178 (0.091)	1.940 (0.031)	-0.551 (0.719)
<i>SHARE TURNOVER</i>	?	1.023 (0.064)	1.400 (0.088)	0.898 (0.292)
<i>DISCLOSE INTERVAL</i>	(+)	0.002 (0.010)	0.002 (0.243)	0.002 (0.032)
<i>INVERSE MILLS RATIO</i>	?	-2.391 (0.109)	-1.793 (0.470)	-1.757 (0.591)

(continued on next page)

TABLE 7 (continued)

	<u>All Years</u>	<u>Pre-SOX (1997-2002)</u>	<u>Post-SOX (2003-2005)</u>
n	1163 ^b	416 ^b	747 ^b
Pseudo R ²	14.74%	21.17%	11.56%
-2 log likelihood	691.27	321.17	356.35
Model chi-square	185.45	98.97	91.77
p-value	<0.001	<0.001	<0.001
Correctly Classified	86.5	86.2	88.1

The 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.

§, ‡, and † indicate the coefficients in the pre- and post-SOX periods are significantly different at the p = 0.01, 0.05 and 0.10 levels, respectively.

^a See Appendix A for variable definitions.

^b 11 firms were excluded from the regression due to missing *POST RETURN* and *MKTCAP* data (8 and 3 missing observations respectively in the pre- and post-SOX models). An additional 75 observations are excluding due to missing institutional ownership data, which is used as one of the instrumental variables in the first stage regression (55 and 20 missing observations respectively in the pre- and post-SOX models).

TABLE 8
Class Action Lawsuits as an Additional Measure of Severity

Panel A: Overlap of SEC Enforcement Actions and Class Action Lawsuits

	<u>Class Action Lawsuit</u>	<u>No Class Action Lawsuit</u>	<u>Total</u>
SEC Enforcement Action	57	62	119
No SEC Enforcement Action	<u>92</u>	<u>1038</u>	<u>1130</u>
<i>Total</i>	149	1100	1249
% of Obs. with SEC Action	38.3%	5.6%	9.5%

Panel B: Multivariate Analysis

$$SEC\ ENFORCEMENT = \alpha + \beta_1 LITIGATION + \beta_{2-4} [\text{Corporate Transparency}] + \beta_{5-9} [\text{Restatement Severity}] + \beta_{10-13} [\text{Restatement Characteristics}] + \beta_{14-16} [\text{Firm Characteristics}] + \beta_{17-21} [\text{Other Controls}] + \varepsilon$$

Logistic Regression with Dependent Variable = <i>SEC ENFORCEMENT</i>				
<u>Variable^a</u>	<u>Predict</u>	<u>Coefficient</u>	<u>P-value^b</u>	<u>Odds Ratio</u>
Intercept		-5.341	(<0.001)	
<i>LITIGATION</i>	?	1.505	(<0.001)	4.503
<u>Corporate Transparency</u>				
<i>INVESTIGATION</i>	?	1.291	(<0.001)	3.636
<i>PROMINENCE</i>	(+)	0.499	(0.015)	1.647
<i>SEC DISCLOSURE INDEX</i>	?	-0.019	(0.880)	0.982
<u>Restatement Severity</u>				
<i>RESTATEMENT MAGNITUDE</i>	(-)	6.145	(0.209)	466.486
<i>CONCURRENT RETURN (-1,+1)</i>	(-)	-0.749	(0.249)	0.473
<i>FRAUD/IRREG</i>	(+)	-0.332	(0.254)	0.717
<i>DAMAGES</i>	(+)	1.087	(<0.001)	2.965
<i>MISSTATEMENT LENGTH</i>	(+)	0.001	(<0.001)	1.001
<u>Restatement Characteristics</u>				
<i>REVENUE</i>	(+)	1.265	(<0.001)	3.543
<i>LEASE</i>	(-)	-1.132	(0.059)	0.322
<i>RULE CHANGE</i>	(-)	-1.224	(0.006)	0.294
<i>COUNT</i>	(+)	0.131	(0.268)	1.140
<u>Firm Characteristics</u>				
<i>MKTCAP</i>	?	-0.043	(0.665)	0.958
<i>FINANCIAL</i>	?	0.217	(0.552)	1.242
<i>TECH</i>	?	0.032	(0.913)	1.033
<u>Other Controls</u>				
<i>POST-SOX</i>	?	-1.268	(<0.001)	0.281
<i>PRIOR RETURNS (-252,-2)</i>	(-)	-0.463	(0.009)	0.629

(continued on next page)

TABLE 8 (continued)

<u>Variable^a</u>	<u>Predict</u>	<u>Coefficient</u>	<u>P-value^b</u>	<u>Odds Ratio</u>
<i>POST RETURNS (+2,+20)</i>	?	1.100	(0.086)	3.004
<i>SHARE TURNOVER</i>	?	0.480	(0.386)	1.616
<i>DISCLOSE INTERVAL</i>	(+)	0.001	(0.006)	1.001
n		1238 ^c		
Pseudo R ²		18.2%		
-2 log likelihood		760.96		
Model chi-square		248.42		
p-value		<0.001		
Correctly Classified		89.5		

^a See Appendix A for variable definitions.

^b Two-tailed tests are shown for variables without a signed prediction; one-tailed tests are shown for variables with a signed prediction.

^c 11 firms were excluded from the regression due to missing *POST RETURN* and *MKTCAP* data.

TABLE 9
Monetary Penalties after an SEC Enforcement Action

Panel A: Monetary Penalties per Restatement (\$000)^a

	<u>Full Sample</u>	<u>Pre-SOX</u>	<u>Post-SOX</u>
<u>Individuals</u>			
N	108	66	42
Mean	\$4,241	\$1,675	\$8,274
Median	\$156	\$118	\$284
Min	\$0	\$0	\$0
Max	\$75,204	\$24,598	\$75,204
<u>Firms</u>			
N	101	57	44
Mean	\$37,308	\$30,062	\$46,695
Median	\$0	\$0	\$8,750
Min	\$0	\$0	\$0
Max	\$548,000	\$548,000	\$548,000

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

	<u>Independent Investigation</u>			<u>Prominence</u>			<u>SEC Disclosure Index</u>		
	<u>Yes</u>	<u>No</u>	<u>Diff.</u>	<u>High</u>	<u>Medium /Low</u>	<u>Diff.</u>	<u>8-K</u>	<u>Other</u>	<u>Diff.</u>
Individual	\$4,521	\$4,107	\$-414	\$3,672	\$5,290	\$-1,618	\$1,682	\$7,102	\$-5,420*
Firm	\$15,466	\$46,981	\$-31,515*	\$42,086	\$28,681	\$13,405	\$37,019	\$37,653	\$634

Panel C: Determinants of Individual and Firm Monetary Penalties

<u>Variable^b</u>	<u>Predict</u>	<u>OLS Regression; Control variable coefficients excluded</u>	
		<u>(1)</u> <u>Y = IND PENALTY</u>	<u>(2)</u> <u>Y = FIRM PENALTY</u>
Intercept		-11.160 (0.220)	-102.390 (0.306)
<u>Corporate Transparency</u>			
<i>INVESTIGATION</i>	?	-2.241 (0.486)	-92.359 (0.023)
<i>PROMINENCE</i>	?	-0.886 (0.734)	-7.410 (0.785)
<i>SEC DISCLOSURE INDEX</i>	?	-1.115 (0.404)	-3.420 (0.810)
<i>POST-SOX</i>	(+)	19.184 (0.061)	-99.816 (0.208)
<i>INVESTIGATION*POST-SOX</i>	?	3.288 (0.445)	69.758 (0.141)
<i>PROMINENCE*POST-SOX</i>	?	-1.895 (0.651)	24.530 (0.557)
<i>SEC DISCLOSURE*POST-SOX</i>	?	-3.407 (0.096)	6.084 (0.766)

(continued on next page)

TABLE 9 (continued)

	<u>Joint Tests</u>	<u>F-value</u>	<u>F-value</u>
<i>Investigation + Investigation*Post-SOX</i>		0.11	0.54
<i>Prominence + Prominence*Post-SOX</i>		0.77	0.29
<i>SEC Disclosure Index + SEC Disclosure*Post-SOX</i>		8.68	0.03
	n	106 ^c	99 ^c
	Adjusted R ²	56.52%	32.93%

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

Control variables for shareholder harm, deep pockets, and enforcement complexity are included in Panel C, but the coefficients are untabulated. Panel C, Column 1, includes 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. Panel C, Column 2, includes restatements leading to one or more enforcement actions against the restatement firm.

^a Both firm and individual monetary penalties are winsorized at the 99th percentile to limit the influence of outliers. Before winsorization, the maximum individual penalty is \$110,492 and the maximum firm penalty is \$605,800 (in \$000's).

^b See Appendix A for variable definitions.

^c Two observations are excluded from each model due to missing *RESTATEMENT MAGNITUDE* data.

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“An Examination of First Call’s Company Issued Guidance Database” (with Lynn Rees), *Advances in Accounting*, Volume 23 (2007), pgs. 147-177

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- 2008 FARS Conference.

“Do More Transparent Corporate Actions Following a Restatement Influence the SEC’s Decision to Issue an Enforcement Action?”

- 2009 American Accounting Association Annual Meeting