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Rules-Based Accounting Standards and Litigation

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ABSTRACT: Some claim that rules-based accounting standards shield firms from litigation, while others argue that violations of detailed rules give plaintiffs a "roadmap" to successful litigation. We inform this debate by investigating whether rules-based standards are associated with the incidence and outcome of securities class action litigation. Overall, our results suggest that rules-based standards are associated with a lower incidence of litigation but are not associated with litigation outcomes. These results are of interest in the debate regarding the switch from a more rules-based U.S. GAAP to a more principles-based IFRS.

Keywords: *securities litigation; safe harbor; rules-based standards; principles-based standards*.

JEL Classifications: *K22, K41, M41*.

I. INTRODUCTION

Many practitioners and members of the popular press decry the rules-based nature of U.S. GAAP and propose the adoption of standards that are more principles-based (see, e.g., DiPiazza et al. 2006). The Securities and Exchange Commission (SEC 2010) is considering just such a shift to the more principles-based International Financial Reporting Standards (IFRS). One concern with such proposals is that a move to principles-based standards

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will increase firms' exposure to litigation (Schipper 2003). The SEC (2003), however, predicts a decline in litigation if principles-based standards are implemented. Despite the important policy implications, current arguments regarding rules-based standards and litigation rest on rhetoric and there is no clear consensus on their relation to litigation. Schipper (2003, 68) summarizes the need for empirical evidence on this issue, stating that "there is no systematic evidence on the question of whether detailed accounting guidance has any effect on either the incidence or cost of litigation." This study provides such evidence.

In order to understand the role of rules-based standards in accounting-related litigation, it is critical to understand certain aspects of the U.S. securities litigation system. First, securities class actions almost never proceed to trial. As a result, cases that survive the defendant firm's motion to dismiss are almost always settled out of court. This makes the motion to dismiss the pivotal issue in a securities class action suit. To avoid dismissal, plaintiffs must persuasively argue the firm *intentionally* misstated its financial statements, leading to an inflated stock price. Second, plaintiffs are not allowed access to company records through discovery until after they withstand the motion to dismiss, so allegations must draw on publicly available information unless the plaintiff obtains inside information from a whistleblower. Third, because a restatement establishes the misstatement element, intent is usually the only contested question in cases involving restatements. Thus, restatements increase the probability of both a lawsuit filing and a settlement (see Johnson et al. 2007). On the other hand, if firms do not issue restatements, then plaintiffs must convincingly allege both a misstatement and intent.

Against this backdrop, the precise effects of rules-based standards on the threat of litigation are unclear. We distill arguments relating rules-based standards to litigation into two competing theories. The first theory, which we label the "protection" theory, incorporates all arguments that make firms less likely to be sued or less likely to lose conditional on being sued. This theory thus predicts that rules-based standards shield firms from litigation. The competing view is the "roadmap" theory, which includes all arguments that make plaintiffs more likely to file a suit or prevail in a suit conditional on its filing. This theory contends that the specificity of rules-based standards provides plaintiffs with a clear path to successful litigation.

The "protection" theory is based on two arguments. First, when firms do not publicly admit to a misstatement, they can assert that they followed the detailed guidance of rules-based standards. Thus, in cases not involving a restatement, rules provide a "safe harbor" that protects firms from litigation. Principles-based standards, by way of contrast, do not afford such protection, leaving firms open to *ex post* claims that they did not exercise reasonable judgment when preparing financial statements. Second, in cases involving an admitted misstatement, the complex nature of rules-based standards offers an "innocent misstatement" defense that deters litigation. This argument stems from the belief that characteristics of rules-based standards (including volumes of implementation guidance, exceptions, and high levels of detail) make standards complex. Managers violating rules-based standards can argue that the misstatement was an innocent mistake caused by the complexities of GAAP, rather than an intentional violation.

The competing "roadmap" theory only applies to instances in which an identifiable misstatement occurred, as evidenced by a restatement. This theory argues that the detail and objectivity of rules-based standards help to establish intent, as plaintiffs can argue that it is implausible that executives would unintentionally violate the clear guidance provided by a rules-based standard. In essence, this theory is the converse of the innocent misstatement defense discussed above and argues that rules-based standards increase the threat of litigation.

The first challenge in testing these theories involves measuring whether standards are rules-based or principles-based. We identify the key characteristics of rules-based standards espoused by academics, practitioners, and regulators. While some believe that "rules-based" simply refers to bright-line thresholds, such a definition is incomplete. Rules-based accounting standards

are highly detailed, contain scope exceptions, and require a significant amount of implementation guidance (e.g., FASB 2002; Nelson 2003; Schipper 2003; SEC 2003; DiPiazza et al. 2006). Despite the perception that U.S. GAAP is rules-based, there is considerable variation in the extent to which U.S. accounting standards exhibit these characteristics (e.g., Cunningham 2007). We exploit these within-GAAP differences and use the Rules-Based Continuum (RBC) score from Mergenthaler (2010) to measure the extent to which individual accounting standards contain: (1) bright-line thresholds, (2) scope and legacy exceptions, (3) large volumes of implementation guidance, and (4) a high level of detail. Higher RBC scores represent standards with more of these rules-based characteristics.

We begin by validating the RBC measure. Across a variety of tests, we find evidence suggesting RBC is a valid proxy that measures whether standards are rules-based. For instance, consistent with common perceptions, our findings suggest that U.S. GAAP is more rules-based than IFRS. In addition, the RBC measure produces high scores for standards the SEC (2003) classified as rules-based in its 2003 report, thus confirming the RBC measure lines up well with the SEC's view of what constitutes a rules-based standard.

Next, we use lawsuits citing specific accounting standards from 1996–2005 to test the protection and roadmap theories. We examine lawsuits in which the defendant firm does not admit to a prior accounting misstatement ("non-restatement cases"), as well as lawsuits where the firm does admit to such a misstatement ("restatement cases"). As discussed above, the protection theory relates to both non-restatement and restatement cases, while the roadmap theory relates only to cases involving accounting restatements.

Non-restatement cases involve the announcement of bad news, which leads to a material stock price drop. Plaintiffs typically argue the financial statements violated GAAP and did not reflect the true economic state of the firm prior to this news revelation. If the protection theory is correct, then we expect plaintiffs to allege relatively principles-based violations in these cases, as plaintiffs will not have the objective evidence provided by a restatement to demonstrate that specific rules-based standards have been violated. Thus, this theory posits that rules-based standards provide a safe harbor from litigation. To test this conjecture, we use each firm as its own control and compare the RBC score of the alleged violations to that of the accounting standards important to the firm—those contained in its Summary of Significant Accounting Policies 10-K disclosure. Consistent with the safe harbor arguments of the protection theory, we find the RBC score of allegedly violated standards in filed lawsuits is significantly lower (i.e., more principles-based) than the RBC score of standards important to the firm. Thus, absent an admitted accounting violation, plaintiffs tend to target principles-based areas of GAAP.

We next examine restatement cases. The protection theory predicts that admitted violations of rules-based standards should be associated with a lower threat of litigation because rules-based standards provide defendants with an innocent misstatement defense. In contrast, the roadmap theory predicts that violations of clear, specific rules-based standards are more likely to be perceived as intentional, which will provide plaintiffs with stronger cases and thereby increase the threat of litigation. To test these theories, we compare our lawsuit sample against a control sample of admitted accounting violations that could have plausibly resulted in a lawsuit, but did not. Specifically, the control sample includes restatements that resulted in a significant decline in market value without associated litigation. We find that violations of rules-based standards are less likely to result in a lawsuit filing, which is consistent with the protection theory. We also examine whether rules-based standards affect case outcomes. Again, the protection and roadmap theories produce competing predictions. We find no evidence that rules-based standards are related to case outcomes. Overall, we find support for the protection theory with respect to litigation incidence but not case outcomes. We find no support for the roadmap theory with respect to litigation incidence or outcomes.

This study makes two contributions. Most importantly, we provide the first archival evidence on the relation between rules-based accounting standards and litigation. Despite important public policy implications, there is a dearth of research in this area. Our evidence is particularly relevant to policy debates because we utilize a comprehensive database of securities class action lawsuits. Our sample comprises the universe of GAAP-related lawsuits that cite accounting standards among economically significant firms from 1996–2005. In addition, we distill arguments relating accounting standards to litigation into a simple framework involving two competing theories. This framework can be used to guide future policy debates and foster additional academic research in this area.

Section II discusses rules-based standards, prior literature, and features of the U.S. litigation environment. Section III discusses the relevant theories in more detail and develops testable hypotheses. Section IV contains our research design, empirical results, and robustness checks. Section V discusses limitations of our study. Section VI concludes and discusses the policy implications of our findings.

II. LITERATURE REVIEW AND INSTITUTIONAL BACKGROUND

Characteristics of Rules-Based Accounting Standards

Despite significant recent focus on rules-based and principles-based accounting standards, "The exact meaning of this distinction is not well defined and is often unclear" (Hail et al. 2010, 376). There is agreement that rules-based standards often involve bright-line thresholds (e.g., Kadous and Mercer 2012). However, a review of commentary by academics and regulators makes it clear that the characteristics of rules-based standards involve more than bright-line thresholds. These characteristics include scope and legacy exceptions, a high level of detail, and extensive implementation guidance (FASB 2002; Nelson 2003; Schipper 2003; SEC 2003).[1] The SEC (2003, 23), for example, indicates that "the primary characteristics of rules-based standards are the existence of exceptions and bright-lines which lead to very detailed implementation guidance."

The SEC (2003) suggests these characteristics make standards more precise and lower the amount of professional judgment required in application. For example, scope and legacy exceptions provide a lengthy list of transactions to which a standard does not apply, making it clearer whether the standard applies to a particular transaction. Increased detail and implementation guidance similarly limit the amount of professional judgment required, while bright-line thresholds provide objective guidance regarding application of the standard. Nelson (2003) notes that the presence of these characteristics makes a standard both more specific and complex, and thus more rules-based.

Many standards begin with a simple principle, but ultimately begin to take on rules-based characteristics. As Schipper (2003, 67) states:

> Once a standard lays out a financial reporting principle, the only way to permit deviations from that principle is to include in the standard a rule or rules that provide for some combination of excluded items (scope exceptions) or items that receive special treatment (legacy exceptions). These rules add to the length and complexity of the standard, and lead to requests for explanations of the breadth of the exceptions.

Because the nature of rules-based standards is multifaceted, we use all of the characteristics described above (bright-line thresholds, scope and legacy exceptions, a high level of detail, and implementation guidance) in our empirical analysis when measuring the extent to which standards are rules-based.

[1] Scope and legacy exceptions are exceptions to standards that permit alternative treatments for a defined set of transactions or for a specific industry (Schipper 2003).

Prior Research

Most studies related to rules-based versus principles-based accounting standards investigate whether rules-based standards affect financial reporting decisions.[2] There is significantly less work addressing legal or regulatory enforcement with respect to GAAP violations. Kadous and Mercer (2012) utilize an experiment to investigate the effect of bright-line thresholds on juror decisions in auditor negligence cases.[3] In another recent study, Mergenthaler (2010) finds that the SEC is less likely to penalize a rules-based GAAP violation.

However, no study examines the effect of rules-based standards in the securities litigation context. Regulatory enforcement efforts and auditor negligence cases are not a good proxy for the private enforcement arena of securities litigation due to differing incentives (see Coffee 2006) and institutional details. The SEC is a regulatory agency whose enforcement actions are undertaken to shape financial reporting policy and punish companies for not complying with securities laws (Cox and Thomas 2003). Class action plaintiffs are focused on the potential recoverable settlement amount. In addition, auditor negligence cases have a much lower intent threshold than securities class actions, where fraud must be alleged. Thus, direct evidence on the effect of rules-based standards on the threat of litigation is needed in the securities class action context. As we discuss below, the securities class action litigation environment in the U.S. is unique, and key procedural hurdles must be met for plaintiffs to bring a successful suit.

Securities Litigation Background

The securities class action litigation environment is now largely defined by the Private Securities Litigation Reform Act of 1995 (PSLRA), which was passed to limit frivolous securities litigation. Prior to the passage of the PSLRA, securities class action complaints were often filed whenever a significant stock price decline occurred, regardless of the presence of actual fraud. Complaints were often of low quality and consisted largely of boilerplate allegations (Casey 2008). The PSLRA limits such practice, requiring that complaints allege facts that yield a "strong inference that the defendant acted with the required [fraudulent] state of mind" (15 U.S.C. section 78u-4(b)(2)).[4] The PSLRA also prevents discovery until after a motion to dismiss is decided, making the motion to dismiss the key procedural hurdle.[5]

To survive a motion to dismiss, a complaint must allege facts sufficient to satisfy each element of Rule 10b-5, including "(1) a misstatement or omission of (2) a material fact (3) made with intent (4)

[2] Nelson et al. (2002) find that executives manage earnings by structuring transactions when standards are "precise," and that executives manage earnings in an "unstructured" manner when standards are "imprecise." Cuccia et al. (1995) provide evidence that executives use judgment to defend aggressive tax behavior when standards are vague, and that they evaluate the evidence in a manner consistent with the desired outcome when standards are strict. Mergenthaler (2010) finds that the magnitude of earnings management is larger when a rules-based standard is violated. Finally, Jamal and Tan (2010) find that while managers' decisions may differ based on the type of accounting standard, their reporting choices are affected by auditor type (principles-oriented, rules-oriented, or client-oriented).

[3] Kadous and Mercer (2012) find that bright-lines shield auditors from litigation when the client reporting decision is both conservative and deviates from the industry norm. However, they find that merely complying with the industry norm renders the bright-line threshold unimportant in such cases. When the client reporting decision is aggressive, however, bright-lines increase liability of auditors, regardless of compliance with industry norms.

[4] The Supreme Court interpreted the "strong inference" requirement to mean that an inference of fraud "must be more than merely plausible or reasonable—it must be cogent and at least as compelling as any opposing inference of non-fraudulent intent" (*Tellabs, Inc. v. Makor Issues & Rights, Ltd.*, 551 U.S. 308 (2007)).

[5] Preventing discovery greatly reduces the cost of non-meritorious suits. However, if a motion to dismiss fails, then corporations are subject to discovery, requiring high-level officials to submit to depositions and document production. Thus, even if a company believes it would prevail at trial, it is cost-efficient to settle to avoid litigation costs and the large potential damages associated with losing a class action case (e.g., Pritchard and Sale 2005).

that the plaintiff justifiably relied on (5) causing injury in connection with the purchase or sale of securities" (Skinner 1994).[6] Based on the elements of Rule 10b-5, accounting-related securities class action lawsuits follow a reasonably predictable pattern. First, to satisfy element (1), a firm either admits to a misstatement by restating its prior financial statements ("restatement cases"), or shareholders infer a misstatement or omission of prior financial statements ("non-restatement cases"). Second, the revelation or alleged discovery of the misstatement is accompanied by a large stock price decline, satisfying elements (2) (materiality) and (5) (causation). Element (4) is generally presumed under the fraud on the market theory (see Francis et al. 1994). Thus, the key element in most accounting-based securities litigation is element (3), fraudulent intent (see Pritchard and Sale 2005). To establish intent, the plaintiff must be able to allege facts that indicate that the defendant firm's managers acted with scienter. In the law, acting with scienter means that the defendant's attempt to deceive or defraud was intentional or so reckless that the act "reflects some degree of intentional or conscious misconduct" (*In re Silicon Graphics, Inc. Securities Litigation*, 183 F.3d 970, 977 (9th Cir. 1999)). If the plaintiffs' complaint alleges scienter with sufficient factual detail and is not dismissed, then securities class action lawsuits almost always settle rather than go to trial.

III. HYPOTHESES DEVELOPMENT

We review the academic literature, popular press articles, and U.S. case law to distill arguments on the relation between rules-based accounting standards and litigation into two competing theories. Figure 1 outlines the two theories (described in Row A). We label the first the "protection" theory, which incorporates all arguments that make the firm less likely to be sued or less likely to lose if they are sued. In other words, the protection theory contends that rules-based standards decrease the threat of litigation. We label the second the "roadmap" theory, which includes all arguments that make plaintiffs more likely to file a suit or prevail in a suit conditional on its filing. In other words, this theory contends that rules-based standards increase the threat of litigation.

Figure 1 next provides a discussion of the elements of each theory (described in Row B), and relates these elements to observable events—whether a restatement has been issued by the firm (described in Row C). Linking the theories to these observable events is important because the protection theory offers predictions in both non-restatement and restatement cases (detailed on the left side of Figure 1), while the roadmap theory only deals with detected misstatements and thus only offers a prediction for restatement cases (detailed on the right side of Figure 1). Therefore, we organize our hypotheses and tests around whether a restatement is present. We begin with non-restatement cases for which our only hypothesis comes from the protection theory, due to the inapplicability of the roadmap theory in such cases.

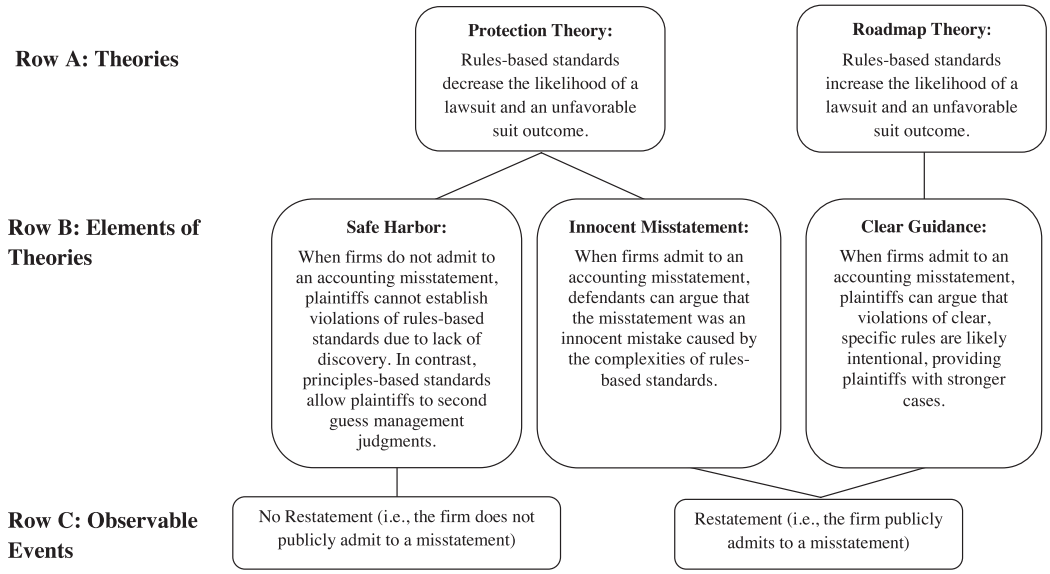
Non-Restatement Cases

In cases not involving a restatement, plaintiffs must argue that defendants misstated their financial statements and that the misstatement was intentional. These cases typically arise following the announcement of bad news that results in a significant stock price drop. Plaintiffs usually allege that a firm's financial statements were misstated in violation of GAAP and did not accurately portray the underlying economic state of the firm prior to the stock price drop.[7] Plaintiffs must be

[6] Firms may also be liable under Section 11 of the 1933 Securities Act, but only in connection with the public offering of securities. The elements of a Section 11 violation are similar to Rule 10b-5, except that the intent standard is lower.

[7] In these cases, defendants do not admit to a misstatement and do not restate their financial statements, even if the case is ultimately settled. Settlement in these cases is generally undertaken to avoid the cost of a trial (and a potentially sizable jury verdict) once the court denies a motion to dismiss. The defendant generally does not admit wrongdoing, even in the settlement agreement (Alexander 1991).

FIGURE 1
Summary of Theories Relating Rules-Based Accounting Standards and Litigation



This figure summarizes the theories that suggest a relation between rules-based standards and litigation. The protection theory applies regardless of whether the firm publicly admits to a misstatement. The roadmap theory only applies when firms publicly admit to a misstatement. Absent such an admission, plaintiffs cannot determine whether firms followed the rules because discovery is not permissible until after the dismissal decision. Thus, without a restatement, plaintiffs generally cannot establish violations of specific rules as required by the roadmap theory.

able to "plead" (present in the complaint) facts that support these elements without access to company records via discovery. Thus, plaintiffs rely on publicly available information to make their initial case, absent a whistleblower.

The arguments for the protection theory as they apply in non-restatement cases are summarized in Figure 1, Row B in the "Safe Harbor" box. Specifically, the protection theory argues that rules-based accounting standards decrease the threat of litigation in non-restatement cases. Under this argument, the detailed guidance provided by rules-based standards provides firms with "safe harbor" protection from litigation when firms follow the rules (Schipper 2003; SEC 2003). Reinforcing this aspect of the protection theory, it is also difficult for potential plaintiffs to allege a specific violation of a rules-based standard due to the lack of discovery. Without discovery, plaintiffs are unable to observe sufficient detail about a firm's transactions to know whether a rules-based accounting standard was violated. For example, it would be difficult to determine whether a bright-line was crossed, the requirements of an exception were met, or whether the transaction fit into a particular area of implementation guidance without either specific records of transactions or testimony from individuals involved in the transaction.

On the other hand, principles-based standards are subject to more judgment and have less objective criteria compared to rules-based standards, so plaintiffs can more persuasively allege that their application was improper and "second guess" accounting decisions after the fact. Even if a firm attempts to follow a principles-based standard, its decision may still be questioned by plaintiffs due to the discretion involved.

Overall, in cases not involving a restatement, the protection theory predicts that rules-based standards will tend to shield firms from litigation and plaintiffs will thus tend to allege violations of principles-based standards. We state our first hypothesis in the alternative:

H1: Plaintiffs are less likely to allege violations of rules-based accounting standards in non-restatement cases.

Restatement Cases

We next consider restatement cases for which the protection and roadmap theories offer competing predictions. In restatement cases, defendant firms admit to an accounting misstatement via a restatement before or soon after the filing of a lawsuit. Thus, the misstatement element is not disputed and the safe harbor protection that accompanies compliance with rules-based standards is inapplicable.

The protection theory suggests that rules-based standards shield firms from litigation, even after a restatement. Rules-based standards include exceptions, high levels of detail, and large amounts of implementation guidance, making such standards more complex and difficult to apply than principles-based standards. Managers can therefore utilize the complex nature of rules-based standards to argue that violations of rules-based standards were "innocent misstatements." Both standard-setters and courts agree that complex standards are more difficult to apply and can lead to errors. For instance, the former Chairman of the IASB, David Tweedie (2007, 5), stated that rules-based standards "frequently baffle many accountants so much so that few audit partners can complete an audit without relying on the advice of experts within the firm." In the Microstrategy case (*In re Microstrategy, Inc. Securities Litigation*, 115 F. Supp. 620, 652 (E.D. Va. 2000)), the court held that the more complex the accounting standard, the lower the inference of fraudulent intent. Furthermore, courts generally assume misstatements are innocent errors, absent convincing evidence of intent (scienter) and "the mere publication of inaccurate accounting figures, or a failure to follow GAAP, without more, does not establish scienter" (*Dsam Global Value Fund v. Altris Software, Inc.*, 299 F.3d 385 (9th Cir. 2002)). These arguments are summarized in Figure 1, Row B, in the "Innocent Misstatement" box.

Proponents of the "roadmap" theory offer an alternative view, contending that rules-based standards provide plaintiffs with a guide to successful litigation. The idea behind the roadmap theory is that violations of rules-based standards help demonstrate intent, as plaintiffs can argue that it is implausible that executives would unintentionally violate a specific rule that provides clear guidance. For example, Leone (2009) cites a veteran securities litigator who notes that "in a case based on a principle, it's 'really hard' to prove that executives or directors acted in bad faith." The roadmap view also predicts that the objectivity and specificity of rules-based standards make it easier to identify accounting misstatements, triggering restatements. Since restatements tend to increase the threat of a lawsuit and lead to more favorable outcomes for plaintiffs (Johnson et al. 2007), the roadmap theory predicts that rules-based (principles-based) standards increase (decrease) litigation risk. For example, Bogoslaw (2008) states that "the big accounting firms that are drawn to [a more principles-based] IFRS believe they'll get sued less since it will be harder to point to their mistakes."[8] These arguments are summarized on the right

[8] Under this portion of the roadmap theory, it is possible that principles-based standards may shield firms from litigation if violations of these standards are more difficult to detect and, thus, are less likely to result in restatements, but testing this aspect of the roadmap theory is beyond the scope of our study because we are unable to model the restatement decision (i.e., we cannot observe potential misstatements that did not result in a restatement).

side of Figure 1, Row B, in the "Clear Guidance" box. Overall, the roadmap theory predicts that violations of rules-based standards will increase the threat of litigation, while the protection theory predicts the opposite. Although both arguments seem plausible, the "innocent misstatement" defense of the protection theory is more strongly supported by U.S. case law. We therefore state our second hypothesis as follows:

H2: Violations of rules-based standards are negatively associated with the incidence of litigation in restatement cases.

Although we focus primarily on the lawsuit filing decision, we also examine case outcomes to present a more complete picture of the litigation process. From the discussion above, the roadmap theory predicts that violations of rules-based standards will lead to better outcomes for plaintiffs, including a greater settlement probability in restatement cases. The protection theory again predicts the opposite in restatement cases, as shown in the "Innocent Misstatement" and "Clear Guidance" boxes of Figure 1, Row B. Again, since the "innocent misstatement" defense of the protection theory appears to have more support in case law, we state our third hypothesis as follows:

H3: Violations of rules-based standards are negatively associated with the plaintiffs' outcome in restatement cases.

If plaintiffs' attorneys consider the effect of rules-based standards on case outcomes at the filing stage, then this could lead to no relation between rules-based standards and suit outcomes *among filed cases*. For example, if H2 is true and cases involving rules-based standards have poorer prospects for plaintiffs on average, those cases involving rules-based standards that plaintiffs do choose to file may have relatively high prospects along other dimensions. Thus, among cases actually filed, this selection effect could lead to no relation between rules-based standards and lawsuit outcomes.

IV. EMPIRICAL ANALYSIS

Measurement of Rules-Based Standards

To determine the extent to which a standard is "rules-based," we utilize the Rules-Based Continuum (RBC) score from Mergenthaler (2010) to measure the presence of rules-based characteristics for accounting standards in our sample. Because many accounting standards are based upon broad principles from the FASB conceptual framework, we avoid subjectively classifying standards as being rules-based or principles-based. Instead, we adopt an empirical perspective and focus on the presence or absence of rules-based characteristics identified by prior literature.

The RBC score measures the extent to which standards contain the rules-based characteristics noted in Section II, including (1) bright-line thresholds, (2) scope and legacy exceptions, (3) large volumes of implementation guidance, and (4) a high level of detail. The RBC score increases by 1 for each such characteristic a standard contains.[9] Thus, the value of the RBC score ranges from 0 (a

[9] The number of FASB "interpretive pronouncements" is the proxy for the amount of implementation guidance. Standards ranked in the upper decile of interpretive pronouncements are classified as having large volumes of implementation guidance. The number of words in a standard measures detail, with standards in the upper word count decile classified as having a high level of detail. We also examine whether our results hold when we change our definition of large volumes of implementation guidance and detail to be the upper quartile of the distribution and find that our results are robust to this alternative way of defining these characteristics.

standard contains none of the characteristics, representing a principles-based standard) to 4 (a standard contains all of the characteristics, representing a highly rules-based standard).[10]

RBC Validation

We validate the RBC score in three ways to ensure that we are capturing the underlying construct of rules-based accounting standards. First, we demonstrate that the four dimensions of *RBC* are all positively correlated. Panel A of Table 1 provides the correlations between the four dimensions that comprise the RBC score in our sample. Standards with bright-line thresholds, for example, tend to have more implementation guidance ($\rho = 0.55$). An untabulated factor analysis reveals only one significant factor in the data, consistent with the notion that the four elements of the RBC score proxy for a common construct. Thus, we aggregate the four characteristics into one measure.

Second, Panel B of Table 1 outlines the RBC score for select standards the SEC (2003) classified as "principles-based" or "rules-based" and demonstrates a consistent overall relation between the RBC score and the SEC's perception of "rules-based" accounting standards. In fact, the RBC score for almost all of the standards the SEC classifies as "principles-based" ("rules-based") have a low (high) RBC score. For instance, ARB 43-4 (inventory pricing), a standard the SEC referred to as "principles-based," has an RBC score of 0, indicating that ARB 43-4 does not contain any of the aforementioned rules-based characteristics. On the other hand, SFAS 13 (leases), a "rules-based" standard per the SEC, has a score of 4, indicating that it contains all of the rules-based characteristics and is therefore more rules-based. SFAS 133 (derivatives) has an RBC score of 3, also consistent with relatively high rules-based content and the SEC classification.

There are three standards in which the SEC's classification of a standard as "principles-based" does not match well with the RBC score: business combinations (SFAS 141), goodwill (SFAS 142), and long-lived asset impairment (SFAS 144). While none of these standards contain bright-line thresholds, they each contain scope exceptions and a high level of implementation guidance. In addition, each standard is very detailed, with total lengths of 19,298 words (SFAS 141), 18,824 words (SFAS 142), and 21,259 words (SFAS 144). These standards have fairly high RBC scores as they exhibit all rules-based characteristics other than bright-line thresholds. Thus, despite the inconsistency with the SEC treatment, the *RBC* classification of these standards as relatively rules-based seems reasonable.[11]

Third, for each U.S. standard examined by the SEC (2003), we compute the RBC score for the corresponding IFRS standard. After tabulating the RBC score, we compare the RBC score of each IFRS standard to that of the corresponding U.S. GAAP standard. This comparison is meaningful because IFRS is commonly perceived to be less rules-based than U.S. GAAP. Thus, if the RBC score correctly measures whether a standard is rules-based, then RBC scores should be higher for U.S. GAAP than for IFRS. In almost all cases, the RBC score for the IFRS standard is less than or equal to the RBC score for the corresponding U.S. GAAP standard. An untabulated test of differences in the median (mean) RBC score reveals that the median (mean) RBC score of the IFRS standards presented is significantly lower (z-statistic $= -2.29$, one-sided p-value $= 0.01$; t-statistic $= -1.95$, one-sided p-value $= 0.03$) than the RBC score of the corresponding U.S. GAAP standards. We view the higher RBC score of U.S. GAAP relative to IFRS as a particularly interesting finding because the underlying transactions are held constant across accounting regimes. Thus, the RBC

[10] *RBC* is calculated each year for each standard because standards change over time as detail, exceptions, and implementation guidance are added.

[11] Schipper (2003) discusses SFAS 141 and 142 as being based on principles, but suggests that additional guidance provided by the FASB makes these standards more rules-based.

TABLE 1

Rules-Based Continuum Construct Validity

Panel A: Pearson Correlations among Rules-Based Characteristics

	Detail	Implementation Guidance	Exceptions
Implementation Guidance	0.62 (< 0.0001)		
Exceptions	0.25 (< 0.0001)	0.65 (< 0.0001)	
Bright-Line Thresholds	0.19 (< 0.0001)	0.55 (< 0.0001)	0.38 (< 0.0001)

Panel A displays Pearson correlations between the individual characteristics of rules-based standards.

Panel B: Comparison of Select IFRS and U.S. GAAP Standards

Description	IFRS Standard	IFRS *RBC*	U.S. Standard	U.S. *RBC*	SEC Classification
Recognition of Financial Assets/Liabilities	IAS 39	3	SFAS 140	4	Rules-Based
Other Post-Retirement Benefits	IAS 19	2	SFAS 106	4	Rules-Based
Taxes	IAS 12	2	SFAS 109	4	Rules-Based
Stock-Based Compensation	IFRS 2	2	SFAS 123	4	Rules-Based
Leases	IAS 17	2	SFAS 13	4	Rules-Based
Pensions	IAS 19	2	SFAS 87	4	Rules-Based
Derivatives and Hedging	IAS 39	3	SFAS 133	3	Rules-Based
Accounting for the Sale of Real Estate	IAS 18	2	SFAS 66	3	Rules-Based
Consolidation	IAS 27	1	ARB 51	3	Rules-Based
Business Combinations	IFRS 3	2	SFAS 141	3	Principles-Based
Goodwill	IAS 38	2	SFAS 142	3	Principles-Based
Impairment of Long-Lived Assets	IAS 36	2	SFAS 144	3	Principles-Based
Asset Retirement Obligations	IAS 37	2	SFAS 143	2	Principles-Based
Foreign Currency	IAS 21	1	SFAS 52	2	Principles-Based
Exit or Disposal Costs (Restructuring)	IAS 37	2	SFAS 146	0	Principles-Based
Inventory	IAS 2	1	ARB 43-4	0	Principles-Based
Interest Capitalization	IAS 23	1	SFAS 34	0	Principles-Based
Impairment of Long-Lived Assets	IAS 36	2	SFAS 121	1	Principles-Only

Panel B presents data on the median RBC score for standards the SEC classified as "rules-based" or "principles-based" and presents the RBC score of the corresponding IFRS standards.
RBC measures whether a standard contains bright-line thresholds, scope and legacy exceptions, large volumes of implementation guidance, and a high level of detail. *RBC* increases by 1 when a standard contains any one of the above-mentioned criteria. *RBC* is calculated each year for each standard because standards change over time as detail, exceptions, and implementation guidance are added.

score captures differences in the characteristics of accounting standards independent of the transactions underlying the standards.

Collectively, results from the correlations between the components of *RBC*, the factor analysis, the comparison to standards classified by the SEC, and the comparison to IFRS validate the RBC score and suggest that it is a reasonable measure of whether a standard contains rules-based characteristics.

Sample

We select all resolved securities class action lawsuits filed from 1996 to 2005 alleging GAAP violations from the Securities Class Action Services (SCAS) database from RiskMetrics Group. We exclude suits based purely on disclosure theories outside financial reporting. We end the sample in 2005 because we require settlement outcomes in later tests, and cases generally take several years to resolve. Starting the sample in 1996 ensures that all suits occur within a similar legal framework under the PSLRA.

We examine lawsuits involving common stockholders and require defendant firms to have coverage in I/B/E/S and CRSP. Requiring analyst coverage aids in ensuring reasonably efficient incorporation of information into stock prices (Piotroski and Roulstone 2004). Requiring CRSP coverage excludes thinly traded OTC stocks. Together, these restrictions ensure that sued firms are of interest to a broad range of investors and are economically significant. We also require firms to have non-missing values for the variables in our empirical tests.

For firms that meet these data requirements, we also screen for an available plaintiff complaint in the Stanford Securities Class Action Clearinghouse. We read each complaint and note the accounting standards allegedly violated, and collect additional variables used in our empirical analysis.[12] This procedure yields 353 cases that cite specific accounting standards, as show in the top box of Figure 2. Figure 2 provides a summary of our samples, including the portion of the lawsuit sample and the designated control sample utilized in each test.

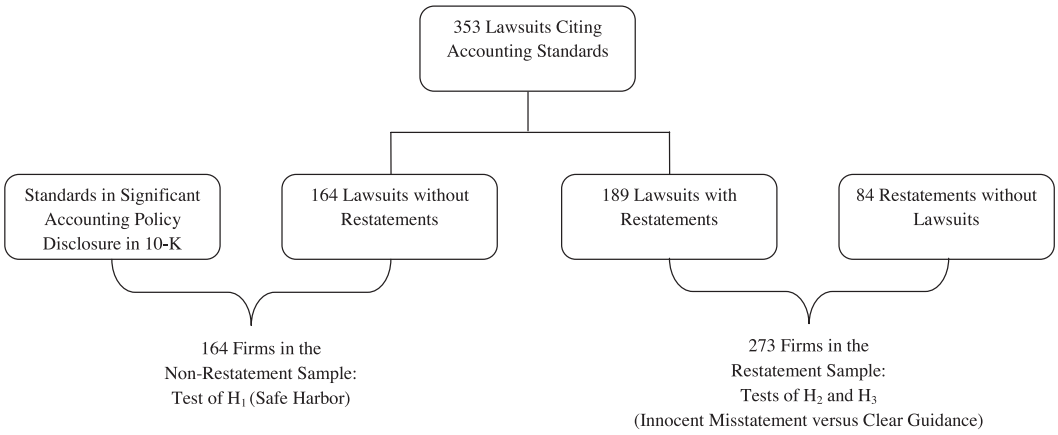
From the 353 total cases that cite accounting standards, 164 do not involve an admitted accounting misstatement by the defendant firm. We identify these non-restatement suits by searching the complaint for the term "restat*" and initially classify cases not containing this term as non-restatement cases. To verify that these suits did not involve a restatement, we further search all 10-K and 10-Q filings for up to one year after the class period end date to verify that the firm did not restate their financial statements prior to the plaintiffs' filing decision. This sample of 164 lawsuits without restatements is located on the bottom left of Figure 2. We use this sample to test H1 by comparing standards cited in the suit to the firm's significant accounting policies (described in more detail below), which applies to the "Safe Harbor" element of rules-based standards as detailed in the "Hypotheses Development" section and in Figure 1, Row B.

The remaining 189 cases involve an admitted misstatement in the form of a restatement of class period financial statements by the defendant firm. As a control sample, we select all restatements identified by the Government Accountability Office (GAO) from the same time period that did not result in litigation, but whose announcements were accompanied by a decline in market value of equity of at least $50 million, resulting in 84 restatements.[13] We use the $50 million cutoff because

[12] To determine if plaintiffs strategically cite certain standards, we selected a random sample of 50 restatement cases. We then compared the violations noted in the complaint to those noted in the restatement. Of the 50 cases we looked at, 48 cite every GAAP violation noted in the restatement. The two remaining cases cited all standards except standards noted as "minor errors" in the restatement. Thus, the plaintiff appears to cite all GAAP violations noted in the restatement filing.

[13] We obtain these restatements from the 1997–2006 GAO sample, which is used in the Hennes et al. (2008) study and is available in machine readable format on Andrew Leone's website (http://sbaleone.bus.miami.edu/).

FIGURE 2
Sample Overview



This figure outlines the samples used in our various analyses. We start with 353 lawsuits that cite accounting standards. We then distinguish between lawsuits involving restatements and those not involving restatements. Plaintiffs have different information about the alleged GAAP violation in restatement and non-restatement cases because discovery is not allowed until after the dismissal decision. Thus, in non-restatement cases, plaintiffs must build their cases on publicly available information without direct admission of a misstatement. Our first analysis focuses on lawsuits not involving a restatement. Our sample consists of 164 non-restatement lawsuits, with each sued firm serving as its own control. We compare the standards cited in the lawsuit to those mentioned in the firms' significant accounting policy disclosures. Our second set of tests focus on instances where a restatement is observed. In our sample of lawsuits citing accounting standards, there are 189 lawsuits involving restatements. We then select a sample of "potential lawsuits" involving restatements where the firm restated earnings and the firm's market value dropped $50 million or more around the announcement of the restatement. The 84 restatements in the control sample are obtained from the 1997–2006 GAO sample, which is used in the Hennes et al. (2008) study and is available in machine readable format on Andrew Leone's website (http://sbaleone.bus.miami.edu/). We compare the standards cited in the lawsuits to those disclosed in connection with the non-sued firms' restatements.

potential damages are an important consideration in the filing decision (Coffee 2006; Alexander 1991). We use these 273 restatement observations (189 that triggered lawsuits and 84 that did not, as detailed on the bottom right of Figure 2) to test H2 and H3, which deal with testing the competing "Innocent Misstatement" and "Clear Guidance" aspects of rules-based standards, as detailed in the hypothesis development and in Figure 1, Row B.

Test of H1

To test H1, we search the complaint document to identify each alleged violation and ensure that the firm did not restate earnings. We then read the firm's significant accounting policy disclosure in the firm's 10-K from the alleged violation period to identify the standards that the firm labels "significant." Classifying the significant accounting standards for each firm provides a sample of standards important to the firm that the plaintiff could observe and thus could have alleged the firm violated. We then compare the average RBC score across all of the alleged violations for each lawsuit to the average RBC score across all of the standards contained in the significant accounting policies. Because each sued firm serves as its own control, we conduct our analysis on a univariate basis. A significantly lower RBC score for the alleged violations in lawsuits would indicate that plaintiffs tend to allege more principles-based standards when firms do not admit to a GAAP violation.

Appendix A provides one example of a firm's significant accounting policy disclosure and documents how we classified this disclosure to identify the firm's significant accounting standards. In this example of Policy Management Systems Corp., we list the identified standards and their RBC measures immediately before the paragraphs discussing each significant accounting policy.

Panel A of Table 2 provides descriptive statistics for the non-restatement cases. The mean RBC score of the alleged violations is 0.87, suggesting that alleged GAAP violations contain roughly one rules-based characteristic. Consistent with expectations, the disclosure of bad news at the end of the class period elicits an average return of negative 25.08 percent. In untabulated analysis, we find that the most common events triggering these cases include (with the incidence in parentheses): earnings warnings (48.2 percent), earnings announcements revealing poor performance (17.7 percent), announcements of internal or external investigations (11.0 percent), and announcements of bankruptcy/insolvency issues (4.9 percent).[14] Finally, 41 percent of these firms come from high litigation risk industries, as identified by Francis et al. (1994).

Panel B of Table 2 provides the 15 most commonly cited accounting standards in plaintiff complaints along with the 15 most common standards associated with defendants' significant accounting policies. The most commonly cited standards in non-restatement lawsuits include APB 22 (disclosure of accounting policies, $RBC = 0$), SFAS 5 (contingencies, $RBC = 1$), SFAC 5-6 (revenue, $RBC = 1$), SFAS 48 (right of return, $RBC = 1$), and ARB 43-4 (inventory write downs, $RBC = 0$).

The most common standards significant to these defendants include ARB 51 (consolidation, $RBC = 3$), ARB 43-9 (depreciation, $RBC = 0$), SFAC 5-6 (revenue, $RBC = 1$), SFAS 109 (taxes, $RBC = 4$), and SFAS 128 (EPS, $RBC = 3$). A visual comparison of the RBC scores in Panel B suggests that standards allegedly violated in non-restatement cases are less rules-based on average than firms' significant accounting standards.

Panel C of Table 2 provides a test of the differences between the mean (median) RBC score across the two samples. The standards that were allegedly violated according to the plaintiffs' complaints contain fewer rules-based characteristics than the firms' significant accounting standards (t-statistic $= -16.90$ for mean comparison, z-statistic $= -13.00$ for median comparison, both p-values < 0.01). The difference in RBC scores suggests that when selecting from a list of potential violations in non-restatement cases, plaintiffs tend to select standards that are relatively more principles-based.[15] This evidence supports H1 and is consistent with the "safe harbor" aspect of the protection hypothesis, which argues that plaintiffs will avoid rules-based standards and target principles-based standards in litigation because plaintiffs can second-guess managements' judgment more effectively under principles-based standards.

Robustness Tests for H1

One concern with our analysis above is that firms' significant accounting policies may not be an appropriate set of standards to benchmark against standards cited in lawsuit allegations. For example, firms may be unlikely to violate significant accounting policies because these standards receive more audit scrutiny.[16] If so, then comparing the allegedly violated accounting standards to significant accounting policies may not be an appropriate test.

[14] Other less common events include announcements for defective products or patent infringement, nonfinancial fraud or enforcement actions, analyst or rating downgrades, and auditor disputes.

[15] To ensure results are not driven by the tendency of plaintiffs to cite revenue standards, which tend to be relatively principles-based, we re-ran this comparison by recalculating *RBC* after dropping all revenue standards cited in the lawsuits and the summary of significant accounting policies. Inferences are similar to those reported above.

[16] We thank an anonymous referee for this suggestion.

TABLE 2

Tests Using Non-Restatement Sample

Panel A: Descriptive Statistics

Variable	n	Mean	Median	Std. Dev.
RBC	164	0.87	0.80	0.57
SIZE	164	6.81	6.49	1.89
ROA	164	−4.55	0.11	14.05
BIG4	164	0.88	1.00	0.32
ANN_RET (%)	164	−25.08	−23.77	19.63
MAX_DAMAGE ($MM)	164	4,789	730	13,206
LN_MAX_DAMAGE	164	6.88	6.61	1.73
LIT_RISK	164	0.41	0.00	0.49
INSIDER	164	−0.20	−0.05	0.33
ISSUE	164	0.24	0.00	0.43
REVENUE	164	0.65	1.00	0.48
SHARE_TURN	164	1.57	1.22	1.18
VOLATILITY	164	5.03	4.52	2.28
DISMISS	164	0.41	0.00	0.49
SETTLEMENT ($MM)	94	35	9	121
SETTLEMENT/MAX_DAMAGE	94	0.02	0.01	0.03
SETTLEMENT/MVE	94	0.03	0.01	0.03

Panel A presents descriptive statistics for lawsuits where the firm does not restate earnings from the alleged violation period. Hence, the plaintiff alleges that GAAP was violated, but the firm does not admit to a violation. We label these lawsuits as "non-restatement lawsuits." We obtain lawsuit data from the RiskMetrics Securities Class Action Services database and complaints from the Stanford Securities Class Action Clearinghouse. We obtain the standards mentioned in the firm's significant accounting policies from each firm's 10-K that is filed closest to the lawsuit filing date. Variables are defined in Appendix B.

Panel B: Most Common Accounting Standards

	Non-Restatement Lawsuits			Significant Accounting Policies	
Standard	**Description**	***RBC***	**Standard**	**Description**	***RBC***
APB 10	Revenue Recognition/Taxes	0	ARB 43-4	Inventory Pricing	0
APB 22	Disclosure of Accounting Policies	0	ARB 43-9	PP&E Depreciation and Valuation	0
APB 28	Interim Financial Reporting	0	APB 17	Intangible Assets	1
ARB 43-3a	Current Assets and Current Liabilities	0	SFAC 5-6	Revenue Recognition	1
ARB 43-4	Inventory Pricing	0	SFAS 107	Financial Instrument Disclosure	1
ARB 45	Revenue Recognition (Construction)	0	SFAS 5	Contingent Liability	1
ARB 43-1a	Revenue Recognition	1	SOP 93-7	Advertising Costs	1
SFAC 5-6	Revenue Recognition	1	SFAS 52	Foreign Currency Translation	2
SFAS 121	Long-Lived Asset Impairment	1	ARB 51	Consolidation	3
SFAS 48	Revenue Recognition (Right of Return)	1	SFAS 115	Investments in Debt and Equity Securities	3
SFAS 5	Contingent Liabilities	1	SFAS 128	EPS Calculation	3
SOP 94-6	Disclosure of Significant Risks	1	SFAS 133	Derivatives	3

(continued on next page)

TABLE 2 (continued)

Non-Restatement Lawsuits			Significant Accounting Policies		
Standard	**Description**	***RBC***	**Standard**	**Description**	***RBC***
SAB 101	Revenue Recognition	2	SFAS 142	Intangible Assets	3
SOP 97-2	Revenue Recognition (Software)	2	SFAS 109	Taxes	4
SFAS 115	Investments in Debt and Equity Securities	3	SFAS 123	Stock Option Compensation	4

Panel B reports the 15 standards most commonly cited in non-restatement cases and these firms' significant accounting policy disclosure. The RBC score of these standards is also presented. The RBC score measures whether a standard contains bright-line thresholds, scope and legacy exceptions, large volumes of implementation guidance, and a high level of detail. *RBC* increases by 1 when a standard contains any one of the above-mentioned criteria. *RBC* is calculated each year for each standard because standards change over time as detail, exceptions, and implementation guidance are added. The RBC score reported is the median RBC score over our sample time period (1996–2006). The table is sorted by RBC score.

Panel C: Differences in Average RBC Scores

	RBC of Alleged Violations		RBC of Significant Accounting Policies		Difference	
n	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**
163	0.80	0.87	1.73	1.73	0.93***	0.86***
					(−16.90)	(−13.00)

*, **, *** Indicate significant differences across groups at 0.10, 0.05, and 0.01 levels, respectively (two-tailed).
Panel C presents a test of H1, the protection theory. In Panel C, we test differences in means (medians) across groups and present the t-statistic (z-statistic) below the Difference column. We were unable to obtain a 10-K for one non-restatement lawsuit firm and thus the tests performed in Panel C are performed with a sample of 163 firms.

We conduct two additional tests to address this concern. First, we calculate the proportion of all non-restatement lawsuits that allege a violation of at least one significant accounting policy. We find that this proportion is 75 percent (untabulated). Using a random sample of 50 observations from our restatement lawsuits, we find very similar results with 72 percent of these firms admitting to violating at least one significant accounting policy (untabulated). Overall, it appears fairly common for lawsuits to involve alleged or admitted violations of significant accounting policies.

For our second test, we use a benchmark sample other than significant accounting policies to compare against the *RBC* of non-restatement lawsuit allegations. Specifically, we use the *RBC* of sued and non-sued restatements. Unlike the summary of significant accounting policies, these observations represent standards that firms admit to violating. In untabulated tests, we find that mean and median RBC scores for sued and non-sued restatements are significantly higher than the RBC score of allegations in our non-restatement lawsuit sample. Overall, this evidence suggests that allegations in non-restatement lawsuits are relatively principles-based, regardless of the benchmark used for comparison, consistent with H1 and the "safe harbor" element of the protection theory.

Test of H2

To test H2, concerning the effect of rules-based accounting standards on the filing of lawsuits when a GAAP violation (restatement) occurs, we estimate the following logistic regression:

$$Prob(Sued = 1) = F\Big(\alpha + \beta_1 RBC + \beta'(Controls)\Big). \quad (1)$$

Sued is a dichotomous variable that is set to 1 if a lawsuit is filed, and is set to 0 otherwise. *F* is the cumulative distribution function of the logistic distribution, and *RBC* is as defined above for the accounting standard that was violated. For restatements not resulting in a lawsuit, we manually review the restatement footnote from the applicable 10-K to identify the accounting standards involved. As multiple standards are usually violated, the average *RBC* of all standards violated is used for both filed suits and non-suits. The coefficient estimate on *RBC*, β_1, provides evidence on H2. A negative β_1 coefficient estimate would suggest that firms violating rules-based standards are less likely to be sued than firms violating principles-based standards, consistent with the "innocent misstatement" aspect of protection theory. A positive β_1 coefficient estimate would suggest the opposite and be consistent with the roadmap theory.

Unlike our test of H1, we are unable to use each firm as its own control to test H2 and must utilize a sample of sued and non-sued firms. To control for differences between sued and non-sued firms, we include firm size, profitability, the presence of a Big 4 or predecessor auditor, stock returns around announcement of the restatement, shareholder damages, insider selling activity, stock issuances, share turnover, stock price volatility, and indicator variables for high litigation risk industries and whether revenue was allegedly misstated.[17] Appendix B defines these control variables that prior research finds to be related to litigation incidence (e.g., Palmrose and Scholz 2004; Francis et al. 1994; Shu 2000).

Descriptive Statistics

Panel A of Table 3 contains descriptive statistics for our sample involving restatements. The first set of columns provides descriptive statistics for restatement firms with a lawsuit, and the second set of columns provides descriptive statistics for restatement firms without a lawsuit. The difference in the mean RBC score between the lawsuit (1.25) and no lawsuit (2.63) samples is stark and significant at the 1 percent level. Restatement firms without lawsuits are larger and more profitable. Not surprisingly, these firms also have less severe announcement returns, smaller damages, fewer revenue restatements, lower share turnover, and less volatile returns.

Panel B of Table 3 tabulates the 15 most commonly violated accounting standards in restatements with lawsuits along with the 15 most commonly violated standards in restatements without lawsuits. The most commonly cited standards in restatements with lawsuits include APB 28 (interim reporting, $RBC = 0$), SFAS 5 (contingencies, $RBC = 1$), SFAC 5-6 (revenue, $RBC = 1$), SFAS 48 (right of return, $RBC = 1$), and SAB 101 (revenue, $RBC = 2$).[18]

The most common standards in restatements without lawsuits include SFAS 109 (taxes, $RBC = 4$), SAB 101 (revenue, $RBC = 2$), SFAC 5-6 (revenue, $RBC = 1$), SFAS 133 (derivatives, $RBC = 3$), SFAS 13 (leases, $RBC = 4$), and SFAS 5 (contingencies, $RBC = 1$). Consistent with Panel A, visual comparison of the RBC scores in Panel B suggests that standards violated in restatements with lawsuits are less rules-based on average than standards violated in restatements without lawsuits.

[17] We also re-ran our analysis utilizing abnormal (market-adjusted) returns. Our inferences remain unchanged using this alternative specification.

[18] As seen in Tables 2 and 3, plaintiffs commonly allege violations of APB 20 (Correction of Errors) and APB 28 (Interim Financial Reporting). Further review indicates that plaintiffs often allege these violations whenever the firm restates earnings or when the plaintiff alleges a GAAP violation. In effect, the plaintiff often alleges the firm restated and thus violated GAAP, citing APB 20, and did not report its interim financial statements in accordance with GAAP, citing APB 28. To the extent that these violations are boilerplate and without substance, including them in our analysis could bias our results, especially given that their RBC score is relatively low. Therefore, we conducted a robustness test in which we excluded APB 20 and APB 28 in calculating the average RBC score of each case. After excluding these standards, our results remain statistically significant at the 0.01 level and also remain economically significant.

TABLE 3

Tests Using Restatement Sample

Panel A: Descriptive Statistics

	Lawsuits Filed				Lawsuits Not Filed			
Variable	**n**	**Mean**	**Median**	**Std. Dev.**	**n**	**Mean**	**Median**	**Std. Dev.**
RBC	189	1.25	1.14	0.67	84	2.63***	3.00***	1.23
SIZE	189	6.77	6.72	1.84	84	7.72***	7.52***	1.46
ROA	189	−4.64	−0.53	13.29	84	0.53***	0.51***	3.38
BIG4	189	0.82	1.00	0.39	84	0.88	1.00	0.33
ANN_RET (%)	189	−21.92	−18.25	20.23	84	−9.18***	−6.43***	9.86
MAX_DAMAGE ($MM)	189	6,422	929	17,465	84	3,037	390**	12,293
LN_MAX_DAMAGE	189	6.95	6.83	1.94	84	6.18***	5.97**	1.71
LIT_RISK	189	0.44	0.00	0.50	84	0.32*	0.00*	0.47
INSIDER	189	−0.13	−0.01	0.26	84	−0.11	−0.04*	0.25
ISSUE	189	0.24	0.00	0.43	84	0.25	0.00	0.44
REVENUE	189	0.74	1.00	0.44	84	0.27***	0.00***	0.45
SHARE_TURN	189	1.28	0.96	1.04	84	0.85***	0.57**	0.66
VOLATILITY	189	4.70	4.29	2.08	84	2.96***	2.70***	1.35
DISMISS	189	0.26	0.00	0.44				
SETTLEMENT ($MM)	137	77	13	190				
SETTLEMENT/ MAX_DAMAGE	137	0.03	0.02	0.04				
SETTLEMENT/MVE	137	0.04	0.02	0.06				

*, **, *** Indicate significant differences across groups at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).
Panel A displays descriptive statistics for lawsuits involving restatements and potential lawsuits involving a restatement that were not filed. We obtain lawsuit data from the RiskMetrics Securities Class Action Services database, complaints from the Stanford Securities Class Action Clearinghouse, and restatements without lawsuits (potential suits not filed) from the 1997–2006 GA0 sample. We do note, however, that the Riskmetrics data do not contain data on the dollar magnitude of the settlement for two restatement lawsuits. Thus, we have data on the magnitude of the settlement for 137 of the 139 restatement lawsuits that were settled. We performed t-tests of differences across groups. Variables are defined in Appendix B.

Panel B: Most Common Standards Violated

	Restatements with Lawsuits			Restatements without Lawsuits	
Standard	**Description**	***RBC***	**Standard**	**Description**	***RBC***
APB 10	Revenue Recognition/Taxes	0	ARB 43-4	Inventory Pricing	0
APB 22	Disclosure of Accounting Policies	0	SFAC 5-6	Revenue Recognition	1
APB 28	Interim Financial Reporting	0	SFAS 5	Contingent Liabilities	1
ARB 43-4	Inventory Pricing	0	SFAS 95	Cash Flow Statement	0
ARB 43-1a	Revenue Recognition	1	SAB 101	Revenue Recognition	2
EITF 94-03	Restructuring Charges	1	SOP 97-2	Revenue Recognition (Software)	2
SFAC 5-6	Revenue Recognition	1	APB 18	Equity Investments	3
SFAS 121	Long-Lived Asset Impairment	1	ARB 51	Consolidation	3
SFAS 48	Revenue Recognition (Right of Return)	1	SFAS 133	Derivatives	3
SFAS 5	Contingent Liabilities	1	SFAS 141	Business Combinations	3
SFAS 86	Cost of Computer Software	1	SFAS 142	Intangible Assets	3

(continued on next page)

TABLE 3 (continued)

Restatement with Lawsuits			Restatements without Lawsuits		
Standard	**Description**	***RBC***	**Standard**	**Description**	***RBC***
APB 20	Correction of Errors and Changes in Estimates	2	APB 16	Business Combinations	4
SAB 101	Revenue Recognition	2	SFAS 109	Taxes	4
SOP 97-2	Revenue Recognition (Software)	2	SFAS 123	Stock Option Compensation	4
APB 16	Business Combinations	4	SFAS 13	Leases	4

Panel B reports the 15 most common standard violations or alleged violations obtained from filed lawsuits and potential lawsuits involving restatements. Our sample of lawsuits involving a restatement was obtained from the Securities Class Action Services database. Our sample of restatements that could have potentially resulted in a suit was obtained from the 1997–2006 GAO sample and includes instances where the firm's restatement announcement caused the firm's market value to drop by at least $50 million dollars. The RBC score of these standards is also presented. The RBC score measures whether a standard contains bright-line thresholds, scope and legacy exceptions, large volumes of implementation guidance, and a high level of detail. *RBC* increases by 1 when a standard contains any one of the above-mentioned criteria. *RBC* is calculated each year for each standard because standards change over time as detail, exceptions, and implementation guidance are added. The RBC score reported is the median RBC score over 1996–2006, the sample's time period. The table is sorted by RBC score.

Panel C: Logistic Regression Results

$$Prob(Sued = 1) = F\Big(\alpha + \beta_1 RBC + \beta'(Controls)\Big). \quad (1)$$

	All Lawsuits			Settled Lawsuits			Dismissed Lawsuits		
Variable	**Coeff.**	**t-statistic**	**Marginal Effect**	**Coeff.**	**t-statistic**	**Marginal Effect**	**Coeff.**	**t-statistic**	**Marginal Effect**
Intercept	2.39	(1.47)		1.29	(0.72)		2.34	(1.04)	
RBC	−1.32	(−5.73)***	−0.121	−1.44	(−5.08)***	−0.123	−1.03	(−3.95)***	−0.134
SIZE	−0.83	(−3.29)***	−0.076	−0.92	(−3.13)**	−0.079	−0.85	(−2.53)**	−0.111
ROA	−0.07	(−1.23)	−0.007	−0.09	(−1.26)	−0.008	−0.05	(−0.79)	−0.007
BIG4	−0.54	(−0.88)	−0.050	−0.74	(−1.03)	−0.063	−0.03	(−0.04)	−0.004
ANN_RET	−0.02	(−1.69)*	−0.002	−0.03	(−1.81)*	−0.002	−0.02	(−1.00)	−0.003
LN_MAX_DAMAGE	0.98	(4.69)***	0.089	1.17	(4.64)***	0.100	0.83	(3.10)***	0.108
LIT_RISK	−0.25	(−0.53)	−0.023	−0.28	(−0.54)	−0.024	−0.32	(−0.58)	−0.042
INSIDER_SALE	−0.51	(−0.62)	−0.047	−0.99	(−1.04)	−0.084	−0.06	(−0.06)	−0.008
ISSUE	−0.40	(−0.82)	−0.036	−0.30	(−0.52)	−0.025	−0.41	(−0.67)	−0.053
REVENUE	0.94	(2.23)**	0.086	1.18	(2.45)**	0.101	0.72	(1.40)	0.094
SHARE_TURN	0.32	(0.96)	0.029	0.07	(0.20)	0.006	0.61	(1.51)	0.080
VOLATILITY	−0.08	(−0.40)	−0.008	0.00	(0.02)	0.000	−0.31	(−1.12)	−0.040
Pseudo-R^2	47.1%			53.5%			40.2%		
n	273			223			134		

*, **, *** Denote significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).
Panel C reports the results of a logistic regression investigating the impact of rules-based characteristics on the decision to file a lawsuit when the firm admits to violating GAAP (restatement lawsuit). In Equation (1), F is the cumulative distribution function of the logistic distribution. We utilize the *RBC* measure from Mergenthaler (2010), which increases by 1 when a standard contains any one of the four following criteria: (1) bright-line thresholds, (2) scope and legacy exceptions, (3) large volumes of implementation guidance, and (4) a high level of detail. Our sample of 189 firms with a restatement where a lawsuit was filed between 1996 and 2005 was obtained from the Securities Class Action Services database. Our sample of 84 restatements where a lawsuit was not filed was obtained from the 1997–2006 GAO sample

(continued on next page)

TABLE 3 (continued)

and includes instances where the firm's restatement announcement caused the firm's market value to drop by at least $50 million dollars. The "All Lawsuits" sample includes 189 restatements with lawsuits and 84 restatements without lawsuits, for 273 total observations. The "Settled Lawsuits" sample includes 139 restatements where the lawsuit was settled (out of the 189 total restatements with lawsuits) and the entire sample of 84 restatements without lawsuits, for 223 total observations. The "Dismissed Lawsuits" sample includes 50 restatements where the lawsuit was dismissed (the remainder of the 189 total restatements with lawsuits) and the entire sample of 84 restatements without lawsuits, for 134 total observations. t-statistics are in parentheses. All variables that lie below (above) the 1st (99th) percentiles are winsorized. The marginal effects are calculated for each observation in our sample and then averaged over all the observations (Greene 2003).

Lawsuit Filing Regression

Panel C of Table 3 reports results from estimating Equation (1). The first set of columns presents results for the combined sample of all 189 restatements with lawsuits and 84 restatements without lawsuits. *RBC* is strongly negatively related to the probability of filing a lawsuit (t-statistic $= -5.73$, $p < 0.01$), consistent with the innocent misstatement defense of the protection theory in H2. The marginal effects tabulated in Panel C suggest that a one-unit increase in *RBC* decreases the likelihood of litigation by 12.1 percentage points. This effect is both statistically significant and economically meaningful. For example, the likelihood of being sued decreases, on average, by approximately 12 percentage points when a company violates SFAS 52, which has an *RBC* of 1, versus violating SFAS 5, which has an RBC score of 0. Overall, results for the restatement sample provide support for the protection theory, suggesting rules-based standards decrease litigation risk by providing an "innocent misstatement" defense for restatements.

Robustness Tests for H2

Presence of Fraud versus Errors

We next consider whether differences in the underlying nature of the violation between our treatment and control samples drive the results in the first set of columns of Panel C in Table 3. For example, our treatment sample of restatement firms with lawsuits could consist primarily of clear-cut cases of fraud, while our control sample could primarily represent obvious errors unlikely to trigger lawsuits. To address this concern, we perform two analyses that involve modifying our sample to assess whether differences in the nature of the violation drive our results.

First, we divide the 189 restatements with lawsuits into 139 settled lawsuits and 50 dismissed lawsuits and re-estimate Equation (1) after retaining all 84 control observations for both of the subsamples. Settled suits represent cases where the court found a strong inference of fraud, while dismissed suits represent cases in which the court did not find a strong inference of fraud. Thus, the settled cases are more credible accounting fraud cases *ex post*, while the dismissed cases are more likely to include errors. We include both sets of results for comparison. The second and third set of columns of Panel C in Table 3 present the results. The strong negative relation between *RBC* and the filing of a lawsuit remains in both subsamples, with similar estimated economic magnitudes of -12.3 percent for settled cases in the "Settled Lawsuits" column and -13.4 percent fordismissed cases in the "Dismissed Lawsuits" column, with $p < 0.01$ in each case. Thus, the negative loading on *RBC* remains even when we partition our sample to separate more clear-cut cases of accounting fraud from cases that may represent errors. Specifically, the comparison of restatements without lawsuits to dismissed cases indicates that a clear separation between fraud and errors does not drive our results.

Second, in Table 4 we report results from a sample of 131 accounting irregularity firms from Mergenthaler (2010), all of which were investigated by the SEC for questionable accounting

TABLE 4

Robustness Test for Filing Decision Using SEC Investigation Sample

$$Prob(Sued = 1) = F\Big(\alpha + \beta_1 RBC + \beta'(Controls)\Big). \quad (1)$$

Variable	Coeff.	t-statistic	Marginal Effect
Intercept	−0.11	(−0.07)	
RBC	−0.87	(−3.18)***	−0.129
SIZE	0.05	(0.37)	0.007
ROA	0.00	(0.13)	0.000
BIG4	0.57	(0.77)	0.084
ANN_RET	−0.04	(−2.05)**	−0.006
LN_MAX_DAMAGE	0.22	(2.13)**	0.032
LIT_RISK	−0.97	(−1.80)*	−0.143
INSIDER_SALE	1.07	(0.95)	0.158
ISSUE	−0.07	(−0.13)	−0.010
REVENUE	0.13	(0.23)	0.020
SHARE_TURN	0.81	(2.37)**	0.119
VOLATILITY	0.06	(0.37)	0.009
Pseudo-R^2	32.6%		
n	131		

*, **, *** Denote significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).
This table reports the results of analyses that examine whether our main results from Equation (1) are robust to an alternate specification. In this analysis we use a sample of restatements that were investigated by the SEC from Mergenthaler (2010). This classification scheme is similar to that employed by Hennes et al. (2008) to identify accounting irregularities; thus, this analysis looks at whether rules-based standards impact the likelihood of litigation when the analysis is confined to accounting irregularities. t-statistics are in parentheses. All variables that lie below (above) the 1st (99th) percentiles are winsorized. Variables are defined in Appendix B.

practices. Some of these firms were named in a class action lawsuit and some were not. Given that the SEC investigated these firms, the concern that non-sued observations represent obvious accounting errors is mitigated.[19] The relation between *RBC* and the filing decision is still significantly negative in this specification ($p < 0.01$).

Taken together, the results in Tables 3 and 4 suggest that differences in the nature of the violation in terms of frauds versus errors between the control and treatment samples do not drive our findings. Instead, it appears that plaintiffs tend to avoid filing lawsuits for violations of rules-based standards even when a potential argument for fraudulent intent exists. The key is that plaintiffs must be able to persuade the court that a *strong* inference of fraud exists, which is likely difficult with violations of rules-based standards due to the innocent misstatement defense.

[19] We do not utilize this sample as our primary sample due to the conflicting incentives of the SEC and plaintiffs' lawyers. As we discussed in Section II, plaintiffs' lawyers are motivated by potential settlement size (Coffee 2006), which is why we screen on potential damages in our primary analysis.

Transaction Complexity and Standard Age

An additional concern with our findings is that perhaps the *RBC* measure picks up factors other than rules-based characteristics of accounting standards. For example, it is possible that the complexity of the underlying transactions, not just rules-based accounting standards, contributes to our results. As a practical matter, accounting standards tend to be more rules-based when transactions are more complex (Nelson 2003). In addition, when inferring intent, courts appear to consider both the complexity of the accounting standards (e.g., *In re Microstrategy, Inc. Securities Litigation*, 115 F. Supp. 620, 652 (E.D. Va. 2000)) and the complexity of the underlying transaction (e.g., *In re Bristol-Myers Squibb Securities Litigation*, 312 F. Supp. 2d 549, S.D.N.Y. (2004)). The negative relation between *RBC* and lawsuit filings in Table 3 could therefore be due to either the complexity of rules-based standards, the complexity of the underlying transactions associated with rules-based standards, or both.

We explore this issue by developing multiple proxies for transaction complexity. Our first proxy for transaction complexity involves searching each standard for three root words: (1) complex*, (2) complic*, and (3) elaborat*. If any of these words are found in the standard, then we read the surrounding paragraph to determine if the standard mentions the underlying transaction as complex. We then create an indicator variable that is equal to 1 if the standard refers to the underlying transaction as complex, and is equal to 0 otherwise. Untabulated analysis indicates that this indicator variable categorizes 35 percent of the underlying transactions in our sample as complex. For example, the following standards involve complex transactions using this proxy: (1) SFAS 133 (derivatives), (2) APB 14 (convertible debt), (3) SFAS 13 (leases), (4) SFAS 109 (taxes), and (5) SFAS 87 (pensions). Finally, since many of the 273 restatements in our sample involve more than one standard (and thus more than one underlying transaction), we calculate the mean of this indicator variable for each of the 273 restatements. This procedure yields our first complexity measure, which we label *COMPLEXITY_1*.

Our second proxy for transaction complexity (*COMPLEXITY_2*) is the mean of the number of words contained in the definition of the underlying transactions involved in each restatement. We obtain definitions from the glossary of the FASB Codification. For example, for SFAS 13, the measure counts the number of words needed to define a lease under the assumption that it will take more words to describe complex transactions. We utilize the log of this measure to mitigate skewness.[20]

Table 5 presents our analyses designed to isolate the effects of transaction complexity from *RBC*. In Column (1) of Table 5, we include *COMPLEXITY_1* as a covariate in our lawsuit filing analysis. After including this variable, the *RBC* coefficient remains negative and significant at the 0.01 level (t-statistic = −4.17). Interestingly, the *COMPLEXITY_1* coefficient is also negative and significant, suggesting that both transaction complexity and the rules-based nature of the standard affect the decision to file a class action lawsuit. Column (2) of Table 5 reports the results using our second measure of complexity (*COMPLEXITY_2*) as a covariate, and we find that *RBC* remains significantly negative at the 0.01 level (t-statistic = −5.71) while *COMPLEXITY_2* is also significant at the 0.01 level. Consistent with Column (1), these results suggest that both *RBC* and

[20] Thirteen of the 273 restatements in our sample involve no underlying transaction and deal exclusively with accounting issues (e.g., how to calculate EPS or report changes in accounting policies). For these observations, we assign them the lowest transaction complexity score obtained from all other restatements that have an underlying transaction. We do this because these restatements are not likely impacted by transaction complexity. We also re-ran our analysis after dropping these observations. Our results are unchanged using this alternative specification.

transaction complexity affect the filing decision, presumably because both complex rules and complex transactions make it more difficult to infer fraudulent intent.[21]

To assess the economic significance of *RBC* relative to our measures of transaction complexity, we calculated standardized regression coefficients as well as marginal effects for a one standard deviation change in either *RBC* or our two transaction complexity measures. In untabulated results, we found that a one standard deviation increase in *RBC* has roughly a 147 percent (25 percent) bigger reduction in the probability of being sued compared to our first (second) complexity measure. Thus, it appears *RBC* has a larger economic effect on the probability of being sued compared to transaction complexity. However, we caution that perfectly separating the complexity of rules-based standards from the complexity of underlying transactions is difficult to achieve from an empirical standpoint. Nevertheless, the tests above do indicate that our results do not appear to be driven exclusively or even predominantly by transaction complexity.

Finally, in the last column of Table 5, we include the average age of the standards violated as an additional covariate. In general, there has been an increase in *RBC* across all standards over time (untabulated). At the same time, newer standards, for example for derivatives, stock options, pensions, etc., tend to involve more complex transactions and to have higher RBC scores. As such, the significance of *RBC* could be related to standard age, but the results in Column (3) of Table 5 do not support this conjecture. Although the results suggest that violations of older standards are more likely to trigger lawsuits, *RBC* remains significantly negatively related to lawsuit incidence ($t = -4.79$).

Other News and Revenue

We perform two additional untabulated robustness checks for our restatement sample. First, we exclude observations involving earnings announcements within three days of the restatement announcement to avoid confounding our filing model with other news. Excluding these observations does not change the economic or statistical significance of our results. Second, we also found significantly negative coefficients on *RBC* both among restatements involving revenue and restatements not involving revenue. This finding suggests that the relation between *RBC* and the probability of litigation is significant in both revenue and non-revenue cases.

Test of H3

To test the effect of rules-based standards on litigation outcomes, we first estimate the following logistic regression:

$$Prob(Meritorious = 1) = F\Big(\alpha + \beta_1 RBC + \beta'(Controls)\Big). \tag{2}$$

Meritorious is a dichotomous variable coded 1 if the lawsuit reaches a meritorious outcome as defined below. We again include firm size and profitability as control variables since larger, more profitable firms may have access to better legal counsel and may be more successful in preventing a meritorious outcome. As discussed above, the outcome of the suit hinges on the perceived strength of the case and ability to prove scienter. Thus, we include variables based on plaintiffs' complaints

[21] We also re-ran our primary analysis excluding SFAS 13 and SFAS 133 violations to ensure that they do not drive our results. These standards are generally viewed as extremely rules-based standards and involve complex underlying transactions. This leads to a common perception that these standards often result in unintentional errors in their application. Untabulated results are very similar when these observations are excluded. We also found that violations of SFAS 13 (leases) and SFAS 109 (taxes) are clustered in our sample during the years of 2003–05. The clustering appears to be related to regulatory enforcement by the SEC (SFAS 13) and new internal control assurances provided as a result of SOX (SFAS 109). Our inferences are also unchanged when this pair of standards is omitted from our analyses.

TABLE 5

Robustness Tests Using Restatement Sample
Transaction Complexity and Standard Age

$$Prob(Sued = 1) = F\Big(\alpha + \beta_1 RBC + \beta'(Controls)\Big). \quad (1)$$

	(1)		(2)		(3)	
Variable	**Coeff.**	**t-statistic**	**Coeff.**	**t-statistic**	**Coeff.**	**t-statistic**
Intercept	2.44	(1.48)	9.42	(3.52)***	0.44	(0.24)
RBC	−1.09	(−4.17)***	−1.43	(−5.71)***	−1.13	(−4.79)***
COMPLEXITY_1	−1.34	(−1.95)*				
COMPLEXITY_2			−2.38	(−3.96)***		
AGE					0.06	(2.47)**
SIZE	−0.83	(−3.25)***	−0.67	(−2.40)**	−0.77	(−3.02)***
ROA	−0.08	(−1.24)	−0.06	(−0.87)	−0.06	(−0.95)
BIG4	−0.66	(−1.04)	−0.78	(−1.20)	−0.64	(−1.02)
ANN_RET	−0.02	(−1.65)*	−0.03	(−2.03)**	−0.02	(−1.49)
LN_MAX_DAMAGE	0.98	(4.61)***	0.91	(3.92)***	0.95	(4.49)***
LIT_RISK	−0.39	(−0.81)	−0.04	(−0.08)	−0.20	(−0.40)
INSIDER_SALE	−0.57	(−0.71)	−1.14	(−1.26)	−0.51	(−0.59)
ISSUE	−0.27	(−0.55)	−0.48	(−0.88)	−0.54	(−1.12)
REVENUE	0.85	(2.00)**	1.51	(3.20)***	1.33	(2.86)***
SHARE_TURN	0.26	(0.80)	0.08	(0.23)	0.22	(0.64)
VOLATILITY	−0.04	(−0.17)	0.01	(0.06)	0.00	(−0.02)
Pseudo-R^2	47.8%		51.6%		48.3%	
n	273		273		273	

*, **, *** Denote significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).
This table reports the results of analyses that examine whether transaction complexity or the age of the standard drive our main results from Equation (1). In Column (1), we include our first complexity measure, *COMPLEXITY_1*, as an additional covariate. *COMPLEXITY_1* is a dummy variable that is equal to 1 when the transaction is described as complex, and is equal to 0 otherwise. We identify transactions described as complex by reading the paragraphs in the standard that contain the following root words or their derivatives: (1) complex*, (2) complic*, or (3) elabor*. In Column (2), we include an alternative proxy for complexity, *COMPLEXITY_2*, which is defined as the natural log of the length of the definition used to describe the underlying transaction that the standard pertains to. If the standard has no underlying transaction (e.g., FAS 128, which outlines how to calculate EPS), then we input the lowest transaction complexity score recorded for all other standards that had an underlying transaction. We do this because standards without an underlying transaction are not impacted by transaction complexity and their complexity score should thus be low because there really is no impact from transaction complexity. Finally, Column (3) includes the age of the standard as an additional covariate. All variables that lie below (above) the 1st (99th) percentiles are winsorized. Variables are defined in Appendix B.

that are plausibly positively related to the ability to prove scienter, including whether: (1) the firm's auditor was named as a defendant, (2) insider trading was alleged, (3) revenue manipulation was alleged, (4) an external whistleblower, such as the press, is mentioned in uncovering the alleged fraud, (5) an internal (i.e., board of directors) or external (i.e., SEC) investigation has taken place, (6) top executives have resigned during or after the class period, and (7) the auditor has resigned. We also include announcement stock returns and the maximum potential damage as a proxy for the extent to which fraud can be inferred. Finally, we include indicator variables for high litigation risk industries and whether the case alleges a violation of Section 11 of the 1933 Securities Act.

TABLE 6

Tests for the Effect of the Rules-Based Characteristics on the Lawsuit Outcomes

	(1) Survives Dismissal Decision		(2) Settlement of at Least 0.5% of MVE		(3) Settlement Amount (among Meritorious Settlements)	
Variable	**Coeff.**	**t-statistic**	**Coeff.**	**t-statistic**	**Coeff.**	**t-statistic**
Intercept	−0.35	(−0.34)	−0.87	(−0.90)	0.07	(3.79)***
RBC	−0.18	(−0.69)	0.29	(1.10)	0.01	(0.99)
SIZE	−0.17	(−0.91)	−0.51	(−2.65)***	−0.01	(−2.54)***
ROA	0.00	(−0.10)	−0.01	(−0.57)	0.00	(1.20)
ANN_RET	−0.01	(−1.27)	−0.02	(−2.40)**	0.00	(0.24)
LN_MAX_DAMAGE	0.21	(1.19)	0.36	(2.05)**		
AUDITOR_NAMED	1.31	(2.21)**	0.79	(1.70)*	0.02	(2.22)**
INSIDER_SALE	−0.13	(−0.33)	0.32	(0.89)	0.00	(−0.03)
LIT_RISK	0.80	(2.03)**	0.74	(2.04)**	0.00	(0.03)
REVENUE	0.27	(0.64)	0.38	(0.91)	−0.02	(−1.84)*
WHISTLE	1.56	(1.95)*	1.15	(1.94)*	0.01	(0.98)
INVESTIGATION_INTERN	0.22	(0.53)	0.20	(0.52)	0.01	(0.80)
INVESTIGATION_EXTERN	0.10	(0.21)	0.29	(0.65)	0.00	(−0.17)
EXEC_TURNOVER	−0.14	(−0.32)	0.10	(0.25)	0.00	(0.33)
AUDITOR_RESIGN	1.38	(2.25)**	0.70	(1.42)	0.01	(0.73)
SEC_11	0.02	(0.03)	0.18	(0.41)	0.01	(1.08)
R^2	15.5%		22.4%		25.8%	
n	189		189		116	

*, **, *** Denote significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

This table reports the results of examining the impact of rules-based characteristics on lawsuit outcomes. Columns (1) and (2) report the results of a logistic regression exploring the impact of rules-based characteristics on two proxies for meritorious outcomes, while Column (3) reports the results of an OLS regression examining the impact of rules-based characteristics on the magnitude of settlement amounts. Column (1) utilizes the dismissal decision as a proxy for a meritorious outcome. A suit that survives the dismissal decision is equal to 1, while a suit that is dismissed is equal to 0. Column (2) follows Johnson et al. (2007) and classifies a suit as meritorious if the settlement is at least 0.5 percent of the firm's market value of equity. Finally, Column (3) follows the Johnson et al. (2007) methodology to identify meritorious cases. Then, among the meritorious cases, it reports the results that examine the impact of rules-based characteristics on settlement amounts. Our sample of 189 suits (116 of which are termed meritorious according to the Johnson et al. [2007] methodology) was obtained from the Securities Class Action Services database. t-statistics are in parentheses. All variables that lie below (above) the 1st (99th) percentiles are winsorized. Variables are defined in Appendix B.

Table 6 contains estimates from Equation (2), using two proxies of meritorious suit outcomes. Column (1) uses the dismissal decision as a proxy, with *Meritorious* coded as 1 if the suit survives the dismissal decision, and 0 otherwise. In Column (2), we utilize the Johnson et al. (2007) measure for meritorious lawsuit outcomes, coding *Meritorious* as 1 if the settlement is greater than 0.5 percent of the firm's market value of equity, and 0 otherwise. Johnson et al. (2007) use this measure because certain cases that survive dismissal may be non-meritorious, even though the allegations were sufficient to survive a motion to dismiss. In these cases, the company may settle to avoid further litigation costs.

Inconsistent with H3, we find no significant relation between *RBC* and meritorious suit outcomes using either proxy. The insignificance of *RBC* and most other variables in Equation (2) is

perhaps not surprising. Prior studies generally find that few variables help predict suit outcomes (see, Johnson et al. 2007; Pritchard and Sale 2005). The fact that many aspects of this process are unobservable or difficult to measure likely contributes to the inability of the model to explain the dismissal decision with much precision. In addition, as we discuss above, variables correlated with the strength of the case, including *RBC*, are likely to be anticipated by plaintiffs' attorneys, leading to a screening process at the filing stage. Thus, variables such as *RBC* may have little ability to predict lawsuit outcomes once weaker cases have been screened out at the filing stage.

As a final test of H3, we perform an OLS regression of settlement amounts on the covariates in Equation (2). Settlements are scaled by maximum damages during the class period and we exclude non-meritorious settlements following the Johnson et al. (2007) definition above. Results in Column (3) of Table 6 show that the coefficient on *RBC* is positive, but not significant at conventional levels ($t = 0.99$). Consistent with earlier tests, we find no significant relation between *RBC* and lawsuit outcomes.

V. LIMITATIONS

Three potential limitations merit discussion in the context of our findings. The first involves the possibility that *ex ante* litigation risk endogenously affects the rules-based characteristics of accounting standards as preparers and auditors demand more guidance in areas where litigation risk is higher. We do not attempt to model simultaneity in our data, primarily because measuring *ex ante* litigation risk across roughly 80 years of U.S. GAAP standards using only post-1996 litigation data seems infeasible. One would expect this source of endogeneity to bias the results in favor of finding a positive relation between litigation risk and rules-based accounting standards. Because we find the opposite, it does not appear that the *ex ante* effect of litigation risk on accounting standards is a significant concern for inferences in our sample.

The second limitation relates to the unobservability of key financial reporting decisions. For example, it is possible that the rules-based nature of accounting standards affects the decision to restate. Rules-based misstatements may be more easily detectable by auditors or regulators, and rules-based standards provide clear guidance that could force a firm to restate when it is outside that guidance. Both of these factors could lead to more restatements involving rules-based standards. If this is the case, then principles-based standards could help firms avoid litigation because many potential principles-based violations would be unobservable. The universe of observable misstatements (i.e., restatements) might therefore be biased toward firms with rules-based misstatements. However, the theory most relevant to this concern, the roadmap theory, predicts these rules-based misstatements should be the most likely to trigger litigation. As we find just the opposite, it does not appear this concern affects inferences in our study. Put another way, even if rules-based standards are more likely to trigger restatements, we find no evidence that these rules-based restatements increase the threat of litigation.

Other forms of unobservability are not as innocuous for our inferences. If firms choose to engage in fraudulent accounting more often in relatively principles-based areas of GAAP, then this effect could contribute to our findings. However, since the underlying incidence of fraud or earnings management is unobservable, this concern is a limitation of any archival study of litigation or earnings manipulation.[22]

The final limitation is that we do not consider all of the potential effects of a shift to a principles-based accounting system. Standard-setters are likely primarily concerned with the

[22] Mergenthaler (2010) provides some evidence in this area, finding that the dollar magnitude of accounting violations is larger when rules-based standards are involved. As such, this should bias against our finding that principles-based standards are more likely to lead to securities litigation.

usefulness of information produced by the accounting system, and we do not address this issue. However, litigation is an important potential "side effect" in such a shift, particularly in the U.S. given its highly litigious nature (Schipper 2003; SEC 2003). Our consideration of litigation does not include all potential costs of a switch to principles-based standards and, thus, we cannot make a recommendation regarding whether such a switch is likely to be beneficial overall. Rather, we only provide evidence on the likely effect of rules-based standards on litigation incidence and outcomes.

VI. CONCLUSION AND DISCUSSION

This study provides the first systematic empirical evidence regarding the association between rules-based accounting standards and securities litigation. Our evidence is important because the U.S. Congress issued a mandate in SOX requiring the SEC to conduct a study of the cost of implementing more principles-based standards in the U.S., and the SEC (2003) specifically noted in the study that such a shift could affect the incidence of litigation. More recently, the SEC (2010) issued a proposal that would require public firms in the U.S. to adopt the more principles-based IFRS.

We utilize two samples of sued firms to test the effect of principles-based standards on the incidence of litigation. First, we compare the standards cited by plaintiffs in cases that do not involve restatements to the standards identified in each sued firm's significant accounting policies. In such cases, the protection theory predicts that plaintiffs will tend to allege standards that are more principles-based due to the safe harbor protection provided by rules-based standards when firms follow the rules, as well as plaintiffs' ability to "second-guess" accounting decisions under principles-based standards. We find evidence consistent with the prediction of the protection theory, that rules-based standards provide a "safe harbor" and are thus not often cited in lawsuits.

Second, using a sample of restatements, we find that violations of rules-based standards are associated with a lower probability of litigation. This finding is inconsistent with assertions that violations of rules-based standards provide plaintiffs with a "roadmap" to successful suits. Rather, it is consistent with the protection theory in that complex, rules-based standards provide firms with an "innocent misstatement" defense. This relation remains economically and statistically significant after controlling for transaction complexity and is robust to a variety of alternative specifications.

In summary, our evidence suggests that rules-based accounting standards reduce the threat of litigation. However, the overall effects of a shift to a more principles-based accounting system are difficult to predict because "the U.S. litigation system and accounting practices [would] transition to a new equilibrium" and numerous factors would change simultaneously (Hail et al. 2010, 377). Thus, while we are leery of definitively predicting a shift in the equilibrium level of securities litigation should the U.S. shift to a more principles-based accounting system, our findings do offer insight for policymakers.

First, our evidence is consistent with the notion that increasing the extent of principles-based accounting standards would weaken safe harbor protection and give plaintiffs a wider menu of potential "judgment-based" allegations in cases not involving an admitted misstatement. This would increase the threat of litigation for firms. Second, decreasing the extent of rules-based accounting standards might make the "innocent misstatement" defense less credible given an accounting restatement, and also increasing the threat of litigation. However, increasing the extent of principles-based accounting standards could also reduce the number of restatements in general, but this development may have little effect since we find that rules-based restatements pose a relatively low litigation threat in the current legal environment. Finally, we emphasize that the U.S. court system already has built-in protections against frivolous securities litigation through the PSLRA. Thus, any increase in the threat of litigation from a switch in accounting standards may be at least partially mitigated by these protections.

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APPENDIX A
EXAMPLE OF SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES FROM 10-K AND LAWSUIT ALLEGATIONS

POLICY MANAGEMENT SYSTEMS CORP, 12/31/1999
NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

ARB 51 (*RBC* = 3), APB 18 (*RBC* = 3)
BASIS OF PRESENTATION

The consolidated financial statements are prepared on the basis of generally accepted accounting principles and include the accounts of the Company and its majority owned subsidiaries (collectively, the "Company"). All material intercompany balances and transactions have been eliminated. The equity method of accounting is used when the Company does not have effective control and has a 20 percent to 50 percent interest in other companies. Under the equity method, original investments are recorded at cost and adjusted by the Company's share of undistributed earnings or losses of these companies.

SFAS 5 (*RBC* = 1)
USE OF ESTIMATES

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Financial statement line items that include significant estimates include the allowance for uncollectible receivables, accrued revenues, accrued restructuring charges, goodwill and other intangibles, net, capitalized software and costs, net, and income tax balances.

CON 5-6 (*RBC* = 1), SOP 97-2 (*RBC* = 2), ARB 45 (*RBC* = 0)
REVENUE RECOGNITION

The Company's revenues are generated primarily by licensing software systems and providing outsourcing and professional services to the global insurance and related financial services industries. All revenues are recorded in accordance with Statement of Position 97-2, *Software Revenue Recognition* (SOP 97-2), and Statement of Position 81-1, *Accounting for Performance of Construction-Type and Certain Product-Type* **Contracts (SOP 81-1). [Note: details of revenue**

recognition omitted for brevity. Also, SOP 81-1 provides interpretive guidance related to ARB 45 (percentage of completion accounting), so we use that standard to calculate *RBC*.]

CASH AND CASH EQUIVALENTS

The Company considers all highly liquid investments with an original maturity of three months or less to be cash equivalents.

SFAS 115 (*RBC* = 3), SFAS 107 (*RBC* = 1)
MARKETABLE SECURITIES

Debt securities included in the Company's investment portfolio for which there is a positive intent and ability to hold to maturity are carried at amortized cost. Debt securities that may be sold prior to maturity and all marketable equity securities are classified as available-for-sale and carried at fair value. The fair value is estimated based on quoted market prices for those or similar investments. Net unrealized gains and losses, determined on the specific identification method, on securities classified as available-for-sale are carried as a separate component of accumulated other comprehensive income.

Realized gains and losses are included in net income and the cost of securities sold is based on the specific identification method. Marketable securities were sold for cash proceeds of $2.1 and $3.3 million during 1999 and 1998, respectively. There were no sales of marketable securities during 1997.

ARB 43-9b (*RBC* = 0), ARB 43-9c (*RBC* = 0)
PROPERTY AND EQUIPMENT

Property and equipment, including support software acquired for internal use, is stated at cost less accumulated depreciation and amortization. Property and equipment is depreciated on a straight-line basis over its estimated useful life.

Gains and losses on dispositions of property and equipment are determined based on the difference between the cash plus the fair value of any assets received (in the case of nonmonetary transactions) less the net book value of the asset disposed of at the date of disposition.

APB 17 (*RBC* = 1), SFAS 121 (*RBC* = 1)
GOODWILL AND OTHER ACQUIRED INTANGIBLE ASSETS

Identifiable intangible assets and goodwill are recorded and amortized over their estimated economic lives or periods of future benefit. The lives established for these assets are a composite of many factors that are subject to change because of the nature of the Company's operations. This is particularly true for goodwill that reflects value attributable to the going-concern nature of acquired businesses, the stability of their operations, market presence, and reputation. Accordingly, the Company evaluates the continued appropriateness of these lives and recoverability of the carrying value of such assets based upon the latest available economic factors and circumstances. The Company evaluates the recoverability of all long-lived assets, including specific intangible assets and goodwill, based upon a comparison of estimated future cash flows from the related operations with the then corresponding carrying values of those assets. Impairment of value, if any, is recognized in the period in which it is determined. A rate considered to be commensurate with the risk involved is used to discount the cash flows for any recognized impairment.

The Company amortizes goodwill over an estimated life of 3 to 15 years. Other identifiable purchased intangible assets are being amortized on a straight-line basis over their estimated period of benefit ranging from 3 to 10 years.

SFAS 86 (*RBC* = 1) SOP 98-1 (*RBC* = 1)
CAPITALIZED SOFTWARE COSTS

In accordance with Statement of Financial Accounting Standards No. 86, *Accounting for the Costs of Computer Software to Be Sold, Leased or Otherwise Marketed* (SFAS 86), certain costs incurred in the internal development of computer software and costs of purchased computer software, consisting primarily of software acquired through business acquisitions, are capitalized. **[Note: details omitted for brevity.]**

The Company also capitalizes certain costs in accordance with Statement of Position 98-1, *Accounting for the Cost of Computer Software Developed or Obtained for Internal Use* (SOP 98-1). **[Note: details omitted for brevity.]**

SFAS 109 (*RBC* = 4)
INCOME TAXES

The provision for income taxes and corresponding balance sheet accounts are determined in accordance with Statement of Financial Accounting Standards No. 109, *Accounting for Income Tax*es (FAS 109). Under FAS 109, the deferred tax liabilities and assets are determined based on temporary differences between the basis of certain assets and liabilities for income tax and financial reporting purposes. These differences are primarily attributable to differences in the recognition of depreciation and amortization of property, equipment and intangible assets and certain software development costs and revenues.

SFAS 128 (*RBC* = 3)
BASIC AND DILUTED EARNINGS PER SHARE

Basic and diluted earnings per share (EPS) are calculated according to the provisions of Statement of Financial Accounting Standards No. 128, *Earnings per Share* (FAS 128). Weighted average common shares outstanding for all periods have been restated to reflect the stock split in June 1998 (see Note 11). For the Company, the numerator is the same for the calculation of both basic and diluted EPS. The denominator for basic and diluted EPS is the same for the period ended December 31, 1999 as the loss from operations would otherwise cause the inclusion of common stock options to be anti-dilutive. The following is a reconciliation of the denominator used in the EPS calculations (in thousands):

> Weighted average shares for 1999 would have included 1,174,358 common stock equivalents if the Company had recorded net income. All options to purchase shares of common stock were included in the computation of diluted EPS for 1998.

SFAS 52 (*RBC* = 2)
FOREIGN CURRENCY TRANSLATION

The local currencies of the Company's foreign subsidiaries have been determined to be their functional currencies. Assets and liabilities of foreign subsidiaries are translated into United States dollars at current exchange rates and resulting translation adjustments are included as a separate component of accumulated other comprehensive income. Revenue and expense accounts of these operations are translated at average exchange rates prevailing during the year. Transaction gains and losses, which were not material, are included in the results of operations of the period in which they occur.

The effect on the Company's operating revenues of adverse foreign currency exchange fluctuations (stated as current year international revenues translated at prior year average exchange rates) was $4.3 and $8.0 million for 1999 and 1998, respectively.

RBC of significant accounting policies: 1.59

Summary of Lawsuit

This case was triggered by a series of bad news announcements in late 1999 and early 2000. The Company announced a variety of write-downs and special charges during this time frame. Plaintiffs alleged, among other things, that the financial statements during the class period violated GAAP in that these write-offs and charges should have been recorded sooner and were deliberately deferred to increase share price. Plaintiffs also alleged that software revenue was recorded improperly. The case settled for $7.75 million after the motion to dismiss was denied by the court.

Lawsuit Allegations of GAAP Violations

SFAS 5 (contingencies) $RBC = 1$
SFAS 86 (capitalization of software costs) $RBC = 1$
APB 17 (intangible assets) $RBC = 1$
APB 28 (interim reporting) $RBC = 0$
SOP 97-2 (revenue recognition (Software)) $RBC = 2$
CON 5-6 (revenue recognition) $RBC = 1$
ARB 43 1-a (revenue recognition) $RBC = 1$
APB 10 (revenue recognition) $RBC = 0$
APB 22 (disclosure of accounting policies) $RBC = 0$

RBC of allegations = 0.78

APPENDIX B

Variable Definitions

Note: For firms that were not sued, the "class period" is defined as the time period between the earnings announcement date of the first misstated quarterly period and the restatement announcement date.

AGE = the age of the accounting standard in years, based upon initial passage;

ANN_RET = cumulative return for the seven days centered on the restatement announcement date or class period end date, expressed as a percentage;

AUDITOR_NAMED = indicator variable that is equal to 1 when the auditor is named in the complaint, and is equal to 0 otherwise;

AUDITOR_RESIGN = 1 if the auditor resigns during the class period, and is equal to 0 otherwise;

BIG4 = indicator variable equal to 1 if the auditor code from Compustat is between 1 and 8;

COMPLEXITY_1 = indicator variable equal to 1 if the relevant accounting standard describes the underlying transaction using any of the three root words: (1) complex*, (2) complic*, and (3) elaborat*, and 0 otherwise;

COMPLEXITY_2 = log of the number of words contained in the definition of the underlying transaction addressed by each accounting standard; we obtain definitions from the glossary of the FASB Codification;

DISMISS = indicator variable equal to 1 if the suit is dismissed;

INSIDER = average monthly net insider selling over the class period, from Thomson Reuters, scaled by total shares outstanding, expressed as a percentage;

INSIDER_SALE = 1 when the plaintiff alleges insider selling activities, and 0 otherwise;

INVESTIGATE_EXTERN = indicator equal to 1 when the complaint indicates that there was an external investigation, and is equal to 0 otherwise;
INVESTIGATE_INTERN = indicator equal to 1 when the complaint indicates that the company conducted an internal investigation, and is equal to 0 otherwise;
ISSUE = indicator variable equal to 1 when the firm issues stock during the class period (Compustat data item SCF), and is equal to 0 otherwise;
LIT_RISK = indicator variable that is set to 1 when the firm operates in a high litigation risk industry (see Francis et al. 1994), and is equal to 0 otherwise;
LN_MAX_DAMAGE = natural logarithm of the *MAX_DAMAGE* variable;
MAX_DAMAGE = highest market value of the firm during the restatement period minus the market value of the firm on the restatement disclosure date (in millions);
MERITORIOUS = indicator variable set to 1 if the suit is meritorious, defined as either (a) a lawsuit that is not dismissed, or (b) a lawsuit that settles for more than 0.5 percent of the defendant firm's market value of equity;
MVE = market value of equity at the end of the quarter preceding the end of the class period;
RBC = average rules-based continuum score of the standards alleged to have been violated. The rules-based continuum score increases by 1 when the standard contains bright-line thresholds, scope and legacy exceptions, voluminous implementation guidance, or a high level of detail. The minimum value of *RBC* is 0 and the maximum is 4. *RBC* is calculated each year for each standard because standards change over time as detail, exceptions, and implementation guidance are added. See Mergenthaler (2010) and Table 1 for further details;
REVENUE = indicator variable equal to 1 if the plaintiff alleged that revenue was misstated, and is equal to 0 otherwise;
ROA = earnings before extraordinary items (as originally reported) for the quarter preceding the end of the class period, scaled by total assets, expressed as a percentage;
SEC_11 = indicator variable that is equal to 1 when the complaint indicates a Section 11 violation, and is equal to 0 otherwise;
SETTLEMENT = dollar amount of the settlement in the lawsuit;
SHARE_TURN = average daily turnover (volume/shares outstanding) over the class period, expressed as a percentage;
SIZE = log market value of equity at the end of the quarter preceding the end of the class period;
SUED = indicator variable equal to 1 if the restatement resulted in a class action lawsuit, and is equal to 0 otherwise;
VOLATILITY = standard deviation of daily returns over the class period, expressed as a percentage; and
WHISTLE = indicator variable that is set to 1 when the complaint mentions an external whistle blower, and is equal to 0 otherwise.