Auditor Industry Expertise and the Timeliness and Usefulness of Litigation Loss Contingency Disclosures*

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Abstract:

In this study, we investigate whether current litigation loss contingency disclosures provide timely and useful information to investors and how auditor industry expertise plays a role in affecting the timeliness and usefulness of such disclosures. Using the largest archival data set examined to date in the literature, we code the litigation loss contingency disclosure of each case from "the cradle to grave", i.e., from the first public disclosure of the case to the final disclosure of the case resolution. The longitudinal feature of our analyses enables us to address the FASB complaint of a lack of timely and/or useful prior disclosures, especially for large negative outcomes. Our results show that, for 22% of our sample cases with material losses (defined as a loss exceeding 0.5% of total assets), no disclosures were made on these cases until the final four quarters prior to the case resolution quarter. More surprisingly, for 45% of our sample cases with material losses, firms did not disclose that these cases could have material economic impacts on the firms (which we term "pre-warning disclosures"), prior to the case resolution quarter. Furthermore, we use the disclosures to predict case outcomes by employing logit models across quarters and find that the predictive power drops sharply from the quarter prior to case resolution to earlier quarters, with little power five quarters prior to the outcome quarter. These results are consistent with the critics of current SFAS 5 that disclosures about certain loss contingencies do not provide timely and useful information to investors. To further examine the possibility of strategic non-compliance with SFAS 5 disclosure requirements, we investigate the role of auditors in litigation loss contingency disclosures, buttressed by an analytical model. The empirical results reveal a strong association between high audit quality, proxied by auditor industry specialization, and more timely and useful litigation loss contingency disclosures. Taken together, it is always possible that managers truthfully disclose what they know at the time and do not behave in a strategic fashion to conceal their news. Our strongest evidence that managers do behave in a strategic manner is our demonstrated role for auditor industry expertise. A role for such expertise in enhancing SFAS 5 disclosures points to strategic noncompliance absent of auditor expertise. Thus, the solution may well be closer audit scrutiny of SFAS 5 disclosures. As such our study informs the ongoing debate.

Keywords: Litigation Loss Contingency Disclosures, Auditor Industry Specialization, Hazard Model

JEL: M41, G38, K41

Auditor Industry Expertise and the Timeliness and Usefulness of Disclosures Related To Contingent Legal Liabilities

1. Introduction

In the U.S., SFAS No. 5 *Accounting for Contingencies* (FASB 1975) is the primary standard governing the reporting of potential losses from pending litigations. Critics of SFAS 5 (now Topic 450) argue that disclosures about litigation related loss contingencies do not provide sufficient and timely information for investors. Specifically, the FASB 2008 exposure draft expressed the following four concerns:

a. The initial disclosure of specific information about a loss contingency often does not occur until a material accrual is recognized for that loss contingency.

b. The *at least reasonably possible* threshold for disclosing loss contingencies has not resulted in the disclosure of the full population of an entity's existing loss contingencies that would be of interest to financial statement users.

c. The option to state that "an estimate of the possible loss or range of loss cannot be made" is exercised with such frequency by financial statement preparers that users often have no basis for assessing an entity's possible future cash flows associated with loss contingencies.

d. The amounts recognized in the financial statements related to loss contingencies are not transparent to users.

The FASB has responded to these criticisms by proposing more timely and useful disclosures (FASB Exposure Drafts 2008, 2010), including disclosures that would achieve more timely disclosure of remote loss contingencies with a potentially severe impact. The proposals have met stiff resistance from financial statement preparers and attorneys. As elaborated on in the FASB's 2010 Proposed Update Comment Letter Summary, a significant number of

respondents to the exposure drafts argue that there is no evidence indicating that Section 450-20-50 needs to be changed with respect to disclosure of loss contingencies. They claim that the proposed new disclosures would reveal valuable information to adversaries, increase an entity's litigation exposure, create voluminous disclosure that may mislead investors, and provide little benefit to financial statement users. In July 2012, the FASB removed this project from its technical agenda, reflecting two failed attempts to modify the disclosure requirements of SFAS 5.

FASB staff have received feedback that changes to SFAS 5 are unnecessary and the bigger problem is a lack of compliance with existing requirements. Our study provides evidence suggesting strategic noncompliance with the existing SFAS 5. We manually collect a large sample of litigation contingency disclosures over the life cycle of lawsuits from U.S. companies' 10-Qs and 10-Ks between 1994 and 2010 and examine the timeliness and usefulness of the disclosures. For 2% of our sample cases with material losses (defined as a loss exceeding 0.5% of total assets), there was no disclosure of the cases until the case resolution quarter.[1] In addition, for another 20% of our cases with material losses, disclosure of these cases did not start until the final four quarters prior to the case resolution quarter. More surprisingly, for 45% of our sample cases with material losses, firms did not disclose that these cases could have material economic impact on the firms (which we term "pre-warning disclosures"), prior to the case resolution quarter. The above evidence calls into question the timeliness of SFAS 5 disclosures. In order to examine the potential usefulness of such disclosures to investors, we pool cases with and without material loss outcomes and employ logit models across quarters in order to predict material loss outcomes. We show that the predictive powers of the models drop sharply from the quarter prior

[1] Cases are typically resolved by dismissal, or out-of-court settlement, or going to trial and winning or losing in court.

to case resolution to earlier quarters, with little predictive power five quarters prior to the outcome quarter. In addition, results of our event study over case outcome announcements suggest that there was less than full anticipation by investors of the announced material loss outcomes. Taken together, the above evidence is suggestive but not conclusive regarding a lack of full compliance with SAFS 5. It is always possible that facts changed dramatically over the life cycle of the lawsuits and managers truthfully disclosed what they knew at the time, although this possibility is hard to entertain for some of the above stylized facts.

As described above, the FASB is concerned with less than full compliance with the disclosure requirements of SAFS 5, when in fact the manager knows the disclosure threshold has been exceeded. The possibility that the manager is truly uninformed gives the informed manager an opportunity to be silent about litigation contingencies for many quarters, possibly until very close to the quarter of resolution of the claim. Motives for disclosure delay include withholding bad news from investors and litigation adversaries. Managers can strategically withhold private information in a given fiscal quarter by falsely claiming to be uninformed about contingent loss probabilities, thus pooling with truly uninformed managers. The informed manager can always claim subsequently that facts changed dramatically and the manager truthfully disclosed what he knew at the time. This setting challenges auditors to assess management claims about probabilities given that such probabilities are subjective and managers often have superior information relative to auditors. To investigate this possibility, we further study the role of auditor industry expertise in enhancing litigation contingency disclosures. SAS 12 (PCAOB AU 337) offers guidance to auditors regarding the appropriate procedures for obtaining evidence and evaluating management's assertions related to litigation contingencies. Those procedures require an auditor to obtain certain information and representations from the client, examine certain

documents that might reveal litigation, in addition to seeking corroborating audit evidence from the client's lawyer. An auditor with industry expertise may be able to benefit from prior litigation episodes in that industry involving other clients. Hence, industry specialist auditors may be able to better police managers from exploiting the discretion in SFAS 5 to delay useful disclosures of litigation loss contingencies.

However, no empirical evidence has been provided so far on the auditor's role in this context. More importantly, it is unclear whether higher quality auditors (proxied by industry specialists in our study) can constrain the aforementioned managerial opportunism and facilitate more timely and useful litigation loss contingency disclosures. We construct a simple theoretical model that views SFAS 5 disclosure compliance as a *de facto* voluntary disclosure decision in the spirit of Verrecchia (1983) and Dye (1985). We show theoretically that, as audit quality increases, a full disclosure equilibrium ensues whereby managers faithfully convey their private information about outcomes in legal contingency disclosures. We then empirically test our second research question: Does auditor industry expertise enhance the timeliness and usefulness of such disclosures?

Using a hazard model in duration analysis, we find that firms audited by industry specialists issue a first disclosure or pre-warning on a timelier basis. For example, for a typical case lasting for 10 quarters, firms audited by industry specialists issue the first disclosure (pre-warning) about the case 1.7 (1.6) quarters earlier than firms audited by non-specialists. Turning to the results regarding usefulness, we find the predictive powers of a series of logit models across quarters are consistently higher for firms audited by specialist auditors than by non-specialists. As discussed above, it is always possible that managers truthfully disclose what they know at the time and do not behave in a strategic fashion to conceal their news. Our

strongest evidence that managers do behave in a strategic manner is our demonstrated role for auditor industry expertise in facilitating the timeliness and usefulness of SFAS 5 disclosures.

Our study contributes to the literature in two major ways. First, as discussed above, the FASB in July of 2012 dropped the loss contingency disclosures project given the strong opposition to the two failed exposure drafts by companies and the legal industry. However, the FASB has left the option open to consider improving loss contingency disclosures as part of a broader project seeking to develop a new disclosure framework. For elaboration, see Chassan (2012). According to the FASB Board Meeting Handout (dated July 9, 2012), FASB staff received feedback that changes to SFAS 5 are unnecessary and the bigger problem is a lack of compliance with existing requirements.[2] Our study provides evidence suggesting strategic noncompliance with the existing SFAS 5 and the role of auditors in curbing this noncompliance. Thus, the solution may well be closer audit scrutiny of SFAS 5 disclosures. As such our study informs the ongoing debate.

Second, our study contributes to the literature on audit quality. In particular, there has been little archival research on the relation between audit quality and firms' disclosure behaviors. The only exception that we are aware of is by Dunn and Mayhew (2004), who document a positive association between industry specialist auditors and analysts' rankings of disclosure quality. Nonetheless, it is unclear whether auditors' moderating effects on firms' overall disclosure environment apply to the loss contingency disclosure setting. We are able to provide evidence concerning the impact of auditor industry expertise on the timeliness and usefulness of litigation loss contingency disclosures.

[2] http://www.fasb.org/cs/ContentServer?site=FASB&c=Document_C&pagename=FASB%2FDocument_C%2FDocumentPage&cid=1176160153687

Section 2 provides the institutional background and reviews the related literature. Section 3 presents an analytical model and develops the testable hypothesis. Section 4 describes the sample selection and presents descriptive statistics. Section 5 presents empirical test designs and Section 6 reports the results. Finally, Section 7 concludes.

2. The Institutional Background and Literature Review

In the U.S., SFAS 5 divides loss contingencies into three groups based on the likelihood that the loss will be realized: probable, reasonably possible, and remote. SFAS 5 dictates that material loss contingencies that are both probable and reasonably estimable must be accrued on the balance sheet. Loss contingencies that are deemed probable or reasonably possible must also be disclosed, even if an inability to estimate the potential losses prevents accrual. SFAS 5 specifies that this disclosure should indicate the nature of the loss contingency and provide a point or range estimate of the amount of loss. If the potential loss cannot be estimated, a statement to that effect is required. Thus loss contingencies that are reasonably possible or probable must be disclosed, and those which are probable and estimable must be accrued. Contingencies where the chance of loss is judged to be remote are generally not required to be disclosed or accrued. However, SFAS 5 offers limited guidance on how the terms “probable”, “reasonably possible”, and “remote” should be interpreted. The lack of quantitative thresholds allows for considerable discretion in the application of SFAS 5 and creates the potential for expectation gaps among shareholders and auditors (Kinney and Nelson 1996; Nelson and Kinney 1997).

Letters to the FASB regarding SFAS 5 criticize firms for failing to provide advance warning of material losses from litigation. Some financial statement users continue to express

concerns that the disclosure criteria in SFAS 5 are "inadequate or ineffective" (FASB 2007, p. 1). The FASB has responded to these criticisms by proposing more timely disclosures, but it was widely criticized for requiring disclosure that has a prejudicial impact to an entity. As a result, FASB postponed their implementation indefinitely amid widespread criticism. In parallel, the IASB is also in the process of revising IAS 37and the 2010 IASB exposure draft proposed an expected value approach that shifts the probability assessment from the recognition decision to the valuation decision. Similarly, this project has been put on indefinite hold since then.

There is little archival research on firms' actual SFAS 5 disclosures. Fesler and Hagler (1989) compare litigation disclosures during 1982-1983 with eventual case outcomes. They judge a substantial percentage (43%) of their sample to have provided no or insufficient warning regarding the legal liability and thus conclude that there is still a lack of consistency and compliance in this area. Banks and Kinney (1982) show that auditors' opinions regarding the probability and materiality of the resolution of the contingency are consistent with the market's assessment, while Frost (1991) find auditors' opinions are influenced by several other factors, such as macroeconomic climate, media coverage, and client size. Although the research on earlier periods expresses dissatisfaction with firms' application of SFAS 5, much has changed in the overall reporting environment in the intervening decades since SFAS 5 was first implemented. The quantity and quality of disclosures on many topics, including other types of contingencies, have increased dramatically, and increased demand for reporting transparency alters the costs and benefits of defendant firms' disclosure decisions. Therefore, earlier evidence on SFAS 5 disclosures is not necessarily relevant to current practice, and more contemporary evidence on litigation loss contingency disclosures is required.

Recent research has found some evidence on the predictive ability of contingent loss reporting. Hennes (2008) documents that the majority of the defendant firms in her sample do not disclose the plaintiffs' claim amounts related to their employment discrimination lawsuits and that very few firms in her annual sample provide estimates of probable losses. However, she finds that SFAS 5 textual disclosures, though seemingly deficient, appear to contain information useful in predicting the ultimate outcomes of the lawsuits and that investors appear to react to this information. For a relatively small sample of litigation-related losses, Desir, Fanning and Pfeiffer (2010) find a large incidence (4 out of 51 cases examined) of non-disclosure of the existence of the lawsuit until the loss occurs. Moreover, even when there is a disclosure, they find many cases where firms do not provide estimates of expected losses. Focusing on market reaction analysis, Grundfest and Simmons (2008) find no significant market reaction to defendants' announcements of settlements for a sample of securities settlements reached in 2007 and 2008, as well as for a sample of the 50 largest securities class action settlements announced since 1996. Finally, the extent of the defendant's disclosure has been shown to be related to the materiality of the monetary damages to the defendant upon losing the lawsuit (Raghunandan, Grimlund and Schepanski 1991; Little, Muoghalu and Robison 1995; Ramnath, Shane and Willenborg 2005).

Our study contains features close to those in Desir et al. (2010), Grundfest and Simmons (2008) and Hennes (2008). Like Desir et al. (2010), we exploit the benefit of hindsight and document the frequency with which a material adverse outcome was not previously disclosed by the firm. However, we examine the entire life cycle of the claim, rather than just the prior quarter, and exploit a much larger sample than that in Desir et al. Like Grundfest and Simmons (2008), we perform an event study around the announced outcome date, in order to ascertain if the

information in the outcome announcement was fully anticipated by investors, which would be inconsistent with the FASB's concerns about the lack of timely prior disclosures. However, we are careful to examine directional as well as non-directional event impacts, as a measure of "news" is often unavailable when a litigation outcome is announced, making tests on the average signed event impact ambiguous. The key is whether the outcome announcement was an information event as far as the market was concerned, an inference that can be made from unsigned event impact tests. Like Hennes (2008), we use prior SFAS 5 disclosures to predict whether the outcome will be a material loss or not. However, unlike Hennes, we examine the entire life cycle of the claim, and employ multiple case types and examine additional SFAS 5 disclosure components, compared to her study.

Our study also contains a feature not yet examined in the SFAS 5 literature. We employ multiple measures of auditor industry specialization in order to ascertain whether the usefulness and timeliness of SFAS 5 disclosures is enhanced with audit quality. This follows a similar enquiry, more generally, by Dunn and Mayhew (2004). Furthermore, prior experimental work investigates how auditors interpret the terminology of SFAS 5 and attempt to solicit numerical interpretations of the relevant probability thresholds that trigger disclosure or accrual of contingencies. These studies suggest that there is considerable variance between subjects' interpretations of SFAS 5 terminology (Schultz and Reckers 1981; Reimers 1992; Kennedy, Mitchell and Sefcik 1998). In particular, subjects with different backgrounds have different interpretations of the probability expressions. Furthermore, additional studies also note that experimental participants' interpretations of SFAS 5 thresholds vary with aspects of the firm and the contingencies being evaluated, thereby further decreasing the likelihood that SFAS 5 is applied consistently across firms (e.g., Lewis 1980; Jiambalvo and Wilner 1985; Harrison and

Tomassini 1989; Raghunandan et al. 1991; Amer and Hackenbrack 1994; Amer, Hackenbrack and Nelson 1995; Hackenbrack and Nelson 1996; Nelson, Smith and Palmrose 2005).

3. Analytical Model and Hypotheses Development

3.1 The Model

To better motivate our hypotheses and guide variable selection for empirical models, we develop a simple analytical model in this section that extends the analysis in Li, Richardson and Thornton (1997). We view the decision to comply with SFAS 5 disclosure requirements as a *de facto* voluntary disclosure decision, subject to the constraint that a manger's untruthful claims of being uninformed may be caught by an auditor. We augment the setting by considering the proprietary costs of making truthful disclosures about the pending legal claim. As such, the manager will consider the costs and benefits of strategic noncompliance with SFAS 5 disclosure requirements. In keeping with the extant SFAS 5 literature, our model assumes that there are two benefits to strategic noncompliance: first, avoiding proprietary costs associated with revealing valuable information to litigation adversaries and second, popping up stock price by withholding bad news which lowers financing costs if the firm is raising financing from capital markets. Further, our model assumes there are costs associated with strategic noncompliance, namely, the risks and consequences associated with noncompliance if detected by an auditor. These consequences in our model assume the form of a penalty that sets in if the auditor detects that a manager withholds bad news. The penalty can be thought of as representing the cost associated with regulatory sanctions by the SEC, follow-on lawsuits alleging fraud, and a higher cost of

capital in the future. In our model, the auditor issues a qualified audit report if strategic noncompliance is detected.[3]

We use Verrecchia (1983) and Dye (1985) as a start, since the two factors that sustain partial disclosure in their models, proprietary costs and outsiders' uncertainty concerning whether the manager has received private information, are the very frictions that sustain partial compliance with SFAS5 disclosure requirements in our setting. In order to show how audit quality affects the compliance with SFAS 5, we assume higher quality auditors are more likely to discover whether managers are privately endowed with information about litigation loss contingencies. It is not obvious whether more useful SFAS 5 disclosures will occur on a timelier basis when firms are audited by higher quality auditors. Audit quality may not matter if there were no subsequent penalty after discovery of managers withholding useful SFAS 5 information. Our model incorporates these economic forces and suggests that, as audit quality increases, the disclosure threshold will decrease; subsequently, a full disclosure equilibrium will unravel, and managers will disclose useful litigation loss information on a more timely basis. The model is as follows.

We assume that the common prior belief regarding the period-end net value of the firm after deducting liabilities, including the contingent liability, denoted by $\tilde{y} \in Y \equiv [0,1]$, is represented by a density function $g(\tilde{y})$, with the cumulative distribution function of $G(\tilde{y})$ and mean m. We also assume that, with probability $p \in (0,1)$, the manager privately observes the probability of eventual losses such that the manager can assess the potential materiality of expected losses, which negatively affects the realization of firm value $\tilde{y}$.[4] With probability

[3] To keep the model simple, there is no possibility of auditor-client negotiations or disclosure adjustments to reflect auditor challenges. Ours is a sequential move setting where the manager chooses disclosure of pending litigation and the auditor then decides whether to issue a qualified audit report. Modeling auditor-client negotiation processes is beyond the scope of our simple model since this would involve modeling the auditor's loss function.

[4] We assume the manager privately observes the probability of the confirming event occurring and the loss amount conditional on that event. For example, the confirming event could be win or lose given trial. It is easier to align to

$1-p$, the manager is uninformed and he cannot issue a credible report to reveal that fact. The manager has no choice but to remain silent about the case, if he is uninformed.[5] However, if he receives a signal, he chooses between issuing a truthful report or not reporting, which is possible if the manager can convince the auditor that he is uninformed. The manager chooses a disclosure strategy to maximize the firm value. In addition, we add an opponent (i.e., the plaintiff, their lawyers, and other potential plaintiffs) in the model to incorporate proprietary costs resulting from disclosure, and add an external auditor in the model to analyze the impact of audit quality on the manager's contingent litigation loss disclosure decision.

Neither the opponent nor the market knows if the manager is informed or not. An auditor is hired to verify the firm's disclosure. Adopting an assumption commonly used in the prior literature (e.g., Dye 1993; Ye and Simunic 2012) to the SFAS 5 setting, we assume the auditor is able to detect whether managers are privately endowed with information about the probability of eventual losses with probability $a \in [0,1]$. This detection probability increases in audit quality. For example, industry specialist auditors provide higher detection probability "a" than non-specialist auditors (Dunn and Mayhew 2004). Thus, this assumption ensures that higher quality auditors are more likely to detect managers withholding useful information.

In our setting, we model proprietary costs as revealing valuable proprietary information to the opponent and capture this in the model by a decision of the opponent to initiate an action so as to impose a cost, *C*, on the defendant. The opponent decides whether to initiate the action

SFAS 5 probability notions if one assumes discrete probabilities for the confirming event. However, the choice of discrete versus continuous probabilities does not affect our model.

[5] There is considerable uncertainty involved in a legal process and many types of liability are inherently difficult to estimate accurately. Since the underlying facts and circumstances may be unclear to defendant firms, managers may be truly uninformed about the likelihood of case resolutions and/or the materiality of case outcomes. However, managers may have private information on these two issues as they make decisions regarding settlement and defense strategies with their legal counsels, which introduces the scope for strategic behavior concerning litigation loss contingency disclosures.

after observing the manager's disclosure together with the auditor's report. These proprietary costs can be thought of legal costs and potential penalty from follow-up lawsuits and a higher settlement amount for the current case. Its decision is represented by a binary function $\delta(y)$, where $\delta = 1$ if it initiates the action, and $\delta = 0$ otherwise. Let $k > 0$ be the opponent's action initiation cost, and t is the opponent's tolerance level for contingent liabilities. The opponent is assumed to derive a benefit $B > k > 0$ by imposing an exogenous proprietary cost $C > 0$ on a firm known to have $y < t$. The action is said to be "successful" if $y < t$ and C is imposed. Thus, when a firm discloses a value of y, the opponent's decision rule is: $\delta(y) = \{0$ for $y \geq t,\ 1$ for $y < t\}$ when y is disclosed.

With nondisclosure, the likelihood that the action would be successful is determined by $T(\tilde{y} < t|N)$, the posterior probability that $y < t$ given nondisclosure. To simplify the notation, this posterior probability is represented by $T(N)$. Denote the disclosure threshold by ε. $T(N)$ is expressed as

$$T(N) = \frac{p\int_0^{\varepsilon} dG(\tilde{y}) + (1-p)\int_0^{t} dG(\tilde{y})}{p\int_0^{\varepsilon} dG(\tilde{y}) + (1-p)} \ when\ \varepsilon \leq t,$$

$$T(N) = \frac{p\int_0^{t} dG(\tilde{y}) + (1-p)\int_0^{t} dG(\tilde{y})}{p\int_0^{\varepsilon} dG(\tilde{y}) + (1-p)} \ when\ \varepsilon > t.$$

The posterior expectation of $\tilde{y}$ given nondisclosure is:

$$E(\tilde{y}|N) = \frac{p\int_0^{\varepsilon} \tilde{y} dG(\tilde{y}) + (1-p)m}{p\int_0^{\varepsilon} dG(\tilde{y}) + (1-p)},$$

which is the weighted average of the posterior belief given that the manager is uninformed and the posterior belief given that the manager is informed but $y \in N$ (i.e., the manager withholds information).In the context of the model, withholding information occurs when the manager falsely claims to be uninformed about the probability of eventual losses. The auditor will be able

to detect the manager withholding information with probability a and inform the investors through the audit report. The firm value is then assumed to be penalized to zero.[6] Since the true level of contingent liability is revealed by the auditor in this case, the opponent's decision is $\delta(y)$. With probability $1-a$, the auditor will not be able to detect the manager withholding information and the informed manager is able to hide among uninformed managers. In this case, the firm value is $E(\tilde{y}|N) - T(N)C$. Therefore, the expected firm value will be as follows:

$$V_y = y - \delta(y)C \; if \; y \; is \; disclosed,$$

$$V_n = (1-a)(E(\tilde{y}|N) - T(N)C) + a * (0 - \delta(y)C) \; if \; nondisclosure \; is \; observed.$$

The equilibrium nondisclosure set N is determined by the following:

$$N = \{y | y - \delta(y)C < (1-a)(E(\tilde{y}|N) - T(N)C) + a * (0 - \delta(y)C\}.$$

A rational-expectation equilibrium dictates that the conjectures of investors with respect to the threshold value ε be fulfilled; i.e., the conjecture should be consistent with the manager's optimal disclosure policy. This requires that:

$$\varepsilon - \delta(\varepsilon) * C = (1-a)(E(\tilde{y}|N) - T(N)C) + a * (0 - \delta(\varepsilon)C) \quad (1)$$

Differentiate Equation (1) w.r.t. a:

$$\frac{\partial \varepsilon}{\partial a} = -\frac{p\int_0^{\varepsilon} \tilde{y} dG(\tilde{y}) + (1-p)m + C(1-p)\left(1-G(t)\right)}{p\int_0^{\varepsilon} dG(\tilde{y}) + (1-p) + a\varepsilon p g(\varepsilon)} \text{ if } \varepsilon \leq t,$$

$$\frac{\partial \varepsilon}{\partial a} = -\frac{p\int_0^{\varepsilon} \tilde{y} dG(\tilde{y}) + (1-p)m - CG(t)}{p\int_0^{\varepsilon} dG(\tilde{y}) + (1-p) + a\varepsilon p g(\varepsilon)} \text{ if } \varepsilon > t.$$

Since the expected firm value given no disclosure should be greater than zero, $\frac{\partial \varepsilon}{\partial a}$ is less than zero.

[6] Relaxing this assumption does not affect our qualitative results regarding the impact of audit quality on disclosure threshold, as long as there is some penalty when the auditor detects the withholding of information. The model relaxing this assumption is available upon request.

If the auditor can perfectly observe whether the manager is informed or not, i.e., $a = 1$, then

$$\varepsilon - \delta(\varepsilon) * C = (1-1)(E(\tilde{y}|N) - T(N)C) + 1 * (0 - \delta(\varepsilon)C),$$

$$\varepsilon - \delta(\varepsilon) * C = 0 - \delta(\varepsilon)C \rightarrow \varepsilon = 0.$$

Therefore, the partial equilibrium disclosure threshold level ε decreases (i.e., disclosure becomes more likely), as audit quality increases, and a full disclosure equilibrium will unravel if $a = 1$. When audit quality increases, it is less possible for the manager to fool investors because it is more likely that the auditor will detect whether the manager is withholding information. If the auditor's expertise allows him to perfectly observe whether the manager is informed or not, the manager will not be able to hide information at all. In that case, the manager will share his probability information with investors. Therefore, when audit quality is higher, more useful loss contingency disclosure will occur in a timelier basis.[7]

While our model is highly stylized, we believe that it captures the essence of the SFAS 5 controversy. As noted earlier, current SFAS 5 disclosure requirements provide managers with a leeway to falsely claim to be uninformed. Our model nicely fits this context. An informed manager knows the probability of eventual losses. Higher quality auditor is better able to find out whether the manager is informed or not.[8] In the early stage of a legal claim, the informed manager might falsely claim that they are uninformed about the probabilities and therefore the chances of losing a material amount are remote, thus avoiding disclosure of the claim (i.e., if the

[7] If the manager has private information about outcome probabilities, this information will always be useful to investors, as the information can be used to update prior beliefs, even if this private information is imprecise. Since the manager withholding this private information seeks to hide behind the pooled belief assigned to all managers who are silent, we know that the investors' updated prior beliefs should this information be disclosed will yield a firm valuation lower than that sustained by the pool belief.

[8] Although the firm's lawyer is not a part of our model, we assume that the manager and the lawyer share the same information and have the same concerns about proprietary costs, making it unnecessary to include a lawyer in the model. See Hennes (2008, p.8) for a discussion of legal responses to auditor enquiries and the limited usefulness of such responses, with the phrase "unable to express an opinion" sustaining a partial disclosure equilibrium in the context of our model.

manager cannot quantify probabilities, there is uncertainty but no quantifiable risk and that defaults to the remote scenario). Later on in the life cycle of the lawsuit, it may not be possible for the manager to credibly make a false claim to be uninformed, perhaps because evidence that the chance of a material loss is other than remote becomes available to auditors. Such evidence arises from different sources, such as reviewing minutes of meetings of those charged with governance and correspondence between the entity and its external legal counsel, etc. The manager can then delay meaningful disclosure about the case by claiming that an estimate of the possible loss or a range of loss cannot be made. This claim is true if the manager is uninformed but false if the manager knows the probability of eventual losses pertaining to the claim. From this information, quantitative disclosures (e.g., the probability weighted expected value) are possible. False claims that the disclosure threshold has not been met or, even if it has, an estimate of the possible loss or range of loss cannot be made allow the manager to delay meaningful disclosures until very close to case resolution. This explains the FASB's first three specific concerns (Points a. to c.) cited in the beginning of our paper.

In summary, the main empirical implication generated by the model is that useful information is disclosed in a timelier manner as audit quality increases. A second implication of our comparative statics (not shown above, but available upon request) is that the likelihood of disclosure decreases as the risk of incurring proprietary cost increases, which echoes the assertions made in the SFAS 5 practitioner literature. Thus, any tests of audit quality effects must control for proprietary cost proxies.

3.2 Hypothesis Development

Litigation loss contingency disclosure is an area where financial reporting standards conflict with litigation strategies. On the one hand, as our model illustrates, existing shareholders seeking to value the firm's equity would benefit from timely disclosures about loss contingencies. On the other hand, the revealed estimate of loss or recognition of the liability of an unfavorable outcome would encourage follow-on suits, and raise the floor for potential settlement amounts, increasing proprietary costs. Critics of the FASB's Exposure Drafts indicated concerns that expanding loss contingency disclosures could force a company to provide a roadmap of its litigation strategy to the benefit of the company's adversaries. Thus, legal concerns make defendant firms reluctant to disclose all of the specific contingency valuation information suggested by SFAS 5. Moreover, SFAS 5 offers limited guidance on the disclosure thresholds, which allows for considerable discretion in the application of SFAS 5. The resulting scope for strategic noncompliance implies that SFAS 5 disclosures will be of limited usefulness for investors. Our first hypothesis, stated in the null, follows:

Hypothesis 1: The litigation loss contingency disclosures are not timely or useful to investors.

The results from Hypothesis 1 would provide evidence on the extent of compliance with SAFS 5, but do not point conclusively to whether managers truthfully disclose what they knew at the time or whether they withhold their private information. The analytical model has shown theoretically managers are less likely to withhold information if audit quality is higher. In practice, we believe high quality auditors, proxied by industry specialists, can enhance litigation loss contingency disclosures.

SAS 12 (PCAOB AU 337) offers guidance to auditors regarding the appropriate procedures for obtaining evidence and evaluating management's assertions related to litigation

loss contingencies. Those "due diligence" procedures require an auditor to obtain certain information and representations from the client, examine certain documents that might reveal litigation, and seek corroborating audit evidence from the client's lawyer. Since industry-specialist auditors possess more industry specific knowledge and expertise in aiding clients with disclosure related issues, their industry expertise enables them to identify material loss contingencies more effectively. The expertise comes from serving other clients in the same industry and learning and sharing best practices across the industry (Balsam, Krishnan and Yang 2003; Krishnan 2003; Dunn and Mayhew 2004). An auditor with industry expertise may be able to benefit from prior litigation episodes in that industry involving other clients. Moreover, industry specialists also have more incentives to correct or report identified issues to protect their market shares. Their incentives to constrain a manager's opportunistic compliance with SFAS 5 stem from their reputation concerns as well as their desire to shield from litigation exposure (e.g., DeAngelo 1981; Palmrose 1988).

From the analytical model and the discussion above, we expect that SFAS 5 disclosures audited by auditors with industry expertise will convey more timely and useful information to investors than disclosures audited by lower quality auditors. Our second hypothesis, stated in the alternate form, follows:

Hypothesis 2: Firms audited by industry specialist auditors issue more useful loss contingency disclosures in a timelier manner than firms audited by non-specialist auditors.

4. Data and Descriptive Statistics

4.1 Data and Sample Construction

The initial list of firms is generated from the intersection of the *Audit Analytics* database, Compustat and CRSP since we require details of auditor information from *Audit Analytics*, accounting data from Compustat and stock price information from CRSP. Given that the electronic SEC files are not available on EDGAR until 1994, our search is conducted on the SEC filings over the period of 1994-2010. We manually search on each firm's 10-Qs and 10-Ks for the litigation loss contingency disclosures (in the sections titled "Legal Proceedings" and "Commitments and Contingencies").

We define the materiality of the loss based on the actual amount of loss. The threshold accords with ISA 320 (IASB) and SAS 107 (AICPA).[9] Specifically, the loss is not material if the amount, net of anticipated insurance coverage, is smaller than 0.5 percent of total assets. Otherwise the loss is material if the amount exceeds 0.5 percent of total assets.

For our material loss group (i.e., outcome amounts greater than 0.5% of total assets), our research design requires initial filing date (i.e., "cradle"), outcome date (i.e., "grave"), and outcome amount. Consequently, as shown in Table 1, our search identifies 608 observations. We then exclude 49 cases where the firm has insurance coverage and the loss net of anticipated insurance recovery is less than 0.5% of total assets.[10] We also exclude 121 cases with durations shorter than or equal to one year.[11] This screening procedure leaves a sample of 438 material loss claims. For the immaterial loss group, our search, as shown in Table 1, identifies 1,569 cases with data available as to filing date, outcome date, and outcome amount. We then exclude 746

[9] Auditing guides and textbooks (e.g., Kinney 2000, Chapter 7; Guy and Carmichael 2000) frequently suggest that planning materiality ranges from 5% to 10% of net income before taxes or 0.5% to 1.5% of total assets or revenues. We choose to focus on the thresholds based on total assets in order to avoid the loss of observations due to negative net income before taxes.

[10] We discard cases covered by anticipated insurance payments rather than include them in either the material or immaterial loss samples due to the uncertainty of recoveries from insurance involved in legal cases.

[11] We exclude short-duration cases, since the FASB's concern about the lack of timely disclosures is a moot point for cases that last less than one year.

cases where the loss, while less than 0.5% of total asset, is non-zero. We further exclude 393 cases with durations shorter than or equal to one year. This leaves a sample of 430 zero loss claims.[12] For both material and zero loss groups, additional data requirements may further reduce our tabulated results.

A unique feature of our search strategy is to code the litigation loss contingency disclosure of each case from "the cradle to grave", i.e., from the first public disclosure of the case to the final disclosure of the case resolution. For each resolved case, we start from the quarter when the case outcome is revealed and check the disclosure patterns quarter by quarter back to the first quarter of disclosure of the underlying case. The longitudinal nature of defendant firms' disclosure information allows us to explore the timeliness and usefulness of various types of litigation loss contingency disclosures.

4.2 The Components of Litigation Loss Contingency Disclosures

For each quarter during the life cycle of a lawsuit, we identify the following components of litigation loss contingency disclosures and we group them into four aspects.

The first aspect pertains to pre-warnings of adverse outcomes, including *Potential_Adverse*, *M_Estimate*, *Accrue*, and *M_Accrue*. *Potential_Adverse* is an indicator variable that equals 1 if the firm warns investors of potential material losses or mentions that there are significant adverse economic consequences if the company losses a lawsuit, and zero otherwise. *M_Estimate* is an indicator variable that equals 1 if the firm provides a material loss estimate, and zero otherwise. If the firm provides a range of loss estimates, we examine the materiality of the median value. *Accrue* is an indicator variable that equals 1 if the defendant

[12] We discard non-zero immaterial loss outcomes and focus on zero loss outcomes due to resource constraints involving our "cradle to grave" content analysis of SFAS 5 disclosures.

firm mentions that they have accrued or reserved a certain amount for the litigation, and zero otherwise. *M_Accrue* is an indicator variable that equals 1 if the accrued amount is material, and zero otherwise.

The second aspect is about pessimistic guidance issued by management, including *Settle_Ref*, *M_Claim* and *Trial*. *Settle_Ref* is an indicator variable that equals to 1 if the firm mentions their willingness or the possibility to settle, and zero otherwise. *M_Claim* indicates the materiality of the plaintiff's claimed amount, which equals 1 if the amount is material and zero otherwise. *Trial* is an indicator variable that equals 1 if the defendant's motion to dismiss the case being overruled by the courts and a trial date is set or the court issues an order certifying the class action lawsuit (suggesting the case is going to trial).

The third aspect is related to optimistic views expressed by the management, including *Immaterial* and *No_Merit*. *Immaterial* is an indicator variable that equals 1 if a defendant firm mentions that the case is not likely to have a material impact, and zero otherwise. *No_Merit* is an indicator variable that equals 1 if a defendant firm mentions that the case has no merit, and zero otherwise.

Finally, there are two disclosure components, *Defense* and *Not_Estimable*, that usually appear at the early stage of a lawsuit, thus suggesting substantial uncertainty surrounding the case. *Defense* is an indicator variable that equals 1 if the firm mentions that they will vigorously defend or contest the claim, and zero otherwise. *Not_Estimable* is an indicator variable that equals 1 if the firm explicitly states that a loss estimate could not be made at this time, and zero otherwise.

4.3 Auditors' Industry Specialization Measures

We closely follow Francis, Reichelt and Wang (2005), Francis and Yu (2009), and Reichelt and Wang (2010) in developing various national and office-specific measures of auditor industry expertise. National level auditor industry expertise is based on the auditor's annual market share based on clients' revenue[13] within a two-digit SIC category. City-level auditor industry expertise is based on the auditor's annual market share of audit fees within a two-digit SIC category for a particular city, defined as a Metropolitan Statistical Area (MSA). Audit Analytics identifies the geographical city (not the MSA) from audit reports attached to the Form 10-K filing. Geographic cities are categorized by MSA from the U.S. Census Bureau's MSA cross-map.[14]

Following prior studies (e.g., Balsam et al. 2003; Krishnan 2003; Dunn and Mayhew 2004), two definitions (definitions 1 and 2) are employed to measure national and city industry expertise. Definition 1 measures industry expertise by auditor dominance. In particular, definition 1 defines a national (city) industry specialist if in a particular year (and in a particular city) the auditor has the largest market share in a two-digit SIC category and if its market share is at least ten percentage points greater than the second largest industry leader in a national (city) audit market. Definition 2 measures industry expertise assuming auditor expertise increases with industry market share and that a sufficiently large market share exists. Specifically, Definition 2 defines a national (city) industry specialist if in a particular year (and in a particular city) the auditor has a market share greater than 30 percent (50 percent) in a two-digit SIC category.

4.4 Descriptive Statistics

[13] We use clients' revenue instead of audit fee before audit fee information is only available after 2000. However, our results remain unchanged when using audit fee to define national-level industry specialization.

[14] The U.S. Census Bureau's MSA cross-map (2010 definition) is available at the following web-site: http://www.census.gov/population/metro/files/lists/2009/List1.txt. The geographical location of these cities was found using the Google Maps website.

Both the material loss and zero loss cases in our sample are distributed fairly evenly across the sample years with more concentration of case resolutions around 1997 to 2007 (Table 2, Panel A). Table 2, Panel B shows the distribution of case types. The cases are categorized into a number of types such as breach of contracts with stakeholders, securities and trading related issues, improper business practices, and intellectual property infringement. Similarly, plaintiff types of our sample cases are shown in Panel C. We control for case and plaintiff types in the empirical tests because different types of cases and plaintiffs might have differential impacts on the defendant firm, thereby leading to differential managerial disclosure patterns.[15] As shown in Panel D, the material loss cases in our sample concentrate in the following industries: Business Services (SIC 73), Electronics (SIC 36), Chemical and Allied Products (SIC 28), and Measuring, Analyzing, and Controlling Instruments (SIC 38). The industry composition of zero loss cases is similar. Overall, the industry patterns are comparable to what were presented in Rogers and Van Buskirk (2009).

Table 3 presents the timing of loss contingency disclosures over the life cycle of the material loss cases. Panel A shows the number of quarters between the date of case initiation and respective disclosure events, i.e., first disclosure, pre-warning and case resolution. Panel B illustrates the percentage of time elapsed before the specific disclosure events occur. First, as to the first disclosure of litigation loss contingencies, the table shows that more than 75% of our sample cases were not disclosed when they were filed and defendant firms delay for more than one quarter before disclosing the cases. In fact, on average, a defendant firm would wait three quarters after a case has been filed to disclose case-specific information in its quarterly or annual reports. The fact that defendant firms typically delay for several quarters before publicly

[15] For example, patent infringement claims usually relate to the firm's core operation while employee discrimination claims usually do not.

disclosing litigation cases has not been documented in the existing literature. Panel A of Figure 1 shows that for 22% of our sample cases with material losses, case-specific information is not disclosed until one year prior to the case resolution quarter. Among them, 2% of the cases were not disclosed at all until the case resolution quarter.

Quarters to Pre-warnings is a variable capturing the number of quarters taken by a defendant firm to disclose that a case could have material impacts on the firm or when the firm accrues or estimates a material loss amount. Panels A and B of Table 3 describe this variable. The mean number of quarters leading to "pre-warnings" after the case filing date is 8.3. This statistic means that, on average, firms with *ex post* material loss cases wait more than eight quarters before issuing a pre-warning to investors. The mean (median) life span of our sample cases is 12.5 (10) quarters. The longest case in our sample lasts 60 quarters. On average, at 23% of a case's life span, we observe that a sample firm makes the first disclosure about the case; and at 67% of the case's life span, we observe that the firm issues a pre-warning to investors about the potential material loss. The most striking finding is that the median lapse of time for pre-warnings in Panel B is 81% over the life cycle, implying that pre-warnings to investors are typically issued at a very late stage of lawsuits. Panel B, Figure 1 shows that, for 45% of our sample cases with material losses, defendant firms do not issue pre-warnings prior to the case resolution quarter. These results are consistent with the claim made by opponents of SFAS 5, i.e., disclosures about certain loss contingencies do not provide useful and timely information to investors.

Table 4 provides descriptive statistics for the sample of material loss cases. Panel A reports the mean, median and standard deviation of the two industry specialist definitions, and their interaction terms. Definition 1 is more restrictive than Definition 2 at the national level,

evident from fewer national industry specialists (a mean of 10% vs. 16%). However, at the city level, the two definitions are more comparable, evident from a similar mean city industry specialist percentage (21% vs. 25%). Our descriptive statistics of auditor industry specialists are comparable to that of Reichelt and Wang (2010).

The mean (median) market value of equity is $2.8 billion ($222 million). The mean (median) return on assets is -0.18 (-0.02). On average, 43% (53%) firms issued equity (debt) when a case is undergoing and the median percentage of firms that issued equity (debt) is zero (1). The mean (median) book to market ratio is 0.22 (0.41). The mean (median) number of analysts who issued earnings forecasts for the sample firm is 7.85 (4.78). The mean (median) leverage is 0.31 (0.17). Moreover, the mean (median) percentage of independent director is 0.62 (0.68). An average (median) board has a size of 5.93 (6) directors.

5. Empirical Tests

5.1 Auditor Specialization and the Timeliness of Litigation Loss Contingency Disclosures

To test H2, we explore the role of auditor industry specialization in determining the timeliness of loss contingency disclosures with known material losses *ex post*. Our focus on cases with material losses is consistent with the FASB's concern (FASB Exposure Draft 2010, p. 2) about the "need for more timely disclosure of remote loss contingencies with a potentially severe impact." Essentially, we want to learn how soon firms provide any disclosures (or informative disclosures) to the public after the initiation of the case. Our test speaks to the duration between the date of case initiation and the date of the issuance of first disclosure or pre-warning disclosure. The duration t is therefore calculated as the number of quarters between the date of case initiation and the date of the events, i.e., first disclosure or pre-warning

disclosure, scaled by the number of total quarters for the case. Hence, we employ a hazard model which is widely used in the duration analysis.[16]

First, we assume that the duration t has a continuous conditional density $f(t|\mathrm{X};\theta)$, $t \geq 0$, where X is a vector of explanatory variables and θ is a vector of unknown parameters.[17] The conditional hazard, which approximates the probability of making informative disclosure conditional on t, is as follows:

$$\lambda(t;\mathrm{X}) = \lim_{h\to 0} \frac{P(t \leq T < t+h \mid T \geq t, \mathrm{X})}{h} = \frac{f(t|\mathrm{X})}{1-F(t|\mathrm{X})} \quad (2)$$

If we further assume that the density function f follows a Weibull distribution[18], the hazard function in this case becomes simply

$$\lambda(t;\mathrm{X}) = \exp(\mathrm{X}\beta)\,\alpha t^{\alpha-1},$$

where α and β are parameters of the Weibull distribution. Hence, by maximizing the product of $f(t|\mathrm{X};\theta)$ over our sample cases, a standard Maximum Likelihood Estimation yields $\hat{\alpha}$ and $\hat{\beta}$. The coefficients of explanatory variables are given by $\hat{\delta} = -\hat{\beta}/\hat{\alpha}$.

The vector of explanatory variables X includes our variable of interest, auditor industry specialization, as well as a set of control variables. In particular, our control variables consist of three groups: proprietary costs, capital market benefits, and corporate governance.

Defendant firms and their counsels often hesitate to make loss contingency disclosures as the revealed estimate of loss or recognition of the liability of an unfavorable outcome would encourage follow-on suits, and raise the floor for potential settlement amounts. Our first group of control variables thereby is designed to capture the proprietary cost of disclosure to the defendant

[16] For more details of the hazard model, see Chapter 21 of Woodridge (2002).

[17] In our setting, all defendant firms make disclosures no later than the case resolution. Accordingly, we can always observe the realization of t and thus do not have to deal with the potential issue of right censoring, which often emerges in a duration analysis.

[18] Other hazard models such the Cox proportional hazard model lead to similar inferences.

firm. We first adopt defendant size and profitability as proxies for proprietary costs since large, profitable firms are deemed to have "deeper pockets", and therefore are expected to be more vulnerable to legal suits and more reluctant to issue timely disclosures than their smaller and poorer counterparts. We use the defendant's market value to proxy for defendant size and ROA (return on assets) to proxy for a firm's profitability.

Firms often consider the capital market benefits when making disclosure decisions (e.g., Lang and Lundholm 2000). In particular, firms are more likely to hide bad news when they are raising capital in the near future (Darrough and Stoughton 1990). Therefore, withholding bad news to boost stock price constitutes the main capital market motivation. This is explicit in the pooling equilibrium in Dye (1985) and further illustrated by our model in Section 3.1. To measure this capital market incentive, we use two debt and equity issuance indicators. The first indicator variable takes a value of 1 if the firm issues debt any time during the lawsuit period and 0 otherwise. The second indicator variable takes a value of 1 if the firm issues new equity over the same period as that for debt issues and 0 otherwise. The Book-to-Market ratio is also included because the capital market response to bad news has been shown to be more pronounced for growth firms (e.g., Skinner and Sloan 2002). In addition, we control for factors related to the demand for informative and timely SFAS 5 disclosures, i.e., the number of analysts following the firm, and the percentage of shares held by institutions (Banks and Kinney 1982; Li et al. 1997). We expect that the greater the demand for timely disclosures is, the more likely the manager is to provide timely disclosures.

In general, the literature has established that better governed firms are more forthcoming in disclosure. Our final group of control variables relates to a number of corporate governance factors as other corporate governance factors could substitute or complement the auditors' role.

In particular, voluntary disclosure is expected to increase with leverage because the monitoring demand for information rises when debt increases (Leftwich, Watts and Zimmerman 1981). In addition, we control for the number of outside directors and board size which are shown to be important corporate governance mechanisms in prior literature.

Finally, case types, plaintiff types and year effects are also included in our model to control for potentially different practices pertaining to different case types, plaintiff types and years. Therefore, our hazard function goes as follows:

$$\lambda(t;\mathrm{X}) = \exp\begin{pmatrix} \beta * Auditor\ Specialization + \sum\gamma * Proprietary\ Costs \\ +\sum\mu * Capital\ Market\ Incentives \\ +\sum\rho * Corporate\ Governance \\ +\sum Case\ Types + \sum Plaintiff\ Types + \sum Year + \varepsilon \end{pmatrix} \alpha t^{\alpha-1} \qquad (3)$$

The coefficient $\hat{\delta}_{Auditor\ Specialization} = -\hat{\beta}/\hat{\alpha}$ is expected to be negative; in other words, industry specialization is associated with more timely disclosures. Financial statements, stock prices and corporate governance data are obtained from Compustat, CRSP and Risk Metrics, respectively. We further complement the corporate governance data by manually collecting information from firms' proxy statements. Our indicator variable capturing financing equals 1 if the firm issues equity (debt) any time during the period when the case is undergoing and 0 otherwise. Our other variables are measure as the average values over the life cycle of each case.

5.2 Auditor Specialization and the Usefulness of Litigation Loss Contingency Disclosures

We now turn to usefulness, e.g., the ability of SFAS 5 disclosures to predict material versus immaterial litigation loss outcomes. We utilize a sample of both material loss cases and zero loss cases lasting for more than one year. In order to jointly address timeliness and usefulness, we examine for each resolved case the whole life cycle of the case, i.e., from the quarter prior to the case outcome announcement to the quarter when the case is filed. We test

whether components of litigation loss contingency disclosures from each quarter can be used to form predictions regarding the case outcome (i.e., incurring material losses or not). Thus, the research design enables us to examine the time trend of disclosure usefulness, permitting an examination of both the timeliness and usefulness components of H1.

Specifically, we apply the following logit model, quarter over quarter, to test the usefulness of SFAS 5 disclosures in predicting material losses of resolved cases:

$$Loss = f\left(\beta * Disclosure\ Component_{\ T-\tau} + \sum Case\ Types + \sum Plaintiff\ Types + \varepsilon\right), \quad \tau = 1, 2, \dots, n \tag{4}$$

Loss is an indicator variable indicating whether defendant firms incur a material loss. T is the length of case and T-τ refers to τ quarters before the case is resolved. Then the dependent variable is equal to 1 at the quarter when the defendant ends up with a material loss, and zero otherwise. We include the variables capturing loss contingency disclosure components described in Section 4.3. We control for the case type and plaintiff type in our tests.

Based on all quarters of disclosure prior to the outcomes, we estimate the predictive probability of each disclosure variable at a particular "time to outcome" quarter. Furthermore, in order to test H2, we partition our sample into two parts: cases where defendants are audited by industry specialists and cases where defendants are audited by non-specialists. We estimate Equation (4) and calculate predictive power measures for Quarters T-1 to T-6 prior to the outcome announcement quarter. Finally, a comparison of the predictive powers between the two industry specialization subsamples would reveal whether specialist auditors lead to more useful loss contingency disclosures.

To further examine whether prior SFAS 5 disclosures are useful to investors, we perform an event study similar to Hennes (2008) but with a much larger sample, multiple case types and an expanded list of narrative disclosures used to form probabilities, compared to her study. We

search for the event date from all publications on Factiva. We require that the announcement date is not contaminated by other confounding events such as quarterly report releases. The cumulative abnormal return (CAR) is calculated over the three day window (-1, 1) in four ways, i.e., market adjusted returns, market model, Fama-French three-factor model and Fama-French four-factor model respectively. Raw returns are used for the first model and excess returns (i.e., return minus the risk free rate) are used for the next three models. The model is as follows.

$$CAR\ (-1,+1) = \beta_0 + \beta_1 LossAmt + \beta_2 Prob_{t-\tau} + \beta_3 LossAmt * (Prob_{t-\tau}) + \beta_4 Settlement + \sum Case\ Type + \varepsilon, \tau = 1, 2, \dots\ n \quad (5)$$

LossAmt is the announced amount of loss scaled by total assets. The predicted probability (*Prob*) comes from the predicted value in Eq. (4). It captures the predictive power of litigation loss contingency disclosures for material loss outcomes. Because the coefficient of *LossAmt* reveals the announcement effect of material losses, the coefficient for the interaction term *LossAmt*Prob* captures whether disclosures prior to resolution mitigate the announcement effect of material losses. We expect β_3 to be positive, suggesting that the information contained in Quarter T-1 SFAS 5 disclosures is useful for investors in order to predict the final outcome prior to its announcement.

6. Empirical Results

6.1 Results of the Timeliness Tests

Table 5 reports the results pertaining to the role of our treatment variable, auditor industry specialization, in determining the timeliness of loss contingency disclosures. According to H2, we predict that the coefficient on this variable will have a negative sign. Our predicted signs for each control variable are based on intuition and prior studies. Panel A presents results related to the timeliness of "first disclosure". In other words, Panel A shows the impact of

auditor industry specialization on the duration between the quarter of case initiation and the quarter when the firm first disclosed the case in either 10-K or 10-Q. As introduced in Section 4.3, six measures are used to proxy for industry specialization. The results show that, while the coefficients of national-level specialists are insignificant, the coefficients of city-specific and joint national and city-specific industry specialists are significantly negative. In particular, the highest effects are obtained when joint national and city-specific industry specialists are used. For example, for a typical case lasting for 10 quarters, firms audited by joint national and city-specific industry specialists disclose the case around 1.7 quarters earlier than firms audited by non-specialists, all else equal. These results suggest that city and joint national and city-level specialists are able to push managers to make timely disclosures while national industry specialists are not. These results are consistent with a number of prior studies showing that joint national and city-specific industry specialists have the highest audit quality while city-industry specialists alone are also associated with high audit quality (e.g., Reichelt and Wang 2010). Regarding control variables, the coefficients which are significant bear signs consistent with our predictions. Specifically, growth firms (i.e., the inverse of BM), and firms raising financing (i.e., debt issuance) wait longer to make the first disclosure. In the context of our analytical model, delay of bad news yields capital market benefits in terms of higher stock price. Additionally, well governed firms (i.e., higher percentage of independent directors) make first disclosures sooner.

Panel B shows the impact of auditor industry specialization on the duration between the quarter of case initiation and the quarter when the firm first issues pre-warning. Pre-warning refers to when the firm discloses that the case could have material impact on the firm or when the

firm estimates a material loss amount or when the firm accrues a loss amount[19]. Similar to Panel A, while the coefficients of national-level specialists are insignificant, the coefficients of city-specific and joint national and city-specific industry specialists are significantly negative. In particular, the highest effects are obtained when joint national and city-specific industry specialists are used. For a typical case lasting for 10 quarters, firms audited by joint national and city-specific industry specialists issues the pre-warning around 1.6 quarters earlier than firms audited by non-specialists, all else equal. Overall, these results are consistent with our hypothesis that firms audited by industry specialist auditors tend to issue more timely loss contingency disclosures than firms audited by non-specialist auditors. Regarding control variables, the coefficients which are significant once again have signs consistent with our predictions. Specifically, growth firms (i.e., the inverse of *BM*) and firms raising financing (i.e., debt issuance) wait longer to make a pre-warning. Additionally, firms with a large analyst following (a proxy for demand for information) issue a pre-warning sooner.

6.2 Results of the Usefulness Tests

Table 6 presents descriptive statistics of components of litigation loss contingency disclosures. As Panel A shows, firms warn investors of potential material losses (*Potential_Adverse*) for 21% of case quarters. Put in perspective, for 53% of the case quarters, the outcome upon resolution is a material loss. Turning to the disclosure of claim amounts, untabulated descriptive statistics indicate that plaintiff claim amounts are disclosed for 53% of the case quarters and Panel A indicates that 15% of the claims are material. This is consistent with FASB concerns that the claim amount is not always disclosed. With regards to the

[19] The results are quantitatively similar if we require the accrued amount to be material.

disclosure of estimates, untabulated descriptive statistics indicate that estimates are disclosed for very few (i.e., 3%) case quarters. Panel A indicates that 2% of disclosed estimates are material. This is consistent with FASB concerns that estimates are seldom provided.

Panel B contains the Pearson correlation matrix for the variables used in our logit regression. The correlations indicate potential multicollinearity between some of our variables. For example, the Pearson's rank correlation coefficient between *M_Accrue* and *Accrue* is 0.79, while the correlation coefficient between *M_Estimate* and *M_Accrue* is 0.38.

In order to reveal the usefulness of each disclosure component in predicting material loss outcome, we first run separate logit regressions using each disclosure component in Quarter T-1 with case type and plaintiff type being controlled for. In each of such regressions, the dependent variable assumes a value of 1 if the outcome loss is material and zero otherwise. The results are presented in the first column of Table 7. Our predicted signs for each disclosure component are based on intuition and prior studies. Consistent with our expectations, a material loss outcome is significantly positively associated with *Potential_Adverse*, *Settle_Ref*, *Trial*, *Accrue*, *M_Claim* and *M_Accrue* and is significantly negatively associated with *Immaterial*. Although we do not have a predicted sign for the variables on *Defense* and *Not_Estimable*, both variables are significantly positively associated with a material loss outcome. The coefficient for *No_Merit* is insignificant, which may suggest that managers' claim of no merit is merely cheap talk and is not related to final outcomes. The coefficient for *M_Estimate*, 0.1, is of the predicted sign, but insignificant. This result may be due to the low power because managers make material loss estimates in only 2% of case quarters. When we combine all disclosure components in one single regression, Table 7 indicates similar results except that the coefficients on *Not_Estimable*, *Settle_Ref*, and *Accrue* become insignificant.

In order to explore the predictive power of our disclosure components, we next use these disclosure variables in a series of logit models, one for each of quarters from T-6 to T-1. The results appear in Table 8 and Figure 2. Table 8 presents various statistics of predictive power over six quarters prior to the case outcome quarter. These statistics include Pseudo R^2, Percent Concordant, Likelihood Ratio and Hosmer–Lemeshow's p-value[20]. As Panel A of Table 8 shows, all our four statistics steadily go down over quarters. For example, the pseudo R^2 steadily goes down from 14% at Quarter T-1 to 5% at Quarter T-5 and 4% at Quarter T-6. More importantly, the null hypothesis of the Hosmer–Lemeshow test is rejected at T-5 (p-value = 0.06), suggesting that the disclosure variables start to lose predictive power from Quarter T-5 backwards. Overall, these results suggest that loss contingency disclosures are useful at Quarter T-1, but the usefulness of disclosures quickly evaporates at the fifth quarter prior to the case outcome, consistent with the FASB concerns about the lack of timely and useful disclosures, especially in the advanced stages of the case life cycle. Panel A of Figure 2 illustrates this trend as well.

Panel B of Table 8 presents predictive powers for firms audited by specialist auditors vs. firms audited by non-specialist auditors[21]. While the predictive power indicated by the Pseudo R^2 drops over quarters from quarters T-1 to T-6 for both groups, it drops faster for firms audited by non-specialist auditors than their counterparts. For firms audited by non-specialist auditors, at Quarter T-5, the Pseudo R^2 drops to 4% and the Hosmer–Lemeshow's p-value is 0.06. For firms audited by specialist auditors, the Pseudo R^2, at Quarter T-5, is still over 10% and the Hosmer–Lemeshow's null hypothesis is not rejected at conventional significance level. In untabulated

[20] The Hosmer–Lemeshow test is a statistical test for goodness of fit for logit regression models. The null hypothesis is that the model has an appropriate fit, with p-values less than 0.1 indicating that this null can be rejected, i.e., the fit of the model is poor. This test has been widely adopted in prior accounting and finance literature (e.g., Martin 1996; Blouin, Grein and Rountree 2007).

[21] Here the specialist auditor is defined based upon city-level and definition 1. The results are qualitatively similar using other specialist definitions.

analysis, the Hosmer–Lemeshow's null hypothesis is rejected at Quarter T-8 for firms audited by specialist auditors.

In order to compare predictive power for the two groups, we conduct Chow tests to examine whether their regression coefficients are different. If disclosure components carry the same predictive power, we should not expect structural differences between these two sets of coefficients. The results of Chow tests indicate that while the coefficients are not significantly different in Quarters T-1 to T-3 (i.e., p-values are greater than 10%), they are significantly different in Quarter T-4 and before. The patterns are also shown in Panel B, Figure 2. In sum, the results demonstrate that firms audited by industry specialists provide more timely and useful disclosures of material litigation losses.

To summarize, our usefulness evidence indicates that the predictive powers of our logit models drop sharply from the quarter prior to case resolution to earlier quarters, with little power five quarters prior to the outcome quarter. In addition, consistent with H2, auditors' industry specialization is positively associated with the timeliness and usefulness of loss contingency disclosures.

6.3 Results of the Event Study

Table 9 presents the results of market reactions to litigation outcome announcements. Panel A reports the results of market reaction tests based on signed and unsigned event impacts. Specifically, we compute cumulative abnormal return (CAR) and abnormal volatility (AVAR). Following prior literature, the cumulative abnormal return (CAR) is calculated over the three-day window (-1, 1) in four ways: market adjusted returns, the market model, Fama-French 3-factor model, and Fama-French 4-factor model. The estimation window is from Day -165 to Day -16.

The abnormal volatility (AVAR) is the ratio of the square of abnormal returns to the variance of residuals from the estimation period. Similar to CARs, we obtain four AVAR measures based on different benchmark models. The results show that while we do not observe significant CARs over the event window, which is consistent with Grundfest and Simmons (2008), we do observe AVARs significantly different from 1. For example, the average market adjusted AVAR is 1.48, which exceeds 1 at the 0.01 significance level. A measure of "news" is often unavailable when a case resolution is announced, making tests on the average signed event impact ambiguous. For example, some resolutions can reflect good news while others reflect bad news, depending on market expectations, making a prediction on the average signed event difficult. In our context, an average signed event impact of zero could mean either full anticipation by investors or good news cancelling out bad news. Unsigned event impact tests have the advantage that an expectation model measuring news is not required and one can infer whether the outcome announcement is an information event as far as the market is concerned. The significant average unsigned event impact suggests that there is less than full anticipation by investors of the announced litigation outcomes, consistent with FASB's concerns.

Panel B presents descriptive statistics of several independent variables involved in our multivariate regression. *LossAmt* is the loss amount deflated by total assets. The mean (median) loss amount is 50.3% (23.2%) of total assets, pointing to on average severe losses for our sample of material loss announcements. *Prob* is the predicted probability of a material loss on case resolution from the logit model in Table 7 at Quarter T-1. At Quarter T-1, the mean (median) predicted probability of a material loss is 61% (54%), indicating that material loss is likely. *Settle* is a dichotomous variable indicating whether the case is settled out-of-court. On average, 97% of

our material loss announcements arise from out-of-court settlements with the remainder arising from unfavorable court verdicts.

Panel C shows the results of a regression of CARs on outcome amount and estimated probability in Quarter T-1 employing four CAR measures. Because the results are similar among all CAR measures we use market adjusted CARs as an example. Illustrated using Market Model CARs, the coefficient on *LossAmt* is -0.06, which is significant at the 10% level. More importantly, the coefficient on *LossAmt*Prob* is 0.08, which is significant at the 5% level. The result suggests that the litigation loss contingency disclosures mitigate the market reaction to material loss announcements. In particular, when the outcome is fully predicted by the disclosure (i.e., *Prob* = 100%), there is no significant market reaction[22].

To summarize, our event study results contain mixed evidence on the timeliness and usefulness (H1) of SFAS 5 disclosures (i.e., Hypothesis 1). On a positive note, litigation loss contingency disclosures in Quarter T-1 are useful to investors in predicting the case outcomes, a conclusion similar to that of Hennes (2008)[23]. The evidence is also consistent with a certain degree of Quarter T-1 predictive usefulness indicated for our logit model, as reported in Table 8. At least by Quarter T-1, SFAS 5 disclosures are useful, thus rejecting H1 in its null form. Such results do not directly address the FASB's concern for a lack of timely disclosures in quarters before T-1. Our inferences about the average unsigned event impact do speak, indirectly, to the timeliness issue. This evidence suggests that investors do not fully anticipate the outcome announcements. As such, it points to a role for timely and useful financial statement disclosures

[22] The sum of the coefficients on *LossAmt* and *LossAmt*Prob* are not significantly different from zero (p-value > 10%).

[23] Since our results in Table 8 reveal no statistically significant difference in the predictive power between firms audited by specialist auditors and firms audited by non-specialist auditors at Quarter T-1, we do not test for auditor effects in Table 9.

about the case, since other information sources do not completely remove the surprise element of announced litigation outcomes.

6.4 Robustness Checks

Addressing the self-selection concern. Our analyses on audit specialists are subject to the potential self-selection concern. For example, a well-governed firm might simultaneously pick an audit specialist and choose to make timely and useful disclosures regarding litigation loss contingencies. Following Minutti-Meza (2012), we use the propensity score matching method to check for the robustness of our main results.[24] We start with the material loss cases audited by city-level industry specialists as our treatment group. Then, we run a probit model of auditor selection by regressing the choice of an industry specialist on client characteristics suggested by Minutti-Meza (2012) such as size, profitability, leverage, liquidity, sales and variability of net incomes, which have been shown in the audit literature to affect audit quality choice. Based on the predicted probability obtained from the probit regression, we select the closest match of treatment cases (i.e., firms audited by specialists) and control cases (i.e., firms audited by non-specialists).[25] Because we require a one-to-one match in the same two-digit SIC industry, the sample size decreases dramatically (160 and 330 for the timeliness and usefulness tests respectively). We replicate our timeliness and usefulness tests (reported above in Tables 5 and 8 respectively) using the matched sample based on two different definitions of city-level industry specialists. For the timeliness test, the coefficients (untabulated) on industry specialists continue

[24] We do not use the Heckman (1979) model in this setting because it is difficult, if not impossible, to find instrumental variables that are the determinants of the first stage model (on the choice of audit specialists), but are exogenous to the second stage model. Moreover, the Heckman (1979) model typically entails a first stage probit model and a second stage OLS model. It does not apply directly to our setting because our second stage model is not on an OLS regression.

[25] The propensity score matching was successful. The average difference in propensity scores across the treatment and the control samples is not significantly different from zero using a paired T-test.

to be significantly negative at the 5% level, confirming that industry specialists are associated with more timely disclosures. Likewise, we obtain qualitatively similar results on the usefulness tests, although the significance levels are somewhat lower than that in our main tests, likely due to the relatively smaller sample size. In particular, the Chow test shows that the usefulness results for the two groups are similar in Quarters T-1 to T-4, but differ significantly in favor of industry specialists in Quarters T-5 and T-6.

Alternative materiality threshold. In our main tests, the threshold of material loss is set as 0.5 percent of total assets according to ISA 320 (IASB) and SAS 107 (AICPA). In our robustness test, we alternatively use a higher threshold to define the materiality of losses. In particular, we set the threshold to be 1.5% of total assets and replicate our previous tests. The results are similar to our main findings and the inferences remain unchanged.

Alternative industry specialist threshold. To ensure that our results are not driven by arbitrary cut-off values of industry market share that separate audit specialists from non-specialists, we alternatively require that city-level industry specialists have a market share greater than 30 percent in a two-digit SIC category instead of 50 percent as used in our main tests. The results are qualitatively similar and do not change the inference.

7. Conclusion

Investors have complained for many years that public companies fail to warn them early enough, or at all, about risks relating to litigation and other claims that ultimately result in large losses. In response to these criticisms, the FASB proposed two exposure drafts in an attempt to improve the timeliness and usefulness of the loss contingency disclosures. However, the FASB

Exposure Drafts did not refer to evidence of insufficient disclosure to support the concerns expressed by the users.

We investigate whether current litigation loss contingency disclosures provide timely and useful information to investors. Using the largest archival data set examined to date in the literature, we code the litigation loss contingency disclosure of each case from "the cradle to grave", i.e., from the first public disclosure of the case to the final disclosure of the case resolution. The longitudinal feature of our analyses enables us to address the FASB complaint of a lack of timely and/or useful prior disclosures, especially for large negative outcomes. We first examine the timeliness of litigation loss contingency disclosures by employing hazard function methodology for material loss outcomes. We then investigate disclosure usefulness through two stages. In the first stage, we use prior SFAS 5 disclosures to predict a material litigation loss outcome. In the second stage, we perform an event study in order to test whether the stock market reaction to a litigation loss announcement decreases as the first-stage predicted material loss probability increases.

We show the following salient facts regarding a lack of timely and/or useful prior SFAS 5 disclosures, especially for large negative outcomes. For 2% of our sample cases with material losses (defined as a loss exceeding 0.5% of total assets), there was no disclosure of the cases until the case resolution quarter. In addition, for another 20% of our cases with material losses, there was no disclosure of the cases until the final four quarters prior to the case resolution quarter. For 45% of our sample cases with material losses, firms did not disclose that these cases could have material economic impact on the firms, prior to the case resolution quarter. In addition, we show that the predictive power of the models predicting a material litigation loss outcome drops sharply from the quarter prior to case resolution to earlier quarters, with little

predictive power five quarters prior to the outcome quarter. Furthermore, we find there was less than full anticipation by investors of the announced litigation outcomes. Overall, these results are suggestive but not conclusive regarding a lack of full compliance with SAFS 5. It is always possible that facts changed dramatically over the life cycle of the lawsuits and managers truthfully disclosed what they knew at the time. Thus, we turn to the role of audit quality, proxied by auditor industry specialization, to provide stronger "smoking gun" evidence of strategic non-compliance with SFAS 5 disclosure requirements.

Prior archival studies do not examine the role of audit quality in enhancing the timeliness and usefulness of SFAS 5 disclosure. Building on an analytical model, we conjecture that better quality auditors are better able to prevent manager from withholding their private information. Thus, managers who can assess the potential materiality of expected losses upon case resolution are more likely to disclose this information under the monitoring of industry specialist auditors. With regards to timeliness, our hazard model analysis indicates that auditors with industry expertise are associated with earlier disclosure of cases and more timely pre-warnings to investors. Turning to the results regarding usefulness, we find the predictive powers of a series of logit models across quarters are consistently higher for firms audited by specialist auditors than by non-specialists. Thus, our strongest evidence that managers do behave in a strategic manner is our demonstrated role for auditor industry expertise.

In July of 2012, the FASB dropped the loss contingency disclosures project given the strong opposition to the two failed exposure drafts by companies and the legal industry. However, the FASB has left the option open to consider improving loss contingency disclosures as part of a broader project seeking to develop a new disclosure framework. FASB staff received feedback that changes to SFAS 5 are unnecessary and the bigger problem is a lack of compliance with

existing requirements. Our study provides evidence suggesting strategic noncompliance with the existing SFAS 5 and the role of auditors in curbing this noncompliance. Thus, the solution may well be closer audit scrutiny of SFAS 5 disclosures. As such our study informs the ongoing debate.

References

Amer, T., and K. Hackenbrack. 1994. Between-auditor differences in the interpretation of probability phrases. *Auditing: A Journal of Practice and Theory* 13 (1): 126-136.

Amer, T., K. Hackenbrack, and M. W. Nelson. 1995. Context-dependence of auditors' interpretations of the SFAS No. 5 probability expressions. *Contemporary Accounting Research* 12 (1): 25-39.

American Institute of Certified Public Accounts. 1976. *Statement on Auditing Standards (SAS) No. 12: Inquiry of a Client's Lawyer Concerning Litigation*. New York: Auditing Standards Board.

Balsam, S., J. Krishnan, and J. S. Yang. 2003. Auditor industry specialization and earnings quality. *Auditing: A Journal of Practice and Theory* 22 (2): 71–97.

Banks, D. W., and W. R. Kinney. 1982. Loss contingency reports and stock prices: An empirical study. *Journal of Accounting Research* 20 (1): 240-254.

Blouin, J., B. M. Grein, and B.R. Rountree. 2007. An analysis of forced auditor change: the case of former Arthur Andersen clients. *The Accounting Review* 82 (3): 621-650.

Chassan, E. 2012. FASB dumps loss contingency disclosure project. *Wall Street Journal*, July 10, 2012. http://blogs.wsj.com/cfo/2012/07/10/fasb-dumps-loss-contingency-disclosure-project/

Craswell, A. T., J. R. Francis, and S. L. Taylor. 1995. Auditor brand name reputations and industry specializations. *Journal of Accounting and Economics* 20 (3): 297-322.

Darrough, M. N., and N. M. Stoughton. 1990. Financial disclosure policy in an entry game. *Journal of Accounting and Economics* 12 (1-3): 219-243.

DeAngelo, L. E. 1981. Auditor size and audit quality. *Journal of Accounting and Economics* 3 (3): 183-199.

Desir, R., K. Fanning, and R. J. Pfeiffer. 2010. Are revisions to SFAS No. 5 needed? *Accounting Horizons* 24 (4): 525-545.

Dunn, K. A., and B. W. Mayhew. 2004. Audit firm industry specialization and client disclosure quality. *Review of Accounting Studies* 9 (1): 35-58.

Dye, R. A. 1985. Disclosure of nonproprietary information. *Journal of Accounting Research* 23 (1): 123-145.

Dye, R. A. 1993. Auditing standards, legal liability, and auditor wealth. *Journal of Political Economy* 101 (5): 887–914.

Fesler, R. D., and J. L. Hagler. 1989. Litigation disclosures under SFAS No. 5: A study of actual cases. *Accounting Horizons* 3 (1): 10-20.

Financial Accounting Standards Board (FASB). 1975. *Statement of Financial Accounting Standards No. 5: Accounting for Contingencies*. Norwalk, CT: FASB.

Financial Accounting Standards Board (FASB). 2007. *Accounting for Contingencies*. Board Meeting Handout. Norwalk, CT: FASB. http://www.fasb.org/board handouts/09-06-07.pdf

Financial Accounting Standards Board (FASB). 2008. *Exposure Draft: Disclosure of Certain Loss Contingencies.* Norwalk, CT: FASB.

Financial Accounting Standards Board (FASB). 2010. *Exposure Draft: Contingencies (Topic 450) - Disclosure of Certain Loss Contingencies.* Norwalk, CT: FASB.

Francis, J. R., D. Philbrick, and K. Schipper. 1994. Shareholder litigation and corporate disclosures. *Journal of Accounting Research* 32 (2): 137-164.

Francis, J. R., K. R. Reichelt, and D. Wang. 2005. The pricing of national and city-specific reputations for industry expertise in the U.S. audit market. *The Accounting Review* 80 (1): 113–136.

Francis, J. R., and M. Yu. 2009. Big 4 office size and audit quality. *The Accounting Review* 84 (5): 1521-1552.

Frost, C. A. 1991. Loss contingency reports and stock prices: a replication and extension of Banks and Kinney. *Journal of Accounting Research* 29 (1): 157-169.

Gramling, A., Stone, D., 2001. Audit firm industry expertise: A review and synthesis of the archival literature. *Journal of Accounting Literature* 20 (1): 1–29.

Grundfest, J. A., and L. E. Simmons. 2008. Submission of comments to the FASB regarding exposure draft: "Disclosure of certain loss contingencies, an amendment of FASB statement N. 5 and 141 (R)".

Guy, D. M., and D. R. Carmichael. 2000. *Wiley's Student GAAS Guide*. New York: John Wiley & Sons Inc.

Hackenbrack, K., and M. W. Nelson. 1996. Auditors' incentives and their application of financial accounting standards. *The Accounting Review* 71 (1): 43-59.

Harrison, K. E., and L. A. Tomassini. 1989. Judging the probability of a contingent loss: An empirical study. *Contemporary Accounting Research* 5 (2): 642-648.

Heckman, J. 1979. Sample selection bias as a specification error. *Econometrica* 47 (1): 153-161.

Hennes, K. M. 2008. The reporting of contingent legal liabilities. Working Paper, Pennsylvania State University.

Jiambalvo, J., and N. Wilner. 1985. Auditor evaluation of contingent claims. *Auditing: A Journal of Practice* 5 (1): 1-11.

Kennedy, J., T. Mitchell, and S. E. Sefcik. 1998. Disclosure of contingent environmental liabilities: Some unintended consequences? *Journal of Accounting Research* 36 (2): 257-277.

Kinney, W. R. 2000. *Information Quality Assurance and Internal Control for Management Decision Making*. McGraw-Hill/Irwin.

Kinney, W. R., and M. W. Nelson. 1996. Outcome information and the "expectation gap": The case of loss contingencies. *Journal of Accounting Research* 34 (2): 281-299.

Krishnan, G. V. 2003. Does Big 6 auditor industry expertise constrain earnings management? *Accounting Horizons* 17 (Supplement): 1–16.

Lang, M. H., and R. J. Lundholm. 2000. Voluntary disclosure and equity offerings: reducing information asymmetry or hyping the stock? *Contemporary Accounting Research* 17 (4): 623-662.

Leftwich, R. W., R. L. Watts, and J. L. Zimmerman. 1981. Voluntary corporate disclosure: The case of interim reporting. *Journal of Accounting Research* 19 (1): 50-77.

Lewis, B. L. 1980. Expert judgment in auditing: An expected utility approach. *Journal of Accounting Research* 18 (2): 594-602.

Li, Y., G. D. Richardson, and D. B. Thornton. 1997. Corporate disclosure of environmental liability information: Theory and evidence. *Contemporary Accounting Research* 14 (3): 435-474.

Little, P., M. I. Muoghalu, and H. D. Robison. 1995. Hazardous waste lawsuits, financial disclosure, and investors' interests. *Journal of Accounting, Auditing and Finance* 10 (2): 383-400.

Martin, K. J. 1996. The method of payment in corporate acquisitions, investment opportunities, and management ownership. *Journal of Finance* 51 (4): 1227-1246.

Minutti-Meza, M. 2012. Does auditor industry expertise improve audit quality? Evidence from comparable clients. Working paper, University of Miami.

Nelson, M. W., S. Smith, and Z. Palmrose. 2005. The effect of quantitative materiality approach on auditors' adjustment decisions. *The Accounting Review* 80 (3): 897-920.

Nelson, M. W., and W. R. Kinney. 1997. The effect of ambiguity on loss contingency reporting judgments. *The Accounting Review* 72 (2): 257-274.

Palmrose, Z.-V. 1988. An analysis of auditor litigation and audit service quality. *The Accounting Review* 63 (1): 55-73.

Public Company Accounting Oversight Board (PCAOB). 2003. *AU 337: Inquiry of a Client's Lawyer Concerning Litigation, Claims, and Assessments*.

Raghunandan, K., R. A. Grimlund, and A. Schepanski. 1991. Auditor evaluation of loss contingencies. *Contemporary Accounting Research* 7 (2): 549-569.

Ramnath, S., P. Shane, and M. Willenborg. 2005. Accounting for litigation loss contingencies: The case of patent lawsuits. *Working Paper*, Georgetown University.

Reichelt, K. J. and D. Wang. 2010. National and office-specific measures of auditor industry expertise and effects on audit quality. *Journal of Accounting Research* 48 (3): 647-686.

Reimers, J. L. 1992. Additional evidence on the need for disclosure reform. *Accounting Horizons* 6 (1): 36-41.

Rogers, J. L., and A. Van Buskirk. 2009. Shareholder litigation and changes in disclosure behavior. *Journal of Accounting and Economics* 47 (1-2):136-156.

Schultz, J. J., and P. M. J. Reckers. 1981. The impact of group processing on selected audit disclosure decisions. *Journal of Accounting Research* 19 (2): 482-501.

Skinner, D. J. 1994. Why firms voluntarily disclose bad news. *Journal of Accounting Research* 32 (1): 38-60.

Skinner, D. J., and R. G. Sloan. 2002. Earnings surprises, growth expectations, and stock returns or don't let an earnings torpedo sink your portfolio. *Review of Accounting Studies* 7 (2-3): 289-312.

Verrecchia, R. E. 1983. Discretionary disclosure. *Journal of Accounting and Economics* 5 (1): 179-194.

Wooldridge, J. M. 2002. *Econometric Analysis of Cross Section and Panel Data*. The MIT press.

Ye, M., and D. A. Simunic. 2012. The economics of setting auditing standards. *Contemporary Accounting Research.* Forthcoming.

Table 1
Sample Selection

This table presents the procedures of sample selection. The material loss cases are defined as the cases whose loss is over half a percent of total assets.

Panel A: Material Loss Cases

Material cases with filing date, outcome date and outcome amount available	608
After excluding cases in which loss is claimed to be covered by insurance	559
After excluding cases shorter or equal to one year	438

Panel B: Immaterial Loss Cases

Immaterial cases with filing date, outcome date and outcome amount available	1569
After excluding non-zero loss cases	823
After excluding cases shorter or equal to one year	430

Table 2
Descriptive Statistics of Sample Cases

This table presents the disposition of material and zero loss cases, by year of filing, case type and industry respectively. The material loss cases are defined as the cases whose loss exceeds half a percent of total assets.

Panel A: Cases by Year

Year of Filing	Material Loss Cases		Zero Loss Cases	
	N	%	N	%
1994	13	2.97	4	0.93
1995	20	4.57	9	2.09
1996	18	4.11	14	3.26
1997	26	5.94	28	6.51
1998	25	5.71	22	5.12
1999	23	5.25	34	7.91
2000	36	8.22	28	6.51
2001	43	9.82	46	10.7
2002	38	8.68	39	9.07
2003	40	9.13	49	11.4
2004	49	11.19	46	10.7
2005	36	8.22	44	10.23
2006	29	6.62	38	8.84
2007	23	5.25	24	5.58
2008	17	3.88	5	1.16
2009	2	0.46	0	0
Total	438	100	430	100

Panel B: Cases by Type

Case Type	Material Loss Cases		Zero Loss Cases	
	N	%	N	%
1. Environmental Issues	10	2.28	10	2.33
2. Employee Related Issues	45	10.27	42	9.77
3. Securities and Trading Related Issues	94	21.46	81	18.84
4. Breach of Contracts with Stakeholders	104	23.74	61	14.19
5. Intellectual Property Infringement	55	12.56	67	15.58
6. Product Liability	29	6.62	21	4.88
7. Improper Business Practices	87	19.86	133	30.93
8. Other	14	3.2	15	3.49
Total	438	100	430	100

Panel C: Cases by Plaintiff Type

Plaintiff Type	Material Loss Cases		Zero Loss Cases	
	N	%	N	%
1. Government Agencies	43	9.8	36	8.4
2. Shareholders and Creditors	32	7.3	26	6.0
3. Employees and Directors	34	7.8	42	9.8
4. Customers and Suppliers	90	20.5	85	19.8
5. Class Action	99	22.6	76	17.7
6. Others	140	32.0	165	38.4
Total	438	100	430	100

Panel D: Cases by Industry

SIC first two digits	Industry	Material Loss Cases		Zero Loss Cases		%Distribution in Compustat
		N	%	N	%	
73	Business Services	58	13.24	70	16.28	10.1
36	Electronic And Other Electrical Equipment And Components, Except Computer Equipment	54	12.33	43	10	7
28	Chemicals And Allied Products	43	9.82	26	6.05	5.5
38	Measuring, Analyzing, And Controlling Instruments	43	9.82	26	6.05	6.7
35	Industrial And Commercial Machinery And Computer Equipment	21	4.79	28	6.51	5.6
48	Communications	17	3.88	27	6.28	1.7
80	Health Services	16	3.65	8	1.86	3.7
58	Eating And Drinking Places	14	3.2	8	1.86	1.9
67	Holding And Other Investment Offices	11	2.51	9	2.09	4
	Other	161	36.76	185	43.02	53.8
	Total	438	100	430	100	100

Table 3
Descriptive Statistics of the Life Cycle of Loss Contingency Disclosures for Material Loss Cases

This table presents the descriptive statistics of the timing of loss contingency disclosures over the life cycle of each case. *Quarters to First disclosures* are the number of quarters when the case is first disclosed by the firm in their 10-Ks or 10-Qs. *Quarters to Pre-warnings* are the number of quarters that the firm takes to disclose that the case could have material impact on the firm or when the firm estimates a material amount of losses or when the firm accrues a loss. *Quarters to Case Resolution* are the number of quarters for a case to resolve. Panel A shows the number of quarters between the case filing date and the event date. Panel B illustrates the percentage of time elapsed when the event occurs.

Panel A: Number of Quarters Relative to the Filing Date

Disclosure	N	Mean	S.D.	Min	Q1	Median	Q3	Max
Quarters to First Disclosures	438	2.94	4.78	0	1	1	3	52
Quarters to Pre-warnings	438	8.28	7.9	0	3	7	11	60
Quarters to Case Resolution	438	12.51	8.58	5	7	10	15	60

Panel B: Number of Quarters Relative to the Filing Date

Disclosure	N	Mean	S.D.	Min	Q1	Median	Q3	Max
Quarters to First Disclosures	438	23%	0.25	0	4%	14%	33%	100%
Quarters to Pre-warnings	438	67%	0.37	0	33%	81%	100%	100%

Table 4
Firm Characteristics for Material Loss Cases

This table shows the characteristics of the defendant firms with material loss cases during the case period. *Industry Specialist Auditor* is defined at a national and a city level as well as their combination (e.g., Reichelt and Wang 2010). National level auditor industry expertise is based on the total sales audited by an accounting firm within a two-digit SIC category. City-level auditor industry expertise is based on the auditor's annual market share of audit fees within a two-digit SIC category for a particular city. Two alternative measures (definitions 1 and 2) are employed. Definition 1 defines a national (city) industry specialist if in a particular year (and in a particular city) the auditor has the largest market share in a two-digit SIC category and if its market share is at least 10% points greater than the second largest industry leader in a national (city) audit market. Definition 2 defines a national (city) industry specialist if in a particular year (and in a particular city) the auditor has a market share greater than 30% (50%) in a two-digit SIC category. *MV* is the market value of equity. *ROA i*s calculated as the net income divided by total assets. *Equity (Debt) Issuance* equals 1 if the firm issues equity (debt) any time during the period when the case is undergoing and 0 otherwise. *BM* is the ratio of the book value of equity to the market value of equity. *Analyst Following* is the number of analysts who issue earnings forecasts of the sample firm. *Institutional Holding* is the percentage of shares held by institutions. *Leverage* is the ratio of total debt to total assets. *% of Independent Director* is the percentage of independent directors to the number of all directors. *Board Size* is defined as the number of all directors. Our indicator variable capturing financing equals 1 if the firm issues equity (debt) any time during the period when the case is undergoing and 0 otherwise. Our other variables are measure as the average values over the life cycle of each case.

Variable	N	Mean	Median	S.D.	Q1	Q3
Industry Specialist Definition 1						
National Specialist	438	0.10	0	0.27	0	0
City Specialist	382	0.21	0	0.36	0	0
Both National and City Specialist	382	0.03	0	0.14	0	0
Industry Specialist Definition 2						
National Specialist	438	0.16	0	0.33	0	0
City Specialist	382	0.25	0	0.38	0	1
Both National and City Specialist	382	0.06	0	0.2	0	0
MV	438	2810.3	221.85	14822.7	64.09	762.33
ROA	438	-0.18	-0.02	0.68	-0.2	0.05
Equity Issuance	438	0.43	0	0.5	0	1
Debt Issuance	438	0.53	1	0.5	0	1
BM	438	0.22	0.41	3.37	0.22	0.69
Analyst Following	438	7.85	4.78	9.67	1	10.75
Institutional Holding	438	0.45	0.42	0.32	0.16	0.74
Leverage	438	0.31	0.17	0.63	0.04	0.36
% of Independent Director	438	0.62	0.68	0.28	0.5	0.82
Board Size	438	5.93	6	3.21	4	8

Table 5
The Effect of Auditor Industry Expertise on the Timeliness of Loss Contingency Disclosures for Material Loss Cases

This table shows the estimation results of a hazard model which assumes a Weibull distribution. Employing the hazard model, Panels A and B examine the timeliness of first disclosure and pre-warning, respectively. The coefficient values $\hat{\delta} = -\hat{\beta}/\hat{\alpha}$ (as in Eq. (3)) are reported. *Quarters to First disclosures* and *Quarters to Pre-warnings* are dependent variables, as defined in Table 3. All the other variables are defined in Table 4. ***, **, and * indicate that the coefficient is statistically different from 0 at the 1%, 5% and 10% levels, respectively (two-tailed tests).

Panel A: The Timeliness of First Disclosures

Variable	Pred. Sign	Industry Specialist Definition 1			Industry Specialist Definition 2		
National Specialist	-	-0.04			-0.04		
		[-1.40]			[-1.07]		
City Specialist	-		-0.08**			-0.07**	
			[-2.44]			[-2.17]	
Both National and City Specialist	-			-0.17**			-0.11**
				[-2.28]			[-2.24]
log(MV)	+	0.01	0.01	0.01	0.01	0.01	0.01
		[1.34]	[1.46]	[1.48]	[1.32]	[1.41]	[1.52]
ROA	+	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
		[-0.07]	[-0.37]	[-0.46]	[-0.04]	[-0.37]	[-0.45]
BM	-	-0.01***	-0.01***	-0.01***	-0.01***	-0.01***	-0.01***
		[-8.28]	[-6.46]	[-7.64]	[-8.05]	[-6.39]	[-7.89]
Lev	-	0.01	0.01	0.01	0.01	0.01	0.01
		[1.09]	[0.27]	[0.13]	[1.11]	[0.24]	[0.14]
Log(1+Analyst Following)	-	-0.01	-0.02	-0.02	-0.01	-0.02	-0.02
		[-0.66]	[-0.92]	[-1.00]	[-0.65]	[-0.83]	[-1.05]
Institutional Holding	-	-0.07	-0.05	-0.05	-0.07	-0.06	-0.05
		[-0.91]	[-0.70]	[-0.69]	[-0.92]	[-0.71]	[-0.72]
Equity Issuance	+	0.01	-0.03	-0.02	0.01	-0.03	-0.02
		[0.34]	[-0.89]	[-0.88]	[0.34]	[-0.92]	[-0.79]
Debt Issuance	+	0.06***	0.05***	0.05***	0.06***	0.05***	0.05***
		[3.87]	[3.20]	[3.35]	[3.66]	[2.92]	[2.99]
log(1+Board Size)	-	-0.02	-0.04	-0.04	-0.02	-0.04	-0.04
		[-0.74]	[-1.22]	[-1.33]	[-0.73]	[-1.25]	[-1.34]
% of Independent Director	-	-0.06*	-0.02	-0.02	-0.05*	-0.01	-0.02
		[-1.82]	[-0.52]	[-0.61]	[-1.71]	[-0.42]	[-0.57]
Case Type		Yes	Yes	Yes	Yes	Yes	Yes
Plaintiff Type		Yes	Yes	Yes	Yes	Yes	Yes
Year Effects		Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2		0.20	0.23	0.22	0.2	0.23	0.21
N		438	382	382	438	382	382

Panel B: The Timeliness of Pre-warnings

Variable	Pred. Sign	Industry Specialist Definition 1			Industry Specialist Definition 2		
National Specialist	-	-0.06			-0.07		
		[-1.28]			[-1.51]		
City Specialist	-		-0.05**			-0.06**	
			[-2.03]			[-1.99]	
Both National and City Specialist	-			-0.16**			-0.08**
				[-2.33]			[-1.98]
log(MV)	+	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
		[-0.67]	[-0.79]	[-0.81]	[-0.40]	[-0.72]	[-0.66]
ROA	+	-0.03	-0.03	-0.03	-0.03	-0.04	-0.04
		[-0.95]	[-0.84]	[-0.87]	[-1.43]	[-1.23]	[-1.24]
BM	-	-0.00**	-0.00*	-0.00**	-0.00**	-0.00*	-0.00**
		[-2.19]	[-1.85]	[-2.09]	[-2.15]	[-1.88]	[-2.22]
Lev	-	0	-0.01	-0.01	-0.01	-0.02	-0.02
		[0.11]	[-0.02]	[-0.06]	[-0.41]	[-0.55]	[-0.56]
Log(1+Analyst Following)	-	-0.03***	-0.04***	-0.04***	-0.03***	-0.03***	-0.03***
		[-4.01]	[-4.42]	[-4.54]	[-3.03]	[-3.39]	[-3.46]
Institutional Holding	-	0.03	0.06	0.06	0.02	0.04	0.04
		[0.45]	[0.65]	[0.64]	[0.34]	[0.42]	[0.41]
Equity Issuance	+	-0.02	-0.03	-0.03	-0.03	-0.05**	-0.04**
		[-0.83]	[-1.62]	[-1.42]	[-1.60]	[-2.53]	[-2.24]
Debt Issuance	+	0.07**	0.06	0.06	0.08**	0.07*	0.07*
		[2.11]	[1.39]	[1.42]	[2.58]	[1.80]	[1.78]
log(1+Board Size)	-	-0.03	-0.03	-0.04	-0.03	-0.04*	-0.04*
		[-1.16]	[-1.42]	[-1.48]	[-1.33]	[-1.81]	[-1.83]
% of Independent Director	-	-0.04	-0.03	-0.04	-0.04	-0.02	-0.03
		[-0.61]	[-0.47]	[-0.49]	[-0.59]	[-0.30]	[-0.36]
Case Type		Yes	Yes	Yes	Yes	Yes	Yes
Plaintiff Type		Yes	Yes	Yes	Yes	Yes	Yes
Year Effects		Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2		0.28	0.27	0.27	0.29	0.28	0.26
N		438	382	382	438	382	382

Table 6
Descriptive Statistics of Litigation Loss Contingency Disclosure Components

This table presents the descriptive statistics of disclosure components in litigation loss contingency disclosures. The sample includes 438 material loss cases and 430 zero loss cases which last more than a year. There are 11,762 case quarters in total, composing 53% and 47% material and zero losses case quarters respectively. *Potential_Adverse* is an indicator variable that equals 1 if the firm warns investors of potential material losses or mentions that there are significant adverse economic consequences if the company losses a lawsuit, and zero otherwise. *M_Estimate* is an indicator variable that equals 1 if the firm provides a material loss estimate, and zero otherwise. *Accrue* is an indicator variable that equals 1 if the defendant firm mentions that they have accrued or reserved a certain amount for the litigation, and zero otherwise. *M_Accrue* is an indicator variable that equals 1 if the accrued amount is material, and zero otherwise. *Settle_Ref* is an indicator variable that equals to 1 if the firm mentions their willingness or the possibility to settle, and zero otherwise. *M_Claim* indicates the materiality of the plaintiff's claimed amount, which equals 1 if the amount is material and zero otherwise. *Trial* is an indicator variable that equals 1 if the defendant's motion to dismiss the case being overruled by the courts and a trial date is set or the court issues an order certifying the class action lawsuit (suggesting the case is going to trial). *Immaterial* is an indicator variable that equals 1 if a defendant firm mentions that the case is not likely to have a material impact, and zero otherwise. *No_Merit* is an indicator variable that equals 1 if a defendant firm mentions that the case has no merit, and zero otherwise. *Defense* is an indicator variable that equals 1 if the firm mentions that they will vigorously defend or contest the claim, and zero otherwise. *Not_Estimable* is an indicator variable that equals 1 if the firm explicitly states that a loss estimate could not be made at this time, and zero otherwise.

Panel A: Descriptive Statistics

Variable	N	Mean	Median	S.D.	Q1	Q3
Potential_Adverse	11762	0.21	0	0.4	0	0
M_Estimate	11762	0.02	0	0.14	0	0
Accrue	11762	0.06	0	0.23	0	0
M_Accrue	11762	0.04	0	0.19	0	0
Settle_Ref	11762	0.07	0	0.25	0	0
M_Claim	11762	0.15	0	0.36	0	0
Trial	11762	0.13	0	0.34	0	0
Immaterial	11762	0.24	0	0.43	0	0
No_Merit	11762	0.21	0	0.41	0	0
Defense	11762	0.53	1	0.5	0	1
Not_Estimable	11762	0.13	0	0.34	0	0

Panel B: Correlation Matrix

	Potential_Adverse	*M_Estimate*	*Accrue*	*M_Accrue*	*Settle_Ref*	*M_Claim*	*Trial*	*Immaterial*	*No_Merit*	*Defense*	*Not_Estimable*
Potential_Adverse	1										
M_Estimate	0.05	1									
Accrue	0.14	0.31	1								
M_Accrue	0.12	0.38	0.79	1							
Settle_Ref	0.14	0.06	0.07	0.08	1						
M_Claim	0.04	0.07	0.13	0.12	-0.01	1					
Trial	0.21	0.13	0.22	0.21	0.06	0.13	1				
Immaterial	0.07	0.02	0.15	0.09	0.08	0.10	0.11	1			
No_Merit	0.11	-0.03	0.01	0.00	0.04	0.13	0.12	0.14	1		
Defense	0.19	0.04	0.13	0.11	0.08	0.24	0.17	0.18	0.4	1	
Not_Estimable	0.19	0.06	0.08	0.09	0.04	0.01	0.05	0.15	0.14	0.18	1

Table 7
Using Components of Litigation Loss Contingency Disclosures to Predict Material Losses

This table presents the estimation results of logit models in Quarter T - 1 based on 438 material loss cases and 430 zero loss cases. The first column shows the coefficients of disclosure components when they are included in the regression separately, while the second column shows the coefficients when they are included in the full model simultaneously. The disclosure components are defined in Table 6. ***, **, and * indicate that the coefficient is statistically different from 0 at the 1%, 5% and 10% levels, respectively (two-tailed tests).

Variable	Pred. Sign	Separate Regressions											Full model
Potential_Adverse	+	1.09***											0.91***
		[3.00]											[4.99]
M_Estimate	+		0.01										0.01
			[0.01]										[0.01]
Accrue	+			1.72***									0.58
				[6.64]									[1.60]
M_Accrue	+				3.05***								1.94***
					[5.80]								[3.04]
Settle_Ref	+					0.71***							0.35
						[3.46]							[1.46]
M_Claim	+						1.14***						1.11***
							[6.03]						[5.32]
Trial	+							1.04***					0.75***
								[6.20]					[4.01]
Immaterial	-								-0.35**				-0.53***
									[-2.28]				[-3.01]
No_Merit	-									0.08			-0.15
										[0.49]			[-0.82]
Defense	?										0.58***		0.33*
											[3.68]		[1.78]
Not_Estimable	?											0.51***	0.21
												[2.78]	[0.98]
Case Type		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Plaintiff Type		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2		0.09	0.04	0.09	0.11	0.06	0.08	0.08	0.05	0.05	0.06	0.06	0.14
N		868	868	868	868	868	868	868	868	868	868	868	868

Table 8
Predictive Powers of Litigation Loss Contingency Disclosures over Quarters

This table presents the predictive powers of litigation loss contingency disclosure components on the final material outcome for each quarter. The sample includes 438 material loss cases and 430 zero loss cases. City-level auditor industry expertise is based on the auditor's annual market share of audit fees within a two-digit SIC category for a particular city. ***, **, and * indicate that the coefficient is statistically different from 0 at the 1%, 5% and 10% levels, respectively (two-tailed tests). The number of cases drops in Quarter T-6 as we only require sample cases to last more than four quarters.

Panel A: Full Sample (N = 868)

Quarter	Pseudo R^2	Hosmer–Lemeshow's p-value	Percent Concordant	Likelihood Ratio
T – 1	0.14	0.51	72.00	162.70
T – 2	0.10	0.33	67.90	116.13
T – 3	0.08	0.28	66.20	101.44
T – 4	0.07	0.13	62.40	83.34
T – 5	0.05	0.06	56.70	61.28
T – 6	0.04	0.06	53.70	23.59

Panel B: By Auditors' Industry Specialization ($N_{Non\text{-}specialist}$ = 524 and $N_{Specialist}$ = 246)

Quarter	Pseudo R^2		Hosmer–Lemeshow's p-value		Chow Test's p-value
	Non-Specialist	Specialist	Non-Specialist	Specialist	
T - 1	0.14	0.19	0.43	0.40	0.27
T - 2	0.11	0.15	0.41	0.38	0.12
T - 3	0.10	0.13	0.35	0.32	0.17
T - 4	0.06	0.11	0.19	0.29	0.09
T - 5	0.04	0.11	0.03	0.26	0.06
T - 6	0.04	0.10	0.02	0.23	0.04

Table 9
Market Reactions to Material Loss Announcements

This table presents results of the market reactions to the material loss announcements. The sample consists of 152 material loss cases in which (1) the case lasts longer than one year; (2) the case is not claimed to be covered by insurance; and (3) the announcement day can be found on Factiva and is not contaminated by any other events such as quarterly report releases. *CAR* is the cumulative abnormal return, calculated over the three day window (-1, 1) in four different ways including Market Adjusted Returns, Market Model, Fama-French three-factor (FF3) Model and Fama-French four-factor (FF4) Model. The estimation window is from Day -165 to Day -16. *AVAR* is the abnormal volatility, measured as the ratio of the square of abnormal returns to the variance of residuals from the estimation period. *LossAmt* is the percentage of loss to total assets. *Settle* is a dichotomous variable indicating whether the case ends as a settlement. *Prob* is the predicted probability estimated from the logit model in Table 7. Panel A shows the market reaction based on CARs and AVARs. Panel B shows the descriptive statistics of independent variables. Panel C shows the results of a regression of CARs on outcome amounts and the material loss probability in Quarter T - 1. ***, **, and * indicate that the coefficient is statistically different from 0 at the 1%, 5% and 10% levels, respectively (two-tailed tests).

Panel A: Descriptive Statistics of Market Reactions

Variable	N	Mean	S.D.	t-stats/F-stats
Market Adjusted CAR (%)	152	0.6	6.77	1.09
Market Model CAR(%)	152	0.42	6.87	0.76
FF3 Model CAR(%)	152	0.43	7.16	0.74
FF4 Model CAR(%)	152	0.35	7.17	0.60
Market Adjusted AVAR	152	1.48***	2.47	2.38
Market Model AVAR	152	1.55***	2.58	2.62
FF3 Model AVAR	152	1.57***	2.62	2.70
FF4 Model AVAR	152	1.64***	2.82	2.80

Panel B: Descriptive Statistics of Independent Variables

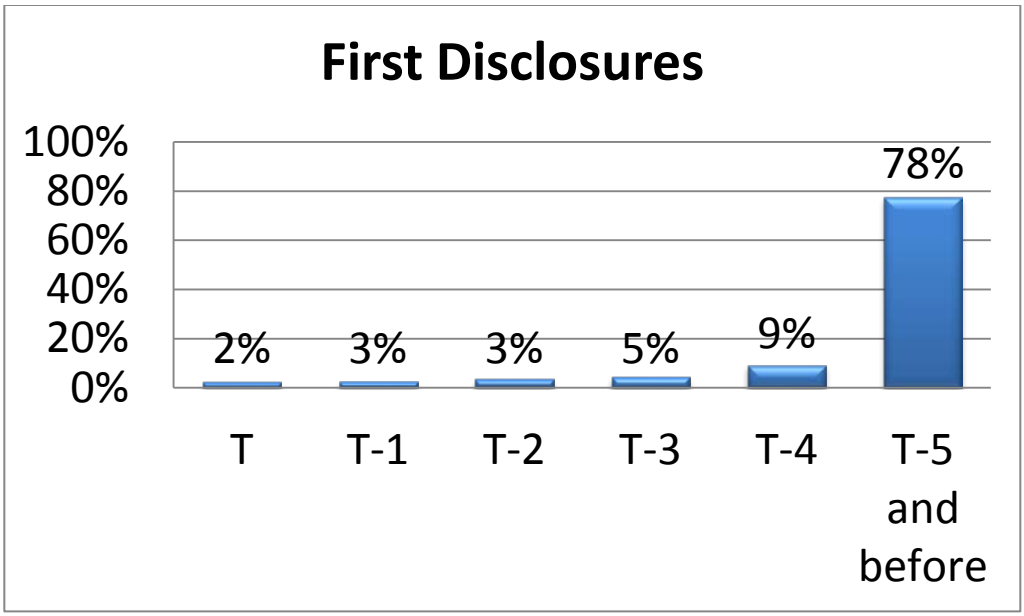
Variable	N	Mean	Median	S.D.	Q1	Q3
LossAmt (%)	152	50.31	23.22	82.24	11	50.74
Settle	152	0.97	1	0.16	1	1
Prob	152	0.61	0.54	0.22	0.27	0.78

Panel C: Market Reactions Conditioned on the Material Loss Probability

Variable	Market Adjusted CAR	Market Model CAR	FF3 Model CAR	FF4 Model CAR
LossAmt	-0.05*	-0.06*	-0.06*	-0.06*
	[-1.66]	[-1.98]	[-1.86]	[-1.95]
Prob	-0.49	-1.4	-0.55	-0.57
	[-0.20]	[-0.55]	[-0.21]	[-0.22]
*LossAmt * Prob*	0.06*	0.08**	0.07**	0.07**
	[1.79]	[2.13]	[1.98]	[2.06]
Settle	2.12	0.96	1.41	1.29
	[1.28]	[0.62]	[0.91]	[0.79]
Case Type	Yes	Yes	Yes	Yes
Plaintiff Type	Yes	Yes	Yes	Yes
Adjusted R^2	0.14	0.12	0.11	0.12
N	152	152	152	152

Figure 1
Distribution of Material Loss Cases

Panel A: Distribution of First Disclosures



Panel B: Distribution of Pre-warnings

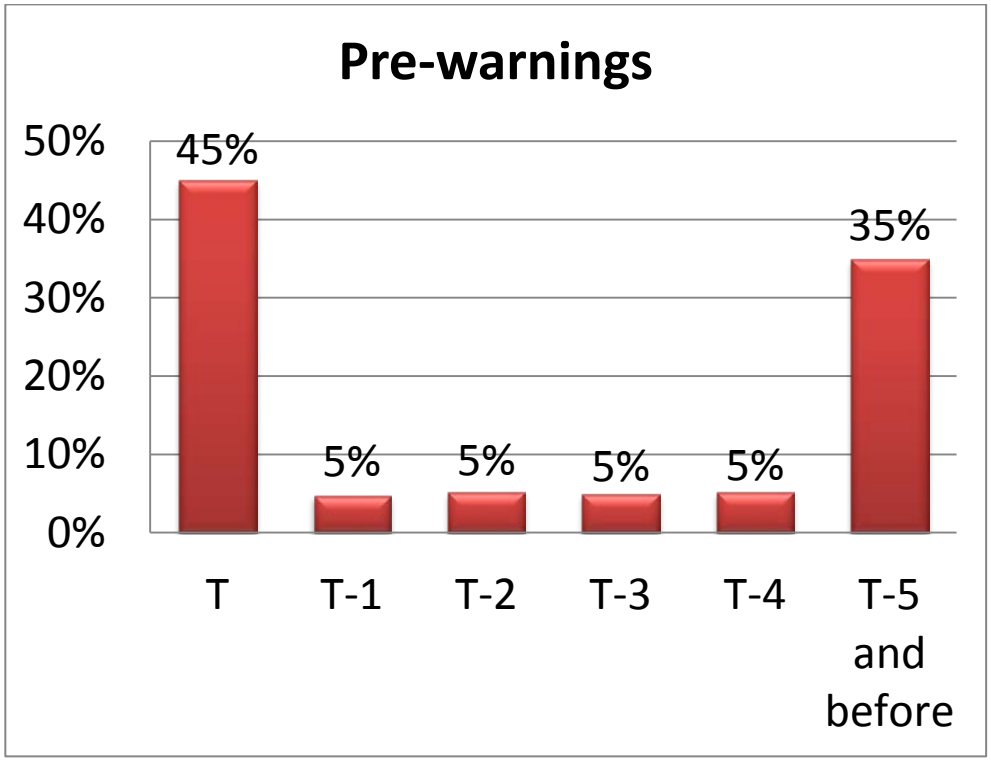
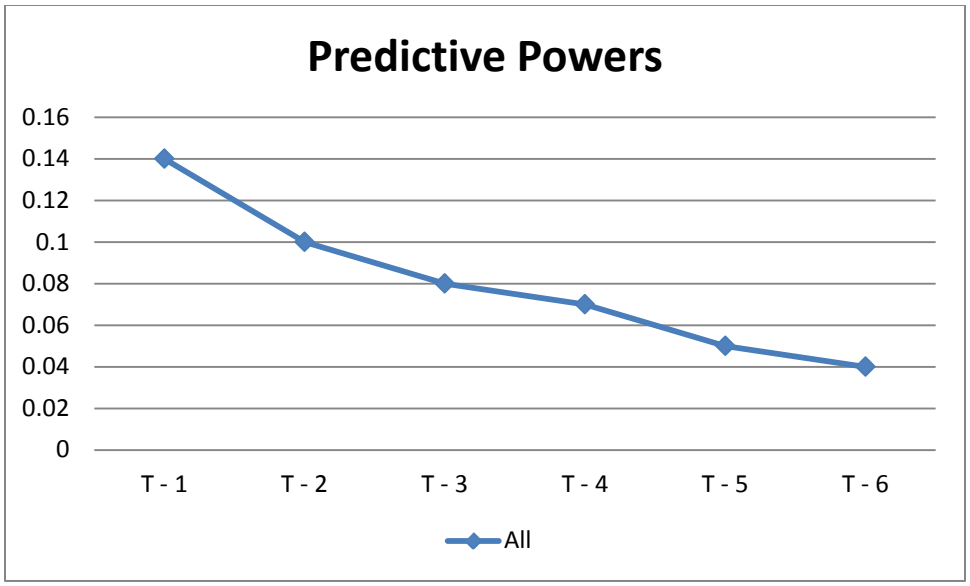


Figure 2
Predictive Powers over Quarters

Panel A: All Cases



Panel B: By Auditors' Industry Specialization