Economic Event Characteristics and Disclosure Choice: Evidence from Influential Negative Economic Events

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ABSTRACT

This study examines the interplay between economic event characteristics and disclosure choices. We identify influential negative economic events that are first announced by a third-party (not the firm itself) and are readily observable to the market (e.g., major industrial accident, natural catastrophe) and examine firms' subsequent disclosure choices. We hypothesize that firm disclosures about negative economic events are negatively associated with the level of perceived blame. Consistent with this prediction, we find that firms are 10 times less likely to issue a disclosure following events for which they might be blamed for causing relative to events for which they are likely to be perceived as blameless. We also show this blame-blameless asymmetric disclosure choice is more pronounced for firms with greater dependence on a positive reputation, such as frequent public debt issuers, NYSE firms, and profitable firms. These results are robust to controlling for event materiality, media attention, and firm characteristics. The results shed light on an event characteristic firms consider when making disclosure choices about individual economic events. Moreover, our focus on economic events highlights how samples based on disclosure events are more likely to contain relatively blameless rather than blamed events.

Keywords: voluntary disclosure, blame, litigation, reputation

JEL Classification: G14, G18, K22, M41, M48

1. Introduction

A vast accounting literature examines company disclosure events and provides evidence that firm and industry characteristics, among others, affect disclosure choices (see Beyer, Cohen, Lys, and Walther, 2010 for a review). Yet, whether and how the characteristics of the underlying economic event itself influence disclosure choices has received much less attention. In this paper, we examine whether disclosure about influential negative economic events that are first announced by a third-party (not the firm itself) and are readily observable to the market (e.g., major industrial accident, natural catastrophe) are negatively associated with the perceived level of blame for the event. This focus provides novel insights into whether firms adopt differential disclosure practices based on economic event characteristics.

While GAAP, SEC rules, and securities laws require firms to disclose material economic events, the conceptual definition of materiality provides firms with a degree of discretion over which events require disclosure.[1] We argue that, in the wake of an influential negative event, firms consider factors in addition to materiality when choosing whether or not to issue a disclosure. Our main prediction is that managers are less likely to disclose information regarding a negative economic event for which the firm might be "blamed" for causing (i.e., oil spill caused by employee error) relative to an event for which the firm is relatively blameless (i.e., an oil spill caused by a hurricane). Our prediction follows from two broad streams of literature in management and law that argue the extent of potential blame is a fundamental force that shapes

[1] For example, the FASB notes that "the Board cannot specify a uniform quantitative threshold for materiality or predetermine what could be material in a particular situation" (FASB SFAS No. 8 2010). The Supreme Court also highlights that materiality "is inherently fact-specific" (Matrixx Initiatives, Inc. v. Siracusano, No. 09-1156, 2011 WL 977060, U.S. Mar. 22, 2011). In addition, the SEC rules reinforce the notion that firms have a degree of discretion over which events to disclose via Form 8-K, as 8-K Item 8.01 states that "the registrant may, at its option, disclose under this Item 8.01 any events, with respect to which information is not otherwise called for by this form that the registrant deems of importance to security holders."(SEC 2004).

the disclosure of negative events. The research asserts that the likelihood a firm could be blamed for a negative event increases the firm's reputation and litigation risks.

We examine our main prediction regarding the interplay between the perceived level of blame for an event's occurrence and subsequent disclosure choices by examining a sample of 238 influential negative economic events first announced by a third-party (not the firm itself) that are publicly observable.[2] The restriction to only negative events allows us to examine event characteristics that are not influenced by the asymmetric disclosure incentive between positive and negative news (e.g., Skinner, 1994; Kothari, Shu, and Wysocki, 2009). Our focus on publicly observable events instead of firms' self-reported events mitigates any potential selection bias that might be present due to firms' opportunistic disclosure behavior, such as reporting favorable events along with negative earnings news (Baginski, Hassell, and Kimbrough, 2004; Bliss, Partnoy, and Furchtgott, 2016).

Our dependent variable captures whether a firm provides disclosures about the specific economic event identified. We read through Edgar filings and press releases for the 30 days following each event to identify event-specific disclosures.[3] We use two tests to assess the relation between the perceived level of blame at the time a third party announces a negative event and firms' subsequent disclosure choices. First, we focus on the subset of negative events that are securities class action cases first announced by a third-party and not by the firm itself. We restrict the sample to only those cases that claim overly optimistic performance guidance to hold constant the nature of litigation. We then split the sample into those lawsuits that are

[2] We discuss our sample formation process in Section 3. Our sample includes, for example, severe casualty accidents reported by National Transportation Safety Board and Federal Aviation Administration, large-scale oil spills reported by Bureau of Safety and Environmental Enforcement (EPA), and investor class actions filed in the courts.

[3] For example, after the Tōhoku earthquake and tsunami occurred on March 11, 2011, Texas Instruments issued a press release that detailed the location of their affected facilities, how long their operations will be suspended, and the percentage of revenue affected by the event on March 14.

subsequently non-dismissed and settled (blamed) versus those that are dismissed (blameless). We examine the disclosure choice immediately after the announcement of the securities litigation and use this ex post classification of blamed versus blameless to assess whether the extent of perceived blame at the time the class action is announced relates to disclosure behavior.

We find evidence of a relation between the perceived level of blame at the time the lawsuit is announced and the firm's subsequent disclosure choice. In particular, the likelihood a firm issues at least one disclosure following the filing of a blameless lawsuit is *more than 10 times greater* than that for a blamed lawsuit. These results are robust to controlling for event materiality, media attention, and firm/industry characteristics.

In our second test, we define our proxy based on suddenly occurring major industrial accidents caused by internal or external forces that are first announced by third parties (not by the firm itself). Internal forces are, for example, human error (blamed), while external forces are events such as natural disasters (blameless). Again, we find that the perceived level of blame at the time the event occurred relates to the firm's propensity to disclose. The likelihood of a firm issuing at least one disclosure after an externally-caused event is *10 times greater* than after an internally-caused event. To address potential heterogeneity issues in our second test, we further restrict our sample to include only oil spills and incorporate spill size as an additional proxy for materiality. We continue to find that externally-caused events are more likely to be disclosed than internally-caused events. In sum, these tests present robust evidence that the extent of perceived blame is an important factor that shapes the disclosure of negative events.

We further examine whether the asymmetric disclosure behavior for blamed versus blameless events is associated with the firm's dependence on a positive reputation based on three proxies. First, firms that frequently rely on external markets to raise capital are likely to benefit

more from asymmetric disclosure of blamed versus blameless events because their external capital providers potentially rely on a positive reputation to assess firm risk and determine their required cost of capital. Second, prior studies suggest that firms that seek to increase their visibility and reputation among investors choose to list on the NYSE (Cowan, Carter, Dark, and Singh, 1992), suggesting that NYSE-listed firms are more concerned about their reputation and likely benefit more from the asymmetric disclosure. Lastly, more profitable firms have greater reputation risk as prior research suggests that reputation is important in maintaining firm profitability (Roberts and Dowling, 1997). This suggests that profitable firms are more likely to benefit from asymmetric disclosure of blamed versus blameless events to maintain their reputation. Consistent with these expectations, we find that frequent public debt issuers and firms on the NYSE have greater blameless-blame asymmetric disclosure behavior. Similarly, we find that the asymmetry in disclosure behavior for blamed versus blameless events is positively associated with profitability and more pronounced for profit firms than loss firms.

Our study makes three contributions to accounting research. First, we identify a common event characteristic—blamed versus blameless—that explains variation in managers' disclosure choices beyond the firm and industry characteristics established in prior studies. This evidence provides fresh insights into the factors managers consider when making disclosure decisions about an individual economic event (Berger, 2011). Specifically, our study documents that not all influential negative events are subsequently disclosed and finds evidence that blamed events are less likely to be disclosed than blameless events. This evidence has implications for studies that measure reporting quality based on the number of 8-K filings or the frequency of press releases, which could partially capture the different nature of economic events the firm

experiences vis-à-vis the level of transparency (Balakrishnan, Core, and Verdi, 2014; Burks, Cuny, Gerakos, and Granja, 2016; Bird, Karolyi, and Ruchti, 2017).

Second, our study balances the tradeoff between identification and generalizability (Glaeser and Guay, 2017). Compared to studies that focus on a specific type of event, such as Superfund firms (Barth, McNichols, and Wilson, 1997), product recalls (Lee, Hutton, and Shu, 2015), firms experiencing a natural disaster or fire (Michels, 2016), or mine-safety disclosures (Christensen, Floyd, Liu, and Maffett, 2017), we focus on two separate empirical settings. In the analysis of securities class action lawsuits, we restrict our sample to one homogeneous claim—overly optimistic performance guidance—to hold constant the nature of litigation. In the analysis of externally versus internally caused events, we restrict our sample to suddenly occurring events. We further conduct a robustness test by restricting the sample to include only oil spill events and incorporating spill size as an additional proxy for materiality. Results regarding a higher likelihood of disclosure following blameless events are consistently present across these different empirical settings, enhancing the generalizability of our evidence.

Lastly, studies identifying economic events via company disclosures conduct joint tests of their main hypothesis and the firms' decision to disclose. For example, Francis, Hanna, and Vincent (1996) identify asset write-downs via press releases, while Michels (2016) relies on SEC filings to identify firms impacted by a natural disaster or fire. We show that not all influential negative events are subsequently disclosed and that blameless events are more likely to be disclosed than blamed events. This evidence suggests a potential sample selection bias in studies that rely on disclosure to identify economic events.

The remainder of the paper proceeds as follows. In Section 2, we review the literature and develop our hypotheses. In Section 3, we describe our sample selection and variable

definitions. In Section 4, we describe our research design and provide the results of our empirical tests. Section 5 presents our tests of cross-sectional differences in disclosure behavior. Section 6 concludes the paper with a summary of our results and a discussion of their implications.

2. Background and hypothesis development

This section first discusses the disclosure requirements regarding influential negative economic events, focusing particularly on the notion of materiality. We then propose that, in the wake of a negative event, firms consider the "level of blame" perceived by the manager when making subsequent disclosure decisions. Firms engage public relations consultants and legal counselors to help shape disclosure choices following influential negative events (e.g., major industrial accident, natural catastrophe). Premier public relations firms have consultants devoted to business crisis communications (e.g., http://www.edelman.com/practice/crisis-and-risk/). Similarly, major law firms often have practice areas that assist in shaping disclosures following an influential negative event (e.g., http://www.steptoe.com/practices-200.html). There is, therefore, a stream of literature in management and law on disclosures around negative events. We develop our hypotheses regarding firms' disclosure choices with respect to negative events based on the literature in accounting, law, and management. We argue that while the full disclosure hypothesis predicts no difference in disclosure choices between blamed and blameless events, the level of blame hypothesis predicts more disclosures following a blameless event relative to a blamed event.

2.1 DISCLOSURE REQUIREMENTS

The materiality of an event is an important aspect of disclosure (Heitzman, Wasley, and Zimmerman, 2010). While GAAP, SEC rules, and securities laws require firms to disclose

material events, the conceptual definition of materiality provides firms with a degree of discretion over which events require disclosure. For instance, FASB's definition of materiality is:

> "*Information is material if omitting it or misstating it could influence decisions that users make on the basis of the financial information of a specific reporting entity. In other words, materiality is an entity-specific aspect of relevance based on the nature or magnitude or both of the items to which the information relates in the context of an individual entity's financial report. Consequently, the Board cannot specify a uniform quantitative threshold for materiality or predetermine what could be material in a particular situation.*"… FASB SFAS No. 8 (2010)

The Supreme Court also provides a broad-based definition:

> "*[materiality] is inherently fact-specific, depending upon whether a "reasonable investor" would have viewed the relevant information as having significantly altered the total mix of information made available.*"… Matrixx Initiatives, Inc. v. Siracusano, No. 09-1156, 2011 WL 977060 (U.S. Mar. 22, 2011)

SEC rules reinforce the notion that firms have a degree of discretion over which events to disclose via Form 8-K, as 8-K Item 8.01 states:

> "*The registrant may, at its option, disclose under this Item 8.01 any events, with respect to which information is not otherwise called for by this form that the registrant deems of importance to security holders.*"…SEC (2004)

The aforementioned requirements stipulate that firms are required to disclose material economic events, but the ambiguity in the definitions creates debate regarding which events require disclosure. For instance, in Matrixx Initiatives, Inc. v. Siracusano (No. 09-1156, 2011 WL 977060; U.S. Mar. 22, 2011), the District Court initially dismissed the complaint on the basis of a lack of statistical correlation between the firm's stock price reaction and the third-party announcement of product-related information. However, the U.S. Supreme Court overruled, claiming that the lack of stock price reaction does not in itself imply that the event is immaterial to investors. As such, while event materiality is a critical determinant of subsequent disclosure,

firms indeed have some degree of discretion when interpreting which "material" events require disclosure.

2.2 FULL DISCLOSURE HYPOTHESES BASED ON PRIOR RESEARCH

A stream of accounting literature identifies a potential benefit of providing disclosure about negative earnings news—disclosure might limit the ability of potential litigants to claim that the firm was withholding adverse information (Skinner, 1994). Moreover, because negative earnings news often precipitates a decline in stock price, timely disclosure might reduce the probability of litigation with respect to disclosure by releasing information relatively frequently, rather than releasing infrequent disclosures that result in larger market reactions (Field, Lowry, and Shu, 2005). While this literature focuses on earnings disclosures (e.g., Francis, Philbrick, and Schipper, 1994; Skinner, 1997; Johnson, Kasznik, and Nelson, 2001; Rogers and Van Buskirk, 2009; Donelson, McInnis, Mergenthaler, and Yu, 2012; Billings, Cedergren, and Dube, 2016, among others), the arguments can be applied in the context of influential negative events. Specifically, the literature suggests that firms choose a full disclosure strategy in order to avoid litigation risk arising from withholding adverse information.

Studies in management, public relations, and journalism also offer full disclosure guidance to managers in the wake of influential negative events. This is because the manager's primary objective must be to protect the firm's reputation. This guideline has been referred to as a "tell it all and tell it fast" disclosure strategy (Dilenschneider and Hyde, 1985; Martinelli and Briggs, 1998), a "full disclosure" strategy (Kim and Wertz, 2013), or a "rapid disclosure" strategy (Arpan and Roskos-Ewoldsen, 2005). This perspective has led to a view that "executives should make full and immediate disclosures about the circumstances surrounding the events" (Kaufmann, Kesner and Hazen, 1994). Recent studies go a step further, arguing that managers

should proactively disclose all facts about a negative event because these facts will eventually come out in the media (Arpan and Pompper, 2003; Arpan and Roskos-Ewoldsen, 2005; Claeys, Cauberghe and Pandelaere, 2016; Lee, 2016). In general, the consensus across the accounting and management literature proposes a full disclosure hypothesis.[4]

2.3 LEVEL OF BLAME HYPOTHESIS

Notwithstanding these arguments, we propose a partial disclosure hypothesis based on a common event characteristic—"the level of blame" perceived by the firm.[5] We define a blamed event as a negative event for which the firm is likely to be perceived as responsible or at fault, and hypothesize that firms are less willing to provide disclosures regarding a blamed event than a blameless event due to concerns about their reputation and litigation risks.

2.3.1 *Reputation risk with respect to blamed and blameless events*

We argue that firms may be less willing to disclose information about a blamed event relative to a blameless event because of reputation risk. The management literature defines reputation as the perception of a firm held by its stakeholders, and reputation risk reflects a potential decrease in reputation that may affect future actions of stakeholders toward a firm (Walker, 2010). This risk arises because stakeholders use reputation as an imprecise signal to assess firm attributes that are difficult to observe (e.g., process quality, corporate culture; Fombrun and Riel, 1997). We argue that disclosing information regarding a blamed event decreases the positive reputation more than disclosing information about a blameless event. In other words, detailed facts regarding a blamed event are more informative for stakeholders to

[4] Kothari, Shu, and Wysocki (2009) posits a different argument—delayed disclosure hypothesis for all negative earnings news—because career concerns may motivate managers to withhold bad news and gamble that subsequent events will turn in their favor. This argument predicts that managers would delay disclosures about all negative news, while we argue that some bad news is more likely to be disclosed than other bad news.

[5] A recent experiment also proposes a partial disclosure hypothesis in the wake of negative events whereby firms might benefit from remaining silent due to the greater likelihood investors will invest in an affected firm's stock when they are uncertain about an event's impact (Cikurel, Fanning, and Jackson, 2017).

downgrade a firm's reputation than facts regarding a blameless event. This argument is supported by the evidence that reputational loss, measured as the market reaction to a loss announcement, is greater following a negative event caused by internal forces than external forces (Perry and Fontnouvelle, 2005).

2.3.2 *Litigation risk with respect to blamed and blameless events*

Although extant accounting research focuses on the potential of providing negative earnings warnings to preempt litigation, a stream of legal literature recognizes that any information disseminated could be used against the firm in litigation regarding the event itself. That is, given that influential negative events might trigger litigation by stakeholders (e.g., local communities suing a firm after an oil spill), the firm must consider the effect of the disclosures on the likelihood and outcome of any related litigation.[6]

Prior legal studies argue that firms may offer plaintiffs a generous settlement amount to avoid a legal process because they worry about disclosing certain information in a trial (Grundfest and Huang, 2006). For example, it is often challenging for plaintiffs to demonstrate that the defendant knew, or should have known, that his actions were wrong (i.e., scienter) at the start of the lawsuit before having access to witnesses and internal documents during a trial (Honigsberg, Rajgopal, and Srinivasan, 2017). Facts released via public disclosures prior to the lawsuit or during the trial process potentially help plaintiffs plead that the defendant had the proper scienter.

We argue that the nature of information that firms are reluctant to disclose likely relates to the level of blame perceived by the firm and that the facts regarding the blamed event are

[6] We focus on the threat of litigation instead of the actual litigation because managers are likely to consider only the threat of litigation when they make disclosure decisions right after an influential negative event, rather than facing an actual litigation which often occurs several months or years after the event. For instance, plaintiffs are allowed to bring claims under Section 10(b) of the Exchange Act within five years after the violation (Honigsberg, Rajgopal, and Srinivasan, 2017).

more likely to be used by plaintiffs to prove elements of their claims (e.g., scienter). The litigation risk (e.g., the likelihood for plaintiffs to plead a successful claim that is not dismissed by the court, or the amount of the expected damage conditional on a successful claim) related to disclosed facts regarding a blamed event is potentially greater than the litigation risk related to disclosed facts about a blameless event.

3. Sample selection and variable definitions

3.1 INFLUENTIAL NEGATIVE ECONOMIC EVENTS

Our sample consists of influential negative events first announced by parties external to the firm. We identify the scope of influential negative economic events using the definition of a business crisis put forth by the Institute for Crisis Management (hereafter ICM), a prominent crisis consulting firm that has published an annual business crises report since 1990.[7] ICM defines a business crisis as "any issue, problem or disruption which triggers negative stakeholder reactions that impact the organization's business and financial strength." We focus on four of 17 ICM crisis categories: catastrophes, casualty accidents, environmental damages, and investor class action lawsuits (see Table 1).[8]

[7] These reports are available at http://crisisconsultant.com/.

[8] We exclude crisis categories from our sample. We initially collected samples for white collar crimes and consumer activism, but these samples are not large enough (less than 50 observations each) for us to conduct separate tests. Relatedly, we exclude whistleblowers because many of these cases were already included in the sample of white collar crimes and consumer activism. We exclude cyber-crime cases because cyber-crimes often emerge internally, so the exact crisis date is unknown to outsiders. Recent cyber-crime studies focus on the disclosure events or assume that these disclosure dates are the first time the public is aware of these events (Hilary, Segal, and Zhang, 2016; Sheneman, 2016). We exclude major health-related product recalls because the FDA requires firms to issue their recall announcements through its website, which implies that recall disclosures are mandated instead of voluntary. Major financial damage cases are already in our sample because these damages often pertain to investor class actions. We exclude mismanagement, discrimination, and workplace violence cases because many of these events generate minimal financial impact, casting doubt that these events cause managers to evaluate the benefits and costs of publicly disclosing information. Sexual harassment cases often generate personal rather than corporate losses; we exclude these cases because we seek to analyze corporate disclosure. Executive dismissals, hostile takeovers, and labor strikes are examined in the corporate finance and labor economics literature, so we do not focus on these events in our study.

We use numerous sources to hand-collect our sample of negative events; please refer to Table 2 for a detailed discussion of the sources used and our data collection methods. We define the event date as the first date when an event occurred or when an event started to gain public scrutiny. Specifically, we identify the event date as the first date when a catastrophe, a casualty accident, or an oil spill occurred, or the date when a litigation case was filed. We exclude events for which the firm was the first to announce the crisis. Hence, we restrict our sample to include only those negative events announced by external parties, thereby providing a quasi-exogenous setting to examine how the nature of these negative events impacts firms' disclosure choices.

For investor class action lawsuits, we further search for company disclosures issued during the 90 days prior to the identified event date to address the concern that firms may provide disclosures to preempt negative market reactions around the event date. We choose the 90 day window because firms would have issued at least one financial report, either a 10-K or 10-Q, during this pre-event period. We exclude events for which the firm discussed a specific event before our identified event date. Therefore, we ensure that market participants are surprised by the event on our identified event date and are likely to seek detailed information regarding the event from the affected firm to estimate the impact of the event on firm value.

Our final sample consists of 238 negative events involving 210 firms over the period of 2002-2015, with a concentration in 2005, 2011, and 2012. This large sample of heterogeneous negative events provides an opportunity to enhance the generalizability of our study, while each individual empirical setting (e.g., investor class action lawsuits, externally- or internally-caused events) holds constant the nature of the event and allows us to investigate how one event characteristic, the perceived level of blame, explains variation in disclosure choices beyond the firm/industry determinants previously examined in the literature.

3.2 PROXIES FOR BLAMED VERSUS BLAMELESS EVENTS

We use two proxies to capture the firm's perceived level of blame regarding the event. An event is likely to be assumed by firms to be blamed if this event is under the firm's control. It is important to note that our proxies are intended to capture the *relative* extent that the firm perceives the event to be blamed versus blameless. If our proxies do not capture a meaningful distinction between blamed and blameless events perceived by firms, we are likely to find an insignificant relation with disclosure choices. We describe our motivations for these proxies in the following subs-sections.

3.2.1 *Dismissed versus non-dismissed litigation cases*

Our first proxy is based on whether an investor class action lawsuit is dismissed by the court. We use the lawsuit outcome, dismissed versus non-dismissed and settled, to distinguish between litigation cases that are likely to be perceived by the firm as a blameless or a blamed event, respectively. We exclude cases that involve claims other than making overly optimistic statements, such as restatements or fraudulent acts, to hold constant the nature of litigation.[9] In our sample of 99 cases, we create a dummy variable, *Dismiss*, which equals one for 63 dismissed cases and zero for 36 cases that are not dismissed (see Figure 1). All non-dismissed cases are eventually settled between the defendant and the plaintiff in our sample. We exclude 10 cases from the analysis because we are not able to identify the case outcome.

We predict that firms facing a litigation case that is subsequently dismissed are *more* likely to provide disclosure following the filing of a lawsuit than firms facing a non-frivolous litigation case. This expectation, based on legal theory, suggests that a firm is less likely to

[9] Investor class action lawsuit samples in prior studies often include all 10b-5 cases without distinguishing the nature of claims (e.g., Francis, Philbrick, and Schipper, 1994; Skinner, 1997, among others). We read through claims in each 10b-5 cases to identify a sample that is based on claiming only overly optimistic statements. Field, Lowry, and Shu (2005) take a similar approach by removing cases that involve restatements.

provide information in a settled (non-dismissed) case because the firm attempts to avoid public disclosure of the facts regarding a blamed event. In contrast, settlement is less likely to happen and the case is likely to be dismissed by the court for a blameless event. Consequently, a firm is more likely to provide information in a dismissed case because it is less concerned about releasing information about a blameless event.

3.2.2 *Externally-caused versus internally-caused events*

Our second proxy is based on the locus or controllability of an event. Motivated by the management and public relations literatures (see, for instance, Coombs (2007) and the discussion of Weiner's (1985, 1986) work on Attribution Theory), stakeholders are more likely to perceive a firm to be responsible for an event when it is caused by an internal force than an external force. This is because firms are perceived to have more control over internal forces than external ones. For example, the extent to which the firm might be blamed for an oil spill caused by human error (an internally-caused event) is likely to be greater than when the oil spill is caused by a hurricane (an externally-caused event).

We examine a sample of 129 sudden events. We partition these 129 sudden events into internally-caused and externally-caused events (see Figure 1). All 61 catastrophe events are classified as externally-caused events. For 43 casualty accidents, we read NTSB and FAA accident reports and conduct web searches to assess whether each accident was caused by an internal or external force. For 25 environmental damages cases, all of which are oil spills, the 12 events caused by Hurricanes Katrina and Rita, and one event due to a lightning strike are classified as externally-caused events. Internal causes for casualty accidents and oil spills often relate to human error and equipment failures. Three sudden events are not included in the analysis because they have an unknown cause.

We create a dummy variable, *External*, that equals one for 77 externally-caused events and zero for 49 internally-caused events, as our second proxy for the extent to which the event might be perceived by the firm as relatively blameless (externally-caused) or the firm might be blamed for the event (internally-caused). We predict that firms facing an externally-caused event are *more* willing to provide disclosure than firms facing an internally-caused event because external causes are unlikely to be under managerial control.

3.3 POST-EVENT DISCLOSURE CHOICE

We take an event-driven approach to identify disclosed information regarding a specific event. We read through Edgar filings and press releases for the 30 days following an event to identify event-specific information content. We assume that firms that release information regarding a specific negative event do so within the 30 days following the event.[10] We create an indicator variable, *Whether to disclose*, that equals one if we identify any SEC filings or press releases mentioning the event in our sample, and zero otherwise.[11] Our approach enables us to link event characteristics to firms' post-event disclosure behavior.

[10] In the robustness test discussed in Section 4.4, we expand the post-event disclosure window to the 90 days with a focus on only 10-K/Q filings. Our results continue to hold within this extended disclosure window.

[11] Different from prior research's focus on earnings-related disclosures (e.g., earnings announcements, forecasts, or conference calls), our event-driven approach identifies both earnings and non-earnings related disclosures. Of the 168 disclosures, we find that 5 (3 percent) are released in an earnings announcement. Many events in our sample have impacts on earnings several quarters after the event date. However, during a long post-event disclosure window, studies show that managers strategically select favorable economic events to report in earnings disclosures to mitigate the magnitude of adverse market reactions to negative earnings news. For example, managers are more likely to highlight gains from selling property, plants, and equipment rather than losses (Schrand and Walther, 2000), firms are more likely to attribute positive earnings surprises to internal factors instead of external factors (Baginski, Hassell, and Kimbrough, 2004), or firms release a restatement along with a good news announcement to deter litigation (Bliss, Partnoy, and Furchtgott, 2016). Therefore, our study identifies event-specific information content without limiting to earnings-related disclosures and focuses on a short post-event disclosure window.

4. Empirical analysis and results

4.1 EMPIRICAL MODEL AND SUMMARY STATISTICS

We examine firms' disclosure choices in the wake of an influential negative event using the following empirical model:

$$\begin{aligned} &Whether\ to\ disclose_{i,e,t} \\ &\quad = \beta\, Type\ of\ Event_{i,e,t} \\ &\quad + \sum \gamma_j Materiality_{j,i,e,t} + \rho Media_{i,e,t} + \sum \delta_l OtherDeterminants_{l,i,t-1} \\ &\quad + \sum \alpha_k Year_k + \sum \mu_m Industry_m + \varepsilon_{i,e,t} \end{aligned}$$

The dependent variable is *Whether to disclose*, an indicator variable for firm i, event e, in year t. We estimate logistic regressions because the dependent variable is an indicator. Our variable of interest is $Type\ of\ Event$, a indicator variable that captures the relative degree in which firms perceive they are *blameless* regarding the negative event. Evidence consistent with our hypothesis would show $\beta > 0$.

We include four sets of control variables. First, as discussed previously, rules and regulations typically define materiality based on an investor's perspective. We use the first and second moments of the stock market reaction to the event date to capture event materiality (either the day when a sudden event occurs or the day when a third-party reveals the event). The first moment of a stock return is the absolute value of cumulative market-adjusted return during the three days [0,+2] around the event date, which captures the shift in investor expectations of firm value (*Materiality 1*).[12] The second moment is the change in implied volatility derived from

[12] Section 4.5 discusses alternate market-based materiality measures, such as using the raw return or an extended window to calculate market reactions.

option prices during [-3,+3] period around the event date, which measures increases in investor uncertainty regarding the event (*Materiality 2*).

As discussed previously, event materiality is likely an important factor for firms to consider when selecting a post-event disclosure strategy. We take two steps to assess the validity of our materiality measures. Our first step is to examine the correlation between *Materiality 1* and *Materiality 2* (the first and second moments of event-date returns, respectively) and the incidence of an event-related 8-K filing. We find a positive and statistically significant correlation in both instances (ρ=0.12, p-value=0.08 for *Materiality 1*; ρ=0.19, p-value<0.01 for *Materiality 2*). We also examine the correlation between *Materiality 1* and *Materiality 2* and securities class action lawsuit settlement amounts. While the correlations are positive, they are not statistically significant at conventional levels (ρ=0.19, p-value=0.26 for *Materiality 1*; ρ=0.23, p-value=0.18 for *Materiality 2*). We view these positive correlations as consistent with event-date returns at least partially capturing event materiality.

Our second control variable captures the extent of media attention surrounding the negative event. Following Solomon, Soltes, and Sosyura (2014), we use Factiva to identify the number of news articles for a sample firm on the event date. We deflate this value by the average daily number of news articles of the same firm from the prior 365 days to capture the abnormal media attention around the event date. Since information by the media might complement or substitute for a firm's disclosure, the correlation between media attention and the likelihood of disclosure can be either positive (a complementary relation) or negative (a substitution relation).

Next, we include a comprehensive set of determinants that have been shown in the prior literature to relate to firms' disclosure choices (e.g., Leftwich, Watts, and Zimmerman, 1981; Botosan and Harris, 2000; Verrecchia and Weber, 2006; Khan and Watts, 2009; Rogers, Skinner,

and van Buskirk, 2009; Fu, Kraft, and Zhang, 2012; Kim and Skinner, 2012). These characteristics are: firm size measured as market capitalization, the market-to-book ratio to capture growth, profitability in terms of return-on-assets and an indicator variable for loss firms, leverage, investment cycle measured as depreciation expenses deflated by lagged total assets, the value of past return momentum, the value of past return volatility, firm age, an indicator for firms listed on the NYSE, an indicator for firms incorporated in the U.S., an indicator for firms operating in a high litigation risk industry (following Francis, Philbrick, and Schipper, 1994), the Herfindahl index to capture industry structure, an indicator for firms issuing management guidance, the ownership percentage of insiders, the ownership percentage of institutional investors, the number of analysts following the firm, and the number of public debt offerings. These firm characteristics are used by prior studies to capture the strength of corporate governance, the richness of the firm's information environment, proprietary costs of disclosure, and litigation risks. All variables are from the year prior to the event (year t-1). Finally, we include year fixed effects $\sum \alpha_k Year_k$ and industry fixed effects $\mu_m Industry_m$, based on the first digit of the SIC code. We cluster standard errors by firm in all regressions. Please refer to Appendix A for definitions of all control variables.

Table 3 reports that our sample of 238 influential negative events includes 95 instances (39 percent) in which affected firms issue a disclosure within the 30 days following the event (see the mean of *Whether to disclosure*). These 95 firms release a total of 168 disclosures, resulting in an average frequency of 1.7 disclosures for each negative event. Among these 95 firms, 53 firms issue their initial disclosure within three days after the negative event. Half (76 percent) of the post-event disclosures are released within one (two) week following the event. Table 4 presents correlations among the variables used throughout the analysis.

Specifically, our data further allow us to examine the channels through which the events are disclosed. While the level of blame hypothesis is silent on the disclosure channel, the descriptive evidence is interesting in its own right (untabulated). Of the 168 disclosures, we find that 69 (41 percent) are released in an Edgar filing and 99 (59 percent) are issued in a press release without a concurrent Edgar filing. Among the 123 disclosures of sudden events, only 27 (22 percent) are released via an Edgar filing, while 39 of 42 disclosures (93 percent) of securities class actions are released via an Edgar filing. Hence, firms appear to use Edgar filings to disclose class action events and rely more on press releases for sudden events.

4.2 DISMISSED AND NON-DISMISSED LITIGATION CASES

In Table 5 we consider litigation that was eventually dismissed as having relatively less blame than cases that were not dismissed. Recall that our litigation sample includes investor class action lawsuits related only to claims of overly optimistic performance guidance without any other confounding claims, thereby holding constant the reason a firm is sued. Model (1) examines the relation between firm characteristics and the likelihood that the firm issues a disclosure following an influential negative economic event; the pseudo R^2 for the model is 48 percent.

We find that loss firms (*Loss firms*, p-value<0.05) are more likely to disclose, consistent with the assumption that loss firms potentially face greater litigation risk and are more likely to disclose to preempt litigation. Table 5 also shows firms that issue earnings guidance are more likely to disclose, indicating these firms might be more transparent in general or recognize their duty to update previously disclosed earnings projections or anticipated business risks (*Guidance*, p-value<=0.01). We find evidence that firms in less competitive industries are more likely to disclose, consistent with the notion that industry competition is one potential reason for firms to

withhold proprietary information (*Herfindahl index*, p<0.01; e.g., Verrecchia 1983). Table 5 also reports that greater analyst following (*Analyst following*, p-value<0.05) is negatively related to the likelihood to disclose, suggesting a substitution effect between analyst information and disclosure. In addition, the results in Table 5 suggest firms that issue more public debt are more likely to disclose (*Public debt issuance*, p-value<0.05), which is consistent with evidence presented in prior disclosure research (Lang and Lundholm 2000; Verrecchia and Weber 2006).

We next augment the model to include event materiality and media attention around the event date; the pseudo R^2 increases by 8 percentage points to 56 percent. While we find a similar pattern of evidence among the relations between firm characteristics and disclosure propensity compared with Model (1), we note that neither event-date stock returns nor greater levels of media attention are associated with the propensity to issue a disclosure among firms in this sample of influential negative events. Moreover, we find some evidence that firms are somewhat *less* likely to disclose when the event heightens investor uncertainty on average (p-value <0.10).

Model (3) presents our main result for relatively blameless (dismissed) and blamed (non-dismissed) litigation cases, as evidenced by *Dismiss*. We continue to find a similar pattern of evidence among the relations between firm characteristics and disclosure propensity compared with Models (1) and (2). Importantly, we find evidence of a positive association between dismissed litigation cases and the likelihood a firm issues a subsequent disclosure (β=5.15, p-value<0.01). A comparison of Model (3) with Model (2) establishes that our blameless-blame event characteristic has explanatory power, evidenced by an increase pseudo R^2 of 16 percent ((0.65-0.56)/0.56). Our blameless-blame event characteristic is also economically important—the likelihood that a firm issues at least one disclosure following the filing of an investor class action lawsuit that is subsequently dismissed is *more than 10 times greater* than that for a case that is

subsequently not dismissed. Overall, the statistical significance, incremental improvement in explanatory power, and economic magnitude indicate that the perceived level of blame associated with an influential economic event is an important determinant of firms' disclosure decisions beyond event materiality, media attention, and firm characteristics documented in the literature.

4.3 EXTERNALLY-CAUSED AND INTERNALLY-CAUSED EVENTS

In Table 6 we consider externally-caused versus internally-caused negative events as our second proxy for the level of blame. Model (1) examines the relation between firm characteristics and the likelihood of disclosure following an externally-caused influential negative economic event; the pseudo R^2 is 31 percent. Note that few of the firm characteristics relate to the likelihood of issuing a disclosure following a sudden negative event. We next augment the model to include event materiality (*Materiality 1*, *Materiality 2*) and media attention (*Media*) around the event date; the pseudo R^2 increases by 10 percentage points to 41 percent. We find evidence that firms are more likely to issue a disclosure when the sudden negative event increases investor uncertainty (p-value<0.05 for *Materiality 2*) and when the sudden event increases media attention (p-value<0.10 for *Media*).

Model (3) presents our main result for externally-caused and internally-caused sudden events. The positive association between *External* and the likelihood that a firm issues a subsequent disclosure indicates the blameless-blame event characteristic is an important determinant of disclosure (β=5.15, p-value<0.01). A comparison of Model (3) with Model (2) establishes that our blameless-blame event characteristic has meaningful explanatory power, evidenced by an increase in pseudo R^2 of 12 percent ((0.46-0.41)/0.41). Our blameless-blame event characteristic is also economically important—the likelihood that a firm issues at least one

disclosure following an externally-caused negative event *is 10 times greater* than that for an internally-caused event. Overall, consistent with the evidence presented in Table 5, we again find support for the level of blame hypothesis—the perceived level of blame regarding an economic event is an important factor that shapes firms' disclosure choice.

4.4 ROBUSTNESS TESTS WITH AN EXPANDED POST-EVENT DISCLOSURE WINDOW

The analyses presented in Tables 5 and 6 are based on a post-event disclosure window of 30 days following the negative event. To address the concern that this window may be too short for a firm to release information regarding a specific event, we further collect information from firms' first post-event 10-K/Q issued during the 31-90 day window following the event. Using this alternative measure, we continue to find that firms are more willing to disclose following a blameless event. The likelihood that a firm issues at least one disclosure following a subsequently dismissed case continues to be 10 times greater than that for a case that is subsequently not dismissed (p-value<0.01). In addition, the likelihood that a firm issues at least one disclosure following an externally-caused sudden event is more than 10 times greater than that following an internally-caused event (p-value<0.01). Taken together, our inferences remain unchanged after lengthening the post-event disclosure window.

4.5 ROBUSTNESS TESTS WITH OLS REGRESSIONS AND ALTERNATE MARKET-BASED MATERIALITY MEASURES

The analyses presented in Tables 5 and 6 are based on logistic regressions. When using an OLS regression specification, similar results are obtained. Specifically, the positive coefficients of *Dismiss* and *External* continue being statistically significant (p-value=0.01 for both; untabulated). Instead of using the absolute value of market-adjusted stock price reaction around the event date to capture materiality, we use the raw value of market-adjusted stock price

reaction or include both the raw value and the absolute value in the regression. The coefficients of *Dismiss* and *External* remain statistically significant (p-value<0.01 and p-value<0.05, respectively; untabulated). We also compute market reactions based on a longer window ([-30, +2] relative to the event day to address any potential information leakage prior to the investor class action filing day. When including the raw return over the [-30,+2] window, the absolute return, or both, we find consistent results that dismissed cases are more likely to be disclosed than non-dismissed cases (p-value<0.01 for all three tests; untabulated).

4.6 ROBUSTNESS TESTS WITH EXTERNALLY-CAUSED AND INTERNALLY-CAUSED OIL SPILLS

Our externally-caused and internally-caused sudden event analysis potentially suffers a heterogeneity problem by including natural disasters, casualty accidents, and oil spills in the same sample. To address this potential issue, we restrict our sample to include only oil spills from 2001-2012 and collect additional data for these 89 events—the size of spill in barrels, water depth, and distance to shore as an additional proxy for materiality. In the untabulated analysis, we find that material oil spills are more likely to be disclosed (β=1.81 for spill size, p-value<0.01). Consistent with results in Table 6, *Materiality 1* is negatively associated with the propensity to disclose (β=-52.48, p-value=0.09), while *Materiality 2* and *Media* are both positively correlated with the likelihood of disclosure (β=136.9 and 4.68 respectively, p-value<0.01 for both).[13]

Incremental to materiality, we continue to document a significant coefficient for *External* in this analysis (β=15.66, p-value<0.01). The likelihood that a firm issues at least one disclosure

[13] In a sample of 300 EPA sanctions involving public firms from 1996-2005, Peters and Romi (2013) document that firms are more likely to report their EPA sanctions in the SEC filings if sanctions led to a lawsuit (judicial rather than administrative proceedings) or a high penalty amount. Their study speaks to materiality, while we focus on the perceived level of blame incremental to materiality.

following an externally-caused negative event is still 10 times greater than that for an internally-caused event. Similar results are obtained when we further include water depth and distance to shore as materiality proxies in addition to spill size. This result is robust to an alternate disclosure measure that includes firms' first post-event 10-K/Q issued during the 31-90 days window following the event (β=14.41 for *External*, p-value<0.01), to an OLS regression specification (β=0.23 for *External*, p-value<0.01), and to alternate market-based materiality measures (the raw value of market-adjusted stock price reaction or including both the raw value and the absolute value in the regression: β=0.14 or 5.36 respectively for *External*, p-value<0.01).

This oil spill only analysis, along with our original externally-caused and internally-caused analysis in Table 6, provides robust evidence that externally-caused events are more likely to be disclosed by firms than internally-caused events. This evidence, combined with our findings in the investor class action lawsuits analyses, indicate that the level of blame is an important factor that shapes managerial disclosure decisions.

5. Cross-sectional analysis

Our evidence suggests that the level of blame influences the likelihood that a firm issues a disclosure following an influential negative economic event. As discussed previously, we next examine the asymmetric disclosure choice between blamed and blameless events by considering whether the asymmetric disclosure choice is associated with the firm's reliance on a positive reputation. We use three proxies to capture firms that are more concerned with their reputation. First, firms that frequently use external financing may rely more on their reputation because capital providers' required cost of capital is partially a function of the firm's reputation. Second, prior studies suggest that firms that seek to increase their visibility and reputation among

investors choose to list on the NYSE (Cowan, Carter, Dark, and Singh, 1992). Lastly, more profitable firms have greater reputation risk as prior research suggests that reputation is important in maintaining firm profitability (Roberts and Dowling, 1997). These findings suggest that firms that access external capital, NYSE firms, and profitable firms are more likely to benefit from asymmetric disclosure of blamed versus blameless events to maintain their reputation. We examine these three expectations in the following subsections.

5.1 FREQUENT EXTERNAL FINANCING

Lang and Lundholm (2000) show that firms selectively disclose favorable news prior to equity offerings to 'hype' their stock price by issuing favorable news and fewer pessimistic statements. This, in turn, subsequently increases proceeds from security issuance. While we do not have a sufficient number of equity offerings among our sample firms, we apply their argument to frequent public debt issuers and expect these firms to have greater asymmetry in their blameless-blame disclosure behavior to potentially increase the proceeds from debt issuance.

Table 7 presents evidence consistent with this expectation—frequent public debt issuers indeed have greater asymmetry in their blameless versus blamed disclosures across both the *Dismiss* and *External* proxies. This can be seen by the positive and statistically significant coefficient estimates on the interaction term *Blameless*Debt issuance* in Models (1) and (2) (p-value<0.01 in both models). Therefore, in the wake of an influential negative event, firms that frequently access public debt markets (and, hence, rely to a greater extent on a positive reputation) are more willing to issue a disclosure after a blameless event than other firms.

5.2 NYSE LISTING

Kedia and Panchapagesan (2011) argue that NYSE firms enjoy greater visibility among investors and higher liquidity. They find that NYSE firms issue more debt relative to firms that are qualified to list on the NYSE but instead are listed on the NASDAQ. Cowan, Carter, Dark, and Singh (1992) report similar results, finding that mid-sized firms that seek to increase their visibility among investors and improve their liquidity choose to list on the NYSE. Baker and Johnson (1990) report survey evidence that managers believe an important benefit of NYSE listing is increased investor visibility. These arguments suggest NYSE firms might be more likely to choose an asymmetric disclosure policy for blameless versus blamed events.

Table 8 examines this expectation and reports that firms listed on the NYSE present greater blameless-blame asymmetric disclosure behavior for both the *Dismiss* and *External* proxies. This can be seen by the positive and statistically significant estimates on the interaction term *Blameless*NYSE* in Models (1) and (2) (p-value<0.01 and p-value<0.05, respectively). Therefore, in the wake of an influential negative event, NYSE-listed firms (and, hence, have a relatively higher reputation due to their higher visibility) are more willing to issue a disclosure after a blameless event than a blamed event compared with other firms.

5.3 PROFITABILITY

Studies suggest that profitable firms with a positive reputation are more likely to sustain their profitability (Roberts and Dowling, 1997), suggesting that profitable firms have greater reputation risk related to a blamed versus a blameless event. We therefore expect the asymmetry in the blameless versus blamed event disclosures to be increasing in firm profitability and to be less pronounced for loss firms relative to profit firms.

Table 9 presents evidence from this analysis. Models (1) and (3) report that among the sample of dismissed versus settled class action lawsuits, more profitable firms are more likely to issue a disclosure following the negative event relative to a blamed event (*Blameless*ROA*, p-value<0.10) although the result for the comparison of loss firms to profit firms is of the expected sign but does not reach conventional levels of statistical significance (*Blameless*LOSS*, p-value>0.10). Models (2) and (4) show that when using a sample of externally-caused versus internally-caused sudden events, profitable firms are more likely to issue a disclosure following the negative event relative to a blamed event than loss firms (*Blameless*LOSS*, p-value<0.05 in Model (4)) although the result for the *Blameless*ROA* interaction is of the expected sign but does not reach statistical significance (p-value>0.10). Overall, the results in Table 10 provide some evidence that the asymmetry in disclosure behavior for profitable firms (and, hence, rely to a greater extent on their reputation) are more willing to issue a disclosure after a blameless event than a blamed event compared with other firms.

6. Conclusion

There is a long-held view of accounting as an information system that reflects underlying economic activities (e.g., Canning, 1929; AAA Pathways Commission[14]). We examine one feature of the process of translating original, disaggregated economic events into disclosure choices by hypothesizing that managers are more willing to provide disclosures when they perceive an event as relatively blameless than when they face a blamed event. We collect a large sample of heterogeneous influential negative events, and, for each event, we assess the extent to which the firm is likely to be perceived as blamed for the event or to be perceived as blameless.

[14] Interpreted from its vision model at http://commons.aaahq.org/groups/2d690969a3/summary

We use two proxies to capture the extent to which managers might perceive an event as blameless: dismissed versus non-dismissed shareholder class action lawsuits and externally-caused versus internally-caused sudden events. Overall, we present evidence consistent with our "level of blame" hypothesis—firms are less likely to release information regarding influential negative events when the firm might be blamed for causing the event relative to when it is likely to be perceived as blameless. We further find that the blameless-blame asymmetric disclosure choice is generally more pronounced for firms with greater dependence on a positive reputation, such as frequent public debt issuers, NYSE firms, and profitable firms.

Our study contributes to the literature by showing that studies based on only disclosure events potentially rely on a sample that consists of more blameless events because firms are less likely to disclose blamed events. In addition to voluntary disclosure choices immediately after the influential negative events, future research may explore managerial discretion over how and when these events are reflected in accounting numbers reported in subsequent financial reports.

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Appendix A
Variable definitions

Variable	Definition	Source
Dismiss	An indicator variable equals 1 for dismissed cases, and 0 for non-dismissed, settled cases. The sample includes investor class action lawsuits claiming overly optimistic performance reporting	Stanford SCAC
External	An indicator variable equals 1 if a sudden crisis is caused by external forces, and 0 if a sudden event is caused by internal forces	NTSB, BSEE
Whether to disclose	An indicator variable equals 1 for firms providing any disclosures regarding a specific crisis event within the month following the cisis	Edgar, RavenPack
Materiality 1	Absolute value of the cumulative market-adjusted return during [0,+2] around a crisis	CRSP
Materiality 2	Change in implied volatility derived from option prices [-3,+3] around a crisis	Option Metrics
Media	Natural logarithm of the ratio of the number of news articles on the event day to the average daily news articles from the prior year	Factiva
Size	Natural logarithm of market capitalization	CRSP
Market-to-book	Natural logarithm of the market-to-book ratio	CRSP, Compustat
Return-on-assets	Income before extraordinary items divided by beginning total assets	Compustat
Loss firm	An indicator variable set to 1 if actual earnings is negative	Compustat
Leverage	Book value of long-term debt divided by beginning total assets	Compustat

Appendix A (continued)
Variable definitions

Variable	Definition	Source
Investment cycle	the length of investment cycle is captured by the ratio of depreciation expense to lagged total assets	Compustat
Return momentum	Twelve months market adjusted buy-and-hold return in a year	CRSP
Return volatility	Standard deviation of monthly stock returns over a year	CRSP
Firm age	Natural logarithm of the number of years a firm is publicly traded	CRSP
NYSE firm	An indicator variable set to 1 if a firm is listed on NYSE	CRSP
USA firm	An indicator variable set to 1 if a firm is incorporated in the U.S.	Compustat
Litigation	An indicator variable set to 1 if a firm operates in a high-litigation industry: biotechnology (SIC codes 2833-2836), computers (3570-3577 and 7370-7374), electronics (3600-3674), and retailing (5200-5961)	Compustat
Guidance	Natural logarithm of the number of management guidance issued in a year	First Call, IBES
Herfindahl index	Based on revenues of firms in a SIC three-digit industry	Compustat
Insider ownership	Percentage of outstanding shares held by insiders, defined as those required to file the Form 4	Thomson Reuters, CRSP
Institutional investor	Percentage of outstanding shares held by institutional investors, defined as those required to file the 13F	Thomson Reuters, CRSP
Analyst following	Natural logarithm of the number of analysts in a year	IBES
Public debt issuance	Natural logarithm of the number of public debt issuances in a year	Thomson Reuters SDC Platinum

FIGURE 1
Illustrations of event characteristic indicators

Our sample includes 238 negative events related to 210 unique firms over the period of 2002-2015 with a concentration in 2005, 2011, and 2012. *External* equals one for sudden events caused by external forces, and zero for sudden events caused by internal forces. *Dismiss* equals one for dismissed cases, and zero for non-dismissed, settled cases. *External* is based on a sample of suddenly occurring events, such as catastrophes, casualty accidents and environmental damages. *Dismiss* is based on a sample of investor class action lawsuits claiming only overly optimistic performance guidance.

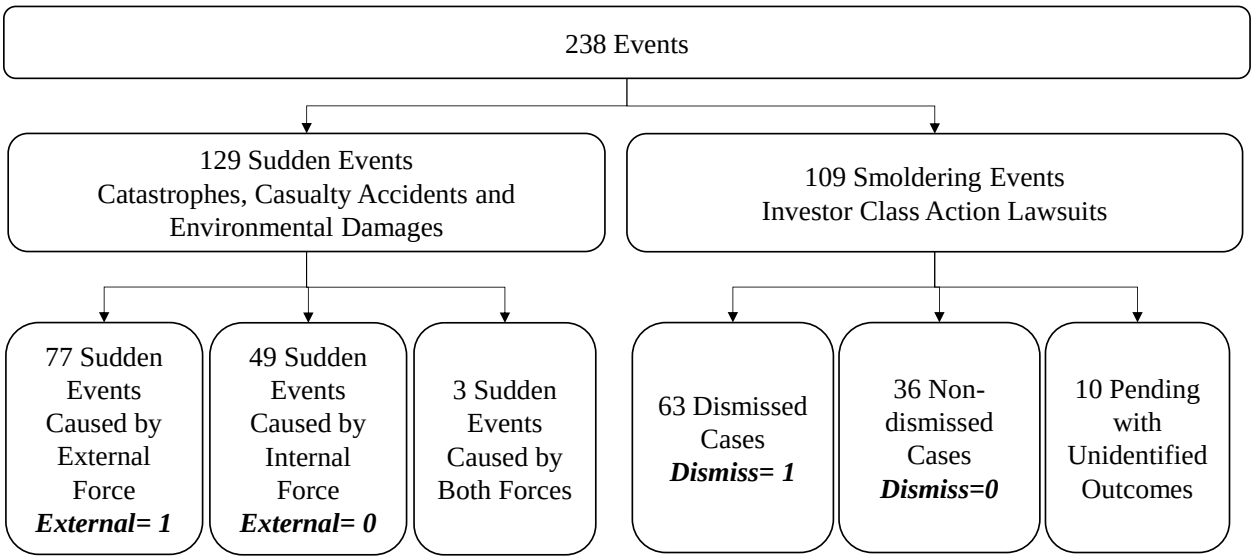

TABLE 1
Influential negative event sample construction

This table summarizes the sample of influential negative events and identifies the sources used to construct the sample. Our sample includes 238 negative events related to 210 unique firms over the period of 2002-2015 with a concentration in 2005, 2011, and 2012. We focus on four crisis categories proposed by the Institute for Crisis Management: catastrophes, casualty accidents, environmental damages, and investor class actions.

Crisis category	# of events	Source
Catastrophes	61	Web search
Casualty accidents	43	NTSB
Environmental damages	25	BSEE
Investor class actions	109	Stanford SCAC
	238	

TABLE 2
Identification of influential negative events

Catastrophes	Since catastrophes rarely occur, we begin by searching major catastrophes around the globe from 2011-2015 and 2005 (due to Hurricane Katrina). Because years 2005, 2011, and 2012 have more severe catastrophes than other years, we decide to focus on these three years as our sample period. We identify affected firms based on the incidence of a stock price crash following a catastrophe when there are no other confounding business events. If a firm experiences a stock price crash within five trading days following a catastrophe, this firm is assumed to be affected by this catastrophe. Stock price crash is identified as occurring when a firm experiences at least one firm-specific weekly return falling two or more standard deviations below the mean firm-specific weekly return for its fiscal year based on the residual from regressing five weeks of market return on an individual firm's return (following Kim, Li, and Zhang, 2011). We do not use the stock price crash measure in Hutton, Marcus, and Tehranian (2009) because they control for industry returns, while we want to keep industry-wide crises in our sample. Consistent with their sample selection criteria, we require at least three trading days in a week, CRSP share code to be 10 or 11 (excluding non-US firms, ADRs, close-end funds, and REITs), and year-end stock price at least five dollars. To rule out confounding business events, we search RavenPack press releases, Proquest news articles, Edgar filings, and Google news to confirm that no major firm disclosures were released during the five day window around the catastrophe. Our final sample includes 61 publicly traded firms affected by five catastrophes: 28 by 2005 Hurricane Katrina, 19 by 2011 Japan Tsunami, 12 by 2012 Hurricane Sandy, 1 by 2011 Joplin Tornado, and 1 by 2011 New Zealand Earthquake. We define the crisis event date as the first date when the catastrophe occurred.
Casualty accidents	Our casualty accidents sample comes from the National Transportation Safety Board (NTSB) casualty accident reports and the FAA aviation accident database (http://www.ntsb.gov/investigations/AccidentReports/Pages/AccidentReports.aspx and http://www.ntsb.gov/_layouts/ntsb.aviation/index.aspx). The sample years include 2005, 2011, and 2012, to be consistent with the catastrophe sample. When comparing the NTSB accident reports to the FAA aviation accident database, we find that NTSB writes reports on more severe casualty accidents in terms of the severity of injuries, the number of deaths, and the degree of damages to facilities. Therefore, we restrict our search of the FAA aviation database to the following: 1) accidents involving deaths and substantial damages to aircrafts, and 2) accidents leading to destroyed aircrafts. Our final sample includes 43 publicly-traded companies affected by casualty accidents during 2005, 2011, and 2012. Among these 43 firm-events, 20 are aviation accidents, 15 are railroad accidents, 6 are marine accidents, and 2 are pipeline accidents. We define the crisis event date as the accident date indicated in the NTSB reports or in the FAA accident database. Two marine accidents occurred internationally and three casualty accidents involved more than one firm. Twelve accidents occurred in 2005, thirteen in 2011, and the rest in 2012.

TABLE 2 (continued)
Identification of influential negative events

Environmental damages	Environmental damages speak to a wide range of events. The Environmental Protection Agency includes violations regarding numerous environmental regulations. For example, in each year, there are 4,000+ violations against the Clean Water Act, 1000+ violations against the Clean Air Act, 500+ violations against the Safe Drinking Water Act, and ~400 about Superfund sites. Many of these violations do not create a significant financial impact on the firm. Instead of including all these violations in our sample, we use the Bureau of Safety and Environmental Enforcement oil spill summary reports to identify one particular type of environmental damages—oil spills (from https://www.bsee.gov/site-page/spills). Different from our approach, Barth, McNichols, and Wilson (1997) examine disclosure choices within publicly-traded firms named as potentially responsible parties to clean up Superfund sites. Our sample includes only severe oil spills, defined as those spills involving greater or equal to 50 barrels, and spanning across three domestic regions: the Gulf of Mexico, Alaska, and the Pacific. Our final sample includes 25 oil spills by publicly traded firms during 2005, 2011, and 2012, 12 of which are caused by Hurricane Katrina or Hurricane Rita in 2005. We define the crisis event date as the oil spill date indicated in the BSEE reports.
Investor class actions	The class action lawsuit sample comes from the Stanford Law School's Securities Class Action Clearinghouse (SCAC), which covers class action lawsuits filed in Federal Courts. We restrict our sample to include only cases that are alleged primarily due to bullish disclosure/guidance or failing to warn about poor performance (i.e., a subset of 10b-5 lawsuits), and remove cases that are confounded with other allegations (e.g., accounting fraud and restatements, related party transactions, government investigation and violations, etc.). We choose to restrict our sample to disclosure-related lawsuits because other confounding allegations often relate to white collar crime cases, which are classified as another crisis category in our study. The event date is the case filing date. We exclude events for which the firm was the first to announce the lawsuit or had discussed the lawsuit prior to the case filing date. Our final sample includes 109 cases during 2005, 2011, and 2012.

TABLE 3
Summary statistics of variable distributions

This table presents descriptive statistics of the variables used in the analysis. *Dismiss* equals one for dismissed cases, and zero for non-dismissed cases. *Dismiss* is based on a sample of investor class action lawsuits claiming only overly optimistic performance guidance. *External* equals one for sudden events caused by external forces, and zero for sudden events caused by internal forces. *Whether to disclose* equals one for firms providing any disclosures regarding a specific crisis event within the month following the event. *Materiality 1* is the absolute value of the cumulative market-adjusted return during [0,+2] around the event, and *Materiality 2* is the change in implied volatility derived from option prices [-3,+3] around the event. *Media* is the natural logarithm of the number of news articles on the event day to the average daily news articles from the prior year. Please refer to Appendix A for other variable definitions.

	N	Mean	25th	Median	75th	Std Dev
Dismiss	99	0.64	0.00	1.00	1.00	0.48
External	126	0.61	0.00	1.00	1.00	0.49
Whether to disclose	238	0.40	0.00	0.00	1.00	0.49
Materiality 1	238	0.16	0.03	0.08	0.22	0.19
Materiality 2	238	0.01	-0.01	0.00	0.02	0.07
Media	238	0.82	0.00	0.65	1.27	0.81
Size	238	7.65	6.12	7.84	9.68	2.49
Market-to-book	238	-0.54	-1.07	-0.48	0.00	1.05
Return-on-assets	238	0.03	0.00	0.03	0.08	0.18
Loss firm	238	0.18	0.00	0.00	0.00	0.39
Leverage	238	0.16	0.00	0.12	0.27	0.17
Investment cycle	238	0.05	0.02	0.04	0.06	0.08
Return momentum	238	0.13	-0.05	0.13	0.29	0.43
Return volatility	238	0.10	0.06	0.09	0.13	0.07
Firm age	238	2.57	1.79	2.80	3.56	1.26
NYSE firm	238	0.59	0.00	1.00	1.00	0.49
USA firm	238	0.84	1.00	1.00	1.00	0.36
Litigation	238	0.25	0.00	0.00	1.00	0.44
Guidance	238	0.93	0.00	1.10	1.61	0.87
Herfindahl index	238	0.14	0.05	0.09	0.15	0.17
Insider ownership	238	0.04	0.00	0.00	0.00	0.41
Institutional investor	238	0.53	0.21	0.62	0.82	0.35
Analyst following	238	2.02	0.00	2.52	3.18	1.36
Public debt issuance	238	0.10	0.00	0.00	0.00	0.36

TABLE 4
Correlation matrix (right: Pearson; left: Spearman)

Please refer to Appendix A for detailed variable definitions. * Two-tailed p<0.10; ** p<0.05; *** p<0.01.

	Dismiss	External	Whether to disclose	Materiality 1	Materiality 2	Media	Size	Market-to-book	Return-on-assets	Loss firm	Leverage	Investment cycle	Return momentum	Return volatility	Firm age	NYSE firm	USA firm	Litigation	Guidance	Herfindahl index	Insider ownership	Institutional investor	Analyst following	Public debt issuance
Dismiss			0.24	(0.15)	(0.11)	(0.18)	0.08	(0.10)	0.21	(0.18)	0.01	0.11	0.01	0.09	0.16	0.02	(0.03)	(0.03)	0.04	(0.05)	(0.00)	(0.06)	(0.01)	(0.05)
			**			*			**	*														
External			0.37	0.18	0.27	(0.06)	(0.30)	(0.25)	0.09	(0.02)	(0.20)	0.05	(0.06)	(0.20)	(0.17)	(0.25)	0.23	0.26	(0.05)	(0.01)	(0.12)	(0.20)	(0.17)	(0.22)
			***	**	***		***	***			**			**	*	***	***	***				**	*	**
Whether to disclose	0.24	0.37		(0.02)	0.07	0.12	(0.09)	(0.00)	0.07	0.02	(0.05)	0.05	0.08	0.05	(0.05)	(0.08)	(0.05)	(0.00)	(0.09)	0.02	(0.04)	(0.06)	(0.08)	(0.11)
	**	***				**																		**
Materiality 1	(0.07)	0.19	(0.02)		0.07	0.17	(0.25)	(0.10)	(0.35)	0.36	(0.12)	0.07	0.00	0.45	(0.28)	(0.23)	0.06	0.15	0.04	(0.04)	(0.01)	(0.07)	(0.11)	(0.10)
		**				***	***	*	***	***	**			***	***	***		***					*	*
Materiality 2	0.06	0.20	0.04	0.09		0.20	0.01	0.02	(0.07)	0.13	0.07	(0.02)	(0.10)	0.06	0.01	0.06	0.04	(0.04)	0.03	(0.03)	0.01	(0.06)	(0.05)	(0.02)
		**				***				**														
Media	(0.18)	(0.10)	0.11	0.03	0.02		(0.02)	(0.06)	(0.11)	0.12	(0.04)	(0.02)	(0.10)	0.06	(0.09)	0.00	(0.07)	0.07	(0.01)	(0.01)	(0.06)	(0.06)	(0.02)	(0.02)
	*		**						*	**			*											
Size	0.11	(0.30)	(0.10)	(0.28)	0.08	0.09		(0.21)	0.34	(0.37)	0.19	(0.09)	0.22	(0.30)	0.49	0.52	0.15	(0.06)	0.25	0.06	0.06	0.35	0.57	0.32
		***	*	***				***	***	***	***		***	***	***	***	***		***			***	***	***
Market-to-book	(0.12)	(0.11)	0.03	(0.08)	0.12	(0.09)	(0.25)		(0.21)	0.06	(0.00)	(0.05)	(0.30)	(0.09)	0.03	0.20	(0.33)	(0.27)	(0.19)	(0.09)	0.04	(0.08)	(0.14)	(0.02)
					**		***		***				***			***	***	***	***				***	
Return-on-assets	0.23	(0.07)	(0.01)	(0.12)	(0.12)	(0.01)	0.46	(0.45)		(0.54)	(0.04)	(0.13)	0.26	(0.23)	0.10	0.08	0.03	(0.03)	0.03	0.03	0.00	0.20	0.20	(0.00)
	**			**	**		***	***		***		**	***	***	*							***	***	
Loss firm	(0.18)	(0.02)	0.02	0.22	0.07	0.10	(0.40)	0.15	(0.65)		(0.04)	0.13	(0.29)	0.45	(0.25)	(0.20)	0.05	0.15	(0.12)	0.00	(0.01)	(0.23)	(0.26)	(0.11)
	*			***		*	***	***	***			**	***	***	***	***		***	**			***	***	**
Leverage	(0.12)	(0.25)	(0.02)	(0.12)	0.08	0.02	0.25	0.13	(0.03)	(0.06)		0.15	(0.01)	(0.03)	0.25	0.22	0.04	(0.25)	0.10	0.13	(0.03)	0.12	0.11	0.13
		***		**			***	**				***			***	***		***	*	**		**	*	**
Investment cycle	0.03	(0.08)	(0.00)	0.10	0.03	0.03	(0.02)	(0.08)	0.05	0.19	0.16		(0.09)	0.21	(0.02)	(0.07)	0.05	0.05	(0.01)	0.16	(0.01)	(0.05)	(0.03)	(0.08)
				*						***	***		*	***						***				
Return momentum	(0.05)	(0.07)	0.04	(0.04)	(0.01)	(0.04)	0.26	(0.35)	0.28	(0.28)	0.05	0.01		(0.02)	(0.04)	0.01	0.06	0.05	(0.03)	(0.06)	0.00	0.00	0.03	0.02
							***	***	***	***														
Return volatility	0.08	(0.23)	0.01	0.34	(0.07)	0.06	(0.44)	(0.10)	(0.11)	0.42	(0.06)	0.22	(0.11)		(0.29)	(0.31)	0.04	0.24	0.06	0.04	(0.03)	(0.16)	(0.21)	(0.18)
		***		***			***	*	**	***		***	**		***	***		***				***	***	***
Firm age	0.15	(0.14)	(0.06)	(0.19)	0.06	0.00	0.48	0.04	0.20	(0.26)	0.33	0.05	0.00	(0.33)		0.45	0.25	(0.21)	0.21	0.17	0.02	0.27	0.31	0.18
				***			***		***	***	***			***		***	***	***	***	***		***	***	***
NYSE firm	0.02	(0.25)	(0.08)	(0.23)	0.11	0.06	0.53	0.16	0.12	(0.20)	0.35	0.04	0.13	(0.32)	0.44		0.03	(0.32)	0.14	0.07	0.02	0.31	0.33	0.21
		***		***	**		***	***	**	***	***		**	***	***			***	**			***	***	***
USA firm	(0.03)	0.23	(0.05)	0.07	0.02	(0.08)	0.09	(0.28)	0.04	0.05	0.04	0.09	0.10	0.01	0.26	0.03		0.09	0.17	0.17	0.04	0.17	0.19	0.13
		***						***					*		***				***	***		***	***	**
Litigation	(0.03)	0.26	(0.00)	0.14	(0.11)	0.07	(0.10)	(0.31)	0.09	0.15	(0.29)	0.10	(0.00)	0.26	(0.22)	(0.32)	0.09		0.20	(0.13)	(0.03)	0.00	0.03	(0.11)
		***		**	**		*	***		***	***	*		***	***	***			***	**				**
Guidance	0.01	(0.07)	(0.09)	0.15	(0.01)	(0.00)	0.24	(0.17)	0.22	(0.12)	0.13	0.11	0.01	0.09	0.20	0.14	0.16	0.18		0.04	(0.07)	0.26	0.38	0.04
				***			***	***	***	**	**	*			***	***	***	***				***	***	
Herfindahl index	(0.04)	(0.20)	(0.00)	0.02	(0.04)	0.03	0.05	(0.13)	0.09	(0.03)	0.21	0.15	0.09	0.13	0.15	0.22	0.15	(0.21)	0.05		0.02	0.11	0.05	(0.00)
		**						**			***	***		**	***	***	***	***				**		
Insider ownership	0.04	0.11	(0.03)	0.17	(0.05)	(0.13)	(0.31)	(0.26)	(0.03)	0.16	(0.15)	0.07	0.04	0.24	(0.20)	(0.30)	0.51	0.21	0.02	0.09		(0.02)	(0.09)	0.09
				***		**	***	***		***	***			***	***	***	***	***		*				
Institutional investor	(0.07)	(0.17)	(0.06)	(0.01)	0.04	(0.02)	0.24	(0.11)	0.26	(0.20)	0.15	0.04	0.11	(0.04)	0.21	0.29	0.17	0.03	0.26	0.19	0.07		0.72	0.04
		*					***	*	***	***	***		**		***	***	***		***	***			***	
Analyst following	(0.01)	(0.18)	(0.09)	(0.08)	0.03	0.03	0.63	(0.18)	0.38	(0.26)	0.15	0.09	0.12	(0.24)	0.34	0.36	0.20	0.04	0.36	0.03	(0.05)	0.59		0.17
		**					***	***	***	***	***		**	***	***	***	***		***			***		***
Public debt issuance	0.01	(0.18)	(0.08)	(0.11)	(0.01)	(0.01)	0.37	0.01	0.02	(0.14)	0.25	(0.06)	0.02	(0.23)	0.24	0.24	0.16	(0.14)	0.15	0.05	(0.04)	0.03	0.25	
		**		**			***			**	***			***	***	***	***	**	***				***	

TABLE 5
Dismissed and non-dismissed cases

This table presents results from logistic regressions. The dependent variable is *Whether to disclose*, an indicator variable for firms providing any disclosure regarding a specific crisis event within the month following the event. The sample includes 99 investor class action lawsuits claiming only overly optimistic performance guidance. *Dismiss* equals one for dismissed cases, and zero for non-dismissed cases. *Materiality 1* is the absolute value of the cumulative market-adjusted return during [0,+2] around the event, and *Materiality 2* is the change in implied volatility derived from option prices [-3,+3] around the event. *Media* is the natural logarithm of the number of news articles on the event day to the average daily news articles from the prior year. All firm-level variables are from the previous year. Please refer to Appendix A for other variable definitions. * Two-tailed p<0.10; ** p<0.05; *** p<0.01.

	Model (1)		**Model (2)**		**Model (3)**	
Dismiss					**5.15**	*******
Materiality 1			10.50		16.50	
Materiality 2			-22.70	*	-35.87	**
Media			0.90		0.74	
Size	0.19		0.41		0.86	
Market-to-book	-0.40		-0.41		-0.19	
Return-on-assets	12.72	*	14.83		20.19	*
Loss firm	4.12	**	4.21		9.21	**
Leverage	-8.06	**	-12.77	**	-25.07	***
Investment cycle	6.33	*	9.27	*	17.28	**
Return momentum	0.31		0.05		1.53	
Return volatility	9.38		13.73	*	11.66	
Firm age	-0.09		0.03		-0.49	
NYSE firm	-0.44		-1.05		0.00	
USA firm	-3.52	**	-4.25	**	-7.51	**
Litigation	-0.17		-0.87		-0.19	
Guidance	1.57	***	2.57	**	4.66	***
Herfindahl index	6.62	***	8.77	**	17.05	**
Insider ownership	-0.73		0.79		-3.29	
Institutional investor	2.17		2.19		3.33	
Analyst following	-1.50	**	-2.09	**	-3.44	***
Public debt issuance	8.10	**	13.88	**	22.01	***
Fixed effects	year, industry		year, industry		year, industry	
Std. error clustered on	firm		firm		firm	
N	99		99		99	
Pseudo R-squared	0.48		0.56		0.65	

TABLE 6
Externally-caused and internally-caused sudden events

This table presents results from logistic regressions. The dependent variable is *Whether to disclose*, an indicator variable for firms providing any disclosure regarding a specific crisis event within the month following the event. The sample includes 126 sudden events (catastrophes, casualty accidents and environmental damages). *External* equals one for sudden events caused by external forces, and zero for sudden events caused by internal forces. *Materiality 1* is the absolute value of the cumulative market-adjusted return during [0,+2] around the event, and *Materiality 2* is the change in implied volatility derived from option prices [-3,+3] around the event. *Media* is the natural logarithm of the number of news articles on the event day to the average daily news articles from the prior year. All firm-level variables are from the previous year. Please refer to Appendix A for other variable definitions. * Two-tailed p<0.10; ** p<0.05; *** p<0.01.

	Model (1)		**Model (2)**		**Model (3)**	
External					**2.30**	*******
Materiality 1			-26.84		-34.99	
Materiality 2			15.27	**	10.75	**
Media			1.07	*	0.99	
Size	0.06		0.10		0.06	
Market-to-book	0.03		0.05		0.13	
Return-on-assets	-11.48	*	-15.60	**	-18.91	**
Loss firm	-2.28		-1.81		-2.80	
Leverage	-0.25		-0.35		-1.75	
Investment cycle	0.55		3.55		-0.24	
Return momentum	-1.32		-1.04		-0.12	
Return volatility	8.41		12.81		28.20	*
Firm age	0.32		0.09		0.29	
NYSE firm	-1.24		-2.11		-2.22	
USA firm	1.31		1.73		1.25	
Litigation	-1.06		-1.44		-2.52	*
Guidance	-0.67		-1.05	**	-1.08	**
Herfindahl index	-4.74	*	-3.16		-3.82	
Insider ownership	-10.82		-7.30		-6.19	
Institutional investor	0.50		1.07		1.66	
Analyst following	0.32		0.37		0.53	
Public debt issuance	-1.13		-1.19		-0.55	
Fixed effects	year, industry		year, industry		year, industry	
Std. error clustered on	firm		firm		firm	
N	126		126		126	
Pseudo R-squared	0.31		0.41		0.46	

TABLE 7
Frequency of public debt issuances

This table presents results from logistic regressions. The dependent variable is *Whether to disclose*, an indicator variable for firms providing any disclosure regarding a specific crisis event within the month following the event. When the sample includes 99 investor class action lawsuits claiming only overly optimistic performance guidance, *Blameless* equals one for dismissed cases, and zero for non-dismissed cases. When the sample includes 126 sudden events (catastrophes, casualty accidents and environmental damages), *Blameless* equals one for events caused by external forces, and zero for events caused by internal forces. *Debt issuance* is the natural logarithm of the number of public debt issuances in the previous year. Please refer to Appendix A for other variable definitions. * Two-tailed p<0.10; ** p<0.05; *** p<0.01.

	Model (1) Blameless= Dismiss		**Model (2) Blameless= External**	
Blameless × Debt issuance	**18.44**	*******	**12.82**	*******
Blameless	5.34	**	1.70	*
Materiality 1	21.24		-52.71	*
Materiality 2	-46.30	**	9.22	
Media	0.22		1.26	
Size	1.67	**	-0.01	
Market-to-book	-0.12		0.09	
Return-on-assets	22.03	**	-29.66	**
Loss firm	10.56	***	-4.02	*
Leverage	-41.03	**	-4.32	
Investment cycle	23.68	***	-0.45	
Return momentum	0.96		0.59	
Return volatility	21.68		40.34	**
Firm age	-0.64		0.51	
NYSE firm	-0.72		-3.04	
USA firm	-10.41	**	1.37	
Litigation	0.14		-3.23	*
Guidance	5.78	***	-1.10	*
Herfindahl index	22.25	**	-4.24	
Insider ownership	-2.87		-13.20	
Institutional investor	1.55		2.12	
Analyst following	-4.14	***	0.75	
Public debt issuance	19.85	*	-9.75	***
Fixed effects	year, industry		year, industry	
Std. error clustered on	firm		firm	
N	99		126	
Pseudo R-squared	0.67		0.54	

TABLE 8
NYSE listing

This table presents results from logistic regressions. The dependent variable is *Whether to disclose*, an indicator variable for firms providing any disclosure regarding a specific crisis event within the month following the event. When the sample includes 99 investor class action lawsuits, *Blameless* equals one for dismissed cases, and zero for non-dismissed cases. When the sample includes 126 sudden events, *Blameless* equals one for events caused by external forces, and zero for events caused by internal forces. *NYSE* is an indicator variable set to 1 if a firm is listed on NYSE. Please refer to Appendix A for other variable definitions. * Two-tailed p<0.10; ** p<0.05; *** p<0.01.

	Model (1) Blameless= Dismiss		**Model (2) Blameless= External**	
Blameless × NYSE	**9.32**	*******	**4.97**	******
Blameless	4.97	**	-1.72	
Materiality 1	26.35	**	-45.54	
Materiality 2	-40.70	***	10.96	*
Media	1.63		1.00	
Size	1.16	*	-0.01	
Market-to-book	-0.37		0.08	
Return-on-assets	39.64	**	-20.14	**
Loss firm	17.16	*	-4.09	*
Leverage	-41.79	**	-4.13	
Investment cycle	24.25	**	-0.44	
Return momentum	1.28		0.54	
Return volatility	16.26		28.21	
Firm age	-0.74		0.34	
NYSE firm	-5.52	**	-6.33	**
USA firm	-12.94	***	1.88	
Litigation	-0.32		-3.03	*
Guidance	8.03	***	-0.94	**
Herfindahl index	31.30	**	-3.64	
Insider ownership	-1.23		-23.19	*
Institutional investor	3.85		0.93	
Analyst following	-5.17	***	0.56	
Public debt issuance	41.45	***	-0.15	
Fixed effects	year, industry		year, industry	
Std. error clustered on	firm		firm	
N	99		126	
Pseudo R-squared	0.71		0.49	

TABLE 9
Profitability

This table presents results from logistic regressions. The dependent variable is *Whether to disclose*, an indicator variable for firms providing any disclosure regarding a specific crisis event within the month following the event. When the sample includes 99 investor class action lawsuits, *Blameless* equals one for dismissed cases, and zero for non-dismissed cases. When the sample includes 126 sudden events, *Blameless* equals one for events caused by external forces, and zero for events caused by internal forces. *ROA* is income before extraordinary items divided by beginning total assets. *Loss* is an indicator variable set to 1 if actual earnings is negative. Please refer to Appendix A for other variable definitions. * Two-tailed p<0.10; ** p<0.05; *** p<0.01.

	Model (1) Blameless= Dismiss		**Model (2) Blameless= External**		**Model (3) Blameless= Dismiss**		**Model (4) Blameless= External**	
Blameless × ROA	**9.46**	*****	**9.34**					
Blameless × Loss					**-1.65**		**-6.36**	******
Blameless	4.49	***	1.92	*	5.60	***	2.90	***
Materiality 1	1.45		-37.54		16.52		-47.45	*
Materiality 2	-19.21	*	11.05	**	-36.63	**	12.18	**
Media	1.82	*	0.95		0.92		0.96	
Size	0.33		0.05		0.82		-0.01	
Market-to-book	-0.58		0.12		-0.29		0.00	
Return-on-assets	8.65		-26.67		20.13	**	-18.38	**
Loss firm	5.40	**	-3.08		9.78	***	1.25	
Leverage	-14.20	***	-2.00		-25.95	***	-2.78	
Investment cycle	5.31		0.04		17.07	***	-0.80	
Return momentum	0.07		0.04		1.30		0.18	
Return volatility	4.89		28.06	*	13.27		32.13	**
Firm age	-0.16		0.29		-0.35		0.43	
NYSE firm	0.62		-2.17		-0.02		-1.94	
USA firm	-4.77	**	1.14		-7.36	**	0.65	
Litigation	-2.29		-2.57	*	-0.60		-2.40	
Guidance	2.91	***	-1.10	**	4.61	***	-1.15	**
Herfindahl index	10.23	***	-3.88		16.75	***	-3.57	
Insider ownership	-2.95		-8.65		-4.16		-8.72	
Institutional investor	3.93		1.76		2.71		2.15	
Analyst following	-3.02	***	0.49		-3.36	***	0.35	
Public debt issuance	4.83	***	-0.56		22.05	***	-0.26	
Fixed effects	year, industry		year, industry		year, industry		year, industry	
Std. error clustered on	firm		firm		firm		firm	
N	99		126		99		126	
Pseudo R-squared	0.62		0.46		0.65		0.48	