Disclosure Timeliness, Insider Trading Opportunities and Litigation Consequences

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Abstract

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Keywords: voluntary disclosure, negative earnings news; securities litigation, insider trading JEL Classification: M41, K22, G14

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I. INTRODUCTION

Skinner (1994) finds that 25 percent of firms facing negative earnings news voluntarily warn of the bad news, compared to 6 percent of the firms facing good news. He argues that these findings result from managers' fear of legal liability. Though empirical evidence in support of this theory is mixed (Healy and Palepu 2001, 423), recent evidence indicates that less timely disclosure increases firms' litigation consequences (Skinner 1994, Kasznik and Lev 1995, Skinner 1997, Baginski et al. 2002, Field et al. 2005). If managers can indeed lower litigation costs by voluntarily disclosing impending negative news, one wonders why managers' warnings remain less frequent than negative news events (i.e., 75 percent of Skinner's bad news sample firms elected not to warn).¹ This paper explicitly considers the tradeoff between increased litigation consequences and tempting insider trading opportunities by examining managers' disclosure decisions in relation to their trading behavior. Specifically, this paper investigates whether managers delay disclosure of negative news and trade to exploit information asymmetries prior to supplying negative earnings news to the market, and, if so, whether this opportunistic behavior is associated with increased litigation consequences for the firm (via increased litigation risk and/or higher lawsuit settlement amounts) or for managers (via higher employment turnover or SEC action).

An established and growing body of research examines when and how managers trade to exploit information asymmetries. Studies indicate that insiders sell (delay purchases) before significant price decreases and buy (delay sales) before significant price increases (Jaffe 1974, Seyhun 1986). Drawing upon these findings, I examine the relation between managers' abnormal trade and the timeliness of their negative news disclosures. In so doing, I connect the stream of literature examining managers' incentives to correct information asymmetries via negative news warnings to the stream of literature examining insiders' exploitation of information asymmetries.

Managers face both disclosure and trading decisions when they learn of negative news. Although securities laws provide penalties for failing to disclose this news in a timely manner,

¹ Managers voluntarily warn of negative news via either management forecasts or earnings preannouncements. A management forecast is an earnings projection made before the end of the quarter; an earnings preannouncement is an earnings projection made after the end of the quarter but before the formal earnings announcement.

tempting trading opportunities might cause some managers to delay disclosure. If managers trade prior to disclosing the negative news, litigation consequences associated with delayed disclosure may increase, as shareholders' attorneys use trading behavior as evidence of managers' disclosure delays (Sale 2002). Because the strength of the shareholders' case largely depends on the assertion that managers withheld adverse information, managers may improve the shareholders' bargaining position by trading prior to disclosure. Indeed, this behavior supplies evidence of the possession of an informational advantage. Yet, some managers might surrender to temptation because the firm (and its directors' and officers' liability insurance carrier) may suffer most of the consequences.

I investigate the disclosure and trading behavior of managers of a sample of 379 firms facing large, negative earnings news (causing drops in price greater than 35 percent in a 3-day window) during 1996 through 2002. Partitioning the sample based on disclosure behavior, I find that the managers who are less timely in their disclosure of negative earnings news are more likely to engage in abnormal trade prior to releasing the news. Consistent with the notion that some managers delay disclosure in order to trade opportunistically, I observe a negative relation between abnormal trade and the timeliness of managers' disclosures after controlling for a number of factors that prior research argues influence managers' disclosure behavior.

Given these findings, I next investigate whether this seemingly opportunistic trading behavior is associated with increased consequences for the firm or for its managers by focusing on subsequent lawsuit filings and the associated settlement costs. Consistent with the premise that managers' trading behavior affects firms' litigation risk, I detect a positive relation between managers' abnormal trade prior to the negative news disclosure and the incidence of a subsequent securities lawsuit. In addition, after controlling for a number of other factors thought to influence settlement negotiations, I document a positive relation between settlement amounts and measures of pre-disclosure abnormal trade. At the same time, I find that insurance companies cover smaller proportions of the firms' settlement costs if the lawsuit filing includes trading allegations as evidence of managers' incentives to delay disclosure. Finally, although I find evidence indicative of increased litigation consequences for firms, I find no evidence to suggest that the managers themselves suffer increased consequences as a result of their trading behavior. Consistent with recent evidence provided by Srinivasan (2005) and Desai et al. (2006), I find increased management turnover following earnings restatements, but similar to Agrawal et al. (1999) and Beneish (1999) who examine turnover following fraud revelations, I find no evidence of turnover associated with seemingly opportunistic trading by managers of lawsuit firms. Furthermore, I find no evidence to suggest that managers suffer via monetary penalties and/or SEC action as a result of their trading behavior.

This study adds to the stream of research examining managers' disclosure incentives. Prior work indicates that less timely disclosure of negative earnings news increases firms' litigation consequences. Yet, managers' negative news warnings occur relatively infrequently.² In this paper, I observe managers' disclosure decisions in relation to their trading behavior (a factor not considered in prior studies that examine the link between disclosure behavior and litigation consequences) and find that the less timely disclosers are more likely to have engaged in abnormal trade that increases litigation consequences for the firm. These findings suggest that studies examining managers' disclosure behavior, particularly those considering litigation consequences and the effect of managers' disclosure decisions, should take into account the influence of managers' trading behavior on both their disclosure decisions and firms' litigation consequences.

This paper also contributes to the literature investigating the degree to which insiders exploit information asymmetries. Although studies examining insiders' behavior in the context of both bankruptcy filings and fraud revelations find evidence of abnormal trade (Seyhun and Bradley 1997, Summers and Sweeney 1998, Beneish 1999), many studies do not find evidence of abnormal trade prior to negative news events, including information revelations that trigger lawsuit filings (Loderer and Sheehan 1989, Gosnell et al. 1992, Jones and Weingram 1996, 2005, Dechow et al. 1996, Bohn and Choi 1996, Niehaus and Roth 1999). Consistent with recent work by Johnson et al. (2007), I find

 $^{^{\}rm 2}$ In fact, recent work by Kothari et al. (2005) suggests that, on average, managers delay the disclosure of negative news.

that managers do indeed appear trade to exploit their informational advantages prior to the information revelations that trigger lawsuit filings.

Finally, this study advances the stream of literature that examines factors that influence lawsuit settlement amounts. Though settlements are negotiated and often thought to reflect the strength of the plaintiffs' case (because either party could opt for a trial verdict rather than a negotiated settlement), a considerable body of legal literature questions whether the settlement amount reflects the merits of the case (Alexander 1991, Seligman 1994, Grundfest 1994, 1995). After controlling for the degree to which directors' and officers' liability insurance covers the settlement (using information hand-collected from the footnotes of firms' financial statements), this study identifies influential factors (e.g., managers' trade and the presence of a restatement) that various commentators believe reflect the merits of the plaintiffs' case. As such, it informs the debate about the determinants of settlements in the legal literature.

The remainder of this paper progresses as follows. Section II of provides background and discusses related literature. Section III supplies the hypotheses and research design. Section IV describes the sample selection criteria and data collection, while Section V presents the analyses and results of the study. Finally, Section VI concludes with a summary and discussion.

II. BACKGROUND AND RELATED LITERATURE

Shareholder litigation under Rule 10b-5

A typical class action shareholder lawsuit brought under Rule 10b-5 of the Securities Exchange Act of 1934 alleges that managers of the company made false or misleading statements and/or failed to disclose material information in a timely manner to the market, resulting in a period of time when the firm's stock price is artificially inflated. The class of investors (known as the "plaintiff class") who purchased the company's stock during this time (known as the "class period") claims damages that result from managers' disclosure behavior. The revelation of negative news along with a considerable drop in the firm's stock price often triggers the filing of a shareholder lawsuit. Plaintiffs' attorneys can and do use managers' trading behavior during the class period as evidence of delayed disclosure (Sale 2002). Although nearly all shareholder lawsuits brought under Rule 10b-5 settle before trial, settlements often result in sizeable costs to the firm and/or the firm's insurance provider. Despite the passage of the Private Securities Litigation Reform Act ("PSLRA") in December of 1995, which was intended to protect publicly traded firms from abuse of class action securities litigation, both the number of lawsuits filed and the average settlement amounts surged in recent years (PricewaterhouseCoopers 2003).³ Shareholder lawsuits under Rule 10b-5 and their associated resolution costs form the basis of the theory introduced by Skinner (1994).

Voluntary disclosure of negative news

Skinner (1994) suggests that aversion to legal liability causes managers to voluntarily warn of negative news. In particular, Skinner (1994) hypothesizes that U.S. securities laws provide incentives for managers to disclose negative news voluntarily. Because announcements of large, negative earnings surprises increase the likelihood of potentially costly shareholder 10b-5 lawsuits, he argues that managers benefit from "preemptive" warnings because such early disclosures both reduce the plaintiffs' ability to claim that managers failed to release material information promptly and limit the size of the plaintiff class by reducing the period of nondisclosure. Accordingly, Skinner suggests that the costs of failing to voluntarily disclose bad news exceed the costs of failing to disclose good news. In fact, legal liability actually provides disincentive for the disclosure of good news, as managers may be held accountable for inaccurate good news forecasts.

Early work examining factors thought to influence managers' disclosure decisions provides mixed evidence to support the premise that managers engage in voluntary disclosure to avoid securities litigation and/or to lower litigation costs associated with shareholder lawsuits (Healy and Palepu 2001, 423). Examining a litigation sample of 45 observations covering 1988 to 1992, Francis et al. (1994) find that managers' warnings prompted 28 of the lawsuits. In contrast, they find that 46 of 53 firms similarly vulnerable to litigation did not warn of the impending negative news, which

³ The PSLRA aimed to reduce "strike" suits based solely on large price declines that tended to coerce settlements out of "deep pockets." Empirical evidence suggests that nuisance suits declined with the passage of the PSLRA (NERA 2002, Painter et al. 2002). For further discussion of the changes introduced by the PSLRA, see Painter et al. (2002).

suggests that warnings do not always deter, and in certain cases may even trigger, lawsuit filings.⁴ Arguing that the control sample of similarly "vulnerable" firms used by Francis et al. (1994) differs from the lawsuit sample in, among other respects, size and the extent to which the market expected the adverse news, Skinner (1997) re-examines the relation between disclosure and litigation. Unlike Francis et al. (1994), Skinner uses the litigation firms as their own controls by comparing the firms' disclosure behavior during quarters when they faced litigation to their disclosure behavior during quarters when they did not face litigation. Like Francis et al. (1994), however, Skinner (1997) finds evidence that early disclosure does not prevent litigation, as disclosure during lawsuit quarters is more timely than disclosure during non-lawsuit quarters.

Studies focusing on the relation between disclosure and the incidence of litigation must consider that disclosure behavior and the probability of litigation are endogenous to the severity of the news, making it difficult to disentangle the effect of disclosure on the probability of litigation. Determining the effect of disclosure on the probability of litigation is further complicated by the need to select a control sample against which to compare managers' decisions to warn. Using a simultaneous equations methodology, Field et al. (2005) find that early disclosure may indeed deter certain types of litigation, suggesting that earlier studies might suffer from problems of endogeneity.⁵ As such, in contrast to prior work, Field et al. (2005) supply evidence indicating that managers' disclosure decisions can lower the likelihood of litigation.

Examining the actual outcomes of lawsuits rather than the incidence of litigation eliminates the troublesome task of selecting a suitable control sample of firms facing similar disclosure incentives. As such, Skinner (1997) focuses on lawsuit settlements and argues that a manager's desire to reduce the costs associated with resolving a perhaps unavoidable lawsuit filing drives the decision to voluntarily warn of impending negative news. In particular, he suggests that early disclosure strengthens the manager's position during settlement negotiations. After controlling for

⁴ Specifically, Francis et al. (1994) select a control sample of "at risk" firms that faced earnings declines that were, on average, 50 percent *more* than the average earnings declines reported by the sample of firms in the same industries that were subject to litigation.

⁵ Although the research design of Field et al. (2005) addresses the endogenous nature of disclosure behavior and the probability of litigation, it does not consider the influence of trading incentives on managers' disclosure decisions nor does it consider insider trading as a factor in lawsuit filings.

the severity of the impending negative news (via a measure of estimated shareholder damages), Skinner (1997) offers evidence to suggest that timely disclosure results in lower lawsuit settlement amounts.⁶ His analyses, however, do not control for several factors that might influence lawsuit settlement amounts (e.g., insider trading, firm size, insurance coverage, the presence of a restatement).

In addition to examining the basic prediction that voluntary disclosure deters litigation and/or lowers litigation costs, other work indirectly suggests that the fear of legal liability causes managers to warn. For example, Baginski et al. (2002) examine whether the differing legal regimes in the U.S. and Canada are associated with differences in disclosure behavior, such as differences in the types and degree of information firms convey. They find that managers of Canadian firms, faced with an arguably similar business environment but less litigious legal environment, are more likely to disclose good news relative to U.S. firms. Furthermore, Canadian managers' good news disclosures tend to be more precise and cover longer horizons. This finding lends credit to the idea that managers are more likely to voluntarily release good news when they are less fearful of being held accountable for inaccurate forecasts.⁷ In summary, though evidence remains mixed, recent evidence indicates that timely disclosure lowers the likelihood of litigation and reduces settlement amounts.

Trading opportunities and managers' disclosure decisions

Although recent work indicates that managers can lower litigation costs by voluntarily disclosing negative news (Skinner 1997, Field et al. 2005), Skinner (1994)'s empirical findings show that managers do so only 25 percent of the time. When managers learn of negative earnings news, I argue that they face a tempting trading opportunity. That is, managers must decide whether to reduce the firm's expected litigation costs by warning of the news or to delay the news and benefit personally by trading to exploit information asymmetries. If the potential trading profits reach

⁶ Skinner (1997) measures disclosure timeliness by calculating the number of trading days between the end of the fiscal quarter and the date of disclosure. Under this approach, earnings forecasts result in positive measures of timeliness, while both earnings preannouncements and actual earnings announcements result in negative measures of timeliness.

⁷ The findings of Baginski et al. (2002) do not preclude reputational concerns from playing a role in disclosure. For example, it might be that managers in Canada "manage expectations" while managers in the U.S. "manage earnings."

sufficient levels, managers may engage in disclosure behavior that allows them to profit personally at the expense of shareholders.⁸

For example, the investors who sued Scholastic Corporation claim managers did just that, as shown by the graph in Panel A of Figure 1. In a complaint filed on April 7, 1997, shareholders alleged that Scholastic and its Vice President of Finance and Investor Relations concealed a material decline in Goosebump book sales and a material increase in returns of Goosebump books, resulting in an artificially inflated stock price during the period from December 10, 1996 through February 20, 1997. The plaintiffs argued that this delay allowed the Vice President to sell 80 percent of his holdings of Scholastic stock at the artificially high price for proceeds of approximately \$2 million, while they bought shares at the artificially high price before Scholastic supplied the negative news to the market.

As shown by the graph in Panel B of Figure 1, the investors of PRI Automation, Inc. tell a similar story. In a complaint filed November 20, 2000, shareholders claimed that throughout the first three quarters of 2000 management of PRI misrepresented its competitive position as a manufacturer in the semiconductor industry.⁹ During the class period (January 27, 2000 through September 11, 2000), insiders (including the CEO, CFO, Chairman of the Board, VPs, and Directors) sold shares to the public at prices ranging from \$65 to \$88 per share, reaping trading proceeds in excess of \$22 million. Via a conference call and press release after close of trading on September 11, 2000, managers warned analysts and investors of manufacturing problems that would seriously impact fourth quarter results. Upon the market's receipt of this negative news, PRI's stock price fell 39% in a single day, from a closing price of \$42.68 on September 11, 2000, to a closing price of \$25.87 on September 12, 2000.

⁸ This expectation is consistent with prior work indicating that managers' trading incentives influence their disclosure *quality* choices (Rogers 2005).

⁹ The class period begins on January 27, 2000, when PRI announced earnings for the first quarter. On that day, PRI reported net revenue for the first quarter of \$58.7 million (a 98% increase from the first quarter of the prior fiscal year) and net income for the quarter of \$294,000, or \$0.01 per share (an improvement from the net loss of \$7.7 million, or \$0.36 per share, in the first quarter of the prior fiscal year). At the time, PRI's CEO Mitch Tyson made a number of comments suggesting these numbers were likely to persist, including "We emerge from the downturn a stronger, more competitive company well positioned for the opportunities we see ahead . . . PRI is well positioned to offer manufacturers a broad range of integrated factory automation systems, software and services to address their total manufacturing requirements." Managers at PRI made similar statements throughout the first 3 quarters of 2000, including when announcing the results for the second and third quarter. (PR Newswire 2000)

The settlements reached in both the Scholastic Corporation and PRI Automation, Inc. cases suggest that the managers profited from their trading and disclosure decisions. In the case of Scholastic, the parties reached a cash settlement of \$7.5 million. In September of 2002, Scholastic announced it would record a non-recurring pre-tax charge of \$1.9 million in the third quarter of 2002, which represents the portion of the \$7.5 million that was not covered by insurance and is less than the approximately \$2 million of alleged trading proceeds enjoyed by insiders during the class period. PRI did not have insurance coverage for the claims. The parties, however, reached a cash settlement of \$3.25 million, which is far less than the approximately \$22 million in alleged trading proceeds reaped by insiders during the early part of the class period.

While this anecdotal evidence speaks to the profitability of managers' disclosure and trading decisions, it remains unclear whether the settlement amounts would have been even smaller had the managers disclosed earlier and/or refrained from trading. In both lawsuits, shareholders used managers' trading behavior as evidence of the violation of Rule 10b-5. This suggests that not only did the managers fail to help their case by disclosing earlier, but they also apparently hurt the firms' positions in settlement discussions by engaging in trading that gives the appearance that they took advantage of their knowledge of impending negative news.

These two cases highlight a key assumption of studies examining theories of legal liability: the strength of the shareholders' case affects their success at the bargaining table. Because the strength of the plaintiffs' case largely depends on the assertion that management should have disclosed the adverse information earlier, defendants may reduce the strength of the plaintiffs' case by voluntarily supplying the adverse information. At the same time, defendants can strengthen the plaintiffs' bargaining position by trading during the class period, which might signal managers' awareness of information asymmetries.¹⁰

¹⁰ Though the parties negotiate a settlement, a considerable body of research argues that settlements do not always reflect the merits of the case (Alexander 1991, Grundfest 1994, 1995, Seligman 1994). Grundfest (1994) suggests that defendants frequently "complain of a wave of litigation that unfairly targets 'deep pockets'" and "confuses legitimate volatility with corporate fraud." Because defendants feel coerced to settle rather than face the potentially large legal costs involved with fighting even the most frivolous class action shareholder lawsuit, Alexander (1991) argues that "settlements are not voluntary in that trial is not regarded by the parties as a practically available alternative for resolving the dispute, and they are not accurate in that the strength of the case on the merits has little or nothing to do with determining the amount of the settlement" (Alexander 1991, 3). In support of her theory, Alexander provides

In summary, though some prior work suggests that managers' fear of costly 10b-5 lawsuits causes them to warn of impending negative news, evidence exists to indicate that, in some cases, management may delay disclosure – even though this could increase the litigation costs incurred by the firm. Furthermore, the degree to which trading behavior affects the litigation consequences for managers remains unclear.

Evidence of abnormal trade by insiders

A large body of research examines when and how managers trade to exploit information asymmetries. Early studies indicate that insiders sell (delay purchases) before significant price decreases and buy (delay sales) before significant price increases (Jaffe 1974, Seyhun 1986). Given those findings, recent work focuses on abnormal trade by insiders prior to large, negative corporate news events. Initial studies examining insiders' behavior in the context of bankruptcy filings, fraud revelations, and lawsuit filings fail to find evidence of abnormal trade (Loderer and Sheehan 1989, Gosnell et al. 1992, Dechow et al. 1996, Jones and Weingram 1996, 2005, Niehaus and Roth 1999). Recent papers, however, employ alternative research designs and find that managers do appear to exploit information asymmetries in these settings (Seyhun and Bradley 1997, Summers and Sweeney 1998, and Beneish 1999, Johnson et al. 2007).

Seyhun and Bradley (1997) supply evidence that insiders sell their holdings in order to limit their losses prior to bankruptcy filings. Summers and Sweeney (1998) find evidence of abnormal selling activity by insiders of 51 fraud firms as compared to the selling behavior of insiders of industry- and sizematched control firms. Similarly, Beneish (1999) finds that managers of 64 firms that faced SEC enforcement actions were more likely to sell shares in periods of overstated earnings than were managers of industry- and age-matched control firms.

In contrast to the above results, many studies do not find evidence of abnormal trade prior to large corporate news events, particularly those information events that trigger the filing of

evidence that most securities lawsuits settle before trial and the settlement amounts vary little with the perceived strength of the case; rather, she finds that settlement amounts routinely reflect a "going rate" consistent with the "familiar axiom that a bad settlement is almost always better than a good trial" (Alexander 1991, 1). Similarly, Grundfest (1994) cites the fact that "one-eighth of all firms listed on the NYSE have been sued in the past five years, and virtually all have paid some amount in settlement of plaintiffs' claims" as evidence of the "hydraulic" pressure to settle (Grundfest 1994, 973). Indeed, since the passage of the PSLRA, no case has gone to trial; all have either been settled or dismissed (Painter et al. 2002).

shareholder lawsuits (Jones and Weingram 1996, 2005, Dechow et al. 1996, Bohn and Choi 1996, Niehaus and Roth 1999).¹¹ For example, the findings of Jones and Weingram (1996, 2005) suggest that insider trade does not influence litigation risk. Likewise, Niehaus and Roth (1999) find that managers are net sellers during lawsuit class periods but that the level of these sales is not significantly different from their prior trading activity. Finally, Bohn and Choi (1996) find no evidence of abnormal selling in defendant firms that were targeted by suits alleging fraud during initial public offerings.

The absence of evidence of abnormal trade in these studies may stem from limitations associated with the measurement of abnormal trade. Studies typically measure the amount of stock sold (in shares) less stock purchased (in shares) by insiders during a period of increased information asymmetry and compare it to a similarly constructed measure of trading behavior for a prior period (or to the trading behavior or a control firm's insiders).¹² Prior literature interprets larger net sales to indicate that managers exploited "bad news" information asymmetries. Seyhun and Bradley (1997) indicate that early work investigating insider trading prior to bankruptcy filings (Loderer and Sheehan 1989, Gosnell et al. 1992) biased against findings by selecting size- and industry-matched control firms.¹³ At the same time, studies that use the managers as their own controls potentially

¹¹ A sample of firms facing litigation under Rule 10b-5 differs from a sample of firms facing allegations of fraud in important respects. First, fraud firms represent a small subsample within the full population of litigation firms. Second, the nature of the allegations with respect to managers' behavior varies across groups. While fraud cases focus on managers' reporting behavior, claims under Rule 10b-5 typically focus on the disclosure behavior of managers. Managers of fraud firms allegedly create information asymmetries; managers of lawsuit firms allegedly perpetuate and/or fail to correct information asymmetries. Third, expectations regarding the timing of information revelations differ. Managers of fraud firms cannot necessarily control (or even predict) whether and/or when their fraudulent reporting behavior will be revealed (by auditors, the SEC, others within the firm, etc.). In these cases, managers' own poor reporting behavior is the negative news. Alternatively, managers of 10b-5 litigation firms make their trading and disclosure decisions with the expectation of the market's eventual receipt of negative news. In these cases, managers can predict (and may even control) when the negative news will be revealed. Thus, the managers of the litigation firms trade with the expectation of the market's receipt of negative news, while the managers of the fraud firms do not necessarily trade with the expectation of SEC action. Consequently, whether the results found in studies examining trading behavior prior to fraud revelations generalize to the population of litigation firms remains an open question. ¹² If not focused on net sales, studies frequently examine a measure of the number of total trades and/or the number of shares sold. For example, Niehaus and Roth (1999) examine both the number of sale trades by insiders divided by the total number of trades and the number of shares sold by insiders relative to the total number of shares traded by insiders during the class period. They then compare these trading metrics calculated during the class period to those same metrics during the two years prior.

¹³ Emphasizing the importance of selecting an appropriate control sample against which to compare trading behavior, Seyhun and Bradley (1997, 193) argue that "the important research question is whether the insiders of firms that file bankruptcy sell their shares before filing. It is not whether the insiders of filing firms sell more than insiders of firms that are in financial distress but do not file a formal bankruptcy petition."

bias findings by comparing trading behavior measured over unequal trading windows (Niehaus and Roth 1999).¹⁴

Although the selection of appropriate control samples and comparable trading windows may influence prior findings, the choice of trading metric may also affect results. By focusing on net shares sold by insiders (as opposed to trading proceeds), measures used in prior studies may fail to adequately reflect the degree to which insiders trade profitably during the period. Further, some studies limit analysis to open market transactions, excluding, among others, derivative security transactions, secondary equity offerings, and transactions associated with acquisitions and dispositions.¹⁵ Consequently, these trading metrics (calculated in shares or in dollars) may fail to fully account for situations in which managers use proceeds from insider sales to exercise options to repurchase the firms' shares at below-market prices or situations in which managers immediately sell shares acquired via option exercises.¹⁶

In summary, though many prior studies investigate the degree to which managers trade to exploit information asymmetries prior to large, corporate news events, evidence of opportunistic behavior in the context of shareholder litigation remains limited. In addition, many studies examining the link between managers' disclosure behavior and litigation consequences frequently do not consider trading behavior (e.g., Skinner 1997, Field et al. 2005).

¹⁴ For example, Niehaus and Roth (1999) compare trading metrics calculated over the class period to the same metrics calculated over the two years preceding the class period. Because the typical length of a class period is much shorter than two years, this biases the abnormal metric downward.

¹⁵ Niehaus and Roth (1999) limit their analysis to open market transactions, arguing that "[o]ther transactions, such as the exercise of options, are more likely to be related to the characteristics of a firm's compensation package than to inside information," (Niehaus and Roth 1999, page 61). Although the receipt of stock options likely results from compensation packages, I argue that the exercise of options likely plays an important role in the profitability of an insider's overall trading strategy.

¹⁶ Beneish (1999, 436) argues that Dechow et al. (1996) biased against finding abnormal trade by employing measures that failed to take into account insider purchases, as insiders of control firms more likely purchase shares during the period. Because managers rarely (if ever) purchase their firms' shares at the market price (opting to exercise options to buy instead), studies that limit analysis to open market transactions when calculating a measure of sales less purchases (rather than sales alone) actually suffer from this same bias. Yet, studies that do incorporate derivative security transactions in the analysis often do so in a way that biases against findings, as a measure of shares traded that nets out purchases actually biases the trading metric downward with the inclusion of option exercises. In these studies, the exercise of in-the-money options to purchase the firms' shares (i.e., wealth-increasing transactions) actually reduces the abnormal trading metric. For example, using a measure of net shares traded allows the exercise of options to purchase at \$100 per share to negate the open-market sale of 100 shares at \$100 per share, resulting in a downwardly biased trading metric.

III. HYPOTHESES AND RESEARCH DESIGN

Opportunistic trading behavior and disclosure timeliness

Taken collectively, the stream of literature examining disclosure behavior and legal liability suggests that firms benefit from the timely disclosure of negative news. Yet, in spite of these benefits, voluntary disclosures of negative news by managers remain relatively infrequent (Skinner 1994, Kasznik and Lev 1995). When presented with valuable information that will impact the future price of their firm's securities, managers may be tempted to delay disclosure and trade to exploit the information. This leads to the following hypothesis regarding managers' disclosure and trading behavior:

<u>Hypothesis 1:</u> Abnormal trade by managers facing negative earnings news is associated with less timely disclosure of the news

To test my first hypothesis, I calculate measures of managers' disclosure and trading behavior prior to large, negative news disclosures. Following Skinner (1997), I calculate a measure of disclosure timeliness (*TIMELINESS*) for each observation by counting the number of days between the negative news disclosure and the end of the fiscal period. Under this approach, earnings forecasts result in positive measures of timeliness, while both earnings preannouncements and actual earnings announcements result in negative measures of timeliness.

I evaluate the trading behavior of managers by constructing trading metrics based on both open market and derivative transactions of insiders during the year leading up to the negative news disclosure. For the subset of firms facing lawsuits, I examine the trading during the shorter period of the year leading up to the disclosure or the class period based on the begin (*CBdate*) and end (*CEdate*) dates alleged in the first identified complaint. That is, I focus on managers' trading behavior during the period of time that they allegedly enjoyed increased information asymmetry. The first measure, *TP*, represents the total dollar amount of (net) trading proceeds reaped by insiders during the period prior to the negative news disclosure.

Trading Proceeds (TP) = $\sum_{i=1}^{N} \sum_{j=1}^{K} (\text{Sales}_{i,j} * \text{TRPrice}_{i,j} - \text{Purchases}_{i,j} * \text{TRPrice}_{i,j}),$ (1)

where:

Ν	= the number of insiders;
Κ	= the number of transactions by insider <i>i</i> during the period;
Sales	= the number of shares sold by insider i in transaction j ;
Purchases	= the number of shares purchased by insider i in transaction j ; and
TRPrice	= the price at which insider i transacts for transaction j .

To facilitate comparison to prior studies, I also calculate two additional trading metrics: a measure of net shares traded (*NST*) during the period (Summers and Sweeney 1998, Niehaus and Roth 1999, Johnson et al. 2007) and a measure of net shares traded deflated by shares outstanding (*NST_SHS*) (Beneish and Vargus 2002).

Net Shares Traded (NST) =
$$\sum_{i=1}^{N} \sum_{j=1}^{K} (\text{Sales}_{i,j} - \text{Purchases}_{i,j})$$
 (2)

and

Net Shares Traded (NST_SHS) =
$$\sum_{i=1}^{N} \sum_{j=1}^{K} (Sales_{i,j}/SHS - Purchases_{i,j}/SHS),$$
 (3)

where:

SHS = the shares outstanding on the date of transaction j.

I calculate *abnormal* trading metrics by subtracting the equivalent trading measures calculated over a trading window of equal length leading up to the beginning of the event period. I denote abnormal trading metrics as *ATP*, *ANST*, and *ANST_SHS*. Following prior work, I focus on the trading behavior of directors, officers, presidents, and vice presidents (Beneish 1999, Beneish and Vargus 2002, Johnson et al. 2007). In analyses that focus on a subset of lawsuit firms that face trading allegations, however, I focus on the trading behavior of only those insiders named in the first identified complaint.

After calculating measures of managers' disclosure and trading behavior, I investigate the relation between timeliness and abnormal trade by estimating the following regression model:

$$TIMELINESS_{i} = \frac{\alpha_{o} + \alpha_{1}TRADING_{i} + \alpha_{2}VOLATILITY_{i} + \alpha_{3}SHARE_TURNOVER_{i}}{+\alpha_{4}SIZE_{i} + \alpha_{5}HILIT_{i} + \alpha_{6}FALL_{i} + \varepsilon_{i}}.$$
(4)

In Equation (4), my first hypothesis predicts a negative coefficient for *TRADING* (i.e., $\alpha_1 < 0$), as measured by the trading metrics I describe in Equations (1) through (3). I include additional variables to control for factors thought to influence the timeliness of disclosure. Lang and Lundholm (1993) suggest that variability in performance may capture information to which managers do not have prior access. Consistent with this argument, Field et al. (2005) find a negative relation between stock volatility and the probability of disclosure. Because higher volatility may also lead to less timely earnings warnings, I expect a negative relation between *TIMELINESS* and *VOLATILITY*, a measure of the standard deviation of monthly returns during the six months prior to the negative news disclosure (i.e., $\alpha_2 < 0$). On the other hand, studies examining litigation risk suggest that larger firm size and increased share turnover provide managers with incentives for more timely disclosure of negative news (Jones and Weingram 1996, Johnson et al. 2000). In addition, prior work examining voluntary disclosure finds a positive relation between firm size and the frequency of disclosure (Lang and Lundholm 1993, Kasznik and Lev 1995). Accordingly, I include a measure of the average ratio of trading volume to shares outstanding during the period, *SHARE _TURNOVER*, and a measure of market capitalization, *SIZE*, with the expectation of a positive coefficient for each (i.e., $\alpha_3 > 0$, $\alpha_4 > 0$).

Similarly, I include an indicator variable equal to one if the firm operates in a high-litigation industry (*HILIT*) and a measure of the severity of the negative news (*FALL*, the size-adjusted return during the 3-day window surrounding the negative news disclosure).¹⁷ I expect positive coefficients for *HILIT* and *FALL* (i.e., $\alpha_5 > 0$, $\alpha_6 > 0$), as they both indicate increased incentives for early disclosure. Yet, Lang and Lundholm (1993, 250) indicate that, taken collectively, theoretical and empirical evidence examining the link between disclosure and firm performance suggests that disclosure could be increasing, constant, or even decreasing in firm performance and that it may even vary based on the type of disclosure. This suggests conflicting predictions for α_6 . At the same time, relying on Skinner's theory, Lang and Lundholm (1993) suggest that legal incentives may play a role in disclosure if managers know that the information will become publicly available in the short term (as is the case with impending earnings news).

¹⁷ Soffer et al. (2000) and Francis et al. (1994) define "high-litigation" industries as: biotechnology (SIC codes 2833-2836), computers (3570-3577 and 7370-7374), electronics (3600-3674), and retailing (5200-5961). Kasznik and Lev (1995) define "high-litigation" using industries with SIC codes 2833-2836, 8731-8734, 7371-7379, 3570-3577, and 3600-3674. I code a high-litigation variable (*HILIT*) to indicate firms in any of the above SIC codes.

Consequences for the firm

If managers trade profitably during the class period, plaintiffs' attorneys may use their trading behavior as evidence of delayed disclosure (Sale 2002). The findings of Skinner (1997) and Field et al. (2005) suggest that managers benefit from "preemptive" warnings perhaps because such early disclosures both reduce the plaintiffs' ability to claim that managers failed to release material information promptly and limit the size of the plaintiff class by reducing the period of nondisclosure. Because the strength of the plaintiffs' case largely depends on the assertion that management should have disclosed the adverse information earlier, defendants (i.e., managers) may strengthen the plaintiffs' (i.e., shareholders') bargaining position by trading profitably during the class period. Thus, I predict that abnormal trade by managers during the class period is associated with increased litigation consequences. This leads to the following hypothesis regarding the relation between managers' trading behavior and litigation consequences for the firm:

<u>Hypothesis 2:</u> Abnormal trade by managers prior to the market's receipt of the negative news is associated with increased incidence of litigation and higher lawsuit settlement amounts

The first test of my second hypothesis examines the relation between abnormal trade by managers and the likelihood of litigation. To accomplish this, I estimate the following logistic regression model:

$$LITIGATION_{i} = \frac{\beta_{o} + \beta_{1}TRADING_{i} + \beta_{2}TIMELINESS_{i} + \beta_{3}FALL_{i} + \beta_{4}SIZE_{i}}{+\beta_{5}SHARE _TURNOVER_{i} + \beta_{6}VOLATILITY_{i} + \varepsilon_{i}}.$$
(5)

In the above equation, the incidence of a shareholder lawsuit (i.e., an indicator variable set equal to one if the firm faces a lawsuit in relation to their negative news disclosure) serves as the dependent variable. My second hypothesis predicts a positive coefficient for *TRADING* (i.e., $\beta_1 > 0$), as measured by the trading metrics I describe in Equations (1) through (3). Relying on prior work examining disclosure behavior and legal liability (e.g., Skinner 1994, 1997 Kasznik and Lev 1995, Baginski et al. 2002, Field et al. 2005), I expect a negative coefficient for *TIMELINESS* (i.e., $\beta_2 < 0$). I include the remaining variables to control for other factors that prior work suggests influence lawsuit filings. Because I expect the probability of litigation to increase with the severity of the news

disclosed, I include *FALL* and predict a positive coefficient (i.e., $\beta_3 > 0$). Consistent with the plaintiffs' need to recover the fixed costs of litigation and also the "deep pockets" argument advanced in the litigation, I include *SIZE* and predict a positive relation (i.e., $\beta_4 > 0$). Prior work suggests that increased share turnover positively affects firms' litigation risk, as it indicates the potential for a larger class of plaintiffs (Jones and Weingram 1996, Johnson et al. 2007). To control for this, I include *SHARE* _*TURNOVER* and predict a positive coefficient (i.e., $\beta_5 > 0$). Prior research also argues that attorneys confuse legitimate volatility with managers' wrongdoing (Grundfest 1994, Jones and Weingram 1996, 2005). At the same time, if attorneys acknowledge increased volatility as a signal of factors beyond managers' control, I expect to observe a negative relation. Consequently, I include *VOLATILITY* and make no prediction for its coefficient.

The second test of the relation between trading and litigation consequences focuses on the settlement amounts paid by firms that face shareholder litigation as a result of managers' alleged disclosure behavior. To accomplish this, I estimate the following regression model:

$$SETTLEMENT_{i} * (1 - INSURANCE_{i}) = \frac{\beta_{o} + \beta_{1}TRADING_{i} + \beta_{2}TIMELINESS_{i}}{+\beta_{3}DAMAGES_{i} + \beta_{4}SIZE_{i} + \beta_{5}RESTATEMENT_{i} + \varepsilon_{i}}.$$
 (6)

The total dollar amount (measured in millions) paid by the firm to settle the lawsuit serves as the dependent variable in this analysis. Recent studies argue that insurance coverage plays an important role in the negotiation of settlements (Peng and Roell 2004, Choi 2005). To control for insurance coverage in this regression, I adjust the dependent variable to take into account the percentage of the settlement paid by the firm's insurance carrier (*INSURANCE*). Again, my second hypothesis predicts a positive coefficient for *TRADING* (i.e., $\beta_1 > 0$), as measured by the trading metrics I describe in Equations (1) through (3). Following Skinner (1997), I include both a measure of disclosure timeliness and a measure of estimated shareholder damages. Relying on prior work examining disclosure behavior and legal liability (e.g., Skinner 1994, 1997 Kasznik and Lev 1995, Baginski et al. 2002, Field et al. 2005), I expect a negative coefficient for *TIMELINESS* (i.e., $\beta_2 < 0$). Because the inclusion of *DAMAGES* (measured as the decline of market capitalization from the trading day when it reached its maximum during the class period to the trading day immediately following the end of the class period) controls for the severity of the news disclosed, I expect a positive coefficient (i.e., $\beta_3 > 0$).

I include the remaining variables to control for other factors thought to influence lawsuit settlement amounts. Relying on the "deep pockets" argument advanced in the legal literature, I predict a positive coefficient for *SIZE*, as measured by the firm's market capitalization (*MVE*). I expect a positive coefficient on *RESTATEMENT*, an indicator variable set equal to one if the firm restates class period earnings and/or announces a restatement during the class period (i.e., $\beta_5 > 0$).

Consequences for managers

Prior research examining management turnover as a consequence of corporate fraud, earnings restatements, and shareholder litigation offers mixed results. While Beneish (1999) and Agrawal et al. (1999) find no evidence of increased turnover following fraud incidences, Desai et al. (2006) do find evidence of increased turnover following restatements.¹⁸ In addition, both Strahan (1998) and Niehaus and Roth (1999) supply evidence consistent with a dramatic increase in turnover following lawsuit filings.

Examining the role executive compensation plays in inducing behavior that may trigger the filing of a shareholder lawsuit, Peng and Roell (2004, 5) highlight the difficulty of punishing managers criminally when most cases settle without admissions of guilt while the company itself and/or its insurance company pays the settlement. Peng and Roell (2004) do note, however, the career consequences (e.g., turnover) associated with lawsuit filings. If managers' trading behavior results in increased litigation consequences for the firm, employment consequences for managers of lawsuit firms may increase as well. This leads to the following hypothesis regarding the relation between trading behavior and employment consequences for managers of lawsuit firms:

<u>Hypothesis 3:</u> Abnormal trade is associated with higher turnover for managers of lawsuit firms.

I examine my third hypothesis by analyzing management turnover within lawsuit firms during the period following the disclosure of the negative news through the settlement of the lawsuit.

¹⁸ Srinivasan (2005) also finds evidence of increased turnover for outside directors following the incidence of an accounting restatement.

Prior research finds that CEOs of lawsuit firms suffer increased turnover (Niehaus and Roth 1999). My third hypothesis looks to see if the lawsuit managers' trading behavior plays a role in this turnover. Specifically, my third hypothesis predicts that *within* the lawsuit firms, turnover will be higher for CEOs confronted with evidence of abnormal trading prior to the lawsuit filing. Consequently, I test this hypothesis by partitioning the lawsuit sample based on insider trading allegations and comparing the rates of CEO turnover. In addition, I estimate the following regression model in order to control for additional factors thought to influence turnover:

$$TURNOVER_{i} = \frac{\delta_{o} + \delta_{1}TRADING_{i} + \delta_{2}CEO_AGE_{i} + \delta_{3}FALL_{i}}{+\delta_{4}SETTLEMENT_{i} + \delta_{5}SIZE_{i} + \delta_{6}RESTATEMENT_{i} + \delta_{7}RET_{i} + \varepsilon_{i}}.$$
(7)

In this regression, I code two variables to indicate CEO turnover. The first, *CEO_TURN*, I set equal to one if the CEO of the firm at the end of the class period no longer holds that position a year after the firm settles the lawsuit. The second, *CEO_LEAVE*, I set equal to one if the CEO of the firm at the end of the class period is no longer with the firm a year after the firm settles the lawsuit. My third hypothesis predicts a positive coefficient for *TRADING* (i.e., $\delta_i > 0$), as measured by the trading metrics I describe in Equations (1) through (4). Following Niehaus and Roth (1999), I include the following variables as controls. I expect positive coefficients for *CEO_AGE* (measured as the age of the CEO at the date of the lawsuit filing), *SETTLEMENT*, *SIZE* and *FALL*. The findings of Srinivasan (2005) and Desai et al. (2006) suggest the need to control for the presence of an accounting restatement when examining the relation between managers' trading behavior and employment consequences. Consequently, I include *RESTATEMENT* in the above regression and predict a positive relation. I also include a measure of firm performance, *RET* (measured as the market-adjusted, buy and hold return in the two years following the lawsuit filing), following the lawsuit filing and expect a negative coefficient (i.e., $\delta_i < 0$).

Finally, because Srinivasan (2005) finds limited evidence of SEC action in his analysis, I investigate whether managers who engage in abnormal trade face increased monetary penalties and/or SEC action associated with the securities lawsuit. Specifically, I perform a full-text search (based on both company name and plaintiffs named on the first identified complaint) of both LexisNexis and the SEC litigation database (<u>http://sec.gov</u>) to identify enforcement actions and monetary penalties that relate to defendant firms and their managers.

IV. SAMPLE SELECTION AND DATA COLLECTION

To investigate my research questions, I focus on the disclosure and trading behavior of managers of firms facing negative earnings news. Because the theory examined by Skinner (1994) and others focuses on negative earnings news that is both large and unexpected, I assemble a sample of firms that suffered sudden, extreme drops in share price over a short period of time. As described in Panel A of Table 1, I begin by obtaining a list of CRSP firms suffering greater than a 35 percent drop in price in a 3-day window during 1996 through 2002. Of these 854 firms, 173 are not included in Thomson Financial's insider trading database, while sufficient time-series data for the calculation of abnormal trading metrics are not available for 101 IPO firms and 97 other firms. After removing 66 firms with non-earnings-disclosure-related negative news triggering the drop in price, 19 firms suffering price drops surrounding the events of September 11, 2001, and 19 firms with a share price of less than 5 dollars, 379 firms remain in the final negative earnings news sample ("negative news sample").¹⁹

In order to test my second and third hypotheses regarding the litigation and employment consequences for firms and their managers, I assemble a sample of firms that face a shareholder lawsuit under Rule 10b-5 as a result of the managers' disclosure behavior surrounding the market's receipt of negative earnings news. As described in Panel B of Table 1, I begin by obtaining a sample of 513 firms that faced shareholder lawsuits during the period of 1996 through 2002 from litigation databases maintained by PricewaterhouseCoopers, LLP ("PwC") and Stanford University (http://securities.stanford.edu/).

Following Skinner (1994, 1997), I isolate earnings-based 10b-5 lawsuits by excluding lawsuits that allege fraud schemes or that relate to IPO allocations, analysts or mutual funds. Consequently, the final "lawsuit sample" consists of 207 firms. Of those 207 lawsuits, 116 involve allegations of

¹⁹ The 66 observations removed for non-earnings-disclosure-related news primarily relate to announcements of SEC investigations, called off merger plans, analyst downgrades, plant fires, weather-related catastrophes, accounting probes, etc.

insider trading as evidence of managers' incentive for delayed disclosure. For these 116 trading allegation firms, I focus my analysis on the insiders specifically named in the first identified complaint. Accordingly, I calculate trading metrics for 463 individuals facing trading allegations. Of the 113 negative news firms facing shareholder lawsuits, 62 appear in the final lawsuit sample with sufficient data availability and 32 appear in the sample of trading allegation firms. Figure 2 depicts the effect of sample selection criteria on sample size and describes the ways in which the samples overlap.

For the lawsuits with available settlement information, I obtain relevant lawsuit information

and confirm its accuracy by hand-collecting data from the following sources:

- **PwC Securities Litigation Database:** Among other information, the PwC database supplies the company name, class period dates, filing date, settlement amount, and settlement form (i.e., cash only, stock only, cash and stock).
- **Stanford Securities Litigation Database:** I confirm class period and filing dates by checking the PwC dates to Stanford's database.
- **First Identified Complaint:** I examine the first identified complaint for each lawsuit in order to categorize the nature of the lawsuit (e.g., fraud, IPO-related, earnings-based), as well as identify whether plaintiffs' attorneys allege insider trading or the issuance of secondary equity offering as evidence of managers' wrongdoing. In addition to identifying the firms that face allegations of insider trading in connection with the lawsuit, I assemble a list of individual executives identified as traders in the complaint.
- **SEC Filings:** I obtain settlement information, including the amount covered by the company's director and officer liability insurance (net of any deductibles) by reading footnotes of the firms' quarterly and annual SEC filings following the filing of the lawsuit through the year following the date of settlement (<u>http://sec.gov</u>).
- Lexis-Nexis, Dow Jones News Service: Performing a full-text search of news articles via Lexis-Nexis and Dow Jones News Service (using the company name and keywords of "lawsuit" and "class action"), I confirm the nature of the lawsuit allegations, class period dates, settlement amount, insurance coverage, and settlement form.

In addition to lawsuit information, I collect data for both the negative news sample (n=379)

and the lawsuit sample (n=207) from the following sources:

- **Disclosure Data:** I hand-collect disclosure dates and quarterly earnings report dates by performing full-text searches of both Lexis-Nexis and Dow Jones News Services.
- **Insider Trading Data:** Thomson Financial supplies the insider filing data I use to calculate the abnormal trading metrics.
- **CEO Consequences Data:** I obtain executive compensation data, including management turnover, from the Compustat Executive Compensation ("Execucomp") Database and from

the firms' SEC filings. I hand-collect missing data items and confirm Execucomp data by examining the firms' proxy statements leading up to the end of the class period and through a year after the date of settlement (<u>http://sec.gov</u>). I perform a full-text search (based on company name and/or plaintiffs named on the first identified complaint) of the SEC litigation database to identify enforcement actions that relate to defendant firms (<u>http://sec.gov</u>).

In addition to the variables of interest, analyses include controls for insurance coverage, restatements, firm size, auditor quality, and estimated shareholder damages. As previously noted, I gather insurance coverage data from the footnotes of firms' quarterly and annual SEC filings in the years following the settlement of the lawsuit. In addition to searching SEC filings, I perform a full-text search of news articles via Dow Jones News Service (using the company name and keywords of "restate" and "restatement" in the year of the lawsuit filing) to identify restatements. I obtain information required for damage calculations, firm size and classification of industry membership from CRSP. Appendix A supplies a list of the variables used in my analyses, their associated sources and the ways in which I confirm their accuracy.

V. ANALYSES AND RESULTS

Descriptive statistics

Panel A of Table 2 presents descriptive statistics for the 379 firms in the negative news sample, while Panel B focuses on the 113 firms within the negative news sample that faced shareholder lawsuits (triggered by the negative news disclosures). The full sample suffered a mean, size-adjusted return of -43.9% during the 3-day window surrounding the negative news disclosure (recall, sample selection criteria for the negative news sample required firms to suffer a 35 percent drop in price or greater). Not surprisingly, the litigation subsample (n=113) differed from the non-litigation firms (n=266) in a number of respects. Comparing the 113 sued firms to the 266 non-sued firms, the lawsuit firms suffer greater drops in price, are larger in terms of market capitalization and volume traded, and enjoyed increased share turnover (untabulated, two-sided tests of mean and median differences show significant differences across groups at the 0.05 level). Consistent with Francis et al. (1994) and Field et al. (2005), the lawsuit firms do not exhibit less timely disclosure of the negative news.

Panel C of Table 2 provides descriptive statistics for the lawsuit sample with available settlement, insurance, price, and trading data for tests of my second and third hypotheses; Panel D focuses on the 116 lawsuit observations that involve trading allegations. Consistent with my second hypothesis, both the mean and median settlement paid by the 116 firms facing trading allegations (\$19.0 million and \$9.0 million, respectively) exceed those paid by the 91 non-allegation firms (\$17.6 million and \$5.1 million, respectively), with two-sided tests of mean and median differences showing significant differences across groups at the 0.05 level. At the same time, the median proportion of the settlement covered by insurance for the trading allegations firms was 85.8%, compared to 100% for the non-allegation group (one-sided test of median differences, $Pr > \chi^2 = 0.03$), again consistent with increased consequences for firms with trading allegations. In addition, the firms facing trading allegations differ in terms of trading volume, enjoy greater share turnover, are more likely audited by a "Big 4/6" firm, and are less likely to experience a restatement in the year of the lawsuit (untabulated, two-sided tests of mean and median differences across groups at the 0.05 level).

Finally, prior work examining litigation limits analysis to firms in high-litigation industries (Johnson et al. 2000, 2004). Looking at both Panels B and D of Table 2, approximately half of the litigation firms from the negative news sample and half of the firms in the lawsuit sample that face trading allegations operate in other industries. This suggests it is useful to examine the full population of firms, rather than limiting analysis to high-litigation firms.

Abnormal trade and disclosure timeliness

Panels A through D of Table 3 report the trading and disclosure behavior of managers in the negative news sample and then partitions of the full sample based on the timeliness of their disclosure, the incidence of lawsuit filings related to the disclosure event and the inclusion of trading allegations within the lawsuit filings. Panel A provides overall descriptive statistics for the negative news sample. To partition the sample by timeliness, I set an indicator variable (*TIMELY*) equal to one if the firm's *TIMELINESS* score exceeds the median timeliness score for the sample. *UNTIMELY* refers to observations where *TIMELY* equals zero. Panel B focuses on the difference in trading

behavior between the timely managers and the untimely managers, while Panel C focuses on the trading behavior of the lawsuit managers. To partition the sample by trading allegations, I set an indicator variable (*ITALLEGE*) equal to one if the first identified complaint filed by shareholders used allegations of insider trading to support their case. To partition the sample by litigation, in Panel D I set an indicator variable (*LIT*) equal to one if the negative news disclosure triggered the filing of a shareholder lawsuit.

Consistent with Jaffe (1974) and Seyhun (1986), I find evidence of abnormal trading prior to the disclosure of negative news that causes a large drop in price. As shown in Panel A, insiders enjoyed mean (median) abnormal trading proceeds of \$11.5 million (\$1.8 million). The alternative metrics based on shares traded provide similar results. Insiders sold mean (median) abnormal net shares of 0.224 (0.047) million prior to disclosing the negative earnings news. Given those findings, I next focus on comparisons across subgroups (based on disclosure timeliness and incidence of lawsuit filings).

Hypothesis 1 predicts that managers who exhibit less timely disclosure enjoy more profitable trading. Consistent with this theory, as shown in Panel B, tests of mean differences for all abnormal trading metrics indicate that the untimely group of managers trades more profitably than the timely group of managers. The results presented in Panel C suggest that plaintiffs' attorneys get it right, as managers facing trading allegations engage in significantly greater mean and median *abnormal* trade based on all trading metrics. In fact, the trading metrics for the non-trading-allegations subsample (n=91) in Panel C do not differ from zero.

Given the findings of Panels B and C, Panel D of Table 3 partitions the firms based on both the timeliness of disclosure and incidence of litigation. If trading behavior influences lawsuit filings and if untimely managers engage in more abnormal trade, the "Litigation/Untimely" group should exhibit significantly more abnormal trade than the other three groups. Consistent with this theory, the "Litigation/Untimely" managers enjoyed greater mean and median abnormal trade based on comparisons to "Litigation/Timely" managers, " No Litigation/Timely" managers, and "No Litigation/Untimely" managers (shown in tests of differences numbers 1, 4, and 5 in Panel D).

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Furthermore, significant differences in trading behavior when comparing the "No Litigation/Untimely" managers to the "Litigation/Untimely" managers (shown in test of difference number 5 in Panel D) suggests that trading behavior does play a role in lawsuit filings.

As discussed in Section 2, Panels A and B of Figure 1 depict situations in which managers allegedly delayed the disclosure of negative earnings news in order to profit via insider trades. Figure 3 illustrates the timing of managers' trades in relation to the drop in stock price for the 463 insiders of the 116 firms facing trading allegations. I partition the sample based on managers' disclosure behavior. Panel A focuses on the trading behavior of the insiders of the firms with *TIMELINESS* measures that fall below the median for the full sample (i.e., the "*UNTIMELY*" disclosers), while Panel B focuses on the trading behavior of the insiders of the firms with *TIMELINESS* measures that exceed the median for the full sample (i.e., the "*TIMELY*" disclosers). I plot cumulative long-window, equal-weighted portfolio values from 24 months before the negative news disclosure to 2 months after (assuming an initial investment of \$1 at the beginning of the 26month period) as well as the average monthly shares sold (in thousands) by insiders.

Consistent with the evidence presented in Table 3, a comparison of the trading behavior exhibited in Panel A of Figure 3 to the trading behavior exhibited in Panel B of Figure 4 suggests that the UNTIMELY disclosers sell their shares before the market receives the negative news while the TIMELY disclosers sell their shares as the market reacts to the negative news. Figure 4 replicates the analysis supplied in Figure 3 but focuses on the timing of managers' option exercises. Again, the UNTIMELY disclosers appear to trade in a way that suggests knowledge of the impending negative news, while the TIMELY disclosers do not. This evidence contradicts the argument that the UNTIMELY disclosers were themselves surprised by the negative earnings news.

Table 4 supplies the Pearson and Spearman correlations for the negative news sample (Panel A) as well as the litigation subsample (Panel B). Consistent with the results presented in Panels A and B of Table 3, the indicator variable for litigation, *LIT*, exhibits significantly positive correlation to drops in price and firm size (as measured by *MVE* and *VOLUME*). More important, consistent with the theory that managers delay disclosure of negative news in order to profit personally, *ATP* is

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negatively correlated with *TIMELINESS* (Pearson correlation coefficient = -0.125). However, the remaining abnormal trading metrics do not exhibit significant correlations with *TIMELINESS*. Panel C of Table 4 provides the correlations for the litigation sample. As expected, *SETTLE* positively correlates with firm size (i.e., *MVE* and *VOLUME*), *RESTATE*, and shareholder damages (i.e., *DDLOSS*). And, consistent with hypothesis 2, I observe a positive correlation between *ATP* and *SETTLE*.

To further investigate my hypothesis that untimely disclosure is associated with abnormal trade by managers, I estimate a regression with controls for other factors thought to influence the timeliness of managers' disclosures. Table 5 provides the results from estimating the regression model described in Equation (4). The significantly negative coefficients for the abnormal trading variables in all three of the regression models provide support for my first hypothesis. That is, abnormal trade is positively associated with less timely disclosure of negative news. The decreased level of significance for *ANST* and *ANST_SHS* (0.086 and 0.096, respectively for two-tailed tests) compared to that associated with *ATP* (0.010) offers support for the measurement concerns discussed in Section 2. Consistent with Lang and Lundholm (1993) and Field et al. (2005), return volatility is negatively associated with disclosure timeliness. Finally, as predicted, share turnover exhibits a positive association. In results (not tabulated), I estimate Equation (4) using only the litigation subsample from the negative news sample (n=113) and the results do not change.

Although the measure of timeliness used in Skinner (1997) focuses on the date of disclosure in relation to the end of the fiscal period, the timeliness measure in Skinner (1994) focuses on the distinction between quarterly and annual earnings releases. As an additional test of robustness (not tabulated), I redefine timeliness as an indicator variable where *TIMELY* equals 1 if managers disclosed the negative news in the first, second or third quarter and *TIMELY* equals 0 if managers disclosed the negative news in the fourth quarter (i.e., in an annual release). Consistent with the previous results (presented in Tables 3 through 5), I find that the *TIMELY* disclosers (in this case measured as those managers disclosing news in the first through third quarter) engage in *less* abnormal trade. Stated differently, I find a significantly, positive relation between managers' abnormal trade and the likelihood that they disclosed the negative news in the fourth quarter.

Abnormal trade and consequences for the firm

Shifting focus to the litigation consequences for the firm, the next table investigates whether abnormal trade is related to increased likelihood of litigation and/or lawsuit settlements. Panel A of Table 6 reports the results of estimating the regression models described in Equation (5). The significantly positive coefficients for *ATP* in model 1 and *ANST* in model 2 support that managers' trading behavior plays a role in lawsuit filings, consistent with the findings of Johnson et al. (2007). Not surprisingly, the likelihood of litigation also increases with firm size and the severity of the news (as measured by *FALL*).

Panel B of Table 6 focuses on the settlement amounts net of insurance coverage paid (i.e., *SETTLEMENT* * (1 – *INSURANCE*)) by the lawsuit firms. In contrast to Skinner (1997), I find no evidence to suggest that more timely disclosure of negative news leads to lower settlements; *TIMELINESS* is insignificant in all specifications. On the other hand, significantly positive coefficients for *ATP* and *ANST* in models 1 and 2 provide support for the theory that seemingly opportunistic trading behavior results in increased settlement costs for the firm. Consistent with the correlations observed in Panel C of Table 4, all three models imply that settlements increase with firm size and in the presence of an earnings restatement. For robustness, I estimate Equation (6) using the gross settlement amount as the dependent variable (i.e., the full settlement that does not consider the portion paid by the firms' directors' and officers' liability insurance provider). In these results (not tabulated), I again detect a positive relation between abnormal trade and the gross amount of settlement and the overall explanatory power of the model increases considerably. The inclusion of insurance coverage as a control variable on the right side of the equation does not change the relevant conclusions and, again, the explanatory power of the model increases.

Taken collectively, the evidence presented thus far is consistent with the notion that some managers trade opportunistically prior to disclosing large, negative earnings news and, as a result, the firm suffers increased litigation consequences in the form increased litigation risk and larger settlement amounts. The question remains: do managers suffer repercussions associated with their trading behavior?

Abnormal trade and consequences for managers

I next examine the incidence of CEO turnover in firms where insiders engaged in abnormal trade prior to the lawsuit filing. In univariate tests (not tabulated), I find little evidence to support my third hypothesis. In particular, I find no significant difference in CEO turnover rates between firms that faced trading allegations and those that did not (43.1% and 45.1%, respectively). Focusing on CEOs that left the firm entirely (i.e., CEO_LEAVE=1), I find similar results (26.8% for firms that faced trading allegations, 30.6% for firms that did not face trading allegations). These results, however, do not consider the magnitude of the insider trading profits reaped by managers of lawsuit firms or consider the question in a multivariate setting.

Table 7 presents the results of the CEO turnover regression described in Equation (7). Using CEO_TURNOVER as the dependent variable, Panel A again provides no evidence to support my third hypothesis, as I find no relation between abnormal trade and employment consequences. Panel B tells a similar story. Focusing on CEOs that actually leave the lawsuit firm, I again find no relation between abnormal trade (as measured by all three trading metrics) and turnover. Instead, results document increased turnover for managers following earnings restatements, which is consistent with recent work by Srinivasan (2005) and Desai et al. (2006). Further, as one might expect, I find increased turnover following poor firm performance.²⁰

To further investigate the degree to which managers faced repercussions from opportunistic trading behavior prior to disclosing the negative news that triggered the filing of the lawsuit, I perform a full-text search of the SEC litigation releases and federal court actions. Furthermore, when collecting settlement and insurance coverage information from the footnotes of firms' financial statements, I noted two instances where managers paid monetary penalties in response to trading

²⁰ In additional analyses (not tabulated), I investigate whether the combination of increased consequences for the firm (in the form of higher settlement amounts) and increased trading by the manager results in increased likelihood of employment turnover. When looking at CEOs no longer with the firm as of the year after the lawsuit settles, I find a significant (at the 0.05 level), positive coefficient when I interact the settlement term with the trading variables. This is consistent with the notion that managers' trading behavior plays a role when the firm faces increased litigation consequences relative to other litigation firms.

allegations. In each of these cases, the firm issued shares of stock to the managers (at \$1 per share) in exchange for the cash paid.

As highlighted in Figure 1, the CEO is not always the insider alleged to have traded opportunistically prior to the negative news disclosure. In the case of Scholastic Corporation, allegations focused on the trading behavior of the VP of Finance and Investor Relations (who sold 80 percent of his holdings in the months leading up to the negative news disclosure).²¹ To address this issue, I search for actions against the firm and any individual named as a defendant in the first identified complaint. For the 207 earnings-based lawsuits in the settlement sample, I detect no instance of SEC involvement or monetary penalties. Rather, SEC actions that overlap securities litigation appear to focus on instances of insider trade in the context of corporate fraud.

Overall, I find limited evidence to suggest that the managers themselves suffer increased consequences as a result of their trading behavior. Consistent with recent evidence provided by Desai et al. (2006), I find increased management turnover following earnings restatements, but similar to Agrawal et al. (1999) and Beneish (1999) who examine turnover following incidences of fraud revelations, I find no evidence of turnover associated with opportunistic trading by managers of lawsuit firms. This lack of evidence may relate to the inherent error associated with the measurement of employment turnover. Because the firing of top executives could strengthen the bargaining position of the shareholders during settlement negotiations (as it may offer support for claims of a manager's wrongdoing), I observe the employment of managers *after* the lawsuit settles. The length of time between the filing and the settling of a lawsuit varies significantly by firm. In some cases, the window is less than a year. Yet, in others settlement occurs many years later. Consequently, as the window of time between filing and settlement increases, my ability to detect relations in the data may decrease.

VI. CONCLUSION

In this paper, I consider the conflicting disclosure and trading incentives faced by managers who become aware of negative earnings news. Prior work indicates that less timely disclosure of

²¹ Based on SEC filings made during the five years following the filing of the lawsuit, Scholastic's VP remained in his position through the date of the settlement.

negative earnings news increases firms' litigation consequences. Yet, managers' negative news warnings occur relatively infrequently. Drawing upon an established body of insider trading literature (Jaffe 1974, Seyhun 1986), I investigate whether managers' disclosure delays relate to their trading opportunities – a factor not considered in prior studies that examine the link between disclosure behavior and litigation consequences. In so doing, I connect the stream of literature examining insiders' exploitation of information asymmetries to the stream of literature examining managers' incentives to correct information asymmetries via negative news warnings.

Examining the disclosure and trading behavior of managers of a sample of 379 firms facing large, negative earnings news, I find that the managers who are less timely in their disclosure are more likely to engage in abnormal trade prior to releasing the news. Additional analysis indicates that this trading behavior is associated with increased litigation consequences for the firm (in the form of increased likelihood of litigation and higher lawsuit settlement amounts) and only limited repercussions for managers.

The findings of this study contribute to the stream of accounting literature that examines managers' disclosure incentives. In this paper, I observe a relation between managers' disclosure behavior and their trading decisions. At the same time, I find evidence consistent with a relation between managers' trading behavior and the firms' litigation consequences. Consequently, my findings suggest that research examining managers' disclosure behavior, particularly studies that consider managers' disclosure behavior in the litigation setting, should take into account the influence of managers' trading behavior on both their disclosure decisions and firms' litigation consequences.

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FIGURE 1 Selling shares to reduce losses before the disclosure of negative news





Panel B – PRI Automation



In the case of Scholastic, the parties reached a cash settlement of \$7.5 million. In September of 2002, Scholastic announced it would record a non-recurring pre-tax charge of \$1.9 million in the third quarter of 2002, which represents the portion of the \$7.5 million that was not covered by insurance and is less than the approximately \$2 million of trading proceeds enjoyed by insiders during the class period. PRI Automation did not have insurance coverage for the claims. The parties, however, reached a cash settlement of \$3.25 million, which is far less than the approximately \$22 million in trading proceeds reaped by insiders during the early part of the class period.





I assemble a sample of firms facing large, negative earnings news by starting with firms that suffered large price declines. I begin by obtaining a list of CRSP firms suffering greater than a 35 percent drop in price in a 3-day window during 1996-2002. As detailed in Panel A of Table 2, data restrictions result in a final "negative news" sample of 379 firms. As detailed in Panel B of Table 2, I obtain a sample of 513 firms that faced shareholder lawsuits during the period of 1996-2002 from litigation databases maintained by PricewaterhouseCoopers LLP and Stanford University. Following Skinner (1994, 1997), I limit my analysis to classic, earnings-based 10b-5 lawsuits by excluding lawsuits that allege fraud schemes or that relate to IPO allocations, analysts or mutual funds. Consequently, the final "lawsuit sample" consists of 207 firms. Of those 207 lawsuits, 116 involve allegations of insider trading allegation firms, I focus my analysis on the insiders specifically named in the first identified complaint. Accordingly, I calculate trading metrics for 463 individuals facing trading allegations. Of the 113 negative news firms facing shareholder lawsuits, 62 appear in the final lawsuit sample with sufficient data availability and 32 appear in the sample of trading allegation firms.

FIGURE 3 Returns and shares sold by insiders prior to and following the negative news disclosure Insiders of lawsuit firms facing trading allegations (116 firms, 463 insiders)





Panel B - TIMELY disclosers



Of the 207 earnings-based 10b-5 lawsuits examined in this study, 116 involve situations where shareholders (and their attorneys) use managers' trading behavior to support allegations of delayed disclosure. I limit the above analysis to insiders of these 116 lawsuit firms facing trading allegations. Further, I eliminate the trading behavior of insiders not specifically named in the first identified complaint and, consequently, I calculate trading measures for only those *individuals* facing trading allegations (n=463). In Panels A and B, I partition the sample based on managers' disclosure behavior. Following Skinner (1997), I calculate **TIMELINESS** by counting the number of days between the end of the fiscal quarter and the date of the negative news disclosure. I set **TIMELY** equal to 1 if the firm's timeliness score exceeds the median timeliness core for the sample; I set **TIMELY** equal to 0 for the remaining observations. **UNTIMELY** refers to observations where **TIMELY** equals 0. I plot cumulative long-window, equal-weighted portfolio values from 24 months before the negative news disclosure (i.e., the **CEdate**) to 2 months after, assuming an initial of \$1 in the first identified complaint using trading data obtained from Thomson Financial. I obtain similar results when I plot average monthly trading proceeds in place of average monthly shares sold.

FIGURE 4 Returns and options exercised prior to and following the negative news disclosure Insiders of lawsuit firms facing trading allegations (116 firms, 463 insiders)



Panel A - UNTIMELY disclosers

Panel B – TIMELY disclosers



Of the 207 earnings-based 10b-5 lawsuits examined in this study, 116 involve situations where shareholders (and their attorneys) use managers' trading behavior to support allegations of delayed disclosure. I limit the above analysis to insiders of these 116 lawsuit firms facing trading allegations. Further, I eliminate the trading behavior of insiders not specifically named in the first identified complaint and, consequently, I calculate trading measures for only those *individuals* facing trading allegations (n=463). In Panels A and B, I partition the sample based on managers' disclosure behavior. Following Skinner (1997), I calculate **TIMELINESS** by counting the number of days between the end of the fiscal quarter and the date of negative news disclosure. I set **TIMELY** equal to 1 if the firm's timeliness score exceeds the median timeliness score for the sample; I set **TIMELY** equal to o for the remaining observations. **UNTIMELY** refers to observations where **TIMELY** equals 0. I plot cumulative long-window, equal-weighted portfolio values from 24 months before the negative news disclosure (i.e., the **CEdate**) to 2 months after, assuming \$1 was in each portfolio at the beginning of the 26-month period. I plot the average monthly options exercised (in thousands) by insiders named in the first identified complaint using trading data obtained from Thomson Financial.

Appendix A – Variable definitions and data sources									
<i>Litigation Data</i> I obtain relevant lawsuit information by hand-collecting data from a number of sources.									
SETTLEMENT	= the dollar amount for which the lawsuit settles (in millions).	• PwC Securities Litigation Database: Among other information, the database supplies the company name, class period dates, filing date, settlement amount and settlement form (i.e., cash only, stock only, cash							
INSURANCE	= the percentage of the settlement covered by director and officer liability insurance.	and stock).							
CASH	= 1 if the defendant paid the entire settlement amount in cash; 0 otherwise.	• Stanford Securities Litigation Database: I confirm class period and filing dates by checking the PwC dates to Stanford Law School's Securities Class Action Clearinghouse database (<u>http://securities.stanford.edu/</u>). In							
CBDATE	= the date plaintiffs allege managers of the company made the first false or misleading statement(s) and/or failed to disclose material information.	 First Identified Complaint: I examine the first identified complaint for each lawsuit in order to categorize the nature of the lawsuit (e.g., fraud, 							
CEDATE	= the date the market learns of the news that triggers the lawsuit filing.	IPO-related, earnings-based), as well as identify whether plaintiffs' attorneys allege insider trading or the issuance of secondary equity offering as evidence of managers' wrongdoing.							
PERIOD	= the number of days between the CBdate and the CEdate (i.e., the period of time used to calculate plaintiffs' alleged damages).	• SEC Filings: I obtain settlement information, including the amount covered by the company's director and officer liability insurance (net of any deductibles) by reading the firms' quarterly and annual SEC filings							
ITALLEGE	= 1 if the complaint or a press release by shareholders' attorneys alleges insider trading as evidence of wrongdoing; 0 otherwise.	following the filing of the lawsuit through the year following the date of settlement (<u>http://sec.gov</u>).							
OFFER ALLEGE	= 1 if the complaint or press releases by shareholders' attorneys use the issuance of a secondary equity offering as evidence of wrongdoing; 0 otherwise.	• Lexis-Nexis, Dow Jones News Service: Performing a full-text search of news articles via Lexis-Nexis and Dow Jones News Service (using the company name and keywords of "lawsuit" and "class action"), I confirm the nature of the lawsuit allegations class period dates settlement amount							
EARNINGS	= 1 if the nature of the lawsuit allegations are earnings-based; o otherwise (e.g., fraud or IPO-related).	insurance coverage, and settlement form.							
	Disclosure	Data							
TIMELINESS	= the number of days between the announcement of earnings (via forecast, preannouncement, or actual announcement) and the end of the fiscal quarter corresponding to the negative news disclosure.	I obtain disclosure dates by performing a full-text search of news articles via Dow Jones News Service . I obtain the report date of quarterly earnings as well as the date of the end of the fiscal quarter from Compustat . Following Sciences (2027) Laglerlate a measure of disclosure timelinese (TIMELINESE)							
TIMELY	= 1 if the firm's disclosure timeliness score exceeds the median timeliness score for the sample; 0 otherwise. (Untimely refers to observations where Timely =0.)	by counting the number of days between the end of the fiscal quarter and the date of negative news disclosure. Under this approach, earnings forecasts result in positive measures of timeliness, while both earnings preannouncements and actual earnings announcements result in negative measures of timeliness.							

Appendix A – Variable definitions and data sources										
	Insider Trading Data									
TRADING PROCEEDS (TP) in millions	$= \sum_{i=1}^{N} \sum_{j=1}^{K} (\text{Sales}_{i,j} * \text{TRPrice}_{i,j} - \text{Purchases}_{i,j} * \text{TRPrice}_{i,j}),$ where N = the number of insiders, K = the number of transactions by insider i during the period, Sales = the number of shares sold in transaction j , Purchases = the number of shares purchased in transaction j , and TRPrice = the price at which insider i transacts (i.e., the exercise price, market price).	I obtain insider filing data from Thomson Financial . I calculate a trading measure that incorporates the dollar value of the transactions: Trading Proceeds (TP) . I calculate a measure of net shares traded (NST) during the period (Summers and Sweeney 1998, Niehaus and Roth 1999, Johnson et al. 2007) and a measure of net shares traded deflated by shares outstanding (NST_SHS) (Beneish and Vargus 2002). I calculate Abnormal trading measures by subtracting the equivalent trading measures calculated over an equal trading window leading up to the CBdate or the date of the price drop (for non-lawsuit firms); I use a firm-specific trading window equal to the								
NET SHARES TRADED (NST)	$= \sum_{i=1}^{N} \sum_{j=1}^{K} (\text{Sales}_{i,j} - \text{Purchases}_{i,j}).$	number of days in the class period for the lawsuit firms and for non-lawsuit firms I examine trading during the year leading up to disclosure. I denote abnormal trading metrics as ATP , ANST , and ANST_SHS . Following prior work. I focus on the trading behavior of directors, officers								
DEFLATED NET SHARES TRADED (NST_SHS) = $\sum_{i=1}^{N} \sum_{j=1}^{K} (\text{Sales}_{i,j}/\text{SHS} - \text{Purchases}_{i,j}/\text{SHS}),$ where SHS = the shares outstanding on the date of transaction j .		presidents, and vice presidents. For the 116 trading behavior of directors, onicers, analysis on the insiders specifically named in the first identified complaint. Accordingly, I calculate trading metrics for 463 individuals facing trading allegations.								
	CEO Consequen	aces Data								
CEO_TURN	= 1 if the Chief Executive Officer (CEO) of the firm at the end of the class period is no longer the CEO the year after the firm settles the lawsuit; o otherwise.									
CEO_LEAVE	= 1 if the CEO of the firm at the end of the class period is no longer with the firm the year after the firm settles the lawsuit; o otherwise.	I obtain executive compensation data, including management turnover, from								
SEC	= 1 if the firm/CEO faces an SEC enforcement action in addition to the class action lawsuit; 0 otherwise.	SEC filings.								
PENALTY	= 1 if the CEO faces monetary penalties relating to an SEC investigation or the funding of the settlement; o otherwise.	• I hand-collect missing data items and confirm Execucomp data by examining the firms' proxy statements leading up to the end of the class period and through the date of settlement (http://sec.gov)								
CEO_AGE	= the CEO's age during the year of the settlement.	 I perform a full-text search (based on company name and/or plaintiffs 								
RET_AGE	= 1 if the CEO's age exceeds 62 at the CEdate; 0 otherwise.	named on the first identified complaint) of the SEC litigation database to identify enforcement actions that relate to defendant firms								
CEO_OWN	= the percentage ownership of the CEO.	(<u>http://sec.gov</u>).								
HIGH_ SETTLE	= 1 if the settlement exceeds the median settlement for the sample; 0 otherwise.									

	Appendix A – Variable definitions and data sources								
In addition to the shareholder da	Control Vari variables of interest, analyses include controls for insurance co mages (severity of the negative news), firm size (market value, industries	Cables verage (discussed in the litigation data section), restatements, estimated volume traded), return volatility, share turnover, and high-litigation s.							
INSURANCE	= the percentage of the settlement covered by directors' and officers' liability insurance.	I obtain settlement information, including the amount covered by the company's director and officer liability insurance (net of any deductibles) by reading the firms' quarterly and annual SEC filings following the filing of the lawsuit through year following the date of settlement (<u>http://sec.gov</u>).							
RESTATE	= 1 if the firm restates earnings and/or announces a restatement in the year of the lawsuit filing; o otherwise.	In addition to searching SEC filings , I perform a full-text search of news articles via Dow Jones News Service (using the company name and keywords of "restate" and "restatement" in the year of the CEdate) to identify restatements.							
AUDITOR	= 1 if the firm is audited by a "Big Six" ("Big Four") auditor in the year of the CEDATE; o otherwise.	I hand-collect auditor information from the firms' annual filings for the year of the CEDATE from SEC filings (<u>http://sec.gov</u>).							
DOLLAR DISCLOSURE LOSS (DDLOSS)	= decline of market capitalization from the trading day when it reached its maximum during the class period to the trading day immediately following the end of the class period (in millions). I use the natural log (LDDLOSS) in regressions.	Lobtain information required for damage calculations from CRSP . As with							
FALL	= size-adjusted return during the 3-day window surrounding the negative news disclosure. I use –FALL in regressions.	prior work, I extend the class period to include the trading day following the CEdate , as the information revelation often occurs at the close of a trading day.							
MVE	= the product of the number of common shares outstanding and the stock price ten days before the end of the class period or 10 days before the negative news disclosure (shown in millions). I use the natural log (LMVE) in regressions.	Under the PSLRA, damages cannot exceed the difference between the price paid for the securities and the mean paid for the securities and the mean trading price for the 90-day period day period following the corrective disclosure. Thus, damages may be mitigated if the market price rebounds during the 90-day							
VOLUME	= the volume of shares traded during the class period or during the year prior to the negative news disclosure (shown in millions).	accommodate the "bounceback" provision of the PSLRA.							
VOLATILITY	= the standard deviation of size-adjusted, monthly returns in the year prior to the CEdate or the date of the negative news disclosure.	I also obtain firms' SIC codes from CRSP . Johnson et al. (2007) limits analysis to 64 post-PSLRA lawsuits in the computer hardware (3570-3577) and computer software (7370-7379) industries during 1996-2000. Soffer et al.							
RET	= the market-adjusted return in the two years following the lawsuit filing.	(2000) and Francis et al. (1994) define "high-litigation" industries as: biotechnology (SIC codes 2833-2836), computers (3570-3577 and 7370-7374), electronics (3600-3674) and retailing (5200-5961) Kasznik and Ley (1995)							
SHARE TURNOVER	= the average ratio of trading volume to shares outstanding during the year prior to the CEdate or the date of the negative news disclosure.	define "high-litigation" using industries with SIC codes 2833-2836, 8731- 8734, 7371-7379, 3570-3577, and 3600-3674. I code a high-litigation variable (HILIT) to indicate firms in any of the above SIC codes.							
HILIT	= 1 if the firm is in biotechnology (SIC codes 2833-2836), computers (3570-3577 and 7370-7379), electronics (3600-3674), or retailing (5200-5961, 8731-8734); 0 otherwise.								

TABLE 1 Sample selection

Panel A – Negative news sample

	Number o	offirms
Firms suffering greater than a 35% drop in price in a 3-day window during 1996- 2002		854
<i>Less</i> : Firms not included in Thomson Financial's trading database IPO firms with insufficient data for abnormal trading metric calculations Other firms with insufficient data for abnormal trading metric calculations Firms with non-earnings related news triggering drop in price Firms facing drops in price surrounding events of September 11th, 2001 Firms with pre-drop prices less than \$5	173 101 97 66 19 19	(475)
Final negative earnings news sample ("Negative news sample")		379
Subsample of negative news firms facing litigation under Rule 10b-5	113	

Panel B – Lawsuit sample

	Number of firms	
Lawsuits identified in PwC's litigation settlement database Additional lawsuits with settlement information from Stanford's litigation database	489 24	
Securities lawsuits with available settlement information	513	
<i>Less</i> : Remaining lawsuits with missing requisite CRSP data Lawsuits for which I could not locate insurance coverage data Lawsuits with insufficient data to calculate trading metrics Lawsuits for which I could not access/locate a complaint	136 64 54 52 (306)	
Final lawsuit sample	207	
Subsample of litigation firms facing insider trading allegations	116	

I limit analysis to classic, earnings-based 10b-5 lawsuits by excluding lawsuits that allege fraud schemes (e.g., price-fixing, fictitious sales, etc.) or relate to IPO allocations, analysts or mutual funds. For the 116 trading allegation firms, I focus my analysis on the 463 insiders specifically named in the first identified complaint. Figure 2 depicts the intersection of the samples.

TABLE 2Descriptive statistics

Variable	Mean	Median	Lower Quartile	Upper Quartile	Std. Dev.
FALL	-0.439	-0.424	-0.386	-0.467	0.076
LITIGATION	0.298	0	0	1	0.458
HILIT	0.549	1	0	1	0.498
MVE	2404.080	799.744	431.881	1687.080	6896.390
VOLUME	203.599	76.517	37.122	174.249	449.668
VOLATILITY	0.261	0.206	0.148	0.291	0.254
SHARE TURNOVER	0.015	0.012	0.007	0.020	0.012
TIMELINESS	-1.464	-5.000	-21.000	14.000	33.899

Panel A – Negative news sample (n=379)

Panel B – Negative news firms facing litigation (n=113)

Variable	Mean	Median	Lower Quartile	Upper Quartile	Std. Dev.
FALL HILIT MVE VOLUME VOLATILITY SHARE TURNOVER TIMELINESS	-0.458 *** 0.513 3206.740 *** 252.083 *** 0.229 0.016 -1.035	-0.433 ** 1 1047.510 *** 105.484 *** 0.193 0.013 * -4.000	-0.398 0 603.202 51.701 0.139 0.008 -22.000	$\begin{array}{r} -0.500\\ 1\\ 3139.490\\ 319.549\\ 0.267\\ 0.021\\ 13.000\end{array}$	0.082 0.502 5448.790 330.607 0.171 0.011 34.301
TIMELINESS	-1.035	-4.000	-22.000	13.000	34.301

*, **, *** denote instances where the characteristic of the subsample of negative news firms facing litigation (n=113) differs significantly from that of the negative news firms not facing litigation (n=266) at the 10%, 5%, and 1% level respectively for a two-tailed test.

FALL equals the size-adjusted return during the 3-day window surrounding the negative news disclosure. **LITIGATION** equals 1 if shareholders file a 10b-5 lawsuit in relation to the firm's negative news disclosure; 0 otherwise. **HILIT** equals 1 if the firm operates in biotechnology (SIC codes 2833-2836), computers (3570-3577 and 7370-7379), electronics (3600-3674), or retailing (5200-5961, 8731-8734); 0 otherwise. **MVE** equals the product of the number of common shares outstanding and the stock price ten days before the negative news disclosure (shown in millions). **VOLUME** equals the volume of shares traded during the year prior to the negative news disclosure (shown in millions). **VOLUME** equals the standard deviation of size-adjusted, monthly returns in the year prior to the date of the negative news disclosure. **SHARE TURNOVER** equals the average ratio of trading volume to shares outstanding during the year leading up to the negative news disclosure (i.e., the negative earnings news) and the end of the fiscal quarter corresponding to the negative news disclosure. Appendix A provides detailed variable definitions and data sources.

TABLE 2 (concluded)Descriptive statistics

Variable	Mean Median		Lower Quartile	Upper Quartile	Std. Dev.
SETTLEMENT	18.421	7.500	3.000	15.000	41.727
INSURANCE	0.714	0.920	0.480	1.000	0.356
DDLOSS	2002.870	536.220	204.146	1394.250	6892.380
RESTATE	0.430	0	0	1	0.496
ITALLEGE	0.560	1	0	1	0.498
AUDITOR	0.859	1	1	1	0.349
HILIT	0.440	0	0	1	0.498
MVE	3095.040	410.386	138.427	985.208	13879.170
VOLUME	172.338	75.210	36.316	189.157	304.972
VOLATILITY	0.252	0.210	0.146	0.286	0.233
SHARE TURNOVER	0.014	0.010	0.006	0.020	0.010
TIMELINESS	-13.232	-13	-36	8	41.589
CEO TURNOVER	0.442	0	0	1	0.498
CEO LEAVE	0.289	0	0	1	0.455

Panel C – Lawsuit sample (n=207)

Panel D – Lawsuit firms facing trading allegations (n=116)

Variable	Mean	Median	Lower Quartile	Upper Quartile	Std. Dev.
SETTLEMENT INSURANCE DDLOSS RESTATE AUDITOR HILIT MVE VOLUME VOLUME VOLATILITY SHARE TURNOVER TIMELINESS CEO TURNOVER	19.021 *** 0.683 * 1635.760 *** 0.371 ** 0.913 ** 0.500 ** 2340.290 ** 212.606 *** 0.234 0.016 *** -10.767 * 0.435	8.950 *** 0.858 * 677.138 *** 0 ** 1 *** 1 ** 487.436 * 97.883 *** 0.219 0.014 *** -11 0	$\begin{array}{c} 3.800\\ 0.395\\ 298.271\\ 0\\ 1\\ 0\\ 209.507\\ 52.624\\ 0.152\\ 0.007\\ -29\\ 0\\ \end{array}$	$17.250 \\ 1.000 \\ 1795.340 \\ 1 \\ 1 \\ 1 \\ 1093.780 \\ 232.995 \\ 0.291 \\ 0.023 \\ 9 \\ 1$	$\begin{array}{r} 33.477\\ 0.365\\ 2822.940\\ 0.485\\ 0.283\\ 0.502\\ 7444.950\\ 355.798\\ 0.110\\ 0.010\\ 29.792\\ 0.498\end{array}$
CEO LEAVE	0.306	0	0	1	0.463

*, **, *** denote instances where the characteristic of the subsample of lawsuit firms facing trading allegations (n=116) differs significantly from that of the litigation firms not facing trading allegations (n=91) at the 10%, 5%, and 1% level respectively for a two-tailed test.

SETTLEMENT equals the dollar amount for which the lawsuit settles (in millions). INSURANCE equals the percentage of the settlement covered by director and officer liability insurance. **DDLOSS** equals the decline of market capitalization from the trading day when market capitalization reached its maximum during the class period to the trading day immediately following the end of the class period (shown in millions). RESTATE equals 1 if the firm restates earnings and/or announces a restatement in the year of the lawsuit filing; o otherwise. AUDITOR equals 1 if a "Big Six" (or "Big Four") firm audits the firm in the year of the CEdate; o otherwise. HILIT equals 1 if the firm operates in biotechnology (SIC codes 2833-2836), computers (3570-3577 and 7370-7379), electronics (3600-3674), or retailing (5200-5961, 8731-8734); O otherwise. MVE equals the product of the number of common shares outstanding and the stock price ten days before the negative news disclosure (i.e., the **CEdate**) (shown in millions). VOLUME equals the volume of shares traded during the year prior to the negative news disclosure (shown in millions). VOLATILITY equals the standard deviation of size-adjusted, monthly returns in the year prior to the date of the negative news disclosure. SHARE TURNOVER equals the average ratio of trading volume to shares outstanding during the year leading up to the negative news disclosure. TIMELINESS equals the number of days between the negative news disclosure (i.e., the CEdate) and the end of the fiscal quarter corresponding to the negative news disclosure. CEO TURNOVER equals 1 if the CEO of the firm at the end of the class period (i.e., on the **CEdate**) is no longer the CEO the year after the firm settles the lawsuit; o otherwise. **CEO** LEAVE equals 1 if the CEO of the firm at the end of the class period is no longer with the firm the year after the firm settles the lawsuit; o otherwise. Appendix A provides detailed variable definitions and data sources.

TABLE 3Evidence of abnormal trade

Panel A - Negative news sample

	I				
	n	Mean	Median	Q1	Q3
ATP ANST ANST_SHS	379 379 379	11.483 0.224 0.8%	1.844 0.047 0.1%	-2.143 -0.099 -0.3%	15.332 0.441 1.6%

Panel B – Negative news sample partitioned by timeliness

	Timely						i	Untimelį	y		Tests of D (p-va	ifferences ilues)
	n	Mean	Med.	Q1	Q3	n	Mean	Med.	Q1	Q3	Mean	Med.
ATP ANST ANST_SHS	187 187 187	8.887 0.156 0.3%	1.586 0.033 0.1%	-4.658 -0.145 -0.4%	12.408 0.346 1.4%	192 192 192	14.012 0.290 1.3%	1.930 0.065 0.2%	-0.443 -0.061 -0.2%	23.162 0.487 1.7%	0.04 0.09 0.06	0.32 0.32 0.07

Panel C – Lawsuit sample partitioned by trading allegations

	No trading allegations					Trading allegations					Tests of Differences (p-values)		
	n	Mean	Med.	Q1	Q3	n	Mean	Med.	Q1	Q3	Mean	Med.	
ATP ANST ANST_SHS	91 91 91	-1.636 -0.013 2.0%	-0.155 -0.006 0.0%	-2.160 -0.106 -0.6%	0.367 0.025 0.1%	116 116 116	16.880 0.644 1.7%	5.119 0.178 0.7%	0.300 0.006 0.0%	15.647 0.763 2.1%	<0.01 <0.01 <0.01	<0.01 <0.01 <0.01	

TABLE 3 (concluded) Evidence of abnormal trade

Panel D – Negative news sample partitioned by litigation and timeliness

			Timely			Untimely					
	n	Mean	Med.	Q1	Q3	n	Mean	Med.	Q1	Q3	
<i>Litigation</i> ATP ANST ANST_SHS	60 60 60	8.664 0.239 0.6%	1.102 0.065 0.1%	-4.998 -0.149 -0.3%	12.386 0.393 1.4%	53 53 53	20.837 0.456 1.7%	7.834 0.174 0.5%	-2.078 -0.038 0.0%	41.413 0.961 2.5%	
<i>No Litigation</i> ATP ANST ANST_SHS	127 127 127	8.992 0.117 0.1%	2.056 0.021 0.0%	-3.750 -0.145 -0.4%	12.450 0.313 1.4%	139 139 139	11.410 0.227 1.1%	1.238 0.020 0.1%	-0.190 -0.062 -0.3%	14.289 0.364 1.6%	

Tests of Differences

								l	
Prediction				ATP p-value for test of differences		AI p-value diffe	NST for test of rences	ANST_SHS p-value for test of differences	
				Mean	Median	Mean	Median	Mean	Median
1. 2. 3. 4. 5. 6.	Litigation / Timely Litigation / Timely Litigation / Timely Litigation / Untimely Litigation / Untimely No Litigation / Timely	< ? ? > <	Litigation / Untimely No Litigation / Timely No Litigation / Untimely No Litigation / Timely No Litigation / Untimely No Litigation / Untimely	0.05 0.36 0.38 0.03 0.10 0.17	0.08 0.39 0.79 0.09 0.13 0.36	0.08 0.22 0.88 0.01 0.03 0.19	0.15 0.16 0.33 0.01 0.02 0.45	0.07 0.29 0.81 0.02 0.08 0.15	0.04 0.09 0.79 0.01 0.04 0.13
				,	Ū		10	Ū	U

In Panels B and D, I partition the sample based on managers' disclosure behavior. Following Skinner (1997), I calculate TIMELINESS by counting the number of days between the end of the fiscal quarter and the date of negative news disclosure. I set TIMELY equal to 1 if the firm's timeliness score exceeds the median timeliness score for the sample; I set TIMELY equal to 0 for the remaining observations. UNTIMELY refers to observations where TIMELY equals 0. In Panel C, I partition the sample based on whether shareholders' attorneys use evidence of managers' trading to support their claim of delayed disclosure. In addition to partitioning based on managers' disclosure behavior, in Panel D I partition the negative news sample based on the presence of a shareholder lawsuit in relation to the disclosure. I set LITIGATION equal to 1 if shareholders file a 10b-5 lawsuit in relation to the firm's negative news disclosure; o otherwise. ATP (abnormal trading proceeds) equals the total amount of trading proceeds enjoyed by insiders during the year leading up to the negative news disclosure less the total amount of trading proceeds enjoyed by insiders during the equivalent prior window. ANST (abnormal net shares traded) equals the total amount of net shares sold (i.e., sales less purchases) by insiders during the year leading up to the negative news disclosure less the total amount of net shares sold (i.e., sales less purchases) by insiders during the equivalent prior window. ANST SHS equals ANST divided by shares outstanding on the date of the transaction. Appendix A provides detailed variable definitions and data sources.

TABLE 4Pearson (Spearman) correlation coefficients above (below) the diagonal

Panel A – Negative news sample (n=379)

	/	~ /	STION	5	5%	IME	THE STREET	REOWER	THESS	8	<u></u> .er /
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FALL		0.168	0.003	-0.051	-0.081	0.063	0.099	0.049	0.024	0.006	0.002
LITIGATION	0.167 ***	-	-0.047	0.076	0.070	-0.083 *	0.047	0.008	0.053	0.077	0.044
HILIT	0.027	-0.047		0.059	0.148 ***	0.130 ***	0.212 ***	0.007	0.098 *	0.065	0.013
MVE	-0.006	0.236 ***	0.131 ***		0.666 ***	-0.065	-0.050	-0.036	0.039	0.008	-0.026
VOLUME	-0.021	0.236 ***	0.246 ***	0.772 ***		-0.044	0.280 ***	-0.006	0.121 **	0.049	-0.031
VOLATILITY	0.054	-0.077	0.259 ***	-0.021	0.108 **		0.334 ***	-0.119 **	0.061	0.028	0.021
SHARE TURNOVER	0.123	0.075	0.326 ***	0.061	0.475 ***	0.384 ***		0.077	0.069	-0.032	-0.051
TIMELINESS	0.061	0.016	0.020	0.036	0.071	-0.142 ***	0.089 *		-0.125 ***	-0.093 *	-0.095 *
АТР	0.021	0.031	0.121 ***	0.115 **	0.039	0.181 ***	0.107 **	-0.108 **		0.828 ***	0.637 ***
ANST	0.024	0.091	0.073	0.091 *	0.014	0.121 ***	0.043	-0.063	0.880		0.752 ***
ANST_SHS	0.019	0.066	0.052	-0.006	-0.075	0.129 ***	0.029	-0.066	0.834 ***	0.952 ***	

*, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

FALL equals the size-adjusted return during the 3-day window surrounding the negative news disclosure. LITIGATION equals 1 if shareholders file a 10b-5 lawsuit in relation to the firm's negative news disclosure; 0 otherwise. HILIT equals 1 if the firm operates in biotechnology (SIC codes 2833-2836), computers (3570-3577 and 7370-7379), electronics (3600-3674), or retailing (5200-5961, 8731-8734); 0 otherwise. MVE equals the product of the number of common shares outstanding and the stock price ten days before the negative news disclosure (shown in millions). VOLUME equals the volume of shares traded during the year prior to the negative news disclosure (shown in millions). VOLATILITY equals the standard deviation of size-adjusted, monthly returns in the year prior to the date of the negative news disclosure. SHARE TURNOVER equals the average ratio of trading volume to shares outstanding during the year leading up to the negative news disclosure. TIMELINESS equals the number of days between the negative news disclosure (i.e., the negative earnings news) and the end of the fiscal quarter corresponding to the negative news disclosure. ATP (abnormal trading proceeds) equals the total amount of ret shares sold (i.e., sales less purchases) by insiders during the year leading up to the negative news disclosure less the total amount of net shares sold (i.e., sales less purchases) by insiders during the equals ANST divided by shares outstanding on the date of the transaction. Appendix A provides detailed variable definitions and data sources.

TABLE 4 (continued) Pearson (Spearman) correlation coefficients above (below) the diagonal

Panel B – Litigation firms within the negative news sample (n=113)

		ENT .	ALL .	MVE V	OFFINE NO	ATTING	ARE OWER	FILTHESS	2 ^{TR}	ATIST AT
FALL		-0.015	-0.047	-0.082	0.044	0.167 **	0.121	0.151 *	0.069	-0.046
HILIT	-0.040		-0.052	0.152	0.302 ***	0.336 ***	-0.062	0.003	0.007	0.014
MVE	0.032	0.003		0.620 ***	-0.137	-0.124	0.005	-0.031	-0.049	-0.104
VOLUME	-0.054	0.148	0.785 ***		-0.010	0.189 **	-0.043	0.048	0.051	-0.061
VOLATILITY	0.065	0.314 ***	-0.144	0.142		0.565 ***	0.098	0.097	0.107	0.164
SHARE TURNOVER	0.205	0.367 ***	-0.040	0.388 ***	0.564		0.041	0.084	0.018	0.060
TIMELINESS	0.137	-0.116	-0.084	-0.029	-0.015	0.039		-0.205 **	-0.118	-0.147 *
АТР	0.138	0.016	-0.033	-0.065	0.203 **	0.156 *	-0.180 **		0.841 ***	0.686 ***
ANST	0.070	0.006	-0.002	-0.002	0.220 **	0.113	-0.118	0.926 ***		0.780 *
ANST_SHS	0.011	0.029	-0.132	-0.120	0.289	0.167 *	-0.132	0.889 ***	0.940 ***	

*, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

FALL equals the size-adjusted return during the 3-day window surrounding the negative news disclosure. HILIT equals 1 if the firm operates in biotechnology (SIC codes 2833-2836), computers (3570-3577 and 7370-7379), electronics (3600-3674), or retailing (5200-5961, 8731-8734); o otherwise. MVE equals the product of the number of common shares outstanding and the stock price ten days before the negative news disclosure (shown in millions). VOLUME equals the volume of shares traded during the year prior to the negative news disclosure (shown in millions). VOLATILITY equals the standard deviation of size-adjusted, monthly returns in the year prior to the date of the negative news disclosure. SHARE TURNOVER equals the average ratio of trading volume to shares outstanding during the year leading up to the negative news disclosure (i.e., the negative earnings news) and the end of the fiscal quarter corresponding to the negative news disclosure. ATP (abnormal trading proceeds) equals the total amount of trading proceeds enjoyed by insiders during the year leading up to the negative news disclosure for window. ANST (abnormal net shares traded) equals the total amount of net shares sold (i.e., sales less purchases) by insiders during the year leading up to the negative news disclosure during the year leading up to the negative news disclosure during the year leading up to the negative news disclosure during the year leading up to the negative news disclosure during the year leading up to the negative news disclosure for window. ANST_SHS equals ANST divided by shares outstanding on the date of the transaction. Appendix A provides detailed variable definitions and data sources.

TABLE 4 (concluded)Pearson (Spearman) correlation coefficients above (below) the diagonal

Panel C – Lawsuit sample of firms facing trading allegations (n=116)

		NE.	A RACE	, 055	a dite	TOR	5	J. P	IME	TIN	REGAR	R INES		jer j	ŞHŞ	0 .04E
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SETTLE		-0.235 ***	0.494	0.236	0.104	-0.005	0.352	0.588	-0.210 **	0.047	0.055	0.337 ***	0.259 ***	-0.038	0.139	0.164 *
INSURANCE	-0.347 ***		0.044	-0.154 *	-0.045	0.184 **	0.104	0.028	0.159 *	0.009	0.072	0.119	0.111	0.149	-0.098	-0.184 **
DDLOSS	0.471	-0.062		-0.075	0.152 *	0.040	0.888	0.806	-0.270 ***	-0.102	0.122	0.293 ***	0.199 **	-0.083	0.132	0.159 *
RESTATE	0.231	-0.148	-0.043		0.106	0.018	-0.116	0.008	0.006	0.030	-0.049	-0.047	0.016	-0.050	0.198	0.185
AUDITOR	0.273	-0.054	0.340 ***	0.106		0.188 **	0.080	0.141	-0.042	0.101	-0.006	0.124	0.118	0.048	0.130	0.127
HILIT	-0.048	0.181 **	0.082	0.018	0.188		0.014	0.201	0.323	0.358	0.011	-0.006	0.024	0.048	0.082	0.023
MVE	0.469 ***	-0.065	0.811	-0.069	0.235	-0.022		0.690 ***	-0.260	-0.105	0.114	0.191 **	0.085	-0.083	0.007	0.049
VOLUME	0.364 ***	-0.019	0.721	-0.035	0.241 ***	0.250	0.657		-0.136 *	0.227	0.178 **	0.371 ***	0.211	-0.090	0.113	0.095
VOLATILITY	-0.161 **	0.145	-0.142	0.091	-0.109	0.358 ***	-0.332 ***	0.006	-	0.405 ***	-0.175 *	0.003	0.018	0.115	0.037	-0.131
SHARE TURNOVER	-0.015	-0.085	0.000	0.024	0.129	0.390 ***	-0.037	0.448 ***	0.394 ***		0.029	-0.058	-0.069	-0.054	0.102	-0.078
TIMELINESS	-0.029	-0.040	0.127	-0.022	-0.003	-0.003	0.117	0.126	-0.170 *	0.033		0.020	-0.104	-0.162 **	-0.002	0.133
АТР	0.351	0.028	0.371	-0.042	0.143	-0.066	0.430 ***	0.271	0.016	-0.020	-0.099		0.760 ***	0.496 ***	0.133	0.121
ANST	0.185	-0.005	0.342	-0.142 **	0.117 *	-0.094	0.339	0.260	0.004	0.020	-0.093	0.849		0.850 ***	0.020	0.064
ANST_SHS	-0.090	-0.005	-0.060	-0.189	-0.040	-0.133	-0.045	-0.074	0.113	0.047	-0.116	0.648	0.844 ***		-0.104	-0.050
CEO TURNOVER	0.309	-0.118	0.217	0.198	0.130	0.082	0.143	0.208	0.081	0.116	0.034	0.160	0.082	-0.038		0.756 ***
CEO LEAVE	0.259	-0.208 **	0.192	0.185	0.127	0.023	0.110	0.147	-0.086	-0.062	0.172	0.139	0.128	0.026	0.756 ***	
									-							

*, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

SETTLE equals the dollar amount for which the lawsuit settles (in millions). **INSURANCE** equals the percentage of the settlement covered by director and officer liability insurance. **DDLOSS** equals the decline of market capitalization from the trading day when market capitalization reached its maximum during the class period to the trading day immediately following the end of the class period (shown in millions). **RESTATE** equals 1 if the firm restates earnings and/or announces a restatement in the year of the lawsuit filing; 0 otherwise. **AUDITOR** equals 1 if a "Big Six" (or "Big Four") firm audits the firm in the year of the **CEdate**; 0 otherwise. **TIMELINESS** equals the number of days between the negative news disclosure (i.e., the **CEdate**) and the end of the fiscal quarter corresponding to the negative news disclosure. **CEO TURNOVER** equals 1 if the CEO of the firm at the end of the class period (i.e., on the **CEdate**) is no longer the CEO the year after the firm settles the lawsuit; 0 otherwise. **CEO LEAVE** equals 1 if the CEO of the firm at the end of the class period is no longer with the firm the year after the firm settles the lawsuit; 0 otherwise. **Appendix A provides detailed variable definitions and data sources**.

TABLE 5Disclosure timeliness and abnormal trade

	Predicted	Mode	el 1	Mode	el 2	Mode	el 3
	Relation	Coeff. Est.	$\Pr > t $	Coeff. Est.	$\Pr > t $	Coeff. Est.	$\Pr > t $
Intercept		-18.31	0.198	-15.78	0.267	-13.55	0.340
Trading							
ATP	-	-0.13	0.010 ***				
ANST	-			-3.05	0.086 *		
ANST_SHS	-					-57.05	0.096 *
Volatility	-	-20.57	0.005 ***	-20.96	0.004 ***	-21.14	0.004 ***
Share turnover	+	360.29	0.019 **	333.82	0.031 **	334.48	0.031 **
Size (LMVE)	+	2.80	0.406	1.99	0.553	1.23	0.713
HILIT	+	0.51	0.887	0.28	0.939	0.06	0.986
Fall	+	21.88	0.338	21.24	0.355	21.13	0.358
Adj. R²			3.40%		2.42%		2.37%

 $TIMELINESS_{i} = \frac{\alpha_{o} + \alpha_{1}TRADING_{i} + \alpha_{2}VOLATILITY_{i} + \alpha_{3}SHARE_TURNOVER_{i}}{+\alpha_{4}SIZE_{i} + \alpha_{5}HILIT_{i} + \alpha_{6}FALL_{i} + \varepsilon_{i}}$

*, **, *** denote significance at the 10%, 5%, and 1% level, respectively (two-tailed test).

TIMELINESS equals the number of days between the negative news disclosure (i.e., the CEdate) and the end of the fiscal quarter corresponding to the negative news disclosure. ATP (abnormal trading proceeds) equals the total amount of trading proceeds enjoyed by insiders during the year leading up to the negative news disclosure less the total amount of trading proceeds enjoyed by insiders during the equivalent prior window. ANST (abnormal net shares traded) equals the total amount of net shares sold (i.e., sales less purchases) by insiders during the year leading up to the negative news disclosure less the total amount of net shares sold (i.e., sales less purchases) by insiders during the equivalent prior window. ANST_SHS equals ANST divided by shares outstanding on the date of the transaction. I estimate the models using the full negative news sample (n=379); results do not change when I estimate the regressions using litigation subsample (n=113). VOLATILITY equals the standard deviation of size-adjusted, monthly returns in the year prior to the date of the negative news disclosure. SHARE TURNOVER equals the average ratio of trading volume to shares outstanding during the year leading up to the negative news disclosure. FALL equals the size-adjusted return during the 3-day window surrounding the negative news disclosure. MVE equals the product of the number of common shares outstanding and the stock price ten days before the negative news disclosure (shown in millions); I use the log (LMVE) in the regressions. HILIT equals 1 if the firm operates in biotechnology (SIC codes 2833-2836), computers (3570-3577 and 7370-7379), electronics (3600-3674), or retailing (5200-5961, 8731-8734); O otherwise. FALL equals the size-adjusted return during the 3-day window surrounding the negative news disclosure. Results remain when I replace HILIT with controls for industry classification based on Fama and French (1997). Appendix A provides detailed variable definitions and data sources.

TABLE 6Consequences for the firm

Panel A – Logistic regression of the incidence of lawsuit filings

LITIGATION	$ \beta_o + \beta_1 TRADING_i + \beta_2 TIMELINESS_i + \beta_3 FALL_i + \beta_4 SIZE_i $
LIIIGAIION	$+\beta_5 SHARE _TURNOVER_i + \beta_6 VOLATILITY_i + \varepsilon_i$

	Predicted Relation	1	Model 2	3
Intercept		-5.75	-5.73 (0.01***)	-5.85 (0.01***)
Trading			(0.01)	(0.01)
ATP	+	0.11 (0.03**)		
ANST	+		0.23 (0.05 ^{**})	
ANST_SHS	+			2.75 (0.12)
TIMELINESS	-	-0.01	-0.01	-0.02
		(0.33)	(0.34)	(0.32)
FALL	+	4.98	5.00	4.99
SIZE (LMVE)	+	(0.001***) 0.94 (<0.0001***)	(0.001***) 0.93 (<0.0001***)	(0.001 ^{***}) 0.97 (<0.0001 ^{***})
SHARE_TURNOVER	+	11.38	12.27	12.42
		(0.13)	(0.12)	(0.11)
VOLATILITY	?	-1.41	-1.46	-1.41
		(0.04**)	(0.03**)	(0.04**)
Percent Concordant		68.4	68.7	68.9
Likelihood Ratio		35.2	36.6	35.1
Pr > ChiSq		<0.0001	<0.0001	<0.0001

*, **, *** denote significance at the 10%, 5%, and 1% level, respectively (two-tailed test).

LITIGATION equals 1 if shareholders file a 10b-5 lawsuit in relation to the firm's negative news disclosure; 0 otherwise. ATP (abnormal trading proceeds) equals the total amount of trading proceeds enjoyed by insiders during the year leading up to the negative news disclosure less the total amount of trading proceeds enjoyed by insiders during the equivalent prior window. ANST (abnormal net shares traded) equals the total amount of net shares sold (i.e., sales less purchases) by insiders during the year leading up to the negative news disclosure less the total amount of net shares sold (i.e., sales less purchases) by insiders during the equivalent prior window. ANST_SHS equals ANST divided by shares outstanding on the date of the transaction. TIMELINESS equals the number of days between the negative news disclosure and the end of the fiscal quarter corresponding to the negative news disclosure. FALL equals the size-adjusted return during the 3-day window surrounding the negative news disclosure. I use -FALL in regressions. MVE equals the product of the number of common shares outstanding and the stock price ten days before the negative news disclosure (in millions); I use LMVE in regressions. SHARE TURNOVER equals the average ratio of trading volume to shares outstanding during the year leading up to the negative news disclosure. VOLATILITY equals the standard deviation of size-adjusted, monthly returns in the year prior to the date of the negative news disclosure. Results remain when I include a control for high-litigation industries (HILIT) or when I include VOLUME as the proxy for size in the regressions. HILIT equals 1 if the firm operates in biotechnology (SIC codes 2833-2836), computers (3570-3577 and 7370-7379), electronics (3600-3674), or retailing (5200-5961, 8731-8734); o otherwise. **VOLUME** equals the volume of shares traded during the year prior to the negative news disclosure (shown in millions). Appendix A provides detailed variable definitions and data sources.

TABLE 6 (concluded)Consequences for the firm

Panel B - OLS regression of settlement amounts

$SETTLEMENT_{i} * (1 - INSURANCE_{i}) = \frac{\beta_{o} + \beta_{1}TRADING_{i} + \beta_{2}TIMELINESS_{i}}{+\beta_{3}DAMAGES_{i} + \beta_{4}SIZE_{i} + \beta_{5}RESTATEMENT_{i} + \varepsilon_{i}}$

	Predicted		Model	
	Relation	1	2	3
Intercept		-27.13	-28.20	-29.40
Trading		(0.01)	(0.01)	(0.00)
ATP	+	0.17		
ANST	+	(0.01***)	1.79	
ANST_SHS	+		(0.09*)	3.43
TIMELINESS	-	-0.03	-0.03	(0.36) -0.03
DAMACES (I DDI OSS)		(0.55)	(0.57)	(0.54)
DAMAGES (LDDL055)	+	0.54 (0.46)	0.70 (0.46)	(0.41)
SIZE (LMVE)	+	10.11	10.71	10.77 (0.05**)
RESTATEMENT	+	12.05	11.40	11.42
		(0.00***)	(0.01***)	(0.00***)
Adj. R ²		13.3%	10.8%	10.2%

*, **, *** denote significance at the 10%, 5%, and 1% level, respectively (two-tailed test).

SETTLEMENT equals the dollar amount for which the lawsuit settles (in millions). INSURANCE equals the percentage of the settlement covered by director and officer liability insurance. ATP (abnormal trading proceeds) equals the total amount of trading proceeds enjoyed by insiders during the year leading up to the negative news disclosure less the total amount of trading proceeds enjoyed by insiders during the equivalent prior window. ANST (abnormal net shares traded) equals the total amount of net shares sold (i.e., sales less purchases) by insiders during the year leading up to the negative news disclosure less the total amount of net shares sold (i.e., sales less purchases) by insiders during the equivalent prior window. ANST_SHS equals ANST divided by shares outstanding on the date of the transaction. TIMELINESS equals the number of days between the negative news disclosure (i.e., the CEdate) and the end of the fiscal quarter corresponding to the negative news disclosure. DDLOSS equals the decline of market capitalization from the trading day when market capitalization reached its maximum during the class period to the trading day immediately following the end of the class period (in millions); I use the log (LDDLOSS) in the regressions. MVE equals the product of the number of common shares outstanding and the stock price ten days before the negative news disclosure (in millions); I use the log (LMVE) in the regressions. **RESTATEMENT** equals 1 if the firm restates earnings and/or announces a restatement in the year of the lawsuit filing; o otherwise. Results remain when I include a control for high-litigation industries (HILIT) or when I include VOLUME as the proxy for size in the regressions. In addition, results remain when I use the gross amount of settlement (that does not consider insurance coverage) as the dependent variable. Appendix A provides detailed variable definitions and data sources.

TABLE 7Consequences for managers: logistic regression examining CEO turnover

$$TURNOVER_{i} = \frac{\delta_{o} + \delta_{1}TRADING_{i} + \delta_{2}CEO_AGE_{i} + \delta_{3}FALL_{i}}{+\delta_{4}SETTLEMENT_{i} + \delta_{5}SIZE_{i} + \delta_{6}RESTATEMENT_{i} + \delta_{7}RET_{i} + \varepsilon_{i}}.$$

Panel A – Dependent variable = CEO_TURNOVER

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	Predicted	Model					
	Relation	1	2	3			
Intercept		-1.8	-2.05	-2.63			
		(0.22)	(0.23)	(0.11)			
Trading							
ATP	+	0.01					
		(0.39)					
ANST	+		0.44				
			(0.17)				
ANST_SHS	+			1.76			
				(0.41)			
CEO AGE	+	0.04	0.01	0.02			
		(0.32)	(0.34)	(0.42)			
FALL	+	0.36	0.41	0.38			
		(0.05**)	(0.05**)	(0.06*)			
SETTLEMENT	+	0.02	0.02	0.01			
		(0.09*)	(0.11)	(0.18)			
LMVE	-	-0.65	-0.72	-0.44			
		(0.17)	(0.17)	(0.27)			
RESTATEMENT	+	1.35	1.47	1.22			
		(0.001***)	(0.002^{***})	(0.02^{**})			
RET	-	-0.09	-0.07	-0.07			
		(0.05**)	(0.07*)	(0.08*)			
Percent Concordant		73.6	75.1	68.1			
Likelihood Ratio		22.4	21.3	14.0			
Pr > ChiSq		(0.01)	(0.02)	(0.16)			

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*, **, *** denote significance at the 10%, 5%, and 1% level, respectively (two-tailed test).

CEO_TURNOVER equals 1 if the Chief Executive Officer (CEO) of the firm at the end of the class period is no longer the CEO the year after the firm settles the lawsuit; 0 otherwise. **ATP** (abnormal trading proceeds) equals the total amount of trading proceeds enjoyed by insiders during the year leading up to the negative news disclosure less the total amount of net shares sold (i.e., sales less purchases) by insiders during the year leading up to the negative news disclosure less the total amount of net shares sold (i.e., sales less purchases) by insiders during the year leading up to the negative news disclosure less the total amount of net shares sold (i.e., sales less purchases) by insiders during the year leading up to the negative news disclosure less the total amount of net shares sold (i.e., sales less purchases) by insiders during the equivalent prior window. **ANST_SHS** equals **ANST** divided by shares outstanding on the date of the transaction. **CEO_AGE** equals the CEO's age during the year of the settlement. **FALL** size-adjusted return during the 3-day window surrounding the negative news disclosure. I use -FALL in regressions. **SETTLEMENT** equals the dollar amount for which the lawsuit settles (in millions). **MVE** equals the product of the number of common shares outstanding and the stock price ten days before the negative news disclosure (in millions); I use the log (**LMVE**) in the regressions. **RESTATEMENT** equals 1 if the firm restates earnings and/or announces a restatement in the year of the lawsuit filing; 0 otherwise. **RET** equals the market-adjusted return in the two years following the lawsuit filing. **HILIT** equals 1 if the firm operates in biotechnology (SIC codes 2833-2836), computers (3570-3577 and 7370-7379), electronics (3600-3674), or retailing (5200-5961, 8731-8734); 0 otherwise. Results remain when I replace **HILIT** with controls for industry classification based on Fama and French (1997). Appendix A provides detailed variable definitions and data sources.

TABLE 7 (concluded)Consequences for managers: logistic regression examining CEO turnover

$$TURNOVER_{i} = \frac{\delta_{o} + \delta_{1}TRADING_{i} + \delta_{2}CEO_AGE_{i} + \delta_{3}FALL_{i}}{+\delta_{4}SETTLEMENT_{i} + \delta_{5}SIZE_{i} + \delta_{6}RESTATEMENT_{i} + \delta_{7}RET_{i} + \varepsilon_{i}}.$$

Panel B – Dependent variable = CEO_LEAVE

	Predicted	ed Model				
	Relation	1	2	3		
Intercept		-1.43	-1.88	-2.60		
m 1.		(0.46)	(0.35)	(0.19)		
ATP	+	0.004				
ANST	+		0.41 (0.28)			
ANST_SHS	+			1.90 (0.24)		
CEO AGE	+	0.05 (0.31)	0.02 (0.30)	0.02 (0.40)		
FALL	+	0.37 (0.05**)	0.41 (0.05**)	0.33 (0.07 *)		
SETTLEMENT	+	0.03 (0.09*)	0.03 (0.13)	0.02 (0.22)		
LMVE	-	-0.66 (0.14)	-0.75 (0.12)	-0.51 (0.16)		
RESTATEMENT	+	1.55 (0.001***)	1.47 (0.001***)	1.24 (0.004**)		
RET	-	-0.08 (0.06*)	-0.07 (0.07*)	-0.08 (0.07*)		
Percent Concordant Likelihood Ratio Pr > ChiSq		76.3 19.6 (0.01)	76.6 19.5 (0.007)	76.4 12.3 (0.09)		

*, **, *** denote significance at the 10%, 5%, and 1% level, respectively (two-tailed test).

CEO_LEAVE equals 1 if the Chief Executive Officer (CEO) of the firm at the end of the class period is no longer with the firm the year after the firm settles the lawsuit; 0 otherwise. **ATP** (abnormal trading proceeds) equals the total amount of trading proceeds enjoyed by insiders during the year leading up to the negative news disclosure less the total amount of net shares sold (i.e., sales less purchases) by insiders during the year leading up to the negative news disclosure less the total amount of net shares sold (i.e., sales less purchases) by insiders during the year leading up to the negative news disclosure less the total amount of net shares sold (i.e., sales less purchases) by insiders during the year leading up to the negative news disclosure less the total amount of net shares sold (i.e., sales less purchases) by insiders during the equivalent prior window. **ANST_SHS** equals **ANST** divided by shares outstanding on the date of the transaction. **CEO_AGE** equals the CEO's age during the year of the settlement. **FALL** size-adjusted return during the 3-day window surrounding the negative news disclosure. I use -FALL in regressions. **SETTLEMENT** equals the dollar amount for which the lawsuit settles (in millions). **MVE** equals the product of the number of common shares outstanding and the stock price ten days before the negative news disclosure (in millions); I use the log (**LMVE**) in the regressions. **RESTATEMENT** equals 1 if the firm restates earnings and/or announces a restatement in the year of the lawsuit filing; 0 otherwise. **RET** equals the market-adjusted return in the two years following the lawsuit filing. **HILIT** equals 1 if the firm operates in biotechnology (SIC codes 2833-2836), computers (3570-3577 and 7370-7379), electronics (3600-3674), or retailing (5200-5961, 8731-8734); 0 otherwise. Results remain when I replace **HILIT** with controls for industry classification based on Fama and French (1997). Appendix A provides detailed variable definitions and data sources.