

**TEMPTING TRADING OPPORTUNITIES  
AND LITIGATION CONSEQUENCES**

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**ACCEPTANCE**

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## ACKNOWLEDGEMENTS

By luck, and perhaps more than a bit of divine intervention, I entered the world a mere nine minutes after my best friend, and together we grew surrounded by people who love profoundly, laugh heartily, care greatly, share generously, support enthusiastically (if not forcefully), think deeply, and live passionately. As I navigated from native Hoosier to proud Chicagoan, my good fortune persisted. A mind-boggling metropolis morphed into home-sweet-home, work at a consulting firm challenged me in unforeseen (yet valuable) dimensions, colleagues became life-long friends, entertainment and activity swirled around me, and I again found myself flanked by incredible people who make my life more complete.

Given my family's penchant for scholarly activity and my own fondness for asking and answering oodles of questions, I surprised few when I chose to return to academia. Nevertheless, the choice to leave the city I love (and the irreplaceable people in it) proved difficult. Yet again, however, I crossed paths with extraordinary people when I returned to Indiana. I benefit enormously from interaction with Jim Wahlen, the chair of my dissertation committee. The other members of my committee (Daniel Beneish, Bob Jennings and Sreeni Kamma) also provide valuable support. In addition, though not on my committee, two people played special roles in my progress. Frank Acito worked tirelessly to, among other things, help me gain access to data required for this research. Jerry Salamon offered encouragement during the initial stages and continues to supply wise and well-timed words. Many other amazing colleagues and classmates contribute so much to my adventure here. Overall, I leave Indiana grateful for the experience.

I describe myself in the context of my family and friends because no effort of mine could rightly be portrayed as an individual endeavor. Toward that end, as I ready myself for yet another transition, I feel the overwhelming need to acknowledge my incomparable team. They continue to have faith in the thought that I am not a quitter and that I can do good (perhaps even great) things – despite the fact that I often offer no evidence that those

thoughts belong within the realm of reasonableness. I thank them all for being who and how they are, which is pretty darn spectacular. They give me so much of what is often the hardest to give – their time, love, energy and support. They make my journey possible; more important, they make it worthwhile.

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## **ABSTRACT**

Mary Brooke Billings

### **TEMPTING TRADING OPPORTUNITIES AND LITIGATION CONSEQUENCES**

This paper considers the conflicting disclosure and trading incentives faced by managers who become aware of negative earnings news. Prior work indicates that potential legal and reputational consequences provide managers with incentives to voluntarily disclose this news. Despite these incentives, managers' warnings of negative news occur relatively infrequently. Therefore, I predict and test whether the receipt of negative news provides some managers with incentives to delay disclosing negative news in order to trade to exploit information asymmetries. I find a negative relation between abnormal trade by insiders prior to the market's receipt of negative earnings news and the timeliness of disclosure. Further analysis indicates that abnormal trade results in increased litigation consequences for the firm but only limited repercussions for managers. That is, after controlling for a number of factors argued to influence settlement negotiations, I document a positive relation between lawsuit settlement amounts and measures of abnormal trade, but I find no relation between abnormal trade and repercussions (in the form of employment turnover or SEC action) to managers involved in the trading.

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## 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 timely disclosure lowers the likelihood of litigation and/or reduces lawsuit settlement amounts (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).<sup>1</sup> This paper explicitly considers the tradeoff between increased litigation consequences for the firm (and potentially its managers) and tempting trading opportunities for managers. Accordingly, 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 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 insiders' exploitation of information

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<sup>1</sup> 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.

asymmetries to the stream of literature examining managers' incentives to correct information asymmetries via negative news warnings.

Managers face both disclosure and trading decisions when they learn of negative news. While securities laws provide penalties for failing to disclose this news in a timely manner, tempting trading opportunities may cause some managers to delay disclosure. If managers trade profitably prior to disclosing the negative news, litigation consequences associated with delayed disclosure may increase, as shareholders' attorneys may 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 should have disclosed the adverse information earlier, managers may improve the shareholders' bargaining position by trading profitably prior to disclosure. Indeed, this behavior supplies evidence of the possession of an informational advantage. Yet, some managers may surrender to temptation because the firm (and its insurance carrier) may suffer most of the consequences. Thus, I also investigate whether managers' abnormal trade prior to negative information events that trigger lawsuit filings is associated with increased litigation costs for firms and for managers.

Although recent 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, particularly those that trigger the filing of shareholder lawsuits (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, Johnson et al. 2004). These studies typically compare the number of shares sold less shares purchased by insiders (i.e., net shares sold) during a period of increased information asymmetry to a similarly constructed measure of trading behavior for a prior period (or to the trading behavior of a control firm's insiders) and interpret larger net sales of shares to indicate that managers exploited information asymmetries. Because the lack of results in these studies may stem from the use of abnormal trading metrics that bias against finding

insider trading, I construct alternative measures of abnormal trade (based on trading proceeds and wealth changes) that capture more completely managers' trading activities during periods of information asymmetry.<sup>2</sup>

I investigate the trading and disclosure 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. Using the sample firms as their own controls and comparing trading behavior over equal windows, my findings indicate that, on average, managers do engage in abnormal trade prior to the disclosure of large, negative earnings news, including those disclosures that trigger the filing of a shareholder lawsuit. I then observe a negative relation between abnormal trade and the timeliness of managers' disclosures, which is consistent with some managers delaying disclosure in order to trade opportunistically.<sup>3</sup>

Given these findings, I next investigate whether this opportunistic behavior is associated with increased consequences for the firm or for its managers by focusing on a sample of 207 firms that faced shareholder lawsuits as a result of the disclosure of negative earnings news. After controlling for the severity of the impending news (i.e., estimated shareholder damages), firm size, insurance coverage, the presence of a restatement, and a number of other factors thought to influence settlement negotiations, I document a positive relation between settlement amounts and measures of abnormal trading proceeds. I, however, find limited evidence of a relation between lawsuit settlement amounts and trading metrics based on abnormal net shares traded, suggesting that the choice of trading metric is important. Furthermore, in contrast to Skinner (1997), I find no evidence to suggest that timely disclosure is associated with lower lawsuit settlement amounts. Finally, although I

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<sup>2</sup> Many prior studies measure trading behavior over unequal trading windows and/or omit (or improperly incorporate) certain types of value-increasing share transactions. For example, in some cases, trading metrics using net trades 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 cases where managers immediately sell shares acquired via option exercises. Indeed, these wealth-increasing transactions actually reduce the net shares traded. In other cases, studies omit derivative transactions from the analysis entirely. I discuss these (and other) concerns in Chapter 1.

<sup>3</sup> Following Skinner (1997), I measure disclosure timeliness by calculating the number of trading days between the end of the fiscal quarter and the date of disclosure.

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 opportunistic trading by managers of lawsuit firms. In addition, 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 contributes to the accounting literature in three ways. This study adds to the stream of research examining managers' disclosure incentives. By considering the conflicting disclosure and trading incentives faced by managers who become aware of negative earnings news, the empirical evidence presented in this paper suggests that some managers may choose to delay the disclosure of bad news even when they know that this behavior might result in increased litigation costs for the firm. This suggests that studies examining managers' disclosure behavior, particularly those considering litigation consequences and the effect of managers' disclosure decisions, should consider the role of trading incentives. For example, Field et al. (2005) use a simultaneous equations framework to examine the relation between early disclosure and litigation risk but do not consider managers' trading behavior in their analysis.

This paper also contributes to the literature investigating the degree to which insiders exploit information asymmetries. Prior studies fail to document that the insiders of defendant firms in shareholder lawsuits engage in abnormal trading prior to information revelations that trigger lawsuit filings (Jones and Weingram 1996, 2005, Bohn and Choi 1996, Niehaus and Roth 1999, Johnson et al. 2004). Consistent with findings on trading prior to bankruptcy filings (Seyhun and Bradley 1997) and fraud revelations (Summers and Sweeney 1998, Beneish 1999), I find that managers do indeed trade to exploit their informational advantages. As such, I highlight important research design choices that affect

studies using abnormal trading metrics to assess whether insiders exploit information asymmetries.

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 addresses whether the merits of the case are reflected in the value of the settlement (Alexander 1991, Seligman 1994, Grundfest 1994, 1995). After controlling for the degree to which insurance covers the settlement (using information hand-collected from the footnotes of firms' financial statements), this study identifies influential factors that various commentators do and do not 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. Chapter 1 provides background and discusses related literature. Chapter 2 supplies the hypotheses and research design. Chapter 3 describes the sample selection criteria and data collection, while Chapter 4 presents the analyses and results of the study. Finally, Chapter 5 concludes with a summary and discussion.

## CHAPTER 1: BACKGROUND AND LITERATURE REVIEW

### I. 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.<sup>4</sup> Settlement values for accounting-related cases climbed from an average of \$18.6 million over 1996-2000 to \$24.0 million in 2001 (PricewaterhouseCoopers 2003). Shareholder lawsuits under Rule 10b-5 and their associated resolution costs form the basis of the theory introduced by Skinner (1994).

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<sup>4</sup> 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).

## II. 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) indicates 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 suggests that warnings do not always deter, and in certain cases may even trigger, lawsuit filings.<sup>5</sup> 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

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<sup>5</sup> 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.



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 may suffer from problems of endogeneity.<sup>6</sup> 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 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.<sup>7</sup> His analyses, however, do not control for several factors thought to influence lawsuit settlement amounts: firm size,

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<sup>6</sup> 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.

<sup>7</sup> 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.

insurance coverage, and the presence of a restatement (Alexander 1991, Painter et al. 2002, Wu 2002, NERA 2006, PwC 2006).

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.<sup>8</sup> In summary, though evidence remains mixed, recent evidence indicates that timely disclosure lowers the likelihood of litigation and/or reduces lawsuit settlement amounts.

### **III. 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 impending negative earnings news, 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 profit personally by trading to exploit information asymmetries. If the potential trading profits reach sufficient levels, managers may engage in disclosure behavior that allows them to profit personally at the expense of shareholders.

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<sup>8</sup> The findings of Baginski et al. (2002) do not preclude reputational concerns from playing a role in disclosure. For example, it is not clear that managers in Canada are not "managing expectations" while managers in the U.S. are "managing earnings."

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.<sup>9</sup> 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.

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<sup>9</sup> 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 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 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 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 may strengthen the plaintiffs' bargaining position by trading profitably during the class period, which may signal managers' awareness of information asymmetries.

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 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).<sup>10</sup> Indeed, since the passage of the PSLRA, no case has gone to trial; all have either been settled or dismissed (Painter et al. 2002).

In summary, though 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 exercise the option to delay disclosure – even though this may increase the litigation costs incurred by the firm. Furthermore, the degree to which profitable trading behavior affects the litigation consequences for managers remains unclear.

#### **IV. 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, current work focuses on abnormal trade by insiders prior to large, negative corporate news events. Initial studies examining insiders’ behavior in

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<sup>10</sup> 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).

the context of both bankruptcy filings and fraud revelations failed to find evidence of abnormal trade (Loderer and Sheehan 1989, Gosnell et al. 1992, Dechow et al. 1996). Recent papers, however, employ alternative research designs and find that managers do exploit information asymmetries in these settings (Seyhun and Bradley 1997, Summers and Sweeney 1998, and Beneish 1999).

Using a larger sample of daily trading data and an alternative method to calculate abnormal trading activity that considers the timing and size of transactions, 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 size-matched 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 corporate news events, particularly those information events that trigger the filing of shareholder lawsuits (Jones and Weingram 1996, 2005, Dechow et al. 1996, Bohn and Choi 1996, Niehaus and Roth 1999, Johnson et al. 2004).<sup>11</sup> For example, the findings of Jones and Weingram (1996) suggest that insider trade does not influence litigation risk. Johnson et al. (2004) find a significant correlation between incidence of litigation and insider selling after the PSLRA, but do not find one between litigation and *abnormal* selling either before or after

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<sup>11</sup> 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.

the PSLRA. 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.

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 scarce. In addition, many studies examining litigation risk frequently do not consider trading behavior (e.g., Field et al. 2005). Next, I describe how the lack of results in prior studies may stem from limitations associated with the measurement of abnormal trade.

## **V. Limitations of current measures 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 of a control firm's insiders).<sup>12</sup> Prior literature interprets larger net sales to indicate that managers exploited "bad news" information asymmetries. Such measures, however, do not always incorporate appropriate benchmarks for "normal" trading and may fail to consider certain types of value-increasing transactions.

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.<sup>13</sup> Following Seyhun and

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<sup>12</sup> 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.

<sup>13</sup> Emphasizing the importance of selecting an appropriate control sample against which to compare trading behavior, Seyhun and Bradley (1997, 1993) 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."

Bradley (1997), I construct abnormal trading metrics by comparing measures of managers' trading proceeds during a period of alleged increased information asymmetry to measures of those same managers' trading proceeds during a prior (control) period. At the same time, studies that use the managers as their own controls potentially bias findings by comparing trading behavior measured over unequal trading windows (Niehaus and Roth 1999, Johnson et al. 2004). Because of these concerns, I calculate abnormal trading metrics by comparing trading over equal trading windows.

While 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. 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.

Niehaus and Roth (1999) limit 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). While 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.

Beneish (1999, 436) argues that Dechow et al. (1996) biased against findings 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 100 shares at \$10 per share to negate the open-market sale of 100 shares at \$100 per share, resulting in a downwardly biased trading metric.

The trading behavior of PRI Automation insiders illustrates the concerns over the choice of trading metric and the exclusion (or improper inclusion) of derivative transactions. The exercise of in-the-money options results in zero or even negative net shares traded for four of six insiders. Yet, all six PRI insiders enjoy positive trading proceeds (totaling \$22 million) during the class period. The trading behavior of insiders at IMP, Inc., as shown in Figure 2, offers additional evidence to support these concerns. In a complaint filed on October 1, 1996, IMP shareholders allege that:

“[Positive statements] enabled eight of IMP's insiders to engage in a remarkable burst of insider trading, selling 1,196,200 shares of their IMP stock at artificially inflated prices as high as \$22.31 per share between May 3, 1996 and May 24, 1996, pocketing over \$23.7 million for themselves -- with most of IMP's insiders unloading large portions of their holdings of IMP stock, immediately after exercising stock options to acquire the shares at just \$.81-\$2.25 per share -- thus obtaining huge, risk-free profits from insider trading.” (CV-96-20826 IMP, Inc. Class Action Complaint, 1)

In both of these cases, a measure of net shares traded fails to indicate the degree to which insiders profited during the period. I present my hypotheses and discuss how I address these methodological concerns in detail in the Chapter 2.

## CHAPTER 2: HYPOTHESES AND RESEARCH DESIGN

### I. Opportunistic trading behavior and disclosure timeliness

Taken collectively, the stream of literature examining disclosure behavior and legal liability suggests that managers 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:

***Hypothesis 1: 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 firm 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.

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

where:

- $N$  = the number of insiders;
- $K$  = the number of transactions by insider  $i$  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  $j$ .

I calculate a second trading metric,  $\Delta IW$ , that focuses on the degree to which managers' trading increases their overall wealth.

$$\Delta \text{Insider Wealth } (\Delta IW) = \sum_{i=1}^N \left[ \left( \text{CEHoldings}_i * \text{CEPrice}_i - \text{CBHoldings}_i * \text{CBPrice}_i \right) + \sum_{j=1}^K (\text{Sales}_{i,j} * \text{TRPrice}_{i,j} - \text{Purchases}_{i,j} * \text{TRPrice}_{i,j}) + \text{Offerings}_i \right], \quad (2)$$

where:

- CEPrice = the firm's stock price one day after the end of the class period.
- CBPrice = the firm's stock price at the beginning of the period.
- CEHoldings = the total amount of shares held by insider  $i$  at the end of the period.
- CBHoldings = the total amount of shares held by insider  $i$  at the beginning of the period.
- Offerings <sub>$i$</sub>  = the total dollar amount of cash proceeds from secondary offerings received by insider  $i$  during the period.

Finally, to facilitate comparison to prior studies, I 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. 2004) and a measure of net shares traded deflated by shares outstanding ( $NST\_SHS$ ) (Beneish and Vargus 2002).

$$\text{Net Shares Traded (NST)} = \sum_{i=1}^N \sum_{j=1}^K (\text{Sales}_{i,j} - \text{Purchases}_{i,j}). \quad (3)$$

$$\text{Net Shares Traded (NST\_SHS)} = \sum_{i=1}^N \sum_{j=1}^K (\text{Sales}_{i,j}/\text{SHS} - \text{Purchases}_{i,j}/\text{SHS}), \quad (4)$$

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 period. I denote abnormal trading metrics as  $ATP$ ,  $A\Delta IW$ ,  $ANST$ , 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).<sup>14</sup>

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

$$TIMELINESS_i = \alpha_0 + \alpha_1 TRADING_i + \alpha_2 VOLATILITY_i + \alpha_3 SHARE\_TURNOVER_i + \alpha_4 SIZE_i + \alpha_5 HILIT_i + \alpha_6 FALL_i + \varepsilon_i \quad (5)$$

In Equation (5), 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 (4). Given the methodological concerns discussed in Chapter 1, the predicted negative relation may not manifest when I include  $NST$  or  $NST\_SHS$  as the proxies for trading in the model.

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).

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<sup>14</sup> As discussed in the next Chapter, in analyses that focus on a subset of lawsuit firms that face trading allegations, I focus on the trading behavior of only those insiders named in the first identified complaint.

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, *MVE*, 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).<sup>15</sup> I expect positive coefficients for *HILIT* and *FALL* (i.e.,  $\alpha_5 > 0$ ,  $\alpha_6 > 0$ ), as they both indicate increased incentive 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  $\alpha_6$ . 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).

## **II. 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 management 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

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<sup>15</sup> 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.

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:

***Hypothesis 2: Abnormal trade by managers during the class period is associated with increased lawsuit settlement amounts***

I investigate my second hypothesis using the following regression model:

$$SETTLEMENT_i = \beta_0 + \beta_1 TRADING_i + \beta_2 TIMELINESS_i + \beta_3 DAMAGES_i + \beta_4 SIZE_i + \beta_5 RESTATEMENT_i + \beta_6 INSURANCE_i + \varepsilon_i \quad (6)$$

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 (4). As previously discussed, the predicted positive relation may not manifest when I include *NST* or *NST\_SHS* as the proxies for trading in the model. 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 *MVE* or the volume of shares traded during the class period (*VOLUME*). Related work suggests a positive relation between the presence of a restatement and litigation risk (Wu 2002, Johnson et al. 2004); consequently, 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.,  $\beta_5 > 0$ ).

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 include a variable (*INSURANCE*) that measures the percentage of the settlement amount covered by the firm's insurance carrier. In addition, I also estimate Equation (6) using the settlement amount net of insurance coverage (i.e.,  $SETTLEMENT * (1 - INSURANCE)$ ) as the dependent variable, while removing the insurance coverage as an independent variable from the regression.

### **III. 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.<sup>16</sup> 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:

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<sup>16</sup> Srinivasan (2005) also finds evidence of increased turnover for outside directors following the incidence of an accounting restatement.

***Hypothesis 3: 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. Niehaus and Roth (1999) provide evidence to suggest that CEOs of lawsuit firms face an increased probability of turnover when compared to the CEOs of similar size- and industry-matched firms. 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:

$$TURNOVER_i = \delta_0 + \delta_1 TRADING_i + \delta_2 CEO\_AGE_i + \delta_3 DAMAGES_i + \delta_4 SETTLEMENT_i + \delta_5 SIZE_i + \delta_6 RESTATEMENT_i + \varepsilon_i \quad (7)$$

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.,  $\delta_1 > 0$ ), 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*, and *SIZE* and a negative coefficient for *DAMAGES*.

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. 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 Lexis-Nexis and the SEC litigation database (<http://sec.gov>) to identify enforcement actions and monetary penalties that relate to defendant firms and their managers.

## CHAPTER 3: SAMPLE SELECTION AND DATA COLLECTION

### I. Sample selection

To test my first hypothesis regarding managers' disclosure and trading behavior, I assemble a sample of firms facing large, negative earnings news by starting with firms that suffered large price declines. As described in Panel A of Table 2, 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 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 related negative news triggering the drop in price, 19 firms suffering price drops surrounding the events of September 11, 2001, and 19 firms with small prices, 379 firms remain in the final negative earnings news sample ("negative news sample").

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 2, 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 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 3 depicts the effect of sample selection criteria on sample size and describes the ways in which the samples overlap.

## II. Data sources

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 (<http://sec.gov>).
- **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 (<http://sec.gov>). 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 (<http://sec.gov>).

### **III. Control variables**

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.

Table 1 supplies a list of the variables used in my analyses, their associated sources and the ways in which I confirm their accuracy.

## CHAPTER 4: ANALYSES AND RESULTS

### I. Descriptive statistics

Panel A of Table 3 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. 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 3 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 allegation 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 show significant 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 3, 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.

## **II. Abnormal trade and disclosure timeliness**

Panels A through D of Table 4 observe 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. 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, 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 profits 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 traded 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.

Given the findings of Panels B and C, Panel D of Table 4 partitions the firms based on both the timeliness of disclosure and incidence of litigation. If trading behavior influences lawsuit filings and if untimely managers enjoy more profitable 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/Untimely" managers, and "No Litigation/Timely" managers (shown in tests of differences numbers 1, 4, and 5 in Panel D). 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 Chapter 1, 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 4 investigates 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 26-month period) as well as the average monthly shares sold (in thousands) by insiders. Consistent with the evidence presented in Table 4, a comparison of the trading behavior exhibited in Panel A to the trading behavior exhibited in Panel B 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 5 replicates the analysis supplied in Figure 4 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.

Panels A and B of Table 5 supply the Pearson and Spearman correlations for the negative news sample as well as the litigation subsample. 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 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 5 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 first hypothesis, I estimate a regression with controls for other factors thought to influence the timeliness of managers’ disclosures. Table 6 provides the results from estimating the regression model described in Equation (5). The significantly



negative coefficients for the abnormal trading variables in all five of the regression models provide support for my first hypothesis. That is, more profitable abnormal trading behavior is associated with less timely disclosure of negative news. The decreased level of significance for *ANST* and *ANST\_SHS* (0.086 and 0.096, respectively) compared to that associated with *ATP* (0.010) offers support for the measurement concerns discussed in Chapter 1. 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.

### **III. 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 lawsuit settlements. Table 7 reports the results of estimating the regression model described in Equation (6). 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*, *AΔIW* and *ANST* in models 1 through 3 provide support for the theory that opportunistic trading behavior results in increased settlement costs for the firm. Consistent with the correlations observed in Panel C of Table 5, all four models imply that settlements increase with firm size, shareholder damages, and in the presence of an earnings restatement.

For robustness, Panel B of Table 7 presents the results of estimating Equation (6) using the settlement amount net of insurance coverage (i.e.,  $SETTLEMENT * (1 - INSURANCE)$ ) as the dependent variable, while removing the insurance coverage as an independent variable from the regression. Again, I observe a positive relation between the after-insurance amount of settlement and *ATP*. However, the alternative measures are all no longer significant at conventional levels.

Taken collectively, the evidence presented thus far suggests 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 of larger settlement amounts. The question remains: do managers suffer repercussions associated with their trading behavior?

#### **IV. 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 initial results (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.

Table 8 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).<sup>17</sup>

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

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<sup>17</sup> 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.

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 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).<sup>18</sup> 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

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<sup>18</sup> 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.

window of time between filing and settlement increases, my ability to detect relations in the data may decrease.

## CHAPTER 5: DISCUSSION AND CONCLUSION

Prior work indicates that potential legal and reputational consequences provide managers with incentives to voluntarily disclose negative news (Skinner 1994, Kasznik and Lev 1995, Skinner 1997, Baginski et al. 2002, Field et al. 2005). I observe the relative infrequency of managers' warnings despite the presence of these incentives and investigate whether profitable trading opportunities provide managers with incentives to delay/withhold this news. Drawing upon an established body of insider trading literature (Jaffe 1974, Seyhun 1986), I examine the relation between abnormal trading profit and the timeliness of managers' negative news disclosures. 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.

Consistent with the theory that the receipt of negative news provides managers with incentives to delay disclosure, I find a negative relation between abnormal trade by insiders prior to the market's receipt of negative earnings news and the timeliness of disclosure. Further analysis indicates that this behavior results in increased litigation consequences for the firm and limited repercussions for managers. That is, after controlling for a number of factors argued to influence settlement negotiations, I document a positive relation between settlement amounts and measures of abnormal trade, but I find no relation between abnormal trade and repercussions to managers involved in the trading. In addition, I find no evidence to suggest that managers suffer via monetary penalties and/or SEC action.

Taken collectively, my findings suggest that some managers delay negative news disclosures and profitably trade on information asymmetries. Consequently, future studies examining managers' disclosure behavior, particularly those considering the effect of disclosure on litigation consequences, should consider the role of managers' trading incentives.

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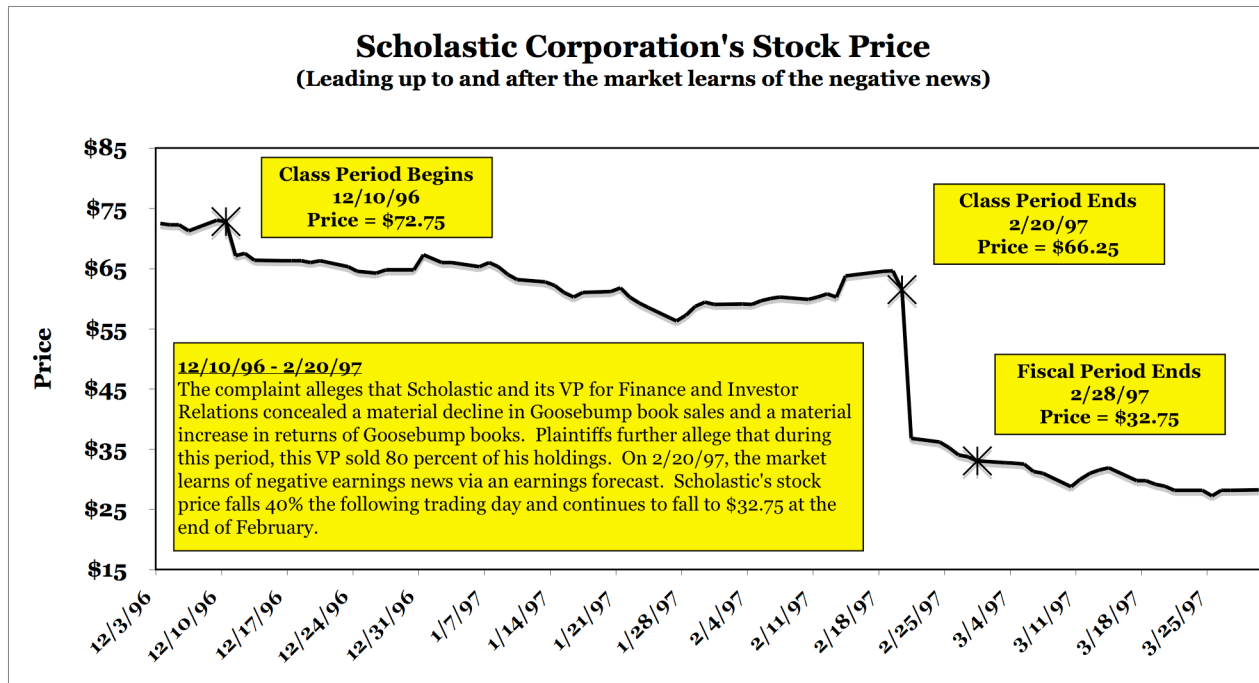
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**FIGURE 1**  
***Selling shares to reduce losses before the disclosure of negative news***

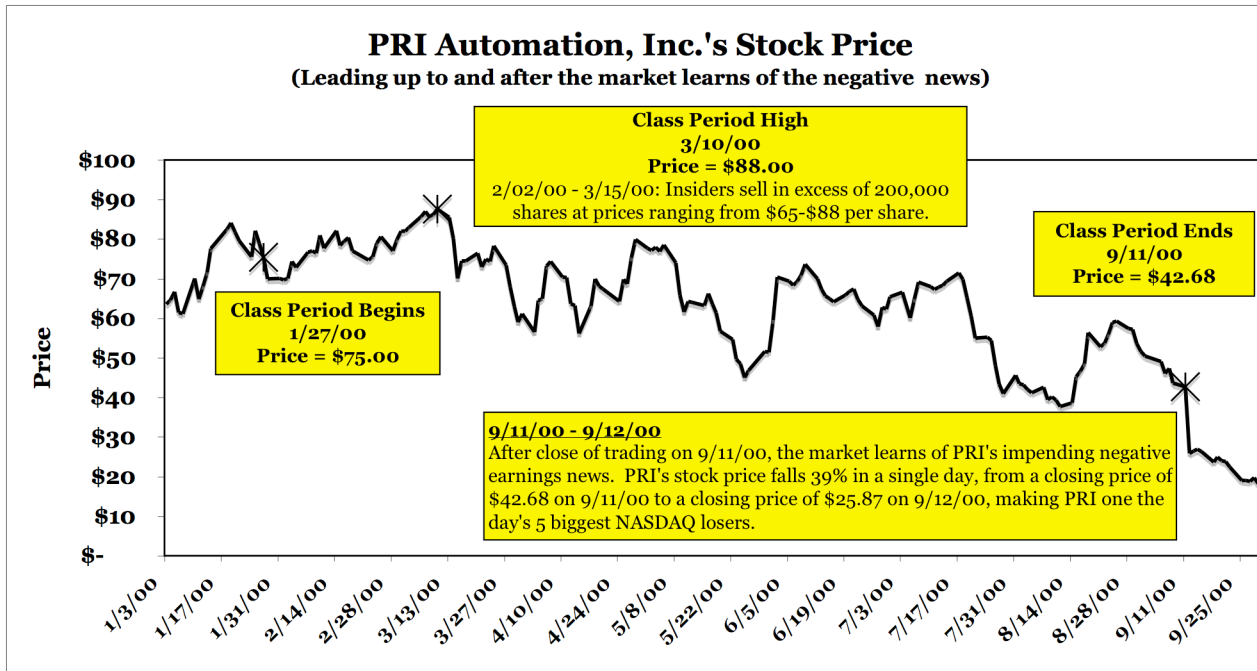
**Panel A – Scholastic Corporation**



**Note:** 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.

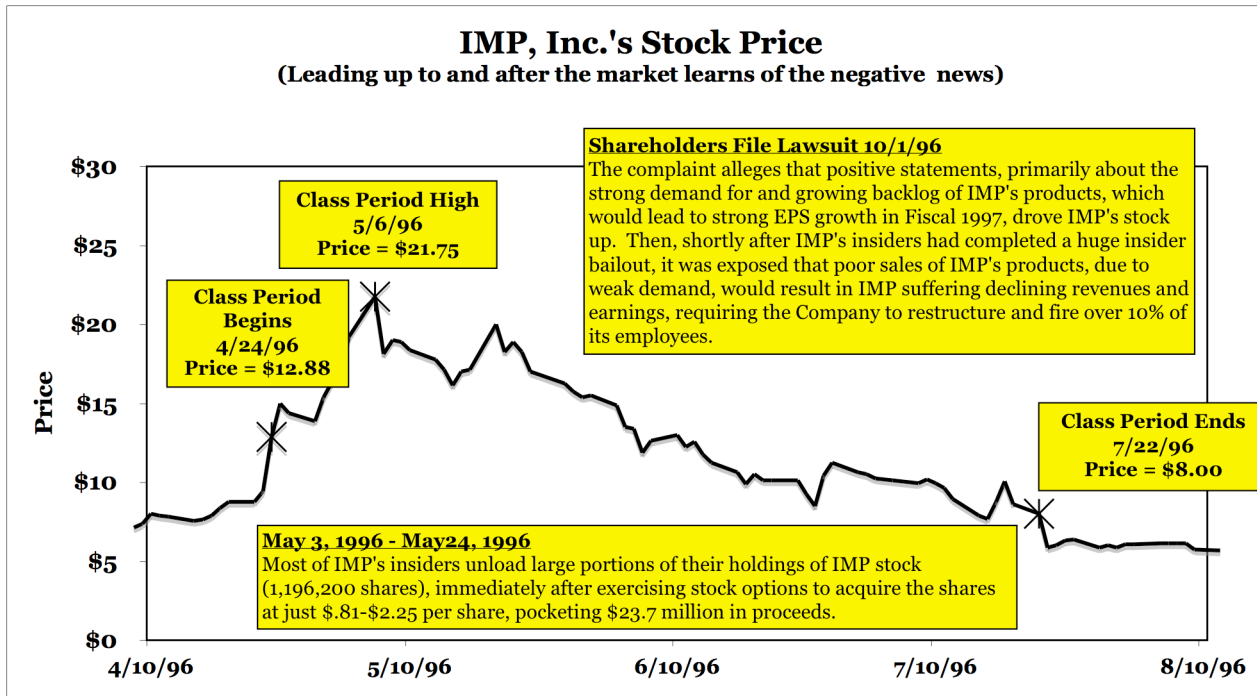
**FIGURE 1 (concluded)**  
***Selling shares to reduce losses before the disclosure of negative news***

**Panel B – PRI Automation**



**Note:** 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.

**FIGURE 2**  
**Profiting via option exercises before the disclosure of negative news**

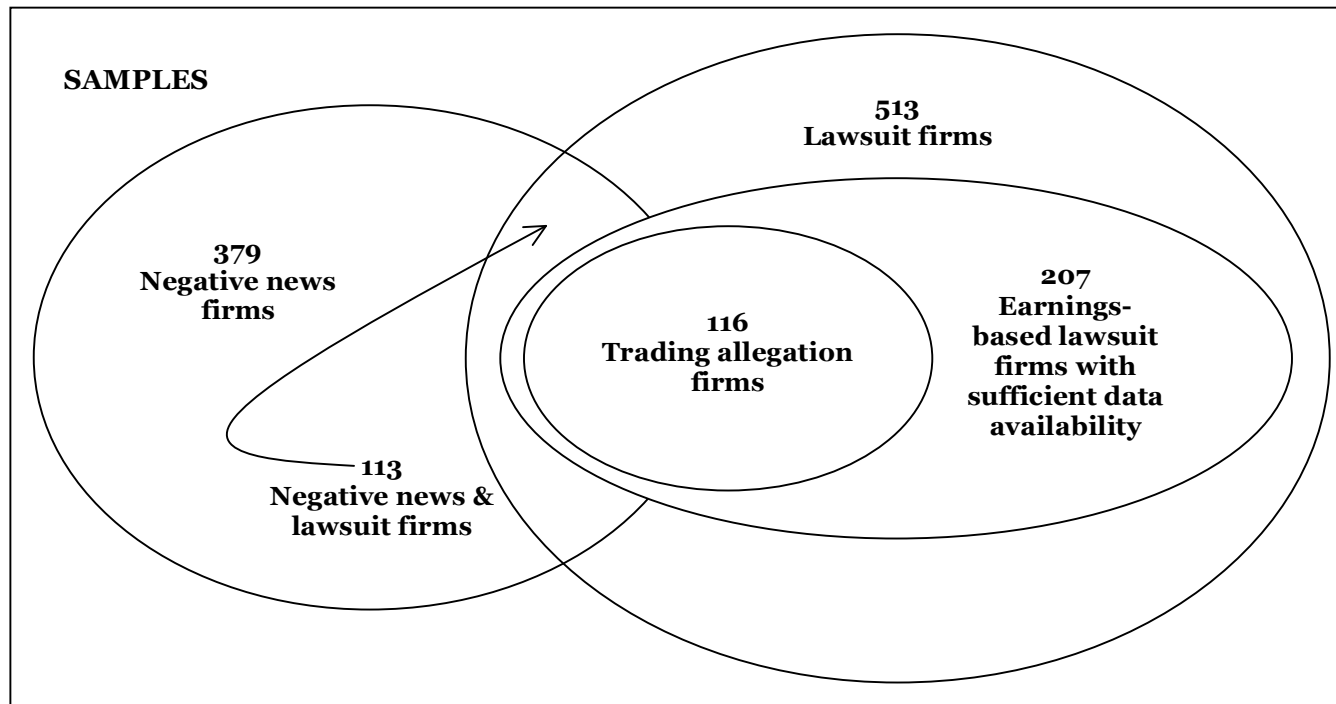


**FIGURE 2 (concluded)**  
***Profiting via option exercises before the disclosure of negative news***

Name	Position	Shares Sold	Sale Prices	Total Proceeds	% of Shares Owned Sold
Carrington	Chairman	659,956	\$17.44-\$22	\$13,032,944	100%
Vonderschmitt	Director	20,000	\$18.88-\$21	\$ 398,800	90%
Rassam	Controller & Chief Accounting Officer	52,662	\$17-\$21	\$ 1,105,074	100%
Isherwood	Senior VP, CFO, Secretary	141,890	\$20.86	\$ 2,959,825	100%
Grinfas	Director	133,000	\$20.44-\$22.31	\$ 2,783,005	28%
Crossley	VP-Administration	10,359	\$18.75-\$21	\$ 197,104	69%
Olson	Director	78,333	\$17.48	\$ 1,369,261	58%
Laws	Director & CEO	100,000	\$18.93	\$ 1,893,000	100%
		----- 1,196,200 -----		----- \$23,739,013 -----	

**Note:** In a complaint filed on October 1, 1996, IMP shareholders allege that: “[Positive statements] enabled eight of IMP's insiders to engage in a remarkable burst of insider trading, selling 1,196,200 shares of their IMP stock at artificially inflated prices as high as \$22.31 per share between May 3, 1996 and May 24, 1996, pocketing over \$23.7 million for themselves -- with most of IMP's insiders unloading large portions of their holdings of IMP stock, immediately after exercising stock options to acquire the shares at just \$.81-\$2.25 per share -- thus obtaining huge, risk-free profits from insider trading.” (CV-96-20826 IMP, Inc. Class Action Complaint, page 1)

**FIGURE 3**  
**Sample selection**

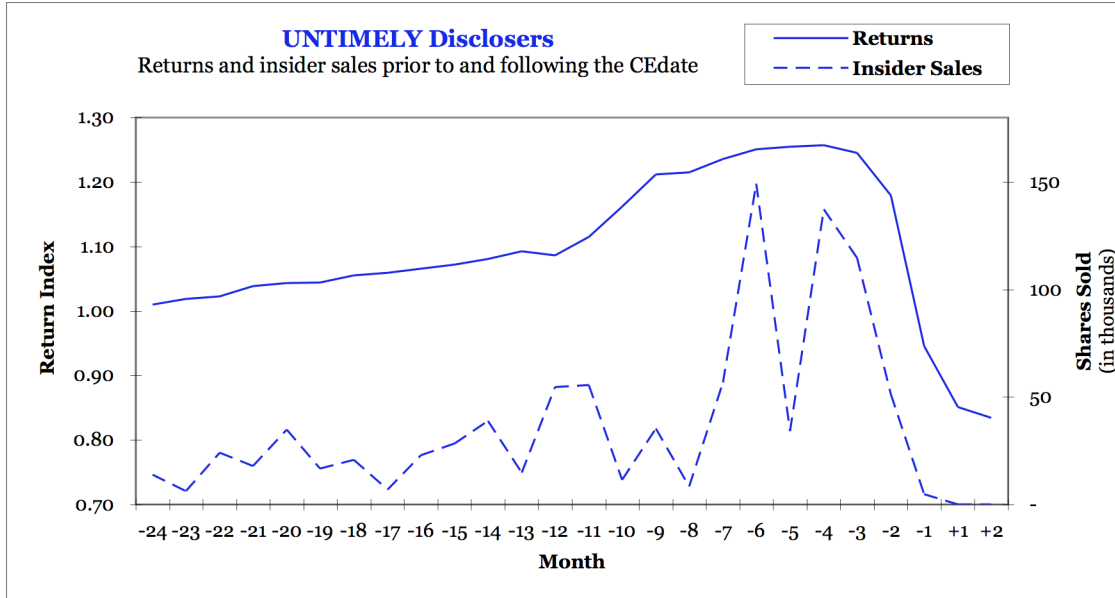


**Note:** I assemble a sample of firms facing large, negative earnings news by starting with firms that suffered large price declines. I begin by obtaining a list of CRSP firms suffering greater than a 35 percent drop in price in a 3-day window during 1996-2002. As detailed in Panel A of Table 2, data 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 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 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 4**  
**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 A – UNTIMELY disclosers**

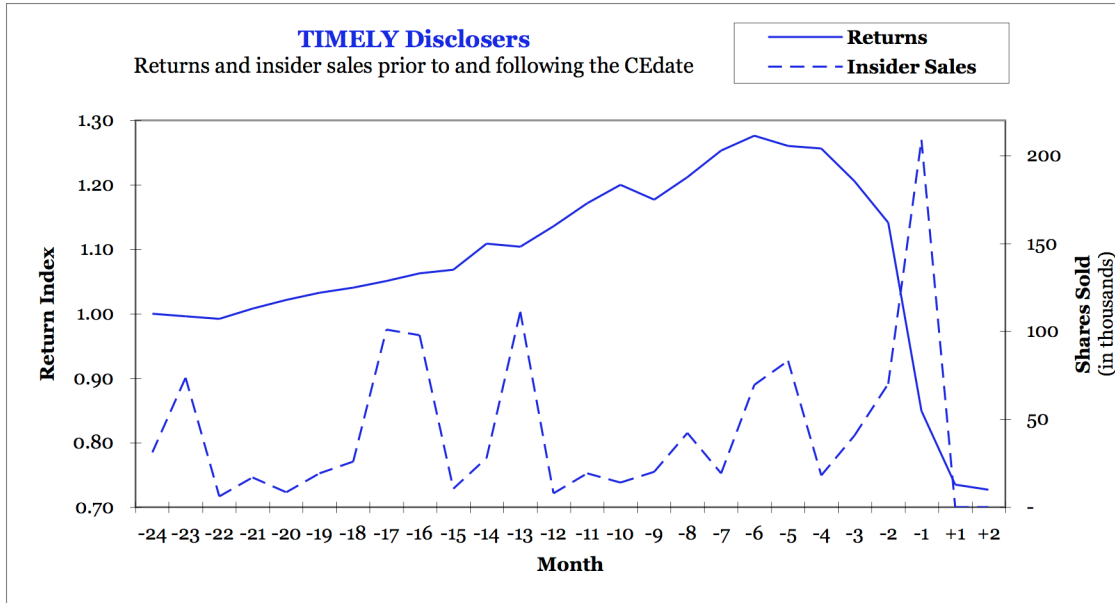


**Note:** Of the 207 earnings-based 10b-5 lawsuits examined in this study, 116 involve situations where shareholders (and their attorneys) use managers’ trading behavior to support allegations of delayed disclosure. I limit the above analysis to insiders of these 116 lawsuit firms facing trading allegations. 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 score 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 each portfolio (at the beginning of the 26-month period). I plot the average monthly shares sold (in thousands) by insiders named 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 (concluded)**  
**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)*

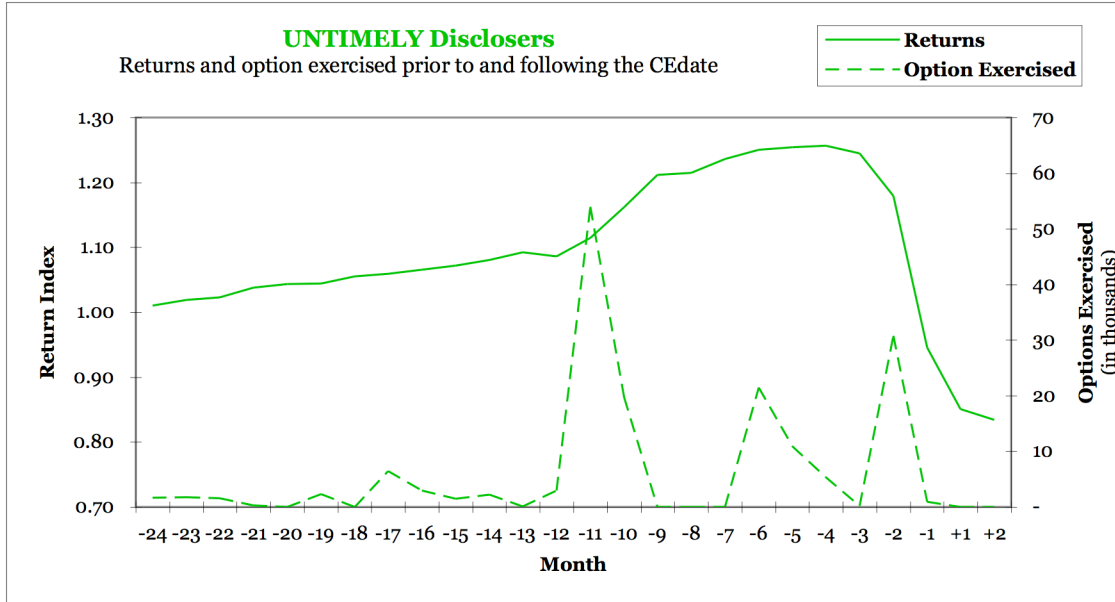
**Panel B – TIMELY disclosers**



**Note:** 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 score 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 each portfolio (at the beginning of the 26-month period). I plot the average monthly shares sold (in thousands) by insiders named 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 5**  
**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**



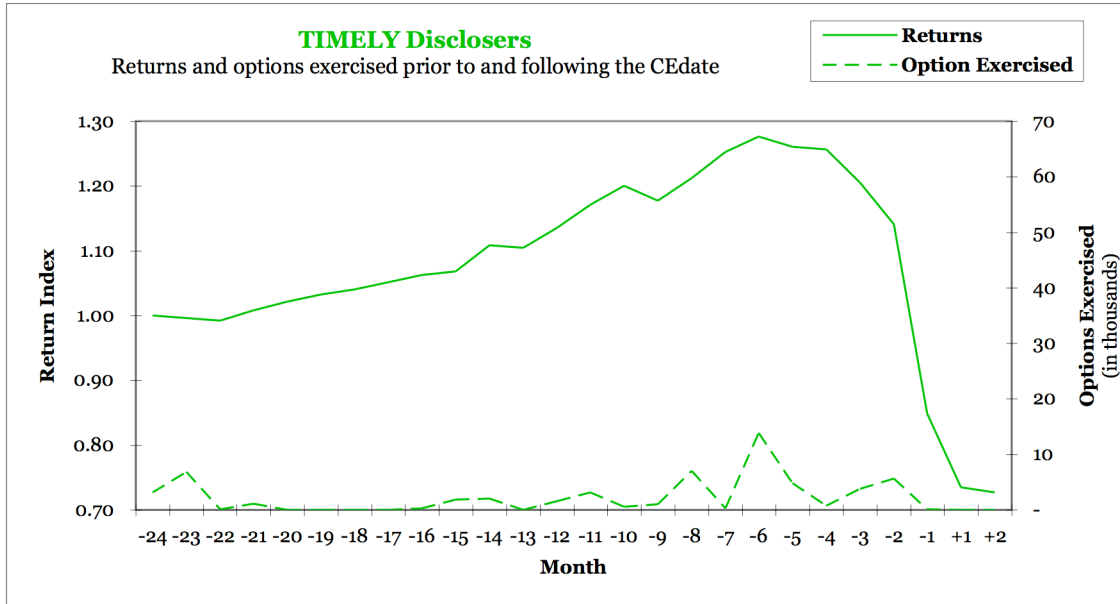
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**FIGURE 5 (concluded)**

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

**Panel B – TIMELY disclosers**



**Note:** 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 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 \$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.

**TABLE 1 – Variable definitions and data sources**

***Litigation Data***

I obtain relevant lawsuit information by hand-collecting data from a number of sources.

<b>Settlement</b>	= the dollar amount for which the lawsuit settles (in millions).	<ul style="list-style-type: none"> <li>• <b>PwC Securities Litigation Database:</b> 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 and stock).</li> <li>• <b>Stanford Securities Litigation Database:</b> I confirm class period and filing dates by checking the PwC dates to Stanford Law School’s Securities Class Action Clearinghouse database (<a href="http://securities.stanford.edu/">http://securities.stanford.edu/</a>). In addition, I augment the PwC sample with additional settled lawsuits.</li> <li>• <b>First Identified Complaint:</b> 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.</li> <li>• <b>SEC Filings:</b> 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 the year following the date of settlement (<a href="http://sec.gov">http://sec.gov</a>).</li> <li>• <b>Lexis-Nexis, Dow Jones News Service:</b> 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.</li> </ul>
<b>Insurance</b>	= the percentage of the settlement covered by director and officer liability insurance.	
<b>Cash</b>	= 1 if the defendant paid the entire settlement amount in cash; 0 otherwise.	
<b>CBdate</b>	= the date plaintiffs allege managers of the company made the first false or misleading statement(s) and/or failed to disclose material information.	
<b>CEdate</b>	= the date the market learns of the news that triggers the lawsuit filing.	
<b>Period</b>	= the number of days between the <b>CBdate</b> and the <b>CEdate</b> (i.e., the period of time used to calculate plaintiffs’ alleged damages).	
<b>ITAllege</b>	= 1 if the complaint or a press release by shareholders’ attorneys alleges insider trading as evidence of wrongdoing; 0 otherwise.	
<b>OfferAllege</b>	= 1 if the complaint or press releases by shareholders’ attorneys use the issuance of a secondary equity offering as evidence of wrongdoing; 0 otherwise.	
<b>Earnings</b>	= 1 if the nature of the lawsuit allegations are earnings-based; 0 otherwise (e.g., fraud or IPO-related).	

**TABLE 1 – Variable definitions and data sources**

<i>Disclosure Data</i>		
<b>Timeliness</b>	= 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 <b>Dow Jones News Service</b> . I obtain the report date of quarterly earnings as well as the date of the end of the fiscal quarter from <b>Compustat</b> . Following Skinner (1997), I calculate a measure of disclosure timeliness ( <b>Timeliness</b> ) 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.
<b>Timely</b>	= 1 if the firm’s disclosure timeliness score exceeds the median timeliness score for the sample; 0 otherwise. ( <b>Untimely</b> refers to observations where <b>Timely</b> =0.)	
<i>Insider Trading Data</i>		
<b>Trading Proceeds (TP)</b> <i>in millions</i>	$= \sum_{i=1}^N \sum_{j=1}^K (\text{Sales}_{i,j} * \text{TRPrice}_{i,j} - \text{Purchases}_{i,j} * \text{TRPrice}_{i,j}),$ <p>where <math>N</math> = the number of insiders, <math>K</math> = the number of transactions by insider <math>i</math> during the period, <b>Sales</b> = the number of shares sold in transaction <math>j</math>, <b>Purchases</b> = the number of shares purchased in transaction <math>j</math>, and <b>TRPrice</b> = the price at which insider <math>i</math> transacts (i.e., the exercise price, market price).</p>	<p>I obtain insider filing data from <b>Thomson Financial</b>. I calculate trading measures that incorporate the dollar value of the transactions: <b>Trading Proceeds (TP)</b>, <b>Wealth Saved (WS)</b>, and <b>ΔInsider Wealth (ΔIW)</b>.</p> <p>To facilitate comparison to prior work, I calculate a measure of net shares traded (<b>NST</b>) during the period (Summers and Sweeney 1998, Niehaus and Roth 1999, Johnson et al. 2004) and a measure of net shares traded deflated by shares outstanding (<b>NST_SHS</b>) (Beneish and Vargus 2002).</p>
<b>Wealth Saved (WS)</b> <i>in millions</i>	$= \sum_{i=1}^N \sum_{j=1}^K \text{Sales}_{i,j} * (\text{TRPrice}_{i,j} - \text{CEPrice}_{i,j}),$ <p>where <b>CEPrice</b> = the firm’s stock price one day after the end of the class period.</p>	I calculate <b>Abnormal</b> trading measures by subtracting the equivalent trading measures calculated over an equal trading window leading up to the <b>CBdate</b> or the date of the price drop (for non-lawsuit firms); I use a firm-specific trading window equal to the 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. Following prior work, I focus on the trading behavior of directors,

**TABLE 1 – Variable definitions and data sources**

<p><b>ΔInsider Wealth (ΔIW)</b> <i>in millions</i></p>	$= \sum_{i=1}^N \left[ \begin{aligned} & (CEHoldings_i * CEPrice_i - CBHoldings_i * CBPrice_i) + \\ & \sum_{j=1}^K (Sales_{i,j} * TRPrice_{i,j} - Purchases_{i,j} * TRPrice_{i,j}) \\ & + Offerings_i \end{aligned} \right],$ <p>where <b>CBPrice</b> = the firm’s stock price at the beginning of the class period, <b>CEHoldings</b> = the total amount of shares held by insider <i>i</i> at the end of the period, <b>CBHoldings</b> = the total amount of shares held by insider <i>i</i> at the beginning of the class period, and <b>Offerings</b> = the total dollar amount of cash proceeds from secondary offerings received by insider during the class period.</p>	<p>officers, presidents, and vice presidents. For the 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. I denote abnormal trading metrics as <b>ATP</b>, <b>AWS</b>, <b>ΔIW</b>, <b>ANST</b>, and <b>ANST_SHS</b>.</p>
<p><b>Net Shares Traded (NST)</b></p>	$= \sum_{i=1}^N \sum_{j=1}^K (Sales_{i,j} - Purchases_{i,j}).$	
<p><b>Deflated Net Shares Traded (NST_SHS)</b></p>	$= \sum_{i=1}^N \sum_{j=1}^K (Sales_{i,j}/SHS - Purchases_{i,j}/SHS),$ <p>where <b>SHS</b> = the shares outstanding on the date of transaction <i>j</i>.</p>	
<p><b>CEO Consequences Data</b></p>		
<p><b>CEO_Turn</b></p>	<p>= 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.</p>	

**TABLE 1 – Variable definitions and data sources**

<b>CEO_Leave</b>	= 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.	<p>I obtain executive compensation data, including management turnover, from the <b>Compustat Executive Compensation Database</b> and from the firms' <b>SEC filings</b>.</p> <ul style="list-style-type: none"> <li>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 (<a href="http://sec.gov">http://sec.gov</a>).</li> <li>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 (<a href="http://sec.gov">http://sec.gov</a>).</li> </ul>
<b>SEC</b>	= 1 if the firm/CEO faces an SEC enforcement action in addition to the class action lawsuit; 0 otherwise.	
<b>Penalty</b>	= 1 if the CEO faces monetary penalties relating to an SEC investigation or the funding of the settlement.	
<b>CEOage</b>	= the CEO's age during the year of the settlement.	
<b>RETage</b>	= 1 if the CEO's age exceeds 62 at the CEdate; 0 otherwise.	
<b>CEOown</b>	= the percentage ownership of the CEO.	
<b>High_Settle</b>	= 1 if the settlement exceeds the median settlement for the sample; 0 otherwise.	
<p><b>Control Variables</b></p> <p>In addition to the variables of interest, analyses include controls for insurance coverage (discussed in the litigation data section), restatements, audit quality, estimated shareholder damages (severity of the negative news), firm size (market value, volume traded), return volatility, share turnover, and high-litigation industries.</p>		
<b>Insurance</b>	= the percentage of the settlement covered by director and officer liability insurance.	<p>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 (<a href="http://sec.gov">http://sec.gov</a>).</p>

**TABLE 1 – Variable definitions and data sources**

<b>Restate</b>	= 1 if the firm restates earnings and/or announces a restatement in the year of the lawsuit filing; 0 otherwise.	In addition to searching <b>SEC filings</b> , I perform a full-text search of news articles via <b>Dow Jones News Service</b> (using the company name and keywords of “restate” and “restatement” in the year of the CEdat) to identify restatements.
<b>Auditor</b>	= 1 if the firm is audited by a “Big Six” (“Big Four”) auditor in the year of the CEDATE; 0 otherwise.	I hand-collect auditor information from the firms’ annual filings for the year of the CEdat from <b>SEC filings</b> ( <a href="http://sec.gov">http://sec.gov</a> ).
<b>Damages</b>	= $MVE * CReturn * [1 - (1 - Turnover)^X]$ , where MVE = the product of the number of common shares outstanding and the stock price ten days before the end of the class period, CReturn = the market-adjusted return cumulated over the class period, Turnover = the average ratio of trading volume to shares outstanding and the stock price ten days before the end of the class period, and X = the number of trading days in the class period. I use the natural log ( <b>LDamages</b> ) in regressions.	I obtain information required for damage calculations from <b>CRSP</b> . As with prior work, I extend the class period to include the trading day following the <b>CEdate</b> , as the information revelation often occurs at the close of a trading day.  Following Jones and Weingram (1996), Skinner (1997) uses a <b>simplified version of the proportional trading model (PTM)</b> to estimate shareholder damages ( <b>Damages</b> ). Specifically, he estimates damages as a product of the firm’s market capitalization just before the stock price decline that accompanies the revelations of bad news, the magnitude of that stock price decline, and an estimate of the proportion of shares that were bought/sold during the class period. He multiplies by minus one so that damages are defined positively. In addition, he sets damages to a minimum of \$1 million when <b>CReturn</b> is positive. For robustness, I calculate a second measure of shareholder damages ( <b>DDLOSS</b> ) based on the way in which attorneys calculate damages.
<b>Dollar Disclosure Loss (DDLOSS)</b>	= 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). I use the natural log ( <b>LDDLOSS</b> ) in regressions.	
<b>Fall</b>	= size-adjusted return during the 3-day window surrounding the negative news disclosure.	
<b>MVE</b>	= 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 ( <b>LMVE</b> ) 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 period following the alleged corrective disclosure. I adjust damage estimates to accommodate the “bounceback” provision of the PSLRA.

**TABLE 1 – Variable definitions and data sources**

<b>Volume</b>	= the volume of shares traded during the class period or during the year prior to the negative news disclosure (shown in millions).	
<b>Volatility</b>	= the standard deviation of size-adjusted, monthly returns in the year prior to the <b>CEdate</b> or the date of the negative news disclosure.	
<b>Share Turnover</b>	= the average ratio of trading volume to shares outstanding during the year prior to the <b>CEdate</b> or the date of the negative news disclosure.	
<b>Hilit_JNP</b>	= 1 if the firm is in SIC codes 3570-3577 or 7370-7379; 0 otherwise.	I obtain firms' SIC codes from <b>CRSP</b> . Johnson et al. (2004) limits analysis to 64 post-PSLRA lawsuits in the computer hardware (3570-3577) and computer software (7370-7379) industries during 1996-2000. I code a high-litigation variable ( <b>Hilit_JNP</b> ) to indicate firms in SIC codes 3570-3577 and 7370-7379. 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 ( <b>HILIT</b> ) to indicate firms in any of the above SIC codes.
<b>HILIT</b>	= 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 2**  
**Sample selection**

**Panel A – Negative news sample**

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

**Panel B – Lawsuit sample**

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

**Note:** 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 3 depicts the intersection of the samples.



**TABLE 3**  
*Descriptive statistics*

**Panel A – Negative news sample (n=379)**

<i>Variable</i>	<i>Mean</i>	<i>Median</i>	<i>Lower Quartile</i>	<i>Upper Quartile</i>	<i>Std. Dev.</i>
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 B – Negative news firms facing litigation (n=113)**

<i>Variable</i>	<i>Mean</i>	<i>Median</i>	<i>Lower Quartile</i>	<i>Upper Quartile</i>	<i>Std. Dev.</i>
FALL	-0.458 ***	-0.433 **	-0.398	-0.500	0.082
HILIT	0.513	1	0	1	0.502
MVE	3206.740 ***	1047.510 ***	603.202	3139.490	5448.790
VOLUME	252.083 ***	105.484 ***	51.701	319.549	330.607
VOLATILITY	0.229	0.193	0.139	0.267	0.171
SHARE TURNOVER	0.016	0.013 *	0.008	0.021	0.011
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.

**Note:** **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. Table 1 provides detailed variable definitions and data sources.

**TABLE 3 (concluded)**  
*Descriptive statistics*

**Panel C – Lawsuit sample (n=207)**

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

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

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

**Note:** **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; 0 otherwise. **AUDITOR** equals 1 if a “Big Six” (or “Big Four”) firm audits the firm in the year of the **CEdate**; 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 (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; 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. Table 1 provides detailed variable definitions and data sources.

**TABLE 4**  
***Evidence of abnormal trade***

**Panel A - Negative news sample**

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

**Panel B – Negative news sample partitioned by timeliness**

	<b><i>Timely</i></b>					<b><i>Untimely</i></b>					<b><i>Tests of Differences</i></b> <i>(p-values)</i>	
	<b>n</b>	<b>Mean</b>	<b>Med.</b>	<b>Q1</b>	<b>Q3</b>	<b>n</b>	<b>Mean</b>	<b>Med.</b>	<b>Q1</b>	<b>Q3</b>	<b>Mean</b>	<b>Med.</b>
ATP	187	8.887	1.586	-4.658	12.408	192	14.012	1.930	-0.443	23.162	0.04	0.32
ANST	187	0.156	0.033	-0.145	0.346	192	0.290	0.065	-0.061	0.487	0.09	0.32
ANST_SHS	187	0.3%	0.1%	-0.4%	1.4%	192	1.3%	0.2%	-0.2%	1.7%	0.06	0.07

**TABLE 4 (continued)**  
***Evidence of abnormal trade***

**Panel C – Lawsuit sample partitioned by trading allegations**

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

**TABLE 4 (continued)**  
***Evidence of abnormal trade***

**Panel D – Negative news sample partitioned by litigation and timeliness**

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

**TABLE 4 (concluded)**  
***Evidence of abnormal trade***

***Tests of Differences***

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

**Note:** 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; 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. Table 1 provides detailed variable definitions and data sources.

**TABLE 5**  
**Pearson (Spearman) correlation coefficients above (below) the diagonal**

**Panel A – Negative news sample (n=379)**

	FALL	LITIGATION	HILIT	MVE	VOLUME	VOLATILITY	SHARE TURNOVER	TIMELINESS	ATP	ANST	ANST_SHS
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 *
ATP	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.

**Note:** **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 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. Table 1 provides detailed variable definitions and data sources.

**TABLE 5 (continued)**  
**Pearson (Spearman) correlation coefficients above (below) the diagonal**

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

	FALL	HILIT	MVE	VOLUME	VOLATILITY	SHARE TURNOVER	TIMELINESS	ATP	ANST	ANST_SHS
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 *
ATP	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.

**Note:** **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); 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 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. Table 1 provides detailed variable definitions and data sources.

**TABLE 5 (concluded)**  
**Pearson (Spearman) correlation coefficients above (below) the diagonal**

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

	SETTLE	INSURANCE	DDLOSS	RESTATE	AUDITOR	HILIT	MVE	VOLUME	VOLATILITY	SHARE TURNOVER	TIMELINESS	ATP	ANST	ANST_SHS	CEO TURNOVER	CEO LEAVE
<b>SETTLE</b>		-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 *
<b>INSURANCE</b>	-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 **
<b>DDLOSS</b>	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 *
<b>RESTATE</b>	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 **
<b>AUDITOR</b>	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
<b>HILIT</b>	-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
<b>MVE</b>	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
<b>VOLUME</b>	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
<b>VOLATILITY</b>	-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
<b>SHARE TURNOVER</b>	-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
<b>TIMELINESS</b>	-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
<b>ATP</b>	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
<b>ANST</b>	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
<b>ANST_SHS</b>	-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
<b>CEO TURNOVER</b>	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 ***
<b>CEO LEAVE</b>	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.*

**Note:** **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; 0 otherwise. **AUDITOR** equals 1 if a “Big Six” (or “Big Four”) firm audits the firm in the year of the **CEdate**; 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 (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; 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. **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. Table 1 provides detailed variable definitions and data sources.

**TABLE 6**  
**Disclosure timeliness and abnormal trade**

$$TIMELINESS_i = \alpha_0 + \alpha_1 TRADING_i + \alpha_2 VOLATILITY_i + \alpha_3 SHARE\_TURNOVER_i + \alpha_4 SIZE_i + \alpha_5 HILIT_i + \alpha_6 FALL_i + \varepsilon_i.$$

	Predicted Relation	Model 1		Model 2		Model 3		Model 4		Model 5	
		Coeff. Est.	Pr >  t	Coeff. Est.	Pr >  t	Coeff. Est.	Pr >  t	Coeff. Est.	Pr >  t	Coeff. Est.	Pr >  t
<b>Intercept</b>		-18.31	0.198	-16.11	0.3411	-15.78	0.267	-13.55	0.340	-21.37	0.421
<b>Trading</b>											
ATP	-	<b>-0.13</b>	<b>0.010</b> ***	--	--	--	--	--	--	<b>-0.20</b>	<b>0.012</b> **
AAIW	-	--	--	<b>-0.09</b>	<b>0.041</b> **	--	--	--	--	--	--
ANST	-	--	--	--	--	<b>-3.05</b>	<b>0.086</b> *	--	--	--	--
ANST_SHS	-	--	--	--	--	--	--	<b>-57.05</b>	<b>0.096</b> *	--	--
<b>Volatility</b>	-	<b>-20.57</b>	<b>0.005</b> ***	<b>-21.48</b>	<b>0.005</b> ***	<b>-20.96</b>	<b>0.004</b> ***	<b>-21.14</b>	<b>0.004</b> ***	<b>30.30</b>	0.189
<b>Share turnover</b>	+	<b>360.29</b>	<b>0.019</b> **	<b>356.89</b>	<b>0.024</b> **	<b>333.82</b>	<b>0.031</b> **	<b>334.48</b>	<b>0.031</b> **	-62.44	0.859
<b>Size (LMVE)</b>	+	2.80	0.406	2.23	0.495	1.99	0.553	1.23	0.713	-2.82	0.644
<b>HILIT</b>	+	0.51	0.887	0.31	0.776	0.28	0.939	0.06	0.986	-6.70	0.328
<b>Fall</b>	+	21.88	0.338	21.75	0.453	21.24	0.355	21.13	0.358	<b>64.47</b>	<b>0.102</b>
<b>Adj. R<sup>2</sup></b>			3.40%		2.82%		2.42%		2.37%		3.89%

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

**Note:** **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 models 1 through 4 using the full negative news sample (n=379) and model 5 using the 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); 0 otherwise. **FALL** equals the size-adjusted return during the 3-day window surrounding the negative news disclosure. Results remain unchanged when I replace **HILIT** with controls for industry classification based on Fama and French (1997). Table 1 provides detailed variable definitions and data sources.

**TABLE 7**  
**Settlement regressions**

**Panel A – Settlement**

$$SETTLEMENT_i = \beta_0 + \beta_1 TRADING_i + \beta_2 TIMELINESS_i + \beta_3 DAMAGES_i + \beta_4 SIZE_i + \beta_5 RESTATEMENT_i + \beta_6 INSURANCE_i + \varepsilon_i$$

	<i>Predicted Relation</i>	<i>Model</i>			
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<b>Intercept</b>		-3.87 (0.78)	-5.21 (0.65)	-2.68 (0.85)	-7.50 (0.59)
<b>Trading</b>					
<b>ATP</b>	+	0.15 (0.01***)	--	--	--
<b>ΔΔIW</b>	+	--	0.09 (0.05**)	--	--
<b>ANST</b>	+	--	--	3.31 (0.05**)	--
<b>ANST_SHS</b>	+	--	--	--	40.85 (0.48)
<b>TIMELINESS</b>	-	-0.03 (0.72)	-0.04 (0.67)	-0.01 (0.87)	-0.03 (0.70)
<b>LDDLOSS</b>	+	7.23 (0.10*)	9.13 (0.05**)	6.87 (0.16)	8.62 (0.08*)
<b>VOLUME</b>	+	0.04 (0.00***)	0.05 (0.00***)	0.05 (0.00***)	0.05 (0.00***)
<b>RESTATEMENT</b>	+	14.35 (0.00***)	14.13 (0.00***)	13.68 (0.01***)	14.13 (0.01***)
<b>INSURANCE</b>	-	-21.88 (0.00***)	-20.4 (0.00***)	-21.86 (0.00***)	-21.07 (0.00***)
<b>Adj. R<sup>2</sup></b>		45.8%	45.6%	45.4%	43.8%

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

**Note:** SETTLEMENT equals the dollar amount for which the lawsuit settles (in millions). 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 (shown in millions); I use the log (LDDLOSS) in the regressions. VOLUME equals the volume of shares traded during the year prior to the negative news disclosure (shown in millions). RESTATEMENT equals 1 if the firm restates earnings and/or announces a restatement in the year of the lawsuit filing; 0 otherwise. INSURANCE equals the percentage of the settlement covered by director and officer liability insurance. Table 1 provides detailed variable definitions and data sources. Results remain unchanged when I include a control for high-litigation industries (HILIT or HILIT\_JNP) or when I include MVE as the proxy for size in the regressions.

**TABLE 7 (concluded)**  
**Settlement regressions**

**Panel B – Settlement net of insurance coverage**

$$SETTLEMENT * (1 - INSURANCE) = \beta_0 + \beta_1 TRADING_i + \beta_2 TIMELINESS_i + \beta_3 DAMAGES_i + \beta_4 SIZE_i + \beta_5 RESTATEMENT_i + \varepsilon_i$$

	<b>Predicted Relation</b>	<b>Model</b>			
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Intercept</b>		-0.86 (0.94)	-3.34 (0.79)	-1.05 (0.93)	-3.05 (0.81)
<b>Trading</b>					
<b>ATP</b>	+	0.12 (0.04**)	--	--	--
<b>ΔIW</b>	+	--	0.06 (0.11)	--	--
<b>ANST</b>	+	--	--	1.72 (0.29)	--
<b>ANST_SHS</b>	+	--	--	--	-10.50 (0.42)
<b>TIMELINESS</b>	-	0.02 (0.82)	0.01 (0.45)	0.02 (0.78)	0.01 (0.94)
<b>LDDLOSS</b>	+	-1.22 (0.39)	0.37 (0.45)	-0.95 (0.42)	0.11 (0.46)
<b>VOLUME</b>	+	0.03 (0.00***)	0.04 (0.00***)	0.03 (0.00***)	0.04 (0.00***)
<b>RESTATEMENT</b>	+	12.15 (0.01***)	11.65 (0.01***)	11.65 (0.01***)	11.69 (0.01***)
<b>Adj. R<sup>2</sup></b>		24.9%	22.8%	23.4%	22.7%

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

**Note:** **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 (shown in millions); I use the log (**LDDLOSS**) in the regressions. **VOLUME** equals the volume of shares traded during the year prior to the negative news disclosure (shown in millions). **RESTATEMENT** equals 1 if the firm restates earnings and/or announces a restatement in the year of the lawsuit filing; 0 otherwise. Table 1 provides detailed variable definitions and data sources. Results remain unchanged when I include a control for high-litigation industries (**HILIT** or **HILIT\_JNP**) or when I include **MVE** as the proxy for size in the regressions.



**TABLE 8**  
**Logistic regressions examining CEO turnover**

$$TURNOVER_i = \delta_0 + \delta_1 TRADING_i + \delta_2 CEO\_AGE_i + \delta_3 DAMAGES_i + \delta_4 SETTLEMENT_i + \delta_5 SIZE_i + \delta_6 RESTATEMENT_i + \varepsilon_i$$

**Panel A – Dependent variable = CEO\_TURNOVER**

	<i>Predicted Relation</i>	<i>Model</i>		
		<i>1</i>	<i>2</i>	<i>3</i>
<b>Intercept</b>		-1.82 (0.26)	-2.05 (0.23)	-2.63 (0.11)
<b>Trading</b>				
<b>ATP</b>	+	0.00 (0.41)	--	--
<b>ANST</b>	+	--	0.0 (0.16)	--
<b>ANST_SHS</b>	+	--	--	1.75 (0.42)
<b>CEO AGE</b>	+	0.01 (0.33)	0.01 (0.34)	0.01 (0.45)
<b>LDDLOSS</b>	+	0.89 (0.11)	1.09 (0.08*)	0.88 (0.12)
<b>SETTLEMENT</b>	+	0.02 (0.06*)	0.02 (0.08*)	0.02 (0.44)
<b>LMVE</b>	-	-0.59 (0.21)	-0.73 (0.16)	-0.24 (0.37)
<b>RESTATEMENT</b>	+	1.33 (0.001***)	1.47 (0.004***)	1.20 (0.02**)
<b>HILIT</b>	-	0.61 (0.11)	0.54 (0.14)	0.28 (0.26)
<b>Percent Concordant</b>		71.3	74.0	67.5
<b>Likelihood Ratio</b>		15.9	17.0	10.3
<b>Pr &gt; ChiSq</b>		(0.03)	(0.02)	(0.17)

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

**Note:** **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 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. **CEO\_AGE** equals the CEO's age during the year of the settlement. **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); I use the log (**LDDLOSS**) in the 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 (shown 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. **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 unchanged when I replace **HILIT** with controls for industry classification based on Fama and French (1997). Table 1 provides detailed variable definitions and data sources.

**TABLE 8 (concluded)**  
**Logistic regressions examining CEO turnover**

$$TURNOVER_i = \delta_0 + \delta_1 TRADING_i + \delta_2 CEO\_AGE_i + \delta_3 DAMAGES_i + \delta_4 SETTLEMENT_i + \delta_5 SIZE_i + \delta_6 RESTATEMENT_i + \varepsilon_i$$

**Panel B – Dependent variable = CEO\_LEAVE**

	<i>Predicted Relation</i>	<i>Model</i>		
		<b>1</b>	<b>2</b>	<b>3</b>
<b>Intercept</b>		-1.44 (0.44)	-1.90 (0.32)	-2.56 (0.15)
<b>Trading</b>				
<b>ATP</b>	+	0.001 (0.30)	--	--
<b>ANST</b>	+	--	0.0002 (0.30)	--
<b>ANST_SHS</b>	+	--	--	5.45 (0.26)
<b>CEO AGE</b>	+	0.05 (0.02**)	0.05 (0.03**)	0.03 (0.06*)
<b>LDDLOSS</b>	+	1.44 (0.06*)	1.55 (0.05**)	1.46 (0.04**)
<b>SETTLEMENT</b>	+	0.03 (0.03**)	0.03 (0.04**)	0.002 (0.37)
<b>LMVE</b>	-	-0.94 (0.11)	-0.90 (0.14)	-0.54 (0.23)
<b>RESTATEMENT</b>	+	1.26 (0.02**)	1.25 (0.03**)	1.07 (0.03**)
<b>HILIT</b>	-	0.70 (0.12)	0.75 (0.10*)	0.22 (0.33)
<b>Percent Concordant</b>		76.3	76.6	76.4
<b>Likelihood Ratio</b>		19.6	19.5	12.3
<b>Pr &gt; ChiSq</b>		(0.01)	(0.007)	(0.09)

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

**Note:** **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 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. **CEO\_AGE** equals the CEO's age during the year of the settlement. **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); I use the log (**LDDLOSS**) in the 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 (shown 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. **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 unchanged when I replace **HILIT** with controls for industry classification based on Fama and French (1997). Table 1 provides detailed variable definitions and data sources.

## VITA

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**EDUCATION**

**Indiana University**, Bloomington, IN, Kelley School of Business  
Ph.D. in Business. July 2007.  
Major field: Accounting. Minor field: Finance.

**Dissertation:** Tempting Trading Opportunities and Litigation Consequences

**Committee:** James Wahlen (Chair), Messod Daniel Beneish, Robert Jennings, and Sreenivas Kamma.

**Indiana University**, Bloomington, IN, Kelley School of Business  
Master of Business. May 2006.  
Bachelor of Science, Finance. May 1998.  
GPA: 4.0/4.0 (*Highest Distinction*).

1998 General Joseph O. Butcher Award winner – This award honors the top student from Indiana University’s graduating class, based on GPA, curriculum rigor and campus involvement.

**WORK EXPERIENCE**

**New York University**, Stern School of Business  
Assistant Professor of Accounting, 2007 to current.

**Indiana University (Bloomington, IN)**  
Research Assistant, 2002 – 2007.

*Senior Consultant*  
June 2000 –  
June 2002

**PricewaterhouseCoopers LLP (Chicago, IL)**  
*Financial Advisory Services*  
Dispute Analysis and Investigations Group

*Staff Consultant*  
August 1998 –  
June 2000

Performed financial and accounting analyses in the context of commercial disputes primarily involving merger and acquisition purchase price, general accounting disputes, breach of contract, fraud and embezzlement, insurance claims, theft of trade secrets, patent infringement and wrongful termination. Assisted arbitrators in the resolution of disputes arising from purchase/sale transactions. Consulted with clients in formulating positions and in preparing statements submitted in arbitration and court proceedings. Researched relevant accounting literature and assembled presentations given at conferences and law firms.

**RESEARCH INTERESTS**

**Financial Accounting and Capital Markets**

- Securities litigation and insider trading
- The degree and nature of institutional investors’ sophistication
- Voluntary disclosure and information asymmetries

**Mary Brooke Billings**  
**New York University**

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**WORKING  
PAPERS  
&**

**REFEREED  
PUBLICATIONS**

Billings, M.B. (2007, July). Tempting Trading Opportunities and Litigation Consequences. *Working paper from my dissertation*, Indiana University.

Beneish, M.D., Billings, M.B., and Hodder, L.D. (2007, May). Internal Control Weaknesses and Information Uncertainty. *Working paper*, Indiana University. (I presented this paper at the 2005 Conference on Financial Economics and Accounting; it is currently under its third round of review.)

Billings, M.B., and Billings, A.C. (2003, November). Formula for a Sell-out House: Factors that Influence the Marketing of Men's Collegiate Basketball Teams. *North American Society for the Sociology of Sport*. Montreal, Canada.

**WORKS IN  
PROGRESS**

Billings, M.B. Managers' Decisions to Warn of Negative Earnings News. (write-up stage from my dissertation)

Billings, M.B. Did Regulation Fair Disclosure Differentially Affect Transient Institutions' Exploitation of Earnings-based and Accruals-based Anomalies? (data- analysis stage)

Billings, M.B., and M.F. Lewis. Perceived Managerial Opportunism and Litigation Consequences in the IPO Setting. (data-analysis stage)

**INVITED  
PRESENTATIONS**

Emory University – March 2007

Indiana University – February 2005, December 2006

New York University – March 2007

University of Chicago – March 2007

University of Georgia – February 2007

University of Illinois-Chicago – April 2007

University of Michigan – February 2007

University of North Carolina at Chapel Hill, Conference on Financial Economics and Accounting – November 2005

University of Notre Dame – February 2007

University of Wisconsin – March 2007

**PRESS  
CITATIONS**

My work on internal control weakness disclosures with Daniel Beneish and Leslie Hodder has been cited in the popular press by:

*WebCPA.com* (December 2, 2005)

*The Sarbanes-Oxley Compliance Journal* (January 3, 2006)

*CFO.com* (February 2, 2006)

**HONORS**

William Panschar Undergraduate Teaching Award (2006)

Invited participant at the FASB's Doctoral Student Program (2006)

AAA/Deloitte/J. Michael Cook Doct. Consortium Fellowship (2005)

Indiana University Doctoral Program Fellowship (2002)

**Mary Brooke Billings**  
**New York University**

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**HONORS**  
**(continued)**

General Joseph O. Butcher Award (1998)  
Indiana University Senior Scholastic Award (1998)  
Rawles Key Award Finalist (1997)  
Distinguished Alumni Service Scholarship (1997)  
Hoosier Scholar Award (1994)

**CONFERENCES**

New York University Summer Camp (2007)  
Financial Accounting Standards Board's Doctoral Student Program (2006)  
AAA FARS Mid-Year Meeting (2006)  
Conference on Financial Economics and Accounting (2005 – presenter)  
AAA Doctoral Consortium, Lake Tahoe (2005)  
Conference on Financial Economics and Accounting (2003)

**SERVICE & AFFILIATIONS**

Ad Hoc Reviewer, AAA FARS Mid-Year Meeting (2005)  
Member of the AAA, Financial Accounting and Reporting Section  
Member of Beta Gamma Sigma

**TEACHING**

*Interests*

***Financial Accounting***

Intermediate financial accounting, financial statement analysis, and financial accounting theory

*Experience*

***Indiana University – Intro. to Financial Accounting***

Full responsibility (5 sections), Discussion sessions (6 sections)

- Won the William Panschar Undergraduate Teaching Award for Associate Instructors in 2006. One of the major teaching awards of the Kelley School of Business, this award recognizes one instructor annually.
- Developed comprehensive course packet for my own and other instructors' use.
- Received overall mean evaluation scores of 6.6 on a 7.0 scale while awarding an average GPA of 2.3 on a 4.0 scale.

<b>Mean Evaluation Scores</b>	
11 Sections with total enrollment of 452 students	
Overall Instructor Rating	6.6
Dealt with students fairly and impartially	6.6
Meaningfully used examples and applications	6.4
Showed a genuine interest in students	6.6
Arrived well-prepared for class meetings	6.7
Displayed enthusiasm in subject matter	6.6
<i>Students answer the evaluation questions on a seven-point scale. To calculate mean ratings, I compute weighted-average scores using the individual section means and number of evaluations completed per section.</i>	

**TEACHING  
(continued)**

***General Business Courses***

- Developed and taught nationwide training course to PwC new hires in the Financial Advisory Services group in August of 2001.
- Developed and taught nationwide training course for PwC interns (1999 – 2001).
- Served as a teaching assistant for a Computer in Business course for four semesters (1996 – 1998) as an undergraduate at Indiana University.

***Indiana University – Calculus and Finite Mathematics***

Supplemental Instructor – 4 semesters (Fall 1996 – Spring 1998)

**REFERENCES**

**James Wahlen**

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**Robert Jennings**

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**Gerald Salamon**

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