

**Do the Merits Matter More?
Class Actions under the
Private Securities Litigation Reform Act**

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Do the Merits Matter More? Class Actions under the Private Securities Litigation Reform Act

Abstract: Congress passed the Private Securities Litigation Reform Act of 1995 in an attempt to discourage meritless securities fraud class actions. This paper uses damages, accounting, insider trading, forecasting and governance variables to explain the incidence of securities fraud litigation both before and after the passage of the PSLRA. Using a matched sample of sued and non-sued firms from the computer hardware and software industries, we find that our accounting and insider trading variables, and some of our governance variables, generally do not correlate with the incidence of litigation prior to the passage of the PSLRA. A number of these variables are significant after the passage of the PSLRA. We also find that the PSLRA's safe harbor for forward-looking statements appears to afford some protection to optimistic forecasts. These findings are confirmed by our analysis of allegations and outcomes. Our accounting variables do not explain the incidence of pre-PSLRA accounting allegations, but restatements and audit committee independence become significant after the passage of the PSLRA. Similarly, insider trading variables do not explain insider trading allegations before the PSLRA, but net sales by insiders correlate with such allegations after its enactment. Allegations based on forward-looking statements correlate with earnings shortfalls before and after the passage of the PSLRA; allegations do not correlate significantly with forecasts in either period. We find no correlation, before or after the enactment of PSLRA, between company forecasts and allegations of false forward-looking statements. Finally, lawsuit outcomes correlate with restatements only after the PSLRA's enactment. On the other hand, abnormal insider sales correlate with outcomes before the PSLRA, but not after. Outcomes correlate positively with negative forecasts and negatively with positive forecasts, but this relation disappears after the PSLRA's enactment. Overall, we interpret our findings as evidence that the PSLRA has furthered Congress's goal of discouraging the filing of frivolous securities fraud lawsuits but we find little evidence that outcomes correlate more closely with merit factors.

Keywords: Securities litigation, litigation risk, accounting fraud, insider trading, earnings forecasts.

I. INTRODUCTION

Do the merits matter in securities fraud class actions? This question captured the attention of both scholars (Alexander, 1991) and legislators in the early 1990s (Hearings, 1995). Congress eventually concluded that the potentially enormous damages in securities fraud class actions were encouraging meritless “strike” suits. In Congress’s view, plaintiffs’ lawyers were filing suits “citing a laundry list of cookie-cutter complaints” against companies “within hours or days” of a substantial drop in the company’s stock price (H.R. Rep., 1995). Moreover, plaintiffs’ lawyers had incentives to “file frivolous lawsuits in order to conduct discovery in the hopes of finding a sustainable claim not alleged in the complaint” (S. Rep., 1995).

In an attempt to discourage such suits, Congress adopted the Private Securities Litigation Reform Act of 1995 (“PSLRA”). The PSLRA erects a series of procedural barriers, which have resulted in a higher percentage of securities fraud class actions being dismissed (Foster et al., 2000). The number of suits being filed, however, has not declined. After an initial dip, the number of securities fraud class actions has returned to, and even exceeded, its pre-PSLRA level. (Foster et al., 2000). The larger number of filings suggests that the PSLRA may have done little to discourage the filing of frivolous suits, although it may have increased their likelihood of dismissal. Plaintiffs’ lawyers respond that the suits have *always* been merit driven and that the only thing that has changed post-PSLRA is that meritorious suits are now being dismissed. The upsurge in filings simply reflects a massive expansion in the amount of fraud being committed (Lerach 2001), perhaps due to reduced exposure to liability (Bernardo, Talley and Welch 2000). The plaintiffs’ bar can find support for their position in concerns expressed by the SEC about the quality of financial reporting (Levitt 1998).

A more cynical explanation for the surge in filings posits that plaintiffs' lawyers are incapable of sorting fraud from bad luck based on the information available to them. Consequently, they sue on bad news that may reflect either; if they can withstand the issuer's inevitable motion to dismiss, they can gain access to discovery of the corporation's internal documents that will allow them to determine whether fraud has been committed. A higher dismissal rate means that plaintiffs' lawyers need to file more suits in hopes that a reasonable number will make it through to discovery.

Which brings us back to our initial question, in slightly revised form: Do the merits matter *more* in securities fraud class actions after the passage of the PSLRA? The impact of the PSLRA has taken on new significance in the political climate engendered by recent accounting and insider trading scandals at Enron, Worldcom and other companies. Numerous proposals have been introduced in Congress, including a number that would roll back certain reforms adopted as part of the PSLRA. So far, that debate has been driven by scandal; few empirical studies assess the impact of the PSLRA.

This study offers evidence on the role that the merits play in securities litigation before and after the passage of PSLRA. We examine three aspects of class actions relevant to that assessment: the filing of suits, the basis for the allegations in those suits, and their resolution. Our primary research hypothesis: By raising the bar for adequately pleading a securities fraud complaint, the PSLRA increased the importance of merit-based factors – including violations of accounting principles, insider trading, and weak monitoring environments – in explaining the incidence, type of allegations, and resolution of securities fraud class actions. Our secondary hypothesis is that the forward-looking safe harbor reduced the importance of forward-looking statements in these litigation phenomena.

To test these hypotheses, we construct a sample of companies in the high technology sector, consistently a favorite target of securities fraud class actions. We identify the firms sued in that industry before and after the enactment of the PSLRA, matching those firms with a control sample of non-sued firms from the same industry that experienced contemporaneous price drops of a similar magnitude. We then use a logit regression model with damages, accounting, insider trading, forecasting and governance variables to explain the variation in the incidence of litigation between the sued and non-sued samples.

We find no evidence that variables intended to capture the role of damages calculations in the decision to sue, share turnover, firm size, and stock price drops have become less important after the passage of the PSLRA. Our other variables have been found in prior work to correlate with the incidence of fraud. In recognition of the prevalence of accounting allegations in post-PSLRA complaints, we include earnings restatements in our regression model. This variable is insignificant prior to the enactment of the PSLRA, but positively associated with the filing of post-PSLRA suits. We also include two measures of insider trading: a measure of net sales by insiders and a measure of abnormal net sales by insiders. Although both measures provide plaintiffs' lawyers with a basis for pleading fraudulent intent, the latter measure is more consistent with the standard that courts purport to apply. Neither measure is significant pre-PSLRA, but the net insider sales variable is negative and significant post-PSLRA, suggesting that firms with a high level of insider selling were more likely to be sued. The forward-looking safe harbor appears to be having an effect: optimistic forecasts correlate with filings before the PSLRA, but not after. One factor remains constant: the revelation that earnings will not meet expectations correlates with suit in both periods. Finally, two of our governance variables—

board independence and average number of directorships—are significant post-PSLRA. None of the governance variables are significant pre-PSLRA.

We next do a more detailed examination of the accounting and insider trading allegations that are increasingly prevalent in securities fraud complaints. The SEC has made accounting fraud an enforcement priority over the last few years and the increase in options-based compensation schemes has created additional opportunities for insider trading by company managers. Courts recognize both accounting violations and insider trading as supporting an inference of fraudulent intent. Do allegations by plaintiffs' lawyers correlate with aggressive accounting choices and insider trading that is unusual in amount or timing, or are the allegations simply an attempt to satisfy pleading standards? Moreover, is the correlation stronger or weaker after the enactment of the PSLRA's more stringent pleading standard? We find that our accounting variables have no explanatory power for pre-PSLRA accounting allegations, but restatements correlate positively with accounting allegations after the passage of the PSLRA, as does audit committee independence. Similarly, the level of insider trading is significant in explaining the incidence of insider trading allegations after the passage of the PSLRA, but not before.

We also consider the role that earnings forecasts play in securities fraud litigation. In enacting the PSLRA, Congress expressed concern that companies failing to meet earnings expectations were vulnerable to securities fraud class action. Fear of liability exposure, it was argued discouraged firms from making earnings forecasts, despite the importance of such disclosures to the process of pricing securities. Congress addressed this concern with a forward-looking safe harbor, which makes it more difficult to bring fraud claims based on projections. To circumvent that safe harbor, the plaintiff must plead and prove that the defendants making the

statements did so with actual knowledge of their falsity. Even if the plaintiff can plead actual knowledge, the safe harbor still bars the claim if the misstatement was accompanied by meaningful cautionary language. As a result, courts often subject these statements to more exacting scrutiny than other general allegations of misleading statements or omissions. Here we find no evidence of more precise targeting by the plaintiffs' bar after the passage of the PSLRA. Positive forecasts do not correlate with allegations of false forward-looking statements before or after PSLRA enactment. Earnings shortfalls, by contrast, correlate with such allegations in both periods.

Understanding the incidence of lawsuit filings and the allegations in those filings is an important element in evaluating the impact of the PSLRA. Both companies and investors, however, are also likely to be concerned with the impact of the PSLRA on lawsuit outcomes. Accordingly, we also use the accounting, insider trading, forecasting and governance variables in a regression explaining the outcome of the litigation. Do these variables explain more of the variation in likelihood of settlement after the passage of the PSLRA? We find that restatements are not correlated with settlement outcomes prior to the PSLRA. We find the predicted relation, however, for abnormal insider trading and a relation opposite to the predicted direction for our raw measure of insider trading in the earlier period. Moreover, we find a *negative* relation between positive forecasts and settlement and a *positive* relation between earnings warnings and settlement. After the PSLRA, restatements correlate positively with the likelihood of a settlement for more than nuisance value, but directors' tenure is negatively related. Abnormal trading by insiders, however, correlates with likelihood of settlement only before the PSLRA.

The remainder of the paper proceeds as follows. Section II provides institutional background on the PSLRA and discusses related research. Section III develops our hypotheses.

Section IV describes the sample selection procedure and data collected. Section V presents our results. Section VI concludes the paper with a summary and discussion of our major findings.

II. THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995

The PSLRA was enacted into law on December 22, 1995, when the Senate followed the House's lead in overriding President Clinton's veto. Although Clinton had initially expressed support for securities litigation reform as a means of discouraging frivolous litigation, he warned in his veto message that the measure passed by Congress would also discourage meritorious suits (Clinton 1995).

The PSLRA contains a number of hurdles for plaintiffs filing securities fraud complaints. First, it establishes a rigorous pleading standard requiring plaintiffs to specify in their complaint each statement alleged to have been misleading and the reasons why the statement is misleading. In addition, the pleading standard requires plaintiffs to state with particularity facts giving rise to a "strong inference" that the defendant acted with "the required state of mind." Second, the PSLRA creates a "safe harbor" for forward-looking projections if they are not knowingly false, or have been qualified by "meaningful cautionary language" (see Johnson, Kasznik, and Nelson (2001) for additional discussion of this provision). Third, plaintiffs' difficulties in pleading a complaint are exacerbated by the fact that the PSLRA also deprives them of the usual access to discovery to bolster their complaint. This provision is intended to prevent plaintiffs from conducting a "fishing expedition" for evidence to support their claims after they have already filed a lawsuit. Finally, the PSLRA requires judges to impose monetary sanctions on those who file frivolous claims. Cumulatively, these procedural requirements present a substantial obstacle to weak claims (Walker, Levine and Pritchard 1997).

The available evidence suggests that market participants believed that, in general the PSLRA benefited shareholders. Spiess and Tkac (1997) and Johnson, Kasznik, and Nelson (2000) document that the PSLRA was wealth-increasing, on average, for shareholders in high technology firms. Specifically, there was a significant negative market reaction to the rumors of President Clinton's veto, followed by a significant positive reaction to the override.¹ In addition, Johnson, Kasznik, and Nelson (2000) find that the stock price reaction varies cross-sectionally with firms' litigation risk, with the firm-specific probability of litigation estimated using a broad set of market-based and financial reporting variables. The evidence indicates that although the market response to the PSLRA is increasing in firms' overall risk of litigation, it is decreasing in the incremental probability of being sued for committing fraud. Collectively, these findings indicate that shareholders generally believe that they benefit from the PSLRA's restrictions on private securities litigation, although these benefits are diminished when other mechanisms for curbing fraudulent activity are inadequate. The perceived deterrent value of class actions, not surprisingly, appears to relate to the likelihood of committing fraud.

One of the most significant and contentious provisions instituted by the PSLRA was the stringent pleading standard requiring plaintiffs to state with particularity facts giving rise to a "strong inference" that the defendant acted with the "required state of mind." This provision was specifically cited by President Clinton as one of his reasons for vetoing the bill. The provision and its legislative history are ambiguous, however, which has led courts to interpret the standard in diverse ways (Grundfest and Pritchard 2002). Most notably, the Ninth Circuit, which encompasses Silicon Valley, surprised many observers by adopting a particularly stringent

¹ Johnson, Kasznik, and Nelson (2000) examine a sample of firms from three industries – pharmaceuticals, computer hardware and computer software. The significant positive reaction to the Senate override was only observed for the subsample of pharmaceutical firms. Spiess and Tkac (1997) also include retail firms in their analysis.

interpretation in their *Silicon Graphics* decision. Prior to this ruling, the Ninth Circuit had the least stringent requirements for pleading fraud of all circuit courts. For a sample of high technology companies, Johnson, Nelson and Pritchard (2000) find a positive market reaction to the *Silicon Graphics* decision, particularly for firms headquartered in the Ninth Circuit and those at greatest risk of being sued in a securities class action. As with the passage of the PSLRA, however, this positive effect diminishes as the probability of being sued for committing fraud increases.

These results relating to the implementation of the PSLRA bolster the conclusion that market participants believed that its restrictions on private securities litigation generally benefited shareholders of high technology firms. This reaction presumably reflects an assessment by those participants that the PSLRA discourages the filing of non-meritorious claims, without unduly chilling meritorious claims and the deterrent benefits that they may produce. That assessment, however, may have been fueled by popular perceptions and anecdotal evidence; market participants may not have the information and/or expertise to assess whether the PSLRA had its desired effect of reducing non-meritorious claims. Stock price reactions provide only indirect evidence of the anticipated effect of the PSLRA on lawsuit filings.

In addition to studies examining the market reaction to passage of the PSLRA and judicial interpretation of its pleading standard, other studies compare the frequency of lawsuit filings and type of allegations before and after the passage of the PSLRA (Grundfest and Perino 1997; PricewaterhouseCoopers 2000; Perino 2002). Merely counting the number of filings, however, provides no direct evidence on whether the PSLRA has achieved its stated objective of reducing non-meritorious securities litigation because exogenous variables, such as the level of fraud and the alternative opportunities available to plaintiffs' attorneys, may also affect the

number of filings. Moreover, simply surveying the type of allegations does not measure the strength of those allegations.

Pritchard and Sale (2003) study how judges resolve motions to dismiss securities fraud complaints in the Second and Ninth Circuit. They find that complaints are significantly more likely to be dismissed in the Ninth Circuit. They also find that allegations of insider trading in complaints correlate with dismissal in both circuits, but that the circuits vary in their approaches to allegations of accounting violations and false-forward looking statements. Their study is limited, however, to the allegations made in the complaints and they do not compare the pre-and post-PSLRA periods. Beatty, Drake and Hogan (2001) find that the risk of litigation in connection with an IPO declined significantly following the enactment of the PSLRA, but they do not provide evidence on the determinants of those filings. Finally, Bajaj, Mazumdar and Sarin (2000) find that while mean settlements increased after the passage of the PSLRA, investors recovered a smaller percentage of potential losses. They do not, however, compare systematically whether the determinants of those settlements have changed with the adoption of the PSLRA.

III. HYPOTHESES

In this section, we develop hypotheses concerning the determinants of (a) class action filings, (b) allegations of accounting fraud, insider trading and false forward-looking statements, and (c) lawsuit outcomes. Collectively, the objective of these hypotheses is to determine the influence of factors related to fraud in securities litigation, and whether that influence has increased with the passage of the PSLRA.

A. Lawsuit Filings

Congress's primary purpose in enacting the PSLRA was to discourage weak or frivolous securities fraud suits. Congress believed that many such suits were being filed based on little more than a stock-price drop, the principal criterion for establishing the damages necessary to justify the risk and expense of a lawsuit. The plaintiffs' and defense bar (along with outside observers) agree that the PSLRA makes it more difficult to adequately plead a securities fraud class action. For example, the pleading requirement demands much greater specificity from plaintiffs in drafting complaints. Presumably plaintiffs' lawyers can most easily satisfy this requirement in those cases with the strongest evidence of fraud, such as clear violations of generally accepted accounting principles or large amounts of selling by insiders. On the other hand, plaintiffs' lawyers claim that the PSLRA has chilled meritorious claims because the pleading requirement is overly restrictive. If the pleading requirement is a clumsy screen, discouraging meritorious and non-meritorious claims alike, lawsuits may have no greater indicia of merit than before the passage of the PSLRA. Moreover, the discovery stay imposed by the PSLRA eliminates plaintiffs' lawyers' access to the most important source of evidence of potential fraud, the issuer's internal records. If the discovery stay discourages meritorious claims because plaintiffs' lawyers fail to pursue claims that they believe cannot be established without discovery, the PSLRA will not achieve its goal of requiring plaintiffs' lawyers to focus on the merits of claims. Accordingly, our first hypothesis is that:

H1: Aggressive accounting, insider trading, and governance factors are more important in explaining lawsuit filings under the PSLRA than before it was enacted.

Prior to the PSLRA, plaintiffs based many claims on assertions that companies had released misleading financial projections or other forward-looking statements (e.g., Francis, Philbrick, and Schipper 1994). While the PSLRA raised the pleading requirement for all

allegations, the statutory safe harbor for forward-looking statements makes it particularly difficult to plead and prove claims based on these statements. As a consequence, forward-looking statements may be a disfavored source for allegations under the new regime, leading to our second hypothesis.

H2: Forecasts are less important in explaining lawsuit filings after the enactment of the PSLRA.

B. Strength of Allegations

Grundfest and Perino (1997) and PricewaterhouseCoopers (2000) attempt to assess the impact of the PSLRA on securities litigation by looking for changes in the frequency of particular allegations. This approach, however, does not consider whether a shift in the type of allegations reflects a change in the strength of the complaints being filed, or is instead driven by a change in the litigation environment itself. The heightened pleading standard gives plaintiffs' lawyers an incentive to assert violations of generally accepted accounting principles (GAAP) and insider trading. The latter types of allegations may provide an appearance of objective evidence that the firm and its managers intentionally misled the investing public and profited from the fraud, which would form a basis for inferring scienter. Thus, one explanation for the recent increase in lawsuits containing allegations of accounting fraud and insider trading (Grundfest and Perino 1997; PricewaterhouseCoopers 2000) is that plaintiffs' lawyers include allegations in their complaints that they believe will be most likely to withstand a motion to dismiss, whether or not the allegations are warranted.

An alternative explanation for the increase in these types of allegations is that fraud has become more prevalent in recent years. Former SEC Chairman Arthur Levitt (1998) has lamented what he perceives as a decline in the quality of financial reporting. His lament gains credence from the number of high profile cases of accounting manipulations reported in recent

years, including well-known companies such as Cendant, Sunbeam, and most recently and spectacularly, Enron and Worldcom. In addition, the temptation to engage in insider trading may have increased in recent years due to the increased prevalence of option-based compensation schemes, which may provide management an incentive to temporarily inflate stock prices in order to liquidate their holdings.² Our third hypothesis is that:

H3: Aggressive accounting and insider trading are more important in explaining allegations of accounting fraud and insider trading under the PSLRA than before it was enacted.

The barrier created by the forward-looking safe harbor may have shifted litigation toward allegations of false historical statements. For lawsuits based on projections in fact, it may have created an insuperable bar. It does not, however, screen out all complaints based on forward-looking statements. If the safe harbor screens claims of fraud based on forecasts, we would expect fewer filings based on revelations of shortfalls from projected earnings. Our fourth hypothesis is that:

H4: Earnings shortfalls will be less important in explaining allegations of false forward-looking statements under the PSLRA than before it was enacted.

C. Lawsuit Outcomes

Our final hypothesis follows closely from the first four. Assuming that plaintiffs' lawyers seek to maximize the fees available to them, the incidence of filing and the content of those complaints should be driven by those attorneys' expectations regarding the outcomes of those suits. If judges are able to use the tools provided by the PSLRA as Congress intended, weak suits will be screened out at the motion to dismiss stage. Alternatively, plaintiffs' attorneys and defendants will settle weak claims for nominal amounts reflecting the nuisance value of avoiding attorneys' fees for the defendants and the distraction of corporate executives created by

² Such compensation would, of course, be quite prevalent among our sample of high-technology companies, so if

a pending lawsuit.

Plaintiffs' attorneys, however, claim that settlement amounts have always been driven by the merits of the claims, at least when the defendants are solvent (Savett, 1997). If this is true, merits factors will play a similar role in explaining settlement amounts both before and after the passage of the PSLRA. Accordingly, our fifth and sixth hypotheses are that:

- H5: Accounting, insider trading, and governance factors are more important in explaining lawsuit outcomes under the PSLRA than before it was enacted.
- H6: Forecasts and earnings shortfalls are less important in explaining lawsuit outcomes under the PSLRA than before it was enacted.

IV. SAMPLE SELECTION AND VARIABLE MEASUREMENT

A. Sample

Our initial sample consists of all computer hardware and software firms (SIC codes 3570-3577 and 7370-7379) listed on CRSP and Compustat during the period 1991-2000. Focusing on firms in this industry allows us to control for industry-specific factors. Moreover, the high tech sector has been a frequent target for class actions both before and after the PSLRA, unlike other industries which have fluctuated over time. We determine which of these firms were sued in securities fraud class actions using the Securities Class Action Alert to identify firms sued in 1991-1995 (pre-PSLRA) and the Stanford Securities Class Action Clearinghouse (<http://securities.stanford.edu>) to identify firms sued in 1996-2000 (post-PSLRA). Data from these sources, along with disclosures in firms' 10-K Legal Proceedings section, discussions of cases in judicial opinions and data generously provided by PricewaterhouseCoopers, were used to identify the date the lawsuit was filed, the class period, the types of allegations contained in

such a relation exists, it would be most likely to show up in our sample.

the complaint, and the lawsuit outcome. Data on lawsuit outcomes were also obtained from the websites of various claims administrators.

Financial and accounting data are obtained from CRSP and Compustat tapes. Information regarding corporate governance structure is obtained from the firm's last proxy statement prior to the beginning of the class period if available; if not, the first available proxy after the beginning of the class period is used.³ Restatement data are obtained from a Lexis search of news stories as well as the company's periodic filings with the SEC.

Table 1, Panel A reports descriptive statistics on lawsuit filings. For firms with the necessary data, we identify 114 lawsuits filed against the firms in our sample, 50 in the pre-PSLRA period and 64 in the post-PSLRA period. The data reveal that the number and proportion of suits with accounting allegations increased dramatically following enactment of the PSLRA. In the pre-PSLRA period, slightly less than a third of lawsuits (32%) contained an accounting allegation. In the post-PSLRA period, a clear majority of lawsuits (60.9%) contained an accounting allegation. One possible explanation for this increase, espoused by some members of the plaintiffs' bar (e.g., Lerach 2001), is that there has been a decline in the quality of financial reporting in recent years. The increase in accounting allegations is also consistent, however, with plaintiffs' lawyers attempting to meet the higher pleading standard of the PSLRA through allegations of accounting fraud.

In addition to an increase in accounting allegations, the passage of the PSLRA is associated with an increase in allegations of insider trading. As reported in Panel A of Table 1, the proportion of suits alleging insider trading more than doubled, from an average annual rate of 38% in the pre-PSLRA period to 79.7% in the post-PSLRA period. This trend is consistent with

³ These data requirements necessarily exclude firms conducting initial public offerings, a popular target for class action filings. Consequently, our sample consists of firms accused of committing fraud on the secondary markets.

an increase in the use of stock-based compensation over our sample period, but, as with the increase in allegations of accounting fraud, it is also consistent with plaintiffs' lawyers adapting the form of their complaints in an attempt to meet the PSLRA's standards.

The proportion of suits including allegations based on forecasts, however, declined in response to the passage of the forward-looking safe harbor in the PSLRA. A very high percentage (86%) of suits included a forward-looking allegation prior to the enactment of the PSLRA. After the enactment, that percentage drops to 64%.

Table 1, Panel B reports descriptive statistics on lawsuit outcomes. The mean settlement value post-PSLRA is approximately twice the pre-PSLRA figure. However, this disparity appears to be driven by a few large settlements in the post-PSLRA period, as the median settlement value is lower in the post-PSLRA period.

We also select a control sample from all firms in the initial sample that were not sued during our nine year sample period, matching each sued firm with a non-sued firm from the same industry. To identify the matched firm, we first determine the minimum one-day return (*Min. Return*) for each sued firm during the 250 trading days preceding the end of the class period. For most of the sued firms, this minimum return occurred on the day that the bad news giving rise to the lawsuit was revealed. Plaintiffs' attorneys look for such drops as an initial screen in selecting which firms to sue. Not all firms with large price drops get sued, however; plaintiffs' attorneys will look among the firms with price drops for other indicia that suggest a suit is likely to be profitable (Jones and Weingram, 1996a). Some price drops reflect bad luck, others reflect the revelation of fraud. Accordingly, we select a match firm by identifying from the initial sample the non-sued firm, for which proxy data is available, that has the minimum one-day return

These suits are the principal focus of the PSLRA.

closest in magnitude to the sued firm's return during the class period.⁴ Thus, our matched firms suffered similar price drops but were not sued. Matching on this basis controls for this important factor in the incidence of litigation. As a result, differences between our sued firms and non-sued firms should reflect the decision-making process that plaintiffs' attorneys use in selecting firms to sue among those with large price drops.

The descriptive statistics reported in Table 2, Panel A indicate that *Min. Return* is significantly more negative in the post-PSLRA period, suggesting that larger price drops are required to trigger a lawsuit. This finding is consistent with greater stock price volatility in the later period. It is also consistent with the theory that greater potential damages are needed to motivate plaintiffs' lawyers to bring suit in light of the barriers erected by the PSLRA. A comparison of the lawsuit and control firms in the pre-PSLRA (Panel B) and post-PSLRA (Panel C) periods indicates that *Min. Return* is significantly lower for lawsuit firms than for control firms. Our matching procedure is only partially successful in controlling for this important factor in the incidence of litigation.

B. Variable Definitions and Descriptive Statistics

We construct five sets of variables that are intended to capture factors that explain how securities class action lawsuits are filed and resolved. For both the lawsuit firms and their matches, we measure these variables to correspond with the class period. Details of variable measurement are reported in the Appendix.

The first set of variables, which we label damages variables, captures elements of the damages calculation for securities fraud suits that have been found in prior research to be significant factor in lawsuit filings (e.g., Francis, Philbrick, and Schipper 1994; Jones and

⁴ For a handful of firms we had difficulty finding matches with available proxies. For these firms, we relaxed the match procedure to include three months after the end of the class period for the sued firm.

Weingram 1996a,b; Skinner 1996). This research shows that market capitalization (*Market Cap.*) and share turnover (*Turnover*) are positively associated with the incidence of lawsuits, as are stock price drops (*Min. Return*). Panel A of Table 2 indicates that there is no statistical difference in firm size between the pre- and post-PSLRA periods, although share turnover is significantly higher post-PSLRA. Panels B and C of Table 2 indicate that lawsuit firms are larger at the median than the control firms in both the pre- and post-PSLRA periods, and are also more actively traded in both periods. Both of these findings are consistent with expectations.

The next variable, *Restatement*, is an indicator variable equal to one for firms that restated earnings during the class period. The public announcement of an earnings restatement is likely to be a particularly prominent signal for plaintiffs' lawyers. For example, Jones and Weingram (1996b) find that accounting restatements increase a firm's probability of facing a class action suit. The descriptive statistics reported in Table 2, Panel A indicate a significantly greater number of restatements in the post-PSLRA period. Panels B and C reveal that lawsuit firms report significantly more restatements than control firms, particularly in the post-PSLRA period, and significantly higher sales growth. We also create two governance variables relating primarily to accounting integrity: *Audit Meetings*, which is the number of meetings held by the firm's audit committee (as reported in the proxy statement prior to the class period) and *Independent Audit*, which is the percentage of independent directors on the audit committee (as reported in the same proxy statement).

The third set of variables, which we label insider trading variables, captures an important motivation for fraud by company managers. Jones and Weingram (1996b) find that insider trading does not increase firms' litigation risk. Johnson, Kasznik and Nelson (2000), however, do find evidence that sales by insiders affect the likelihood of suit. Summers and Sweeney

(1998), studying financial statement frauds reported in the *Wall Street Journal*, find that fraud company insiders are selling their stock during the fraud period. Niehaus and Roth (1999) find that insider managers are net sellers of their firm's stock during the class period, but the sales do not significantly differ from their prior selling practices. The difference between the two measures of insider trading suggested by Niehaus and Roth is important: only *abnormal* insider selling is considered by courts to give rise to an inference of scienter (Sale 2002). Accordingly, we construct two insider trading variables, following Beneish and Vargus (2001): *Insider Trading*, which is the net purchase and sale activity during the class period for directors, CEOs, COOs, CFOs, Presidents and Vice-Presidents, and *Abnormal Insider Trading*, which is the difference between *Insider Trading* and net purchase and sale activity during the one-year period preceding the class period. A negative (positive) value for these variables indicates net sales (purchases).

Panel A of Table 2 shows that mean net insider sales were significantly higher during the post-PSLRA period, consistent with the increasing importance of option-based compensation during this period. The difference is not significant at the median, however, and neither is the difference in abnormal insider selling between the pre- and post-PSLRA periods. Comparing the lawsuit and control samples in Panels B and C reveals that insiders of lawsuit firms sold significantly more of their company's stock during the class period, particularly after the PSLRA, but there is no statistical difference in abnormal insider sales between the lawsuit and control firms in either the pre- or post-PSLRA periods. Thus, plaintiffs' attorneys appear to focus on the level of insider sales rather than on the abnormal sales that are relevant under the law.

Our fourth set of variables (all indicator variables) attempts to capture the effect of forward-looking disclosure on litigation risk. A firm's failure to meet earnings expectation has been found to frequently lead to the steep stock price decline that brings the attention of the plaintiff's bar. *Earnings Shortfall* is set to one if the firm has made a bad news earnings forecast on either the class end date or the minimum return date. *Negative Forecast* is set to one if the firm reveals a lower earnings projection at any other point during the class period. Firms may attempt to reduce litigation risk by managing expectations downward (Skinner 199?). Our last variable, *Positive Forecast*, is set to one if the firm makes an optimistic earnings announcement during the class period. The PSLRA's safe harbor for forward-looking statements is intended to protect such disclosures.

The final set of variables in our model, which we label governance variables, captures characteristics of firms' corporate governance structures that permit aggressive financial reporting and the motivations for such behavior. For example, Dechow et al. (1996) find that firms accused by the SEC of manipulating earnings are more likely to have insider-dominated boards. Beasley (1996) finds that a greater percentage of outside directors, as well as greater ownership and longer tenure for those directors, correlate with a lower likelihood of fraud. Holding a greater number of directorships in other firms, however, correlates positively with fraud. Our governance structure variables are (i) *Avg. Tenure*, the average number of years outside directors have served on the Board, (ii) *Busy*, the average number of other directorships held by outside directors, and (iii) *Independent*, the percentage of outside directors.

Table 2, Panel A reveals no significant differences in the three governance variables between the pre- and post-PSLRA periods. The comparisons in Panels B and C provide some evidence that lawsuit firms have governance structures that provide less management oversight.

The outside directors of lawsuit firms sit on significantly more boards than the directors of the control firms, both before and after the PSLRA. This may reflect the greater market capitalization of the sued firms, as directors of large firms tend to sit on a greater number of boards (Ferris, Jagganathan and Pritchard 2002). Finally, contrary to expectations, boards of lawsuit firms are more independent in the post-PSLRA period.

V. RESULTS

A. *Determinants of lawsuit filings*

We examine lawsuit determinants in the pre- and post-PSLRA periods using a logit model that explains lawsuit filings (*Lawsuit*) as a function of the variables described above

[Revise]:

$$\begin{aligned}
 Lawsuit = & \alpha + \beta_1 Market\ Cap. + \beta_2 Turnover + \beta_3 Restatement^* + \beta_4 Abnormal\ Accruals \\
 & + \beta_5 Sales\ Growth + \beta_6 Insider\ Sales + \beta_7 Abnormal\ Insider\ Sales \\
 & + \beta_8 Avg.\ Tenure + \beta_9 Busy + \beta_{10} Independent + \beta_{11} Outsider\ Holdings \\
 & + \beta_{12} Insider\ Holdings + \varepsilon
 \end{aligned} \tag{1}$$

The results are reported in Table 3. In the pre-PSLRA period, the results indicate that, consistent with prior research (Jones and Weingram 1996a,b), large traded firms are significantly more likely to be sued than other firms. Two of our forecasting variables, *Positive Forecast* and *Earnings Shortfall*, are also significant and in the predicted positive direction. In contrast, the merit-based variables are insignificant. These results support the contention that lawsuit filings prior to the PSLRA were largely driven by factors unrelated to the likelihood of fraud.

The post-PSLRA results reported in the right-hand portion of Table 3 present a strikingly different picture of lawsuit filings under the PSLRA. In addition to two of damages variables (*Market Cap.* and *Min. Return*), several of the variables related to fraud are individually significant in the post-PSLRA period. Specifically, our accounting variable—*Restatement*—is

significant in the predicted direction. Thus, in the post-PSLRA period, firms engaging in aggressive accounting practices were more likely to be sued than similar firms with less aggressive accounting. Our variables relating to audit committee oversight (*Audit Meetings* and *Independent Audit*), however, are insignificant (as they are pre-PSLRA). *Insider Trading* is negative and significant, indicating that firms with a high level of stock sales by insiders were more likely to be sued. Our measure of abnormal insider trading, however, is insignificant, despite being more consistent with applicable legal standards for assessing fraudulent intent. *Earnings Shortfall* continues to be an important trigger for lawsuits, but *Positive Forecast* is now insignificant, suggesting that the safe harbor does provide some relief. Finally, firms whose directors sat on more boards of other firms were more likely to be sued as are firms with less independent boards. Overall, a comparison of the results in the pre- and post-PSLRA periods suggests that merits variables play a greater role in explaining the incidence of suit after the passage of the PSLRA.

B. Determinants of accounting fraud, insider trading and forward-looking statement allegations

We examine determinants of accounting, insider trading and forward-looking statement allegations in the pre- and post-PSLRA periods using the following logit models **[Revise]**:

$$\begin{aligned}
 \text{Accounting Allegation} = & \alpha + \beta_1 \text{Insider Allegation} + \beta_2 \text{Restatement} \\
 & + \beta_3 \text{Abnormal Accruals} + \beta_4 \text{Sales Growth} \\
 & + \beta_5 \text{Avg. Tenure} + \beta_6 \text{Busy} + \beta_7 \text{Independent} \\
 & + \beta_8 \text{Outsider Holdings} + \beta_9 \text{Insider Holdings} + \varepsilon
 \end{aligned}
 \tag{2a}$$

$$\begin{aligned}
 \text{Insider Allegation} = & \alpha + \beta_1 \text{Accounting Allegation} + \beta_2 \text{Insider Sales} \\
 & + \beta_3 \text{Abnormal Insider Sales} + \beta_4 \text{Avg. Tenure} \\
 & + \beta_5 \text{Busy} + \beta_6 \text{Independent} + \beta_7 \text{Outsider Holdings} \\
 & + \beta_8 \text{Insider Holdings} + \varepsilon
 \end{aligned}
 \tag{2b}$$

where *Accounting Allegation*, *Insider Allegation* and *Forecasting Allegation* are set equal to one if the lawsuit contained an allegation of accounting fraud, insider trading, or a false forward-looking statement, respectively. We include the other allegations variables as controls because these allegations may be convenient alternatives to include in complaints when alternative bases for pleading fraud are unavailable. The remaining variables are as defined above.

The results for the accounting allegations model are reported in Panel A of Table 4. There is no evidence of a significant relation between accounting allegations and *Restatement* or our audit committee variables before the passage of the PSLRA. In contrast to these results, *Restatement* is statistically significant post-PSLRA, as is *Audit Independence*. We also find a significant negative relation with forecasting allegations in the post-PSLRA period. Overall, it appears that allegations of accounting fraud have greater merit in the post-PSLRA period than in the pre-PSLRA period.

The analysis of insider trading allegations reported in Panel B of Table 4 reveals only one significant association in the pre-PSLRA period: the governance measure *Busy*. Conspicuously, there is no evidence of an association between insider trading allegations and either of our insider trading variables. In the post-PSLRA period, there is a significant negative relation with forecasting allegations. *Insider Trading* is negative and significant, but *Abnormal Insider Trading* remains insignificant. We conclude that plaintiffs' lawyers are paying more attention to establishing a motive for fraud in suits subject to the PSLRA, but that effort is not fully consistent with the established judicial doctrine, which would require that sales by insiders be out of line with prior sales. This finding is consistent with that of Griffin and Grundfest (2002), who conclude that allegations of insider trading may be substantially overinclusive, as well as the finding by Pritchard and Sale (2003) of a positive relation between insider trading allegations

and dismissal.

Our final allegations model analyzes the relation between allegations of false forward-looking statements and earnings forecasts. Of our forecast variables, only *Earnings Shortfall* has a significant association with allegations of false forward-looking statements. The failure to meet expectations may prompt plaintiffs' lawyers to search for a prior prediction by the firm that has not been borne out. *Accounting Allegation* has a significant negative association, suggesting that these types of allegations may be substitutes for each other. The coefficient for *Earnings Shortfall* continues to be significant post-PSLRA. Both *Accounting Allegation* and *Insider Trading Allegation* have significant negative coefficients in this period. Critically, *Positive Forecast* is insignificant in both periods. This result is expected in the post-PSLRA period, given the ability of firms to insulate statements with "meaningful cautionary language." The lack of a relation in the pre-PSLRA period, however is somewhat surprising.

The absence of correlation between allegations and measures of the underlying behavior before the PSLRA suggests that plaintiffs did not specifically identify the nature of the frauds alleged under that regime's looser standards. The PSLRA's pleading standard requires more specific allegations, with sanctions for allegations that are not factually supported. Accordingly, we see a closer link between allegations of accounting fraud and objective measures of accounting problems represented by restatements in the post-PSLRA period. We also see a closer link between insider trading allegations and net sales by insiders, although no correlation between abnormal selling and insider trading allegation. While our abnormal selling measure is closer to the standard applied by the courts, plaintiffs' lawyers are unlikely to face sanctions for relying on the looser net sales measure. Allegations based purely on net sales have a chance of withstanding a motion to dismiss, with the only downside for the lawyer being dismissal of the

complaint.

C. *Determinants of lawsuit outcomes*

Our final analysis examines the outcome of litigation in the pre- and post-PSLRA periods using a logit model that explains variation in lawsuit outcomes as a function of the accounting, insider trading, forecasting, and governance variables described above. We exclude the market variables, which are relevant to damages calculations, from this regression because the dependent variable is intended to proxy for merit. Our dependent variable, *Settle*, is equal to zero if the lawsuit is dismissed or settled for nuisance value (defined as less than \$2,000,000, a conservative estimate of defense costs), and equal to one if the lawsuit is settled for more than a *de minimis* amount.⁵ We estimate the following regression **[Revise]**:

$$\begin{aligned} \text{Settle} = & \alpha + \beta_1 \text{Restatement} + \beta_2 \text{Abnormal Accruals} + \beta_3 \text{Sales Growth} \\ & + \beta_4 \text{Insider Sales} + \beta_5 \text{Abnormal Insider Sales} + \beta_6 \text{Avg. Tenure} \\ & + \beta_7 \text{Busy} + \beta_8 \text{Independent} + \beta_9 \text{Outsider Holdings} + \beta_{10} \text{Insider Holdings} + \varepsilon \end{aligned} \quad (3)$$

The results are presented in Table 5. In the pre-PSLRA period, only *Abnormal Insider Sales* and *Tenure* are individually significant at traditional levels in the predicted direction. *Negative Forecast* and *Insider Trading* are significant, but contrary to the predicted direction. In the post-PSLRA period, *Restatement* and *Tenure* are significant in the predicted direction. When a firm is required to restate its financial statements, this apparently sends a strong signal to judges, who are more reluctant to dismiss cases with this type of allegation. Notably, *Insider Trading* is not significant in this model, despite its significant association with filings and insider trading allegations. The use by plaintiffs' lawyers of this cruder proxy for fraudulent intent is

⁵ We do not use a linear measure of the settlement amount as our dependent variable because a properly-specified OLS regression with this variable would require an independent variable measuring directors & officers insurance coverage. The availability of insurance is a critical factor in assessing settlement amounts, but this data is not publicly available.

apparently not rewarded by settlements. Overall, however, we conclude that these regressions shed little light on the effect of the PSLRA on litigation outcomes.

VI. SUMMARY AND CONCLUSION

Our principal finding is that factors previously shown to relate to the likelihood of fraud, principally restatements and insider trading, play a more important role in explaining the incidence of, and allegations in, litigation post-PSLRA. Factors relating to fraud generally are insignificant before the passage of the PSLRA. Factors relating to damages continue to have explanatory power after the passage of the PSLRA. Damages factors, while unlikely to correlate with fraud, will always play a role in determining the incidence of suit because greater potential damages claims correlate with correspondingly greater attorneys' fees. Earning shortfalls, too, are a consistent predictor of litigation and allegations based on forward-looking statements. The failure to meet expectations evidently puts a firm on the "radar screen" of the plaintiffs' bar.

Nonetheless, we believe that our results show a closer relation between factors related to fraud and securities class actions after the passage of the PSLRA. The efficacy of deterrence necessarily depends upon the accuracy with which sanctions are assessed because deterrence requires both sanctioning wrongdoers and protecting the innocent from sanctions. Accordingly, the evidence that we find of more precise targeting of securities class actions against firms likely to have committed fraud suggests that Congress has achieved at least some of its objectives in adopting the PSLRA

To be sure, this conclusion comes with some caveats. Our model cannot explain all of the variation in the incidence of litigation. The unexplained variation undoubtedly has both merit and non-merit aspects. If the non-merit aspects predominate, our finding of a shift in the

determinants of litigation may not hold. Moreover, our analysis of litigation outcomes shows no obvious trend between the two periods.

An additional caveat arises from the fact that *Insider Trading* – the insider trading variable that is not adjusted for prior selling patterns – best explains variations in filing and allegations of insider trading suggests that there still is room for improvement. Perhaps allegations will more closely correspond with the law as plaintiffs’ attorneys adjust to the new requirements of the PSLRA’s pleading requirement. Our finding that *Insider Trading* does not correlate with litigation outcomes suggests that plaintiffs’ lawyers are receiving feedback on this issue that should allow them to refine their filing decisions. Future research may find that *Abnormal Insider Trading* becomes a significant predictor of both filing and outcomes.

A more fundamental caveat is that our study design cannot measure the potential costs of the PSLRA’s regime in discouraging suits that may have merit. Plaintiffs’ lawyers may be unable to prove some meritorious claims under the rigorous constraints imposed by the PSLRA. Further research is needed to evaluate this potential cost of the PSLRA.

APPENDIX
Variable Definitions

Variable	Definition	Prediction
Market Cap.	Log of the market value of common equity at the end of the fiscal year preceding the beginning of the class period	+
Min. Return	Minimum one-day return during the 250 trading days preceding the end of the class period	-
Turnover	$1 - (1 - \text{Turn})^{250}$, where Turn is average daily trading volume divided by the number of shares outstanding, and 250 is the number of trading days preceding the beginning of the class period	+
Restatement	Indicator variable equal to one if the firm restated any portion of class period earnings	+
Earnings Shortfall	Indicator variable equal to one if firm made a negative forecast on either the class end or minimum return dates	+
Positive Forecast	Indicator variable equal to one if firm made a positive forecast during the class period	+
Negative Forecast	Indicator variable equal to one if firm made a negative forecast during the class period other than the minimum return date or the end of the class period	-
Insider Trading	Decile ranking of firm based on shares purchased less shares sold during the class period for directors, CEOs, COOs, CFOs, Presidents and Vice-Presidents	-
Abnormal Insider Trading	Decile Ranking of firm based on shares purchased less shares sold during the class period for directors, CEOs, COOs, CFOs, Presidents and Vice-Presidents less the same measure for the year preceding the class period	-
Avg. Tenure	The mean number of years that outside directors have been on board, prior to the beginning of the class period.	-
Busy	The mean number of external directorships of public companies held by outside directors	+
Independent	The percentage of outside directors on the firm's board.	-
Audit Meetings	The number of meetings held by the audit committee the year prior to the class period	-
Audit Independence	The percentage of outside directors on the audit committee	-

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TABLE 1
Descriptive Statistics on Lawsuits

<i>Panel A: Number of filings and allegations</i>				
<u>Lawsuit Year</u>	<u>Number of Suits</u>	<u>Accounting Allegations</u>	<u>Insider Trading Allegations</u>	<u>Forecasting Allegations</u>
<i>Pre-PSLRA:</i>				
1991	10	3 (30.0%)	3 (30.0%)	9 (90.0%)
1992	8	2 (50.0%)	4 (50.0%)	8 (100%)
1993	11	3 (27.3%)	1 (09.0%)	10 (90.9%)
1994	10	5 (50.0%)	6 (60.0%)	9 (90.0%)
1995	11	3 (27.3%)	5 (45.5%)	7 (63.6%)
	50	16 (32.0%)	19 (38.0%)	43 (86.0%)
<i>Post-PSLRA:</i>				
1996	11	6 (54.5%)	9 (81.8%)	7 (63.6%)
1997	15	8 (53.3%)	11 (73.3%)	9 (60.0%)
1998	15	9 (60.0%)	11 (73.3%)	10 (66.7%)
1999	15	10 (66.7%)	13 (86.7%)	10 (66.7%)
2000	8	6 (75.0%)	7 (87.5%)	5 (62.5%)
	64	39 (60.9%)	51 (79.7%)	41 (64.1%)
Total	114	55 (48.2%)	70 (61.4%)	84 (73.7%)
<i>Panel B: Lawsuit outcomes</i>				
<u>Outcome</u>	<u>Pre-PSLRA (N=50)</u>		<u>Post-PSLRA (N=64)</u>	
Dismissed	17 (34.0%)		24 (37.5%)	
Settled (in millions):				
< 2	5		4	
2 – < 5	3		11	
5 – < 10	10		7	
>10	13		15	
Undisclosed or bankrupt	2		2	
Pending	0		1	
Mean	9.88		21.41	
(including dismissals)	(6.38)		(12.99)	
Median	8.00		6.00	
(including dismissals)	(3.05)		(2.26)	
Maximum	55.00		259.00	
Minimum	0.64		< 0.01	

TABLE 2
Descriptive Statistics of Regression Variables

<i>Panel A: Pre-PSLRA compared to Post-PSLRA</i>								
Variable	Pre-PSLRA (N = 100)			Post-PSLRA (N = 128)			Tests of Differences	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
Min. Return	-0.21	-0.19	0.11	-0.26	-0.25	0.13	< 0.01	< 0.01
Market Cap.	1774.93	214.60	5418.00	2806.13	201.14	8043.00	0.29	0.70
Turnover	0.57	0.63	0.32	0.67	0.75	0.29	0.01	0.01
Restatement	0.10	0.00	0.30	0.19	0.00	0.39	0.06	0.07
Insider Trading	-0.10	-0.02	0.17	-0.17	-0.04	0.24	< 0.01	0.33
Abnormal Insider Trading	0.02	0.00	0.17	0.02	0.00	0.27	0.90	0.88
Avg. Tenure	5.98	5.50	4.16	5.30	5.00	3.48	0.19	0.22
Busy	1.69	1.50	1.15	1.49	1.50	1.13	0.17	0.22
Independent	0.58	0.60	0.16	0.60	0.60	0.19	0.49	0.35

TABLE 2 - continued
Descriptive Statistics of Regression Variables

Panel B: Lawsuit firms compared to control firms in the Pre-PSLRA period

Variable	Lawsuit Firms (N = 50)			Control Firms (N = 50)			Tests of Differences	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
Min. Return	-0.25	-0.25	0.10	-0.17	-0.15	0.11	< 0.01	< 0.01
Market Cap.	2320.27	687.47	6650.00	1194.03	62.58	3673.00	0.31	< 0.01
Turnover	0.73	0.83	0.26	0.41	0.36	0.31	< 0.01	< 0.01
Restatement	0.12	0.00	0.33	0.08	0.00	0.27	0.10	0.10
Insider Trading	-0.14	-0.03	0.19	-0.07	-0.01	0.13	0.03	0.08
Abnormal Insider Trading	0.04	0.00	0.19	0.01	0.00	0.16	0.50	0.24
Avg. Tenure	5.12	5.00	2.95	6.85	5.90	5.00	0.04	0.10
Busy	1.90	1.83	1.09	1.48	1.33	1.18	0.07	0.03
Independent	0.59	0.60	0.17	0.58	0.60	0.16	0.76	0.78

TABLE 2 - continued
Descriptive Statistics of Regression Variables

Panel C: Lawsuit firms compared to control firms in the Post-PSLRA period

Variable	Lawsuit Firms (N = 64)			Control Firms (N =64)			Tests of Differences	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
Min. Return	-0.30	-0.31	0.15	-0.23	-0.20	0.11	< 0.01	< 0.01
Market Cap.	4068.57	312.72	8398.00	1518.93	63.67	7528.00	0.11	< 0.01
Turnover	0.79	0.88	0.24	0.55	0.52	0.29	< 0.01	< 0.01
Restatement	0.28	0.00	0.45	0.09	0.00	0.29	< 0.01	< 0.01
Insider Trading	-0.28	-0.23	0.26	-0.06	0.00	0.14	< 0.01	< 0.01
Abnormal Insider Trading	0.03	0.00	0.35	0.13	0.00	0.17	0.77	0.58
Avg. Tenure	5.25	5.25	2.58	5.35	4.00	4.22	0.87	0.28
Busy	1.77	1.84	1.09	1.21	1.00	1.11	< 0.01	< 0.01
Independent	0.65	0.67	0.17	0.54	0.57	0.20	< 0.01	< 0.01

Variable definitions are in the Appendix. The pre-PSLRA period is 1991-1995 and the post-PSLRA period is 1996-1999.

TABLE 3
Determinants of Lawsuit Filings

Variable	Prediction	Pre-PSLRA		Post-PSLRA	
		Coeff.	p-value	Coeff.	p-value
Constant	?	-4.90	< 0.01	-2.52	0.02
Market Cap.	+	0.46	< 0.01	0.33	< 0.01
Min. Return	-	-3.05	0.19	-3.41	0.03
Turnover	+	1.05	0.21	0.12	0.88
Restatement	+	1.62	0.17	2.80	< 0.01
Insider Trading	-	0.01	0.52	-0.01	0.03
Abnormal Insider Trading	-	0.01	0.38	-0.01	0.25
Positive Forecast	+	0.84	0.07	0.22	0.61
Negative Forecast	-	-1.00	0.57	-0.31	0.58
Earnings Shortfall	+	1.31	0.01	1.19	< 0.01
Avg. Tenure	-	-0.06	0.22	0.02	0.74
Busy	+	0.08	0.72	0.39	0.05
Independent	-	-0.78	0.72	-2.36	0.09
Audit Meetings	-	-0.01	1.00	0.10	0.32
Independent Audit	-	-0.76	0.93	0.40	0.67
Pseudo R ²		0.54		0.56	
N		100		128	

Variable definitions are in the Appendix. The pre-PSLRA period is 1991-1995 and the post-PSLRA period is 1996-2000.

TABLE 4
Determinants of Accounting, Insider Trading
and Forecasting Allegations Conditional on a Lawsuit Filing

Panel A: Determinants of accounting allegations

Variable	Prediction	Pre-PSLRA		Post-PSLRA	
		Coeff.	p-value	Coeff.	p-value
Constant	?	-1.84	0.14	-0.24	0.82
Insider Allegation	+	0.49	0.27	-0.48	0.34
Forecasting Allegation	-	-0.12	0.88	-0.83	0.07
Restatement	+	5.80	0.98	0.99	0.03
Avg. Tenure	-	0.03	0.74	0.01	0.86
Busy	+	0.13	0.62	-0.14	0.46
Independent	-	0.04	0.98	-0.27	0.83
Audit Meetings	-	0.03	0.81	-0.06	0.50
Audit Independence	-	0.72	0.54	2.00	0.06
Pseudo R ²		0.23		0.27	
N		50		64	

Panel B: Determinants of insider trading allegations

Variable	Prediction	Pre-PSLRA		Post-PSLRA	
		Coeff.	p-value	Coeff.	p-value
Constant	?	-1.72	0.16	1.69	0.18
Accounting Allegation	+	0.68	0.12	-0.65	0.18
Forecasting Allegation	-	0.10	0.86	-0.95	0.06
Insider Trading	-	-0.01	0.60	-0.01	0.10
Abnormal Insider Trading	-	0.01	0.69	-0.01	0.69
Avg. Tenure	-	-0.09	0.22	-0.06	0.42
Busy	+	0.42	0.06	0.16	0.45
Independent	-	1.60	0.34	1.71	0.21
Audit Meetings	-	-0.13	0.30	0.01	0.95
Audit Independence	-	0.15	0.88	-0.22	0.84
Pseudo R ²		0.19		0.15	
N		50		64	

Variable definitions are in the Appendix. The pre-PSLRA period is 1991-1995 and the post-PSLRA period is 1996-2000.

Panel C: Determinants of forecasting allegations

Variable	Prediction	Pre-PSLRA		Post-PSLRA	
		Coeff.	p-value	Coeff.	p-value
Constant	?	0.28	0.88	1.29	0.26
Accounting Allegation	–	–1.97	0.09	–1.24	<0.01
Insider Trading Allegation	–	0.36	0.69	–1.04	0.05
Positive Forecast	+	1.36	0.21	0.20	0.64
Negative Forecast	–	0.08	0.93	–0.21	0.70
Earnings Shortfall	+	2.85	0.01	0.93	0.04
Avg. Tenure	–	0.06	0.68	–0.12	0.10
Busy	+	0.08	0.81	0.06	0.78
Independent	–	–1.49	0.66	–1.67	0.30
Audit Meetings	–	0.15	0.55	0.03	0.80
Audit Independence	–	–0.80	0.78	1.87	0.12
Pseudo R ²		0.33		0.26	
N		50		64	

Variable definitions are in the Appendix. The pre-PSLRA period is 1991-1995 and the post-PSLRA period is 1996-2000.

TABLE 5
Determinants of Lawsuits Settled for Greater Than Nuisance Value (> \$2 Million)

Variable	Prediction	Pre-PSLRA		Post-PSLRA	
		Coeff.	p-value	Coeff.	p-value
Constant	?	-0.62	0.66	-0.19	0.85
Restatement	+	0.25	0.77	0.73	0.08
Insider Trading	-	0.01	0.10	-0.00	0.59
Abnormal Insider Trading	-	-0.01	0.04	0.00	0.92
Positive Forecast	+	-0.94	0.11	0.58	0.18
Negative Forecast	-	1.44	0.01	0.04	0.92
Earnings Shortfall	?	-0.82	0.34	0.34	0.41
Avg. Tenure	-	-0.16	0.05	-0.16	0.04
Busy	+	-0.00	0.99	0.16	0.42
Independent	-	2.06	0.39	-1.13	0.40
Audit Meetings	-	0.19	0.25	0.01	0.89
Independent Audit	-	1.04	0.38	0.95	0.35
Pseudo R ²		0.38		0.17	
N		48		61	

Variable definitions are in the Appendix. The pre-PSLRA period is 1991-1995 and the post-PSLRA period is 1996-2000.