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There are Plaintiffs and... There are Plaintiffs:
An Empirical Analysis of Securities Class Action Settlements
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There are Plaintiffs and... There are Plaintiffs: An Empirical Analysis of Securities Class Action Settlements

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By

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Reform of the securities class action is once again the subject of national debate. The impetus for this debate is the reports of three different groups – The Committee on Capital Market Regulation\(^2\), The Commission on the Regulation of U.S. Capital Markets In the 21\(^{st}\) Century\(^3\), and McKinsey & Company.\(^4\) Each of the reports focuses on a single theme: how the contemporary regulatory culture places U.S. capital markets at a competitive disadvantage to foreign markets. While multiple regulatory forces are targeted by each report’s call for reform, each of the reports singles out securities class actions as one of the prime villains that place U.S. capital markets at a competitive disadvantage.
disadvantage. The reports’ recommendations range from insignificant changes to drastic curtailments of private class actions. Surprisingly, these current-day cries echo calls for reform heeded by Congress in the not too distant past.

Major reform of the securities class action occurred with the Private Securities Litigation Reform Act of 1995. Among the PSLRA’s contributions is the introduction of procedures by which the court chooses from among competing petitioners a lead plaintiff for the class. The statute commands that the petitioner with the largest financial loss suffered as a consequence of the defendant’s alleged misrepresentation is presumed to be the most adequate plaintiff. Thus, the lead plaintiff provision supplants the traditional “first to file” rule for selecting the suit’s plaintiff with a mechanism that seeks to harness to the plaintiff’s economic self interest to the suits’ prosecution. Also, by eliminating the race to be the first to file, the lead plaintiff provision seeks to avoid “hair trigger” filings by overly eager plaintiffs’ counsel which Congress believed too frequently gave rise to incomplete and insubstantially pled causes of action. The PSLRA also introduced for securities class actions a heightened pleading requirement as well as a bar to the plaintiff

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6 See Securities Exchange Act section 21D(a)(3), 15 U.S.C. § 78u-4(a)(3)(providing twenty days after filing of complaint for notice to be published giving notice inviting class members to petition the court to be designated as the suit’s lead plaintiff and according sixty days for such petitions to be submitted).
7 This abuse is complemented by the PSLRA’s tinkering with the Rule 11 of the Federal Rules of Civil Procedure to mandate that the presiding judge in all securities cases determine whether sanctions against any of the parties or their representatives should be imposed. See Securities Exchange Act section 21D(c), 15 U.S.C. § 78u-4(c). The PSLRA’s innovation is removing from the litigants themselves the initiative for imposing sanctions. It had been the belief that in the settlement dynamics frequently caused the parties to quietly forsake their right to move for Rule 11 sanctions. See generally James D. Cox, Making Securities Fraud Class Actions Virtuous, 39 Ariz. L. Rev. 497, 521-523 (1997)(concluding that the PSLRA reforms overall, including its alteration of the mechanism for Rule 11 sanctions to be considered, was part of dominant focus that the presiding courts are to become more aggressive in their supervision of securities class actions).
8 See Securities Exchange Act section 21D(b)(2), 15 U.S.C. § 78u-4(b)(2). This was recently interpreted to mean that a “strong inference” is one that is “powerful or cogent” and is to be determined from all the facts set forth in complaint with inferences being drawn both for and against the allegations. See Tellabs, Inc. v. Makor Issues & Rights, Ltd., S.Ct. (2007), reversing Makor Issues & Rights Ltd
obtaining any discovery prior to the district court disposing of the defendants’ motions to dismiss. By introducing the requirement that allegations involving fraud must be plead not only with particularity, but also that the pled facts must establish a “strong inference” of fraud, the PSLRA cast aside, albeit only for securities actions, the much lower notice pleading requirement that has been a fixture of American civil procedure for decades.

Substantive changes to the law were also introduced by the PSLRA. With few exceptions, joint and several liability was replaced by proportionate liability so that a particular defendant’s liability is capped by that defendant’s relative degree of fault. Similarly, contribution rights among co-violators are also based on proportionate fault of each defendant. Three years after the PSLRA, Congress returned to the topic again by enacting the Securities Litigation Uniform Standards Act; this provision was prompted by aggressive efforts of plaintiff lawyers to bypass the limitations, most notably the bar to discovery and higher pleading requirement, of the PSLRA by bringing suit in state court. Post-SLUSA, securities fraud class actions are exclusively the domain of the federal court.

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v. Tellabs, Inc., 437 F.3d 588 (7th Cir. 2006). See generally James D. Cox, Randall S. Thomas & Lynn Bai, Doest the Pleading Standard Matter in Securities Class Actions? Doctrinal and Empirical Analysis of the Likely Impact of Tellabs, working draft (2007)(concluding that divergent interpretations of pleading standard that persisted before Tellabs will likely continue and this will perpetuate forum shopping is documented empirically to have occurred before Tellabs).


10 What is typically required is “a short and plain statement of the claim showing that the pleader is entitled to relief.” See Fed. R. Civ. P. 8. See e.g., Conley v. Gibson, 355 U.S. 41, 48 (1957)(purpose of pleading is to facilitate a proper decision on the merits not introduce “a game of skill in which one misstep by counsel may be decisive”).

11 Securities Exchange Act section 21D(f), 15 U.S.C. § 78u-4(f) (proportionate liability does not apply, however, in some instances such as when there has been an adjudication of knowledge of the violation).


13 See generally Richard Painter, Responding to a False Alarm: Federal Preemption of State Securities Fraud Causes of Action, 84 Cornell L. Rev. 1, (1998). However, SLUSA preempts even claims that could not have been brought under the federal securities laws, such as non-purchasers or non-sellers of
In this paper, we examine the impact of the PSLRA and more particularly the impact the type of lead plaintiff on the size of settlements in securities fraud class actions. We thus provide insight into whether the type of plaintiff that heads the class action impacts the overall outcome of the case. Furthermore, we explore possible indicia that may explain why some suits settle for extremely small sums – small relative to the “provable losses” suffered by the class, small relative to the asset size of the defendant-company, and small relative to other settlements in our sample. This evidence bears heavily on the debate over “strike suits.” Part I of this paper sets forth the contemporary debate surrounding the need for further reforms of securities class actions. In this section, we set forth the insights advanced in three prominent reports focused on the competitiveness of U.S. capital markets. In Part II we first provide descriptive statistics of our extensive data set, and then use multivariate regression analysis to explore the underlying relationships. In Part III, we closely examine small settlements for clues to whether they reflect evidence of strike suits. We conclude in Part IV with a set of policy recommendations based on our analysis of the data.

Our goals in this paper are more modest than the Committee Report, the Chamber Report and the McKinsey Report, each of which called for wide-ranging reforms: we focus on how the PSLRA changed securities fraud settlements so as to determine whether the reforms it introduced accomplished at least some of the Act’s important goals. If the PSLRA was successful, and we think it was, then one must be somewhat skeptical of the need for further cutbacks in private securities class action so soon after the Act was passed.

I. The Contemporary Legal Environment of Securities Class Actions

A. Recent Calls for Reform

The premise of each of the three reports is that U.S. capital markets are losing, or have lost, their competitive edge over rival markets, most notably the London Stock Exchange. The metrics advanced to support the thesis is quite similar across the three reports. For example, the Committee Report emphasized the widely reported news account that 24 of the 25 largest IPOs in 2006 took place in markets outside the U.S. 15 Indeed, the Committee Report tracks a fairly steady decline in global IPOs occurring within the U.S.16 On this point, the McKinsey Report notes that global IPOs taking place in the U.S. in 2006 were barely one-third the level they were in 2001, while European exchanges saw a thirty percent increase in this same period.17 The most notable gainer has been the London markets, which have seen their percentage of global IPOs increase from five to twenty-five percent between in the last three years.18

Echoing these concerns,19 the Chamber Report notes the steady decline since 1996 in the number of foreign companies choosing to list their securities in the U.S. so that the U.S. market share of worldwide listings has decreased 19 percent since 1997.20

And, the McKinsey Report reflects where many of these IPOs are migrating - to Hong

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15 Committee Report at 30 (also noting that nine of the ten largest 2006 IPOs prior to the report’s release occurred outside the U.S.).
16 See Id. at Fig. 1.6 (graphically reflecting decline from fifty percent by value of IPOs occurring in the U.S. in 2000 to about eight percent in 2006.
17 McKinsey Report at 43.
18 Id. at 32.
19 See e.g., Chamber Report 18-19.
20 Chamber Report at 19.
Kong, Singapore and London. At the same time, the Chamber Report observes that on close analysis during the first half of 2006 there were 17 foreign issuers who as a practical matter could consider an IPO in the U.S. and 11 of those chose the U.S. so that “the competitive position of the United States for in-play IPOs has not dramatically deteriorated….”

Singled out for special treatment is the relative attractiveness of London’s Alternative Investment Market (AIM) which is the quintessential regulation-lite market. Since 2001, 870 companies have listed on AIM compared to 526 on the NASDAQ market, and the trend has accelerated with AIM enjoying more than twice as many new listings since 2005 as NASDAQ.

The Committee Report advances a more interesting line of inquiry by considering the forces driving the growing “private equity” market. This is a market whereby funds raised from institutions and wealthy individuals are skillfully employed in order to among other objectives, take public companies private or acquire private companies that otherwise would have considered public markets as the next step in their development. While at one time investors would reap their gains when the private company ultimately undertook an IPO, the Committee Report points out that since 2001 the numbers of private sales exits exceed the number IPO exits by ten-to-one. Others have suggested that one of the considerations for being a public firm is not only the cost related to the

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21 McKinsey Report at 47 Exhibit 10 (reporting percent of IPO values across four exchange markets with the U.S. holding steady at about 10 percent but rising levels post 2002 for Hong Kong, Singapore and London).
22 Id. at 20.
23 McKinsey Report at 50 (pointing out that during the first ten months of 2006 total IPOs listed on Nasdaq raised about the same amount as IPOs listed on AIM, whereas as early as 2004 IPOs listed on Nasdaq were four times larger than those listed on AIM).
24 See Committee Report at 34-38.
25 Id. at 36. (in terms of value, the private equity exits 2001-2005 totaled $94.85 billion compared to $12.06 billion for IPO exits).
greater transparency of being a public company, but the heightened exposure to litigation related to the disclosures that public companies must make. This is reflected in the data gathered in the McKinsey Report in which surveyed executives stated that “the propensity toward litigation was the predominant problem” with the legal system.

Although each of the three reports credit securities class actions with contributing to the growing anti-competitiveness of U.S. capital markets, they disagree as to what is the appropriate remedy. The least sweeping suggestions appear in the Chamber Report’s first recommendation that any recovery in a private suit should take into consideration sums recovered by the SEC pursuant to its authority under Section 308 of the Sarbanes-Oxley Act. This provision permits the SEC to direct to injured parties any monies recovered from fines and accompanying disgorgement remedies. This “Fair Fund” authority has been used frequently by the SEC since the enactment of SOX; the frequency of its use and the considerable sums sometimes directed to the Fair Fund are unlikely to have been overlooked by the litigants. Indeed, any private settlement following such action by the SEC most assuredly can be expected to have been negotiated in the shadow of the earlier SEC Fair Fund award.

What appears to be lurking behind this proposal is the observation that “[f]rom time to time, there is a case in which a private action is proceeding ahead of an SEC enforcement action. In these relatively infrequent situations, the Commission recommends that the SEC consider whether seeking postponement of the completion of

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26 This point is made in the Chamber Report at 26, noting the study of E. Kamar, P. Karaca-Mandic, E. Talley, University of California, Berkeley Law and Economics Paper, 2005:
http://law.bepress.com/cgi/viewcontent.cgi?article=1051&context=usclwps.

27 McKinsey Report at 75 (for example, 63 of respondents thought the U.K. had a less litigious culture compared to 17 percent who felt the U.S. had a less litigious culture).

the private settlement until after a Fair Fund is established would be beneficial. . . .” Our own investigation of settlements reveals that parallel SEC investigations and enforcement actions arise in only about 17 percent of the private settlements included in our study data. We suspect that in the great proportion of these cases the SEC action is concluded before the private action is settled. Thus, the Chamber’s recommendation cannot be expected to have an important impact on the overall conduct of securities class actions.

More importantly, the Chamber Report’s second recommendation for reforming private litigation is that there should be no expansion the scope of the definition of who can be a primary violator beyond the very conservative “bright-line” test adopted by the Second Circuit. The Supreme Court in Central Bank of Denver v. First Interstate Bank rejected aiding and abetting liability, holding that only those who “make” a false representation or “engage” in a manipulative act can be liable under the antifraud provision. After Central Bank, courts have grappled with the question of just how remote a party can be from the misrepresentation. The most liberal construction of this inquiry is that which includes all who participate in a “scheme” to defraud. In contrast, the bright-line test holds responsible only those who the plaintiff can attribute the false statement to so that a defendant who is not identified with the false representation but who has contributed mightily to it is excused of responsibility. Some greater clarity in this area will soon occur as the Supreme Court has agreed to decide whether “scheme”

31 See e.g., Simpson v. AOL Time Warner Inc., 452 F.3d 1040 (9th Cir. 2006)(those who participate in “sham” transactions known to be carried out for the purpose of facilitating the release of false financial reports are primary participants).
32 See e.g., Wright v. Ernst & Young LLP, 152 F.3d 169 (1999)(accounting firm that allegedly assured company that certain financial information was accurate but knew otherwise held not to be a primary participant because it was not identified in the publication of the information).
liability exists after *Central Bank.* The Chamber Report does join the other reports in recognizing the need for serious consideration of capping auditor liability, but its recommendation on that score is that auditors should be able to enter into binding arbitration clauses so as to reduce the cost of litigation and presumably provide a more cost effective means for auditors to manage their litigation risks.

The reforms recommended in the McKinsey Report called for the SEC to use its rulemaking power to limit liability of foreign companies “to securities-related damages that are proportional to their degree of exposure to the U.S. Markets.” Presumably this would exclude recovery by foreign investors for losses suffered in connection with declines in the issuer’s home market. The McKinsey Report, similar to the Chamber Report, embraces a cap on auditor liability. Its most novel and pervasive recommendation is to permit parties to appeal interlocutory judgments immediately. Finally, the McKinsey Report calls for express authority allowing company charters to call for arbitration of shareholder claims rather than have disputes channeled to the federal courts.

The recommendations of the Committee Report are far reaching. The Committee Report calls upon the SEC through rule making to eliminate numerous doctrinal uncertainties that surround the scope of the anti fraud provision. These areas are broadly

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34 See Chamber Report at 107-108.
35 See Chamber Report at 114.
37 *Id.*
38 *Id.* at 104.
39 *Id.* at 103.
identified as materiality, scienter and reliance. For example, the report identifies an existing split among the circuits regarding whether a fact, whether omitted or misstated initially, can be material if the announcement containing the omission or misstatement is accompanied by no detectable market response. Similarly, the Committee Report invokes a circuit split regarding whether the pleading standard permits an allegation of recklessness to create a strong inference of fraud and calls for SEC clarification. And, the SEC is asked to clarify the scope of the “fraud on the market” theory for establishing reliance whereby a class of plaintiffs can rely generally on the integrity of market, and not on the misrepresentation itself. Similar to the Chamber Report’s concern, the Committee Report argues that “private damage awards should be offset by any Fair Funds collections” obtained by the SEC. The Committee Report also favors prohibiting attorneys representing plaintiffs in securities class actions when the attorney has directly or indirectly contributed funds to the election campaign of the officials responsible for a investors’ (i.e., fund’s) decision to become a lead plaintiff.

In the audit area, fearing the disappearance of another major accounting firm, the Committee Report recommends there be a cap on the liability of auditors. In response to the result achieved in the WorldCom litigation, the Committee Report further recommends that good faith reliance by outside directors on audited financial statements be conclusive evidence of their due diligence so that no section 11 liability will be imposed upon the relying directors if the financials statements are materially

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40 Committee Report at 80 (calling for the SEC to undertake a review of the elements of Rule 10b-5 using a “risk based” approach).
41 Id. at 80-81.
42 Id at 81.
43 Id.
44 Id. at 82.
45 Id. at 84.
46 Id. at 88-89.
misleading.\textsuperscript{47} In WorldCom,\textsuperscript{48} directors failed to have the case dismissed against them, even though the misrepresentations appeared in the audited financial statements for which the outside directors’ would be liable only if they failed to establish they “had no reasonable ground to believe and did not believe” the financial statements were misleading.\textsuperscript{49} The court concluded that it was a question of fact whether the directors’ awareness that WorldCom enjoyed one of the most positive ratio of expenses to revenues was a “red flag” that would deprive the directors of this defense.

The most sweeping litigation reform proposed in the Committee Report calls for permitting public companies to opt out of the current court-based litigation system if their charters provide that shareholder disputes be addressed via some alternative dispute resolution procedure, such as arbitration.\textsuperscript{50} The parallel for this approach is what has occurred in the realm of customer-broker disputes which since embraced by the Supreme Court\textsuperscript{51} has largely ridded the federal court system of such disputes, substituting in its place the NASD-supervised arbitration process.\textsuperscript{52} Implementation of this initiative would likely require the SEC to set aside earlier positions that substituting an ADR process violates the securities laws anti-waiver provisions\textsuperscript{53} and would most certainly face a serious challenge premised on the argument that the anti-waiver protections are personal

\begin{flushleft}
\begin{footnotesize}
\textsuperscript{47} \textit{Id.} at 91.
\textsuperscript{50} Committee Report at 109-112.
\textsuperscript{52} For a study of inconsistencies of recent arbitration decisions with underlying legal principles, see Jennifer J. Johnson, Wall Street Meets the Wild West: Bringing Law and Order To Securities Arbitration, 84 N.C. L. Rev. 123 (2005).
\textsuperscript{53} Authority cited by Committee Report at 111.
\end{footnotesize}
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and, therefore, cannot be set aside by the collective will of a majority of the holders of a company’s shares.

Whether examined collectively or in isolation of one another, the reforms proposed by the three reports do not call for wholesale changes to securities class actions. With the exception of the Committee Report’s broad calls for the SEC to undertake rule making to clarify issues involving materiality, scienter and reliance, and permitting public companies to opt for ADR procedures in place of the current court-based system, the proposals are hardly an indictment of the efficacy of the securities class action. Indeed, none of the reports include any of the claims commonly made in the mid-90’s by proponents of the PSLRA that securities fraud actions were on average extortion devices in the hands of unscrupulous attorneys. Rather each of the reports is thin on contemporary securities class action experiences. Thus, if we were to consider only the contemporary reform proposals, we might well conclude that the securities class actions are working reasonably well and are in need of only some minor tweaking. We seek to address empirically several questions that we believe are central to assessing whether reform of the securities class action is justified.

B. Tensions Surrounding the Lead Plaintiff Provision

Congress placed the plaintiff’s selection at a strategic position in its 1995 reform efforts. The goal was to provide, whenever possible, a real plaintiff to the suit whose economic self interest would serve the class and likely the defendant corporation’s interests. The latter could occur by structuring any resulting settlement to include governance reforms that would benefit the defendant company’s stockholders in the years
following the settlement. It also is possible that the vigilance of a significant holder of the defendant company’s shares would recommend to the court that the suit was improvidently filed. The former could occur in many ways such as the lead plaintiff prevailing upon the class’ counsel to obtain a larger settlement than the class’ counsel would otherwise have pursued and negotiating attorneys’ fees that not only provide incentives for the counsel to reap a large settlement but also lowers the fees from what otherwise would be awarded.

The plaintiffs’ law firms are not passive participants in the operation of the lead plaintiff provision. The PSLRA empowers the lead plaintiff to recommend to the court who should be designated as counsel for the class. In this way, the decision selecting the suit’s lead plaintiff ultimately decides as well who will be the suit’s counsel. It is, therefore, understandable that since 1995, plaintiffs’ firms actively recruit and nurture ongoing relationships with institutional investors with an eye toward gaining their supporting in being chosen to represent the class.

The PSLRA is clear that the lead plaintiff is presumed to be the party with the most significant loss as a consequence of the violation being sued upon. A review of the legislative history reveals that Congress’ vision was focused exclusively on this being an institutional investor. As will be seen in the descriptive statistics that follow, this vision has not been fulfilled as the greatest number of securities class action settlements have as their plaintiff either an individual or group of individuals, not a financial

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55 See e.g., Conference Report, H. Rept. No. 104-369 (Nov. 28, 1995)(repeatedly making references to expectations that “institutional investors” will step forward to become lead plaintiffs).
institution. On a more hopeful note, we do find that in recent years there is something of a trend toward there being many more cases where a financial institution or other entity are the suit’s lead plaintiff. We speculate that as experience was gained under the lead plaintiff provision entities that uncertainties regarding the costs and benefits of being a lead plaintiff disappeared with the result that many more organizations today are willing to shoulder the task of being the suit’s lead plaintiff.

Initially, institutional lead plaintiffs were a narrowly defined group, being almost entirely composed of public pension funds or labor pension funds. Over time, this group expanded to include other financial institutions, such as insurance companies, private investment entities including hedge funds, and sporadically a mutual fund. There is a continuing practice of permitting groups of individuals to aggregate their claims, particularly when a pre-existing relationship among them. Serious doubts have been raised regarding whether aggregation is consistent with the goal of the PSLRA of providing a watchful and resourceful plaintiff for the suit;\textsuperscript{56} the cause for doubt is whether a group not only faces serious collective action problems but that the incentives to be watchful is no greater than that of the group’s member that has the largest loss.

Rounding out the range of lead plaintiffs are individuals who, as observed earlier, represent the largest percentage of securities class actions.

In this empirical investigation, we have two central foci. First, we seek to better understand how well the lead plaintiff provision is operating. As discussed earlier, a key provision of the PSLRA was the adoption for securities class actions a mechanism for the court to select among competing petitioners the most adequate representative of

\textsuperscript{56} See e.g., Heck, Comment, Conflict and Aggregation: Appointing Institutional Investors as Sole Lead Plaintiffs Under the PSLRA, 66 U. Chi. L. Rev. 1199 (1999).
the class. We expand on our earlier work on the operation of this provision by including in our analysis a substantial number of cases filed in more recent years. The more recent settlements are significant to understanding today’s securities class action since our data reflects that it took several years for the lead plaintiff provision to ultimately attract large numbers of competing petitioners. To this end, we compare institutional lead plaintiff cases initiated prior to 2002 with those initiated after 2001. By undertaking this bifurcation we capture how the experience with this type of lead plaintiff has impacted settlements. Moreover, in this study we seek to more closely differentiate among the types of entities that are selected as lead plaintiffs.

Our second focus is to better understand the dynamics and variables associated with the “small settlement.” These are settlements that yield amounts not exceeding $2 million or $3 million which in our sample represent 20.5% and 29.7% percent of the total number of settlements, respectively. In this part of the article, we address the claim that securities class actions frequently involve “strike suits” which are baseless actions sought for no greater purpose than to extort a settlement, most of which is diverted to the suit’s attorneys. In the end, our analysis of 773 settlements in the next section suggest to us several areas of inquiry regulators and policymakers should consider if any review of securities class actions is to occur. Our analysis and recommendations are intended to contribute to the on-going debate about how securities class actions serve their compensatory mission.

II. Empirical Analysis on Impact of Lead Plaintiffs in Securities Fraud Class Actions
We begin by presenting some descriptive statistics for our sample and the main variables for which we have complete data. The data sample consists of 773 securities class actions settled from 1993 through 2005. Pacer was our main source of information regarding the specific cases, such as the identity of the lead plaintiff, the filing and settlement dates, and the settlement amount. We resorted to SEC Enforcement Releases and the Nexis electronic data base to ascertain whether there was a parallel SEC enforcement proceeding. For each case, we coded their lead plaintiff type. We are especially interested in institutional lead plaintiffs defined as financial institutions in the classic sense of an insurance company, bank, pension fund, mutual fund, endowment or foundation. The institutional lead plaintiffs in our cases are mostly pension funds, either a public pension fund or a labor union pension fund. To examine their separate influence on securities settlement outcomes, we separate these types of institution from a residual sub-group of “other institutions.”

In addition, from COMPUSTAT we obtained information on the defendant firms’ total assets (a proxy for the defendants’ sizes) immediately before the law suits, and any bankruptcy filings by the defendants before case settlement from the Bankruptcy Research Database maintained by Professor Lynn M. LoPucki of UCLA Law School. Our study required an estimation of provable losses suffered by the plaintiffs during class periods. These numbers were calculated in the same manner as in Cox & Thomas (2004). The provable loss ratio variable was calculated by scaling the actual cash settlements with the estimated provable losses.

A. Descriptive Statistics

Table 1 sets forth the descriptive statistics for the sample used in our empirical analysis. Categories 1 and 3 comprise our institutional investor lead plaintiffs. They figure prominently in the sample as there are 113 settlements (17.9 % of post-PSLRA settlements) that involve either an institution or an institution and an individual as the lead plaintiffs. The largest category of lead plaintiff is the “Group of Individuals” classification. These constitute aggregations of individual lead plaintiffs that are collectively selected to lead the class. Single individuals and other types of entities are the remaining two important lead plaintiff categories. There is no lead plaintiff for the pre-PSLRA cases.
The second half of Table 1 provides a breakout of the year the complaint was filed for all of the cases in our sample. About one-fifth of our cases were filed before the enactment of the PSLRA, about three-fifths were filed during the early post-PSLRA period, and the remaining cases were filed after 2001 in what we refer to as the mature post-PSLRA time frame. The broad diversity in our sample permits us to examine changes that may have occurred in settlements and other aspects of securities fraud class
action litigation over this extended time frame. In particular, we can examine
longitudinally any differences in institutional investor activity and effect.

To better understand what type of institutional investors are involved as lead plaintiffs
in the cases in our sample, Table 1A subdivides this group of institutional lead plaintiffs
into three categories: the first group contains labor union pension funds, the second
category is public pension funds and the final classification includes the remaining
institutions. We make this division in order to highlight any differences in behavior
among these groups. Prior research has found some such differences.\textsuperscript{58}

<p>| Table 1A |</p>
<table>
<thead>
<tr>
<th>Breakdown of Institutional Lead Plaintiff Types</th>
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<tbody>
<tr>
<td>Type of Institutional Lead Plaintiff</td>
</tr>
<tr>
<td>Labor Union Pension Fund</td>
</tr>
<tr>
<td>Public Pension Fund</td>
</tr>
<tr>
<td>Other Institutions</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

In Table 2, we examine settlement amounts by type of lead plaintiff. Settlement
size is the best measure of the benefits of the case to the plaintiff class. While there is
some controversy over whether the current measure of damages leads to a “circularity”
problem,\textsuperscript{59} the beneficiaries of the settlement would almost always prefer larger
settlements to smaller ones. The largest settlements arise in cases with institutional

\textsuperscript{58} Michael A. Perino, Institutional Activism Through Litigation: An Empirical Analysis of Public

\textsuperscript{59} See Anjan V. Thakor, Jeffrey S. Nielsen & David A. Gulley, The Economic Reality of Securities
Class Action Litigation, U.S. Chamber of Commerce Institute for Legal Reform working paper (Oct. 26,
2005)(finding that due to significant holdings of public companies by well diversified investors that
securities class actions produce net benefits to investors most often in mergers and initial public offering
settings but not otherwise).
investor lead plaintiffs. For this group of settlements we observe much larger mean and median levels than for any of the other lead plaintiff groups. Public pension funds have by far the largest mean recoveries, but their median recovery is lower than that for the labor union pension fund category. Single individual lead plaintiffs achieve the smallest settlement sizes. Significance tests suggest that both the difference in the mean and in the median between institutions and individuals are significant at the 5% level, and that the difference between the mean for public pension funds and the mean for other types of institutions is also significant at 5% level. On the other hand, the difference in the median between public pension funds and labor union pension funds is not significant.

<table>
<thead>
<tr>
<th>Type of Lead Plaintiff</th>
<th>Mean</th>
<th>Median</th>
<th># of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor Union Pension Fund</td>
<td>39,960</td>
<td>21,300</td>
<td>44</td>
</tr>
<tr>
<td>Public Pension Fund</td>
<td>180,606</td>
<td>20,150</td>
<td>33</td>
</tr>
<tr>
<td>Other Institutions</td>
<td>76,048</td>
<td>17,975</td>
<td>36</td>
</tr>
<tr>
<td>Entity</td>
<td>13,254</td>
<td>6,500</td>
<td>118</td>
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<tr>
<td>Single Individuals</td>
<td>6,009</td>
<td>3,500</td>
<td>121</td>
</tr>
<tr>
<td>Group of Individuals</td>
<td>11,309</td>
<td>4,550</td>
<td>206</td>
</tr>
<tr>
<td>Pre-PSLRA</td>
<td>9,822</td>
<td>5,225</td>
<td>140</td>
</tr>
<tr>
<td>Unknown</td>
<td>15,827</td>
<td>6,875</td>
<td>72</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>22,846</td>
<td>5,663</td>
<td>770</td>
</tr>
</tbody>
</table>

\[60\] p-values for the t-statistics for testing equivalence in the mean between institutional lead plaintiffs and individual lead plaintiffs and groups of individual lead plaintiffs are both 0.02, and the p-value for the t-test for the equivalence in the mean between public pension funds and labor union pension funds is 0.0001, all of which statistics strongly reject the null hypothesis of equal mean. p-values in the Wilcoxon rank sum test are both <.0001 between institutional lead plaintiffs and individual lead plaintiffs and between institutional lead plaintiffs and groups of individuals, and the p-value between public pension funds and labor union pension funds is 0.35.
Table 3 reports the length of the class period for cases in our sample by type of lead plaintiff. The length of the class period is a proxy for the number of defrauded investors: longer class periods mean more investors were harmed and are likely to have suffered damages. We see that settlements pursued by institutional lead plaintiffs have the longest class periods although public pension funds have the lowest mean and median class period length of any of the institutional groups. This difference may reflect that public pension funds, more so than other categories of lead plaintiffs, cherry pick the cases they seek to become lead plaintiffs, although we cannot be sure that this is the case. There are relatively minor variations among the other types of lead plaintiffs. Significance tests have confirmed these observations.\textsuperscript{61}

\textsuperscript{61} The differences in the mean class period between labor union pension funds and individual lead plaintiffs as well as groups of individuals are both significant at 5\% level. The difference between labor union pension funds and public pension funds is significant at 10\% level. The difference in the median between institutions and individual lead plaintiffs (as well as groups of individuals), and the difference between labor union pension funds and public pension funds are both significant at 5\% level.
Using total assets (in millions of dollars) as a proxy for firm size, Table 4 presents data on the size of the defendant firms in our sample cases. Firm size may be important as a determinant of how much a defendant can afford to pay in damages in a settlement as well as the magnitude of the losses caused by its reporting violation. The most salient fact shown in this table is that institutional lead plaintiffs (all categories) assume the lead plaintiff position in much larger cases than other types of lead plaintiffs. As with settlements, we see public pension funds are lead plaintiffs in cases against the largest defendants based on mean values, although not for median values. Single individuals and groups of individuals appear as lead plaintiffs in cases against the smallest defendants.62

---

**Table 3**

**Length of Class Period (Months)**

<table>
<thead>
<tr>
<th>Type of Lead Plaintiff</th>
<th>Mean</th>
<th>Median</th>
<th># of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor Union Pension Fund</td>
<td>23.7</td>
<td>24.3</td>
<td>44</td>
</tr>
<tr>
<td>Public Pension Fund</td>
<td>15.6</td>
<td>13.4</td>
<td>33</td>
</tr>
<tr>
<td>Other Institutions</td>
<td>28.2</td>
<td>25.0</td>
<td>36</td>
</tr>
<tr>
<td>Entity</td>
<td>15.2</td>
<td>11.8</td>
<td>118</td>
</tr>
<tr>
<td>Single Individuals</td>
<td>15.9</td>
<td>11.2</td>
<td>117</td>
</tr>
<tr>
<td>Group of Individuals</td>
<td>14.1</td>
<td>10.9</td>
<td>204</td>
</tr>
<tr>
<td>Pre-FSLRA</td>
<td>12.1</td>
<td>10.3</td>
<td>72</td>
</tr>
<tr>
<td>Unknown</td>
<td>16.0</td>
<td>12.2</td>
<td>140</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15.7</td>
<td>11.8</td>
<td>764</td>
</tr>
</tbody>
</table>

---

62 P-values in the t-test for the equivalence in the mean are: 0.07 between labor union pension funds and individuals, 0.001 between public pension funds and individuals, 0.02 between other institutions and individuals, 0.02 between labor union pension funds and groups of individuals, 0.0003 between public pension funds and groups of individuals, and 0.005 between other public institutions and groups of individuals. All these numbers strongly reject the null hypothesis of equivalence in the mean. As for the median, the p-values for the Wilcoxon rank sum test z statistics are <.0001 between each type of
Using the model that we developed in an earlier paper, we estimate for each case in our sample the provable losses suffered by the class members. The estimated provable losses are a measure of the harm suffered by the plaintiff class by the defendants’ alleged fraud. We present these numbers in Table 5. Once again, we see that institutions appear as lead plaintiffs in cases with the largest values, although neither labor union funds nor public pension funds appear in the highest damage cases on average. Further, we see that individuals and groups of individuals act as lead plaintiffs in cases with the lowest estimated provable losses. 

<table>
<thead>
<tr>
<th>Type of Lead Plaintiff</th>
<th>Mean</th>
<th>Median</th>
<th># of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor Union Pension Fund</td>
<td>13,618</td>
<td>2,451</td>
<td>41</td>
</tr>
<tr>
<td>Public Pension Fund</td>
<td>20,570</td>
<td>1,976</td>
<td>28</td>
</tr>
<tr>
<td>Other Institutions</td>
<td>16,953</td>
<td>4,443</td>
<td>31</td>
</tr>
<tr>
<td>Entity</td>
<td>3,865</td>
<td>258</td>
<td>104</td>
</tr>
<tr>
<td>Single Individuals</td>
<td>2,072</td>
<td>183</td>
<td>106</td>
</tr>
<tr>
<td>Group of Individuals</td>
<td>1,301</td>
<td>161</td>
<td>184</td>
</tr>
<tr>
<td>Pre-FSLRA</td>
<td>3,785</td>
<td>124</td>
<td>134</td>
</tr>
<tr>
<td>Unknown</td>
<td>7,086</td>
<td>292</td>
<td>62</td>
</tr>
<tr>
<td>Total</td>
<td>5,025</td>
<td>246</td>
<td>690</td>
</tr>
</tbody>
</table>

Using the model that we developed in an earlier paper, we estimate for each case in our sample the provable losses suffered by the class members. The estimated provable losses are a measure of the harm suffered by the plaintiff class by the defendants’ alleged fraud. We present these numbers in Table 5. Once again, we see that institutions appear as lead plaintiffs in cases with the largest values, although neither labor union funds nor public pension funds appear in the highest damage cases on average. Further, we see that individuals and groups of individuals act as lead plaintiffs in cases with the lowest estimated provable losses. 

institutional lead plaintiffs and individuals as well as groups of individuals, again, suggesting significant difference in the median. The median between labor union pension funds and public pension funds is not significant at 5% with p-value of 0.28.

63 Significance tests show that cases in which public pension funds or other institutions (exclusive of labor union pension funds) were the lead plaintiffs have significantly higher mean provable loss than individual lead plaintiffs and group of individuals cases. In contrast, the difference is not significant at 5% level.
Our final set of descriptive statistics in Table 6 displays the ratio of the settlement amount to the estimated provable losses for the cases in our sample. This ratio can be understood as the percentage of its losses recovered by the class. While the overall level of this value depends heavily on the damage formula and related assumptions used in calculating provable losses, the relative levels of this number help us identify differences in lead plaintiffs’ effectiveness. Here we see that labor union funds and public pension funds are about average in terms of recovery percentages, while the other institution category appears to be a laggard.\(^{64}\)

<table>
<thead>
<tr>
<th>Type of Lead Plaintiff</th>
<th>Mean</th>
<th>Median</th>
<th># of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor Union Pension Fund</td>
<td>2,022</td>
<td>1,432</td>
<td>43</td>
</tr>
<tr>
<td>Public Pension Fund</td>
<td>5,679</td>
<td>975</td>
<td>32</td>
</tr>
<tr>
<td>Other Institutions</td>
<td>8,264</td>
<td>654</td>
<td>35</td>
</tr>
<tr>
<td>Entity</td>
<td>367</td>
<td>136</td>
<td>115</td>
</tr>
<tr>
<td>Single Individuals</td>
<td>306</td>
<td>84</td>
<td>108</td>
</tr>
<tr>
<td>Group of Individuals</td>
<td>306</td>
<td>82</td>
<td>193</td>
</tr>
<tr>
<td>Pre-FSLRA</td>
<td>382</td>
<td>55</td>
<td>140</td>
</tr>
<tr>
<td>Unknown</td>
<td>509</td>
<td>78</td>
<td>65</td>
</tr>
<tr>
<td>Total</td>
<td>1,060</td>
<td>110</td>
<td>736</td>
</tr>
</tbody>
</table>

\(^{64}\) Although the differences in the mean recovery ratio between each type of institutions and individuals (as well as groups of individuals) are not significant, the differences in the median between institutional lead plaintiffs and individuals as well as groups of individuals are significant at 5% or 10% levels. Among
B. Multivariate Analysis

Having described the main variables in the previous section, we now utilize multivariate analyses to examine the underlying relationships between several key variables. We are particularly interested in the determinants of the size of settlements in securities fraud litigation. In Table 7, we display the results of an ordinary least squares regression with the dependent variable being log (settlement amount). The independent variables are log (provable losses), log (total assets), length of class period, a dummy variable for the presence of an SEC enforcement action, a bankruptcy dummy variable (to control for the potential effect of bankruptcy filing on settlement size) and two dummy variables for different institutional lead plaintiff types, labor union pension funds and public pension funds are shown to have significantly higher median than other institutions.
variables for whether the case was filed in the early post-PSLRA time period or the mature post-PSLRA time period.

Table 7
Determinants of Log(Settlement Amount)

<table>
<thead>
<tr>
<th>OLS Regressor</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>t - Statistic</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>3.87</td>
<td>0.26</td>
<td>15.14</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Log (Provable Losses)</td>
<td>0.34</td>
<td>0.03</td>
<td>11.92**</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Log (Total Assets)</td>
<td>0.15</td>
<td>0.03</td>
<td>5.86**</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Log (Class Period)</td>
<td>0.04</td>
<td>0.04</td>
<td>1.01</td>
<td>0.31</td>
</tr>
<tr>
<td>SEC Dummy</td>
<td>0.33</td>
<td>0.10</td>
<td>3.35**</td>
<td>0.001</td>
</tr>
<tr>
<td>1996 - 2000 Period</td>
<td>-0.05</td>
<td>0.10</td>
<td>-0.47</td>
<td>0.64</td>
</tr>
<tr>
<td>2001 - 2005 Period</td>
<td>-0.24</td>
<td>0.11</td>
<td>-2.13**</td>
<td>0.03</td>
</tr>
<tr>
<td>Bankruptcy Dummy</td>
<td>-0.11</td>
<td>0.15</td>
<td>-0.73</td>
<td>0.46</td>
</tr>
</tbody>
</table>

** Significant at 5% level.
Adjusted R-square: 0.47

Scrutinizing Table 7, we see that provable losses, total assets and the presence of an SEC enforcement action are all positively and significantly related to the size of the settlement, which is consistent with earlier studies.\(^{65}\) However, the mature post-PSLRA dummy is negatively and significantly correlated with settlement size, suggesting that the dollar size of settlements has decreased in cases filed in the mature post-PSLRA period. We also find that class period length and bankruptcy filing are not significant explanatory variables for settlement size.\(^{66}\)

We next examine what the determinants are of institutional investors’ decision to intervene as lead plaintiffs in the post-PSLRA period using a logit model. Earlier

\(^{65}\) See, e.g., Cox and Thomas, supra note .

\(^{66}\) The absence of significance for bankruptcy filings may stem from the use of D&O insurance policies as the principal method of funding securities class action settlements.
research found that prior to 2002, institutions were more likely to appear in cases with larger estimated provable losses, at firms with greater total assets and where SEC enforcement actions have been undertaken. Table 8 presents our results for our sample that includes cases filed during the time period 2002-2004.

<table>
<thead>
<tr>
<th>Regressor</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>Wald Chi-Square</th>
<th>Pr &gt; ChiSq</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.94</td>
<td>1.04</td>
<td>73.41</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Log (Provable Losses)</td>
<td>0.37</td>
<td>0.10</td>
<td>13.77**</td>
<td>0.0002</td>
</tr>
<tr>
<td>Log (Total Assets)</td>
<td>0.37</td>
<td>0.08</td>
<td>20.65**</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Class Period</td>
<td>0.02</td>
<td>0.01</td>
<td>2.43</td>
<td>0.12</td>
</tr>
<tr>
<td>SEC Dummy</td>
<td>0.51</td>
<td>0.31</td>
<td>2.66*</td>
<td>0.10</td>
</tr>
</tbody>
</table>

* Significant at 10% level, ** significant at 5% level.

We see that including the later time period does not affect how institutional investors select their cases: provable losses, the presence of an SEC enforcement action, and total assets are significant and positive. Each of these indicates that institutions are more likely to intervene as lead plaintiffs in cases with larger losses, a government enforcement action and bigger defendants. However, the length of the class period is insignificant, even though yielding a positive sign. In estimations not shown, we find similar results using the provable loss ratio as the dependent variable and all of the same independent variables (with the exception of provable losses). We also try alternative specifications (not shown) of the model to include dummy variables to the Post-2001 time period to see if there are any changes in institutional investor behavior during the mature post-PSLRA time period, but these additional variables are insignificant.
We turn next to a very important policy question: whether the presence of an institutional lead plaintiff adds value for the investors by increasing settlement size. Prior research has found that the presence of an institutional investor does add value for cases filed prior to 2002. In this paper, we examine whether this relationship persists during the post-2001 time period. Given the much more widespread appearance of institutional investors in the post-2001 time period, it is possible that they are no longer adding value. Table 9 displays these new results. In this table, the dummy variable institutional investor indicates the presence of an institutional lead plaintiff. The New Era dummy variable captures any effect for post-2001 cases in general, while the variable Institution*New Era is an interaction term of the institution dummy and the New Era dummy designed to capture any additional effect of institutions on settlement amounts in cases settled after 2001.

**Table 9**

<table>
<thead>
<tr>
<th>Regressor</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>t-Statistic</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>4.13</td>
<td>0.32</td>
<td>13.00</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Log (Provable Losses)</td>
<td>0.31</td>
<td>0.03</td>
<td>8.81**</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Log (Total Assets)</td>
<td>0.15</td>
<td>0.03</td>
<td>4.51**</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Class Period</td>
<td>0.001</td>
<td>0.004</td>
<td>0.30</td>
<td>0.76</td>
</tr>
<tr>
<td>SEC Dummy</td>
<td>0.37</td>
<td>0.12</td>
<td>3.08**</td>
<td>0.002</td>
</tr>
<tr>
<td>Institution Dummy</td>
<td>0.31</td>
<td>0.16</td>
<td>1.94*</td>
<td>0.06</td>
</tr>
<tr>
<td>New Era Dummy (Post 2001 Settlements)</td>
<td>-0.07</td>
<td>0.13</td>
<td>-0.55</td>
<td>0.58</td>
</tr>
<tr>
<td>Institution*New Era</td>
<td>0.08</td>
<td>0.20</td>
<td>0.39</td>
<td>0.58</td>
</tr>
<tr>
<td>Bankruptcy Dummy</td>
<td>-0.13</td>
<td>0.18</td>
<td>-0.74</td>
<td>0.46</td>
</tr>
</tbody>
</table>

**Note:** Significant at 5% level, * significant at 10% level. Adj R-sq: 0.47

We find that the presence of an institutional lead plaintiff increases settlement size overall, and that there is a slight but insignificant increase in settlement amount in the
post-2001 period for institutional investors. We also see that settlement size is positively and significantly correlated with estimated provable losses, total assets and the presence of an SEC enforcement action. The class period variable is insignificant, as is the dummy variable for post-2001 settlements overall. 67 Thus, the variables found significant in the early years of the PSLRA’s enactment continue to be significant in the more recent experiences under the PSLRA.

We are also interested in learning whether the type of institutional lead plaintiff matters. In Table 10 below, we include three different dummy variables, one for each type of institutional lead plaintiff. As control variables, we continue to include the same independent variables as in Table 9.

67 When we run a similar regression using the ratio of settlement amount to provable losses as our dependent variable, but with the same set of independent variables (except for provable losses which is now part of the dependent variable), we find negative and significant coefficients on the Log(total assets) and class period variables and a positive and significant coefficient on the SEC dummy variable. This suggests that cases against larger firms and cases with a larger number of claimants pay out a small percentage of estimated losses.

Interestingly, none of the institutional investor variables are significant. We explore this result more fully in note 65 infra.
The results show a positive and significant impact on settlement size from the presence of a public pension fund, or labor union fund, as lead plaintiff. However, the coefficient on the public pension fund dummy variables in more than twice the size of that on labor union funds, indicating a greater effect from the presence of public pension funds. The Other Institutions variable is slightly negative and insignificant.  

III. Small Settlements: Are They Strike Suits?

Another important issue for us is whether securities class action suits are frequently strike suits. We approach this question by focusing on those cases in our sample that lead to small settlements. We define small settlements as cases where the

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68 We re-estimate this equation using the provable loss ratio as the dependent variable and the same set of independent variables (minus provable losses to avoid problems in the estimation). We find that the public pension fund variable is positive and significant, the other pension fund variable is negative and significant and the labor union pension fund variable is insignificant. This evidence is consistent with a hypothesis that public pension funds are doing the best job of increasing the percentage of losses suffered by the class.
settlement before deducting any attorneys’ fees or related litigation costs is below $2 million; we also separately consider settlements falling between $2 and $3 million. Table 11 below presents a breakdown of those cases for our sample.

Table 11
Number of Sample Cases by Settlement Size

<table>
<thead>
<tr>
<th>Type of Lead Plaintiff</th>
<th>Settlement &lt;= $2Mil</th>
<th>Settlement $2Mil - $3Mil</th>
<th>Settlement &gt; $3Mil</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># of Cases</td>
<td>Percent*</td>
<td># of Cases</td>
</tr>
<tr>
<td>Labor Union Pension Fund</td>
<td>1</td>
<td>2.3%</td>
<td>2</td>
</tr>
<tr>
<td>Public Pension Fund</td>
<td>2</td>
<td>6.1%</td>
<td>0</td>
</tr>
<tr>
<td>Other Institutions</td>
<td>9</td>
<td>25.0%</td>
<td>1</td>
</tr>
<tr>
<td>Group of Individuals</td>
<td>50</td>
<td>25.1%</td>
<td>17</td>
</tr>
<tr>
<td>Single Individuals</td>
<td>32</td>
<td>27.1%</td>
<td>15</td>
</tr>
<tr>
<td>Entity</td>
<td>13</td>
<td>11.2%</td>
<td>10</td>
</tr>
<tr>
<td>Pre-PSLRA</td>
<td>31</td>
<td>22.3%</td>
<td>19</td>
</tr>
<tr>
<td>Unknown</td>
<td>17</td>
<td>23.6%</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>155</td>
<td>20.5%</td>
<td>70</td>
</tr>
</tbody>
</table>

* Percent of total cases with specified lead plaintiff type.

Roughly 30% of our sample cases involve cash settlements of below $3 million. By far the largest portion of this group are cases where the lead plaintiff involves individuals, either singly or in a group, for in combination they constitute just over 50% of all post PSLRA settlements below $3 million. At the other end of the spectrum, the labor union pension fund and public pension fund lead plaintiff categories show the lowest percentage of small settlements in the sample. The remaining lead plaintiff types are fairly tightly grouped in the 20 to 40 percentage range.
In separate calculations (not shown), we examine whether there are any significant changes in the percentage of cases involving small settlements for the three time periods we are studying: pre-PSLRA, early post-PSLRA and mature post-PSLRA. We see a slight decline in these percentages from the pre-PSLRA period to the early post-PSLRA period, followed by a rebound to somewhat higher levels in the mature post-PSLRA period, but with no obvious trend. Therefore we cannot conclude that the 1995 reforms had any apparent impact on the percentage of small settlements.

Table 12 displays some further descriptive statistics for the small settlement cases. On average, we see that the median values in small settlement cases are statistically significantly shorter class periods, occur at statistically significantly smaller firms, have statistically significantly lower provable losses but exhibit very similar provable loss ratios (which are not significantly different) than the settlements in cases maintained by other types of lead plaintiff. We infer from this descriptive data that small settlements arise in small cap firms in which there are relatively few injured investors so that there are low levels of provable losses. On the other hand, the resulting settlements appear to recoup roughly the same amount of investors’ losses as other cases relative to the sum lost by investors. We caution, however, that these are only descriptive data and that we need to more completely examine them using a more sophisticated statistical analysis.
One final set of descriptive data relates to the time between the filing of the class action complaint and the settlement of the case. We hypothesize that strike suits are more quickly settled than meritorious actions because their value is easier to assess by each side. We therefore check to see if small settlements occur more rapidly than larger ones as a separate indication of whether they are more likely to be strike suits. Table 13 shows that there are some differences in settlement speed with smaller cases settling more rapidly. Roughly cases that settle for less than $3 million are concluded three months earlier than cases yielding larger settlements. These differences are statistically significant for the median levels, although not for the means.

<table>
<thead>
<tr>
<th>Settlement Size</th>
<th>Mean</th>
<th>Median</th>
<th># of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Settlement &lt; $2 Mil</td>
<td>873</td>
<td>796</td>
<td>100</td>
</tr>
<tr>
<td>$2 Mil &lt;= Settlement &lt; $3 Mil</td>
<td>875</td>
<td>812</td>
<td>45</td>
</tr>
<tr>
<td>Settlement &gt;= $3 Mil</td>
<td>992</td>
<td>902</td>
<td>403</td>
</tr>
</tbody>
</table>

Table 12
Descriptive Statistics by Settlement Size

<table>
<thead>
<tr>
<th>Settlement Size</th>
<th>Settlement $*</th>
<th>Class Period</th>
<th>Defendant Asset*</th>
<th>Provable Loss*</th>
<th>Recovery Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Settlement &lt; $2 Mil</td>
<td>155</td>
<td>150</td>
<td>130</td>
<td>135</td>
<td>135</td>
</tr>
<tr>
<td>- # of Cases</td>
<td>1.0</td>
<td>12.9</td>
<td>2233</td>
<td>111.7</td>
<td>0.1</td>
</tr>
<tr>
<td>- Median</td>
<td>1.0</td>
<td>8.6</td>
<td>71</td>
<td>17.7</td>
<td>0.1</td>
</tr>
<tr>
<td>$2 Mil &lt;= Settlement &lt; $3 Mil</td>
<td>70</td>
<td>69</td>
<td>63</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>- # of Cases</td>
<td>2.4</td>
<td>13.6</td>
<td>610</td>
<td>136.2</td>
<td>0.1</td>
</tr>
<tr>
<td>- Median</td>
<td>2.5</td>
<td>9.0</td>
<td>57</td>
<td>45.3</td>
<td>0.1</td>
</tr>
<tr>
<td>Settlement &gt;= $3 Mil</td>
<td>532</td>
<td>529</td>
<td>483</td>
<td>518</td>
<td>518</td>
</tr>
<tr>
<td>- # of Cases</td>
<td>32.4</td>
<td>16.9</td>
<td>6462</td>
<td>1455</td>
<td>3</td>
</tr>
<tr>
<td>- Median</td>
<td>3.6</td>
<td>13.4</td>
<td>384</td>
<td>160.5</td>
<td>0.1</td>
</tr>
</tbody>
</table>

* Millions of dollars.
We turn next to multivariate regression analysis to see if these patterns persist once we control for the effects of other variables. Table 14 exhibits the results of our analysis for the determinants of the provable loss ratio, that is, our measure of what percentage of the investors’ damages are recovered in the settlement. We see that there are strong negative significant relationships between the provable loss ratio and our measure of firm size and class period, and a statistically significant positive relationship between the presence of an SEC investigation and the same dependent variable. Most importantly, we see that our two dummy variables for small settlements are both strongly (and significantly) negatively correlated with the provable loss ratio. We interpret this finding as consistent with the claim that small settlements recover a lower percentage of investors’ losses. In short, these small settlement cases appear to exhibit the characteristics commonly associated with strike suite: small cash settlements that represent a small percentage of investors’ damages.

Table 14
Determinants of Log (Ratio of Settlement Amount to Provable Loss)

<table>
<thead>
<tr>
<th>Regressor</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>t-Statistic</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-0.30</td>
<td>0.20</td>
<td>-1.49</td>
<td>0.14</td>
</tr>
<tr>
<td>Log (Total Assets)</td>
<td>-0.22</td>
<td>0.02</td>
<td>-12.8**</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Class Period</td>
<td>-0.27</td>
<td>0.06</td>
<td>-4.75**</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>SEC Dummy</td>
<td>0.29</td>
<td>0.13</td>
<td>2.30**</td>
<td>0.02</td>
</tr>
<tr>
<td>Bankruptcy Dummy</td>
<td>0.31</td>
<td>0.20</td>
<td>1.57</td>
<td>0.12</td>
</tr>
<tr>
<td>Settlement &lt; $2 Mil</td>
<td>-0.67</td>
<td>0.14</td>
<td>-6.13**</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>$2 Mil &lt;= Settlement &lt; $3 Mil</td>
<td>-0.74</td>
<td>0.17</td>
<td>-4.29**</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>

** Significant at 5% level.
Adj R-sq. 0.23

Finally, in an effort to shed some further light on these issues, we explore the factors that determine when a case will settle for a low amount. As we expected from the
earlier descriptive statistics, higher levels of provable losses, larger firm size and longer class periods, all significantly reduce the likelihood of a small settlement. None of the other explanatory variables in the equation are significant.

These findings are consistent with the claim that cases against bigger firms with greater losses and longer class periods are less likely to result in small settlements. Surprisingly the presence of an institutional investor, an SEC investigation, or a bankruptcy filing, has no significant effect. In other words, we cannot reject the hypothesis that the presence of an institutional investor lead plaintiff has no effect on whether a small settlement occurs. This would seem inconsistent with the claim that institutional lead plaintiffs monitor settlements and discourage the continuance of strike suits.

IV. Conclusion
One of the forces propelling the enactment of the PSLRA was the charge that the merits did not matter in the settlement of securities class actions.\textsuperscript{69} This charge was leveled in a widely celebrated article that examined a six settlements which fell in a tight band of 20-27.35\% of the allowable recovery. This claim is not only debunked here, but flatly rejected by other studies that find that settlements range widely and that the strength of the complaint matters, and likely matters a lot.\textsuperscript{70} Equally reassuring is that law can have its intended consequence. The lead plaintiff provision sought to attract institutions and others who have a significant stake in the litigation to become the suit’s plaintiff. Our findings not only reflect that nearly 18 percent of securities class action settlements in suits initiated after the PSLRA are prosecuted by institutional plaintiffs of the type desired by Congress, but more importantly that they add substantial value to the outcome. Moreover, we find that there is no important difference in outcome associated with the lead plaintiff being a public pension fund versus a labor pension fund. Thus, criticism sometimes levied at the relationship some plaintiff firms have with labor is not borne out by our data. Finally, our study also underscores the dramatic impact an SEC enforcement action has on dynamics of settlements. If there is cause for disquiet it is that 20.5\% of our settlements are below $2 million and when this group is examined we find that their median settlement is half that ceiling level. Equally disturbing is that these cases are settled more quickly, involve smaller firms, shorter class action periods, have significantly lower provable loss, and yield investors a lower recovery on their provable losses than do larger


\textsuperscript{70} See generally James D. Cox, Making Securities Fraud Class Actions Virtuous, 39 Ariz. L. Rev. 498, 503-08 (1997)(reviewing some early evidence and studies that challenge the assertion that settlements are not impacted by the relative merits of the suit).
settlement cases. Our intuition is that these are cases focused on a single reporting event committed by what the attorneys believe to be a vulnerable prey, the smaller capitalized company. Nonetheless, there is even cause here to be somewhat sanguine. Because this set represents only a distinct minority of the cases, we believe it hardly makes the case for wholesale reform of the securities class action. We also speculate that recent legal events, such as the Supreme Court further tightening the pleading requirement,\textsuperscript{71} requiring factual pleading that the alleged misrepresentation was a cause in fact of the plaintiff class suffering a loss, and substantial qualification of the class action being certifiable on the fraud on the market theory for causation,\textsuperscript{72} are all likely to have their most profound impact on this cohort of cases. In this light, the law may well have progressed in a direction to reduce further the possibility of strike or long-shot suits. If so, our data, although preceding each of these recent developments, nonetheless complements the concerns that produce these procedural and substantive developments that shape the future course of securities class actions. In sum, our data and accompanying analysis provide reassurance not only that the PSLRA is working, but likely working well.

\textsuperscript{72} See Dura Pharmaceutical Inc. v. Broudo, 125 S. Ct. 1627 (2005)(mere allegation that fraud inflated the price at which investors purchased insufficient to establish loss causation; there must be allegation of loss following disclosure of the true facts); In re Initial Public Offering Sec. Litig., 471 F.3d 24 (2\textsuperscript{nd} Cir. 2006)(trial judge before certifying a class action premised on fraud on market theory of causation must find more likely than not that the security traded in a market that was efficient).
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