1-1-2003

Securities Class Action Settlements [Empirical Analysis]

Mukesh Bajaj

Sumon C. Mazumdar

Sumon C. Mazumdar

Follow this and additional works at: <http://digitalcommons.law.scu.edu/lawreview>

Part of the [Law Commons](#)

Recommended Citation

Mukesh Bajaj, Sumon C. Mazumdar, and Sumon C. Mazumdar, *Securities Class Action Settlements [Empirical Analysis]*, 43 SANTA CLARA L. REV. 1001 (2003).

Available at: <http://digitalcommons.law.scu.edu/lawreview/vol43/iss3/8>

This Article is brought to you for free and open access by the Journals at Santa Clara Law Digital Commons. It has been accepted for inclusion in Santa Clara Law Review by an authorized administrator of Santa Clara Law Digital Commons. For more information, please contact sculawlibrarian@gmail.com.

EMPIRICAL ANALYSIS

SECURITIES CLASS ACTION SETTLEMENTS[†]

Mukesh Bajaj, Sumon C. Mazumdar & Atulya Sarin*

I. INTRODUCTION

Plaintiffs, defendants, policymakers, and scholars are often interested in trends in settlements of securities class action lawsuits. In this paper, we present descriptive statistics of the most comprehensive database of settlements of securities class actions categorized by several aspects of the case or the plaintiff law firm involved in the lawsuit. We also compare certain settlements statistics prior to and subsequent to the passage of the Private Securities Litigation Reform Act of 1995 (PSLRA) through December 31, 1999.¹

†

* Bajaj is Managing Director, Finance/Damages Group, LECG, LLC, Emeryville, CA and Visiting Lecturer, Finance Department, Haas School of Business, University of California-Berkeley. Mazumdar is Senior Managing Economist, Finance/Damages Group, LECG, LLC, Emeryville, CA and Visiting Lecturer, Finance Department, Haas School of Business, University of California-Berkeley. Sarin is Breetwor Fellow and Professor of Finance, Leavey School of Business, Santa Clara University. The authors thank Chi-Yi Kuan and Chris Groves for their able research assistance.

1. The stated objectives of the act were to reduce abusive litigation and coercive settlements. *See* SEC. LITIG. REFORM CONF. REP., H.R. CONF. REP. NO. 104-369, at 2, 23 (1995) [hereinafter SLR]. Several measures were enacted to accomplish these objectives. *See id.* Such measures include (1) the replacement of joint and several liability with proportionate liability under certain circumstances; (2) reduce the preference in the appointment of lead plaintiff (and lead plaintiffs' counsel) previously given to the first plaintiff (and law firm) to file a class action; (3) the stay of discovery pending a motion to dismiss; (4) the inclusion of a 90-day "bounce-back rule in measuring damages; and (5) inclusion of negative causation in the statutory language under Section 12, giving the plaintiff burden for proving that acts or omissions of the defendant caused the damage that the plaintiff is seeking to recover. *Id.* at 3, 6, 24.

In December 1995, Congress enacted the Private Securities Litigation (PSLRA) Act over a veto by President Bill Clinton.² The Act sought to reduce abusive litigation and coercive settlements in securities lawsuits.³ Specifically, the PSLRA enacted several measures to accomplish these objectives, including: (1) replacing joint and several liability with proportionate liability under certain circumstances; (2) reducing the preference in the appointment of lead plaintiff (and lead plaintiffs' counsel) previously given to the first plaintiff (and law firm) to file a class action; (3) staying discovery pending a motion to dismiss; (4) including a 90-day "bounce-back rule in measuring damages;" and (5) including negative causation in the statutory language under section 12, giving the plaintiff the burden of proving that acts or omissions in an SEC filing by the defendant caused the damage for which the plaintiff is seeking to recover.⁴

Despite such sweeping legislative changes, the success of the PSLRA remains an open question. In October 1998, Congress determined that the PSLRA had not been able to "fully achieve its objectives" since evidence indicated that securities class action lawsuits were being shifted from federal to state courts to frustrate the PSLRA's objectives.⁵ To curb this problem, Congress enacted further private securities legislation through the Securities Litigation Uniform Standards Act.⁶ The new Act's aim is "to enact national standards for securities class action lawsuits involving nationally traded securities, while preserving the appropriate enforcement powers of State securities regulators and not changing the current treatment of individual lawsuits."⁷

The analysis herein is organized into two Parts. Part II describes the sample and analyzes the trends in the filing and

2. See Private Securities Litigation Reform Act of 1995, Pub. L. No. 104-369, 109 Stat. 737 (1995) (codified as amended at 15 U.S.C. §§ 77z-1 to 78u-4 (1995)) [hereinafter PSLRA].

3. See SLR, H.R. CONF. REP. NO. 104-369, at 2, 23 (1995) Titles I and II respectively seek to reduce abusive litigation and coercive litigation.

4. See *id.*

5. See SECURITIES LITIGATION UNIFORM STANDARDS ACT OF 1998 CONF. REP., H.R. CONF. REP. NO. 105-803, at 1-2 (1998) [hereinafter SLUSA CONF. REP.].

6. SECURITIES LITIGATION UNIFORM STANDARDS ACT OF 1998, Pub. L. No. 105-353, 112 Stat. 3227 (1998) (codified as amended at 15 U.S.C. § 77) [hereinafter SLUSA].

7. See *id.*

settlement of securities class action lawsuits.⁸ Part III provides settlement statistics categorized according to the various interests of the legal profession, policy makers and scholars.⁹

II. SAMPLE

This paper analyzes data available from the Securities Class Action Alert (SCAA),¹⁰ which to the best of our knowledge, is the only centralized resource for settlement award data since 1988. The initial sample contains 2,167 federal case filings and 579 state court filings.¹¹ Additionally, for several aspects of the analysis, we employed stock market data from the University of Chicago's Center for Research in Security Prices (CRSP).¹² The final sample of filings only contains cases for which a class period can be defined and stock price and potential investment loss data are available. This final sample comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999.

A. Filings

1. Time Trends

In Figure 1 we present the frequency of filings over time for the total sample of 2,167 federal cases and 579 state cases.¹³ The number of cases filed in federal courts immediately following PSLRA dropped from 191 in 1995 to 119 in 1996.¹⁴

8. See *infra* Part II.

9. See *infra* Part III.

10. *Securities Class Action Alert* is published by Securities Class Action Services, a division of Institutional Shareholder Services [hereinafter SCAA]. SCAA is on the world wide web at: <http://www.classactionalert.com>.

11. See *id.*

12. The Center for Research in Security Prices (CRSP®) is a financial research center at the University of Chicago Graduate School of Business. CRSP creates and maintains premier historical U.S. databases for stock (NASDAQ, AMEX, NYSE), indices, bond, and mutual fund securities. These databases are used by leaders in academic and corporate communities for financial, economic, and accounting research. See Center for Research in Security Prices, at <http://gsbwww.uchicago.edu/research/crsp/> (last visited Mar. 25, 2003).

13. See SCAA, *supra* note 10.

14. *Id.*

FIGURE 1 : Frequency of Securities Class Action Cases Filed in Federal and State Courts (1991-1999)[Full SCAA dataset]

The Securities Class Action Alert (SCAA) dataset contains 2,167 federal case filings and 579 state court filings. This figure displays the frequency of these filings during the 1991-1999 period. Prior to 1991, there were a total of 480 Federal court, 94 State court, and 20 unidentified filings included in the SCAA dataset.

However, there was no parallel drop in state court filings. Interestingly, even the decline in federal court filings noted in 1996 reversed itself soon thereafter. By 1998, federal court filings had reached an all-time high of 248 filings, while state filings had declined from 80 in 1996 to 59 by 1998 and further to 32 by 1999. In Figure 2 we show the frequency of filings for our final sample of 1,203 federal and 92 state cases that we examine in detail in this paper.¹⁵

15. See *infra* fig.2.

FIGURE 2 : Frequency of Securities Class Action Cases Filed in Federal and State Courts (1991-1999) [cases included in final sample only]

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria. (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices). (2) A class period could be defined for the case. (3) The case pertained to a security violation only. (4) Potential Investment Losses data on the firm was available in CRSP. This final sample comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample. The figure below displays the frequency of filings during 1991-1999 across the cases included in this final sample.

Congress enacted the Securities Litigation Uniform Standards Act of 1998 after reviewing evidence that securities lawsuits were shifting from federal to state courts to circumvent legislative measures introduced by PSLRA.¹⁶ Figure 1 presents the frequency of filings over time for the total initial sample of 2,167 federal cases and 579 state cases. The table reveals that immediately after the enactment of the PSLRA, cases filed in federal courts dropped from 191 in 1995 to 119 in 1996, while cases filed in state courts increased from 65 to 80.¹⁷ This trend confirms Congress' belief that cases were being shifted to frustrate the objectives of the PSLRA.

This trend, however, was not long-lived, as the decline in federal court filings in 1996 reversed itself soon thereafter.¹⁸ By 1998, federal court filings had reached an all-time high of 248

16. See SLUSA CONF. REP., *supra* note 5 at 1-2.

17. See *supra* fig.1.

18. See *id.*

filings, while state filings had declined from 80 in 1996 to 59 by 1998.¹⁹ This data indicates that even before the Securities Litigation Uniform Standards Act of 1998 was formally passed, the tendency to shift from federal to state courts had diminished. This trend may have been in anticipation of the uniform standards in state and federal courts that lawmakers were contemplating at the time and which were eventually enacted in October 1998.²⁰

2. Filings Across Different Allegation Types

Table 1 classifies our sample according to various types of allegations based on our reading of description of the case description provided by Securities Class Action Alert.²¹ We classified each of the cases in our database into ten categories of allegations that involved one or more of the following claims: (1) defendant made misleading or false statements; (2) defendant failed to disclose material information; (3) defendant violated corporate disclosure rules; (4) defendant breached fiduciary responsibilities; (5) registration/proxy statement included false or misleading statements; (6) officers of defendant firm violated insider-trading rules; (7) defendant made false revenue disclosures, which required a restatement; (8) the statements made at the IPO were false or misleading; (9) defendant was involved in improper accounting practices; and (10) defendants were involved in improper Revenue recognition.

Table 1. Frequency of Case Filings Classified by Types of Allegations

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria. (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices). (2) A class period could be defined for the case. (3) The case pertained to a security violation only. (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample. Note a case could make multiple allegations. Hence, the classifications shown below are not mutually exclusive.

A. Filings in sample by Types of Allegations

Year	Misleading/ False Statement	Failure to Disclose	Disclosure Violation	Breach of Fiduciary Responsibilit	Registration Proxy Statement	Insider Trading	Revenue Restatement	IPO	Improper Accounting Practice	Revenue Recognition
Pre - 1991	76	56	4	32	8	1	1	5	0	1
1991	53	58	3	13	7	0	0	4	3	1
1992	77	71	7	15	6	0	0	10	7	1
1993	75	52	8	18	10	3	1	14	1	2
1994	97	79	11	14	13	5	4	31	7	3
1995	69	59	14	7	10	2	4	18	3	1
1996	55	38	4	14	4	7	9	11	6	6
1997	70	48	14	19	8	3	16	13	19	9
1998	20	10	2	9	0	1	7	1	6	5
1999	97	27	4	13	6	1	9	3	10	7

19. See *id.*

20. See SLUSA, *supra* note 6.

21. See SCAA, *supra* note 10.

Securities cases often include multiple allegations. Therefore, classifying cases by allegation type is not mutually exclusive. Nevertheless, a vast majority of cases alleged misleading statements by the company's management. In 1999 alone, 97 such suits were filed.²² In contrast, the remaining nine allegation categories combined included only 80 cases filed in 1999.²³

The disparity in filings across allegation types is less stark for the pre-PSLRA period. For instance, in the pre-PSLRA period, cases alleging defendants' failure to disclose material information (the second most common allegation) were never less than 69% of cases that alleged false or misleading statements (the most common allegation).²⁴ In the post-PSLRA period, however, cases alleging defendants' failure to disclose material information never exceeded 69%. In 1999, such cases were as low as 28% of cases that alleged false or misleading statements.²⁵

Insider trading cases receive considerable public attention. Yet, Table 1 reveals that relatively few cases actually involve such an allegation. Cases alleging accounting malpractice, such as those involving revenue restatements, improper revenue recognition, or other accounting malpractice increased during the post-PSLRA period.²⁶ Revenue restatement-related cases have increased from 10 filed before 1996 to 41 filed since 1996.²⁷ Revenue recognition-related cases have also increased significantly from 9 filed in the pre-PSLRA period to 27 filed in the post-PSLRA period.²⁸ Filings alleging improper accounting practices have increased from 21 in the pre-PSLRA period to 41 in the post-PSLRA period.²⁹

3. *Filings Involving Multiple Defendants*

Even though investors may rely on information from a firm's auditors or investment banks serving as underwriters, relatively few securities class action lawsuits have been filed against such co-defendants. Figure 3 indicates that in the post-PSLRA period only 2.3% cases involved the firm's auditor as co-

22. See *supra* tbl.1.

23. See *id.*

24. See *id.*

25. See *id.*

26. See *id.*

27. See *id.*

28. See *supra* tbl.1.

29. See *id.*

defendant and only 5.4% cases involved the firm's underwriter as co-defendant.³⁰

Figure 3. Filings in Sample Classified by Type of Co-Defendant

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria. (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices). (2) A class period could be defined for the case. (3) The case pertained to a security violation only. (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample. Prior to 1991, there were a total of 17 filings with accounting co-defendants, and 16 with underwriter co-defendants.

Moreover, there was a marked decline in cases against either type of co-defendant in 1998 and 1999 compared to earlier years.³¹ For instance, in 1999, only one case involved an accounting firm as a co-defendant and only five involved an underwriting firm as a co-defendant.³² In contrast, in 1997, 11 cases involved an accounting firm as a co-defendant and 23 involved an underwriting firm as a co-defendant.³³

4. Filings by Court

Table 2 examines trends in cases filed in various courts of the federal circuit.

30. See *infra* fig.3.

31. See *supra* fig.3.

32. See *id.*

33. See *id.*

Table 2. Frequency of Case Filings Classified by Circuit Courts

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria. (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices). (2) A class period could be defined for the case. (3) The case pertained to a security violation only. (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

Year	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh
Pre - 1991	18	31	11	2	7	3	9	1	34	5	11
1991	7	24	12	1	9	1	5	4	35	3	4
1992	3	28	15	6	5	7	10	4	51	7	10
1993	5	28	15	5	7	5	6	2	45	4	8
1994	13	27	16	4	9	11	6	8	60	5	8
1995	8	17	9	3	8	7	5	4	53	6	9
1996	9	9	11	2	7	4	1	1	26	1	11
1997	10	23	10	2	7	5	8	9	50	5	18
1998	3	8	3	1	1	2	1	0	17	1	5
1999	7	14	7	6	15	6	7	5	32	6	17

These trends indicate that most federal cases have been filed with the Ninth Circuit Court of Appeals, which has the widest geographic jurisdiction, followed by the Second Circuit Court of Appeals, which covers Connecticut, Vermont and New York, for both the pre-PSLRA and the post-PSLRA periods.³⁴

B. *Speed of Settlements*

Table 3 sheds light on whether the majority of securities class action cases filed settle before trial. Table 3 shows the number of settlements by year for our sample of security class actions.³⁵

Table 3. Number of Cases Settled by Year

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria. (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices). (2) A class period could be defined for the case. (3) The case pertained to a security violation only. (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

Year Filed	Year Settled										Number of Cases Filings
	Pre - 1991	1991	1992	1993	1994	1995	1996	1997	1998	1999	
Pre - 1991	7	10	8	12	41	30	14	5	4	1	146
1991		4	24	27	18	16	3	2	2	1	112
1992			2	22	37	34	11	6	5	2	151
1993				2	27	33	19	11	7	3	137
1994					6	26	46	31	14	5	174
1995						2	28	41	31	10	143
1996							1	14	15	14	111
1997								1	16	36	162
1998									1	19	47
1999										0	129

34. See *supra* tbl.3. Two exceptions were 1996 and 1999, during which two and three more cases were filed at the Eleventh Circuit Court of Appeals compared to the Second Circuit Court of Appeals, respectively. See *id.*

35. See *id.*

Table 4 reveals that in the pre-PSLRA period a majority of cases (57.59% of cases filed) were settled in four years.³⁶ For the post-PSLRA cases in our sample, only 26.06% settled in 4 years.³⁷ These settlement rates are lower than in the pre-PSLRA period.³⁸

Table 4. Percentage of Cases Settled by Year

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria. (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices). (2) A class period could be defined for the case. (3) The case pertained to a security violation only. (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

Year Filed	Settled Within										Number of Cases
	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years	
Pre - 1991	4.79%	11.64%	17.12%	25.34%	53.42%	73.97%	83.56%	86.99%	89.73%	90.41%	146
1991	3.57%	25.00%	49.11%	65.18%	79.46%	82.14%	83.93%	85.71%	86.61%		112
1992	1.32%	15.89%	40.40%	62.91%	70.20%	74.17%	77.48%	78.81%			151
1993	1.46%	21.17%	45.26%	59.12%	67.15%	72.26%	74.45%				137
1994	3.45%	18.39%	44.83%	62.64%	70.69%	73.56%					174
1995	1.40%	20.98%	49.65%	71.33%	78.32%						143
1996	0.90%	13.51%	27.03%	39.64%							111
1997	0.62%	10.49%	32.72%								162
1998	2.13%	42.55%									47
1999	0.00%										129

	1 Year	2 Years	3 Years	4 Years	5 Years
Average for Pre - 1996:	2.67%	18.54%	40.79%	57.59%	69.52%
Average for 1996 - 1999:	0.67%	11.58%	22.94%	26.06%	

C. Speed of Dismissals

Table 5 shows the number of dismissals for our sample of security class actions.

36. See *infra* tbl.4.

37. See *id.*

38. There may be a variety of reasons why settlement and dismissal speeds declined in the post-PSLRA period. For example, one possible interpretation may be that cases filed in the post-PSLRA period are perceived *ex ante* to have more merit than cases filed in the pre-PSLRA period, which has made the settlement process more protracted. Our data do not allow us to determine which of these reasons, if any, explain our findings. Therefore, here and throughout the paper we provide descriptive statistics and avoid speculation as to the underlying reasons for trends not ascertainable from data alone.

Table 5. Number of Cases Dismissed by Year

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria. (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices). (2) A class period could be defined for the case. (3) The case pertained to a security violation only. (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

Year Filed	Year Dismissed										Number of Cases Filings
	Pre - 1991	1991	1992	1993	1994	1995	1996	1997	1998	1999	
Pre - 1991	1	6	1	1	0	1	0	0	0	0	146
1991		4	4	1	0	2	1	0	0	0	112
1992			4	9	4	4	0	0	0	0	151
1993				4	9	5	5	0	0	0	137
1994					2	15	2	0	1	0	174
1995						2	11	0	0	0	143
1996							0	1	4	2	111
1997								0	10	2	162
1998									1	6	47
1999										0	129

Table 6 shows the speed at which these cases were dismissed. Only 10.89% of all cases filed were dismissed within four years and 11.24% of all cases filed were dismissed in 5 years during the pre-PSLRA period.³⁹ An even smaller fraction (5.79%) was dismissed within four years in the post-PSLRA period.⁴⁰

Table 6. Percentage of Cases Dismissed by Year

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria. (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices). (2) A class period could be defined for the case. (3) The case pertained to a security violation only. (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

Year Filed	Settled Within										Number of Cases
	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years	
Pre - 1991	0.68%	4.79%	5.48%	6.16%	6.16%	6.85%	6.85%	6.85%	6.85%	6.85%	146
1991	3.57%	7.14%	8.04%	8.04%	9.82%	10.71%	10.71%	10.71%	10.71%		112
1992	2.65%	8.61%	11.26%	13.91%	13.91%	13.91%	13.91%	13.91%			151
1993	2.92%	9.49%	13.14%	16.79%	16.79%	16.79%	16.79%				137
1994	1.15%	9.77%	10.92%	10.92%	11.49%	11.49%					174
1995	1.40%	9.09%	9.09%	9.09%	9.09%						143
1996	0.00%	0.90%	4.50%	6.31%							111
1997	0.00%	6.17%	7.41%								162
1998	2.13%	14.89%									47
1999	0.00%										129

	1 Year	2 Years	3 Years	4 Years	5 Years
Average for Pre - 1996:	1.97%	8.23%	9.73%	10.89%	11.24%
Average for 1996 - 1999:	0.22%	4.01%	5.35%	5.79%	

39. See *supra* tbl.5.

40. See *supra* tbl.5. Five-year data were unavailable for the post-PSLRA period. See *id.* Fewer dismissals in the post-PSLRA period is consistent with the hypothesis that cases filed in the post-PSLRA period are perceived ex ante to have more merit than cases filed in the pre-PSLRA period. See *id.*

III. SETTLEMENTS

The primary purpose of this paper is to examine trends in settlements. Settlements depend on the potential loss borne by investors. We therefore consider three different measures of settlements: the dollar amount of settlement, the settlement relative to damage calculations using the plaintiff style model, and the maximum loss in market value of the company stock during the class period. To measure the plaintiff style damages we use a proportional decay model and define inflation as the difference between the stock price and an industry index. The market capitalization drop is the difference between the highest value of the market capitalization during the class period and the market capitalization on the day after the end of the class period.

A. *Settlement Amounts Categorized by Time Taken for Settlement*

Mean and median settlement amounts tend to increase the longer a case takes to settle.⁴¹ This trend is especially noticeable in the post-PSLRA period. For instance, of all 111 cases filed in 1996, just one settled within the year for \$500,000.⁴² However, of these 111 cases, 14 settled in 1997, 15 settled in 1998 and 14 settled in 1999.⁴³ The mean settlement amount for the 14 cases settled in 1997 was \$4.690 million, whereas the mean increased to \$7.571 million for the 14 cases that took two extra years to settle (i.e., settled in 1999).

41. See *infra* tbls. 7, 8.

42. See *supra* tbl.7.

43. See *supra* tbl.7.

Table 7. Average Settlement Amount and Number of Cases Settled by Year

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria. (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices). (2) A class period could be defined for the case. (3) The case pertained to a security violation only. (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

Year Filed	Year Settled										Number of Cases Filings
	Pre - 1991	1991	1992	1993	1994	1995	1996	1997	1998	1999	
Pre - 1991	\$9,786	\$6,566	\$31,905	\$9,956	\$8,771	\$7,337	\$5,206	\$7,131	\$15,638	\$7,700	
	7*	10	8	12	41	30	14	5	4	1	146
1991		\$3,799	\$6,019	\$5,012	\$7,170	\$9,797	\$13,983	\$28,700	\$0,405	\$67,250	
		4	24	27	18	16	3	2	2	1	112
1992			\$1,290	\$4,198	\$6,619	\$11,668	\$8,332	\$15,542	\$5,633	\$9,273	
			2	22	37	34	11	6	5	2	151
1993				\$0,810	\$4,467	\$5,723	\$3,634	\$8,076	\$20,696	\$6,622	
				2	27	33	19	11	7	3	137
1994					\$7,475	\$7,543	\$7,057	\$6,568	\$17,308	\$1,971	
					6	26	46	31	14	5	174
1995						-	\$4,467	\$7,221	\$8,970	\$3,698	
						2	28	41	31	10	143
1996							\$0,500	\$4,690	\$7,990	\$7,571	
							1	14	15	14	111
1997								\$1,700	\$9,332	\$13,684	
								1	16	36	162
1998									\$3,500	\$189,921	
									1	19	47
1999										-	
										0	129

Note:

Settlement Amounts are in millions.

(*) This number indicates that number of cases settled in the year corresponding to the specific filing year.

The median settlement amounts display a similar trend. The median settlement amount for cases filed in 1996 and settled in 1997 was \$2.7 million.⁴⁴

Table 8. Median Settlement Amount and Number of Cases Settled by Year

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria. (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices). (2) A class period could be defined for the case. (3) The case pertained to a security violation only. (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

Year Filed	Year Settled										Number of Cases Filings
	Pre - 1991	1991	1992	1993	1994	1995	1996	1997	1998	1999	
Pre - 1991	\$5,650	\$4,850	\$5,800	\$5,250	\$4,300	\$3,138	\$4,602	\$6,250	\$5,625	\$7,700	
	7*	10	8	12	41	30	14	5	4	1	146
1991		\$2,098	\$2,400	\$3,300	\$3,450	\$2,725	\$4,500	\$28,700	\$0,405	\$67,250	
		4	24	27	18	16	3	2	2	1	112
1992			\$1,290	\$1,475	\$3,400	\$3,325	\$3,750	\$11,875	\$0,950	\$9,273	
			2	22	37	34	11	6	5	2	151
1993				\$0,810	\$2,050	\$2,720	\$3,000	\$5,000	\$5,000	\$9,300	
				2	27	33	19	11	7	3	137
1994					\$2,350	\$2,400	\$3,250	\$4,000	\$7,000	\$2,300	
					6	26	46	31	14	5	174
1995						-	\$1,850	\$2,750	\$6,800	\$1,600	
						2	28	41	31	10	143
1996							\$0,500	\$2,700	\$5,900	\$6,000	
							1	14	15	14	111
1997								\$1,700	\$6,313	\$5,363	
								1	16	36	162
1998									\$3,500	\$4,500	
									1	19	47
1999										-	
										0	129

Note:

Settlement Amounts are in millions.

(*) This number indicates that number of cases settled in different year corresponding to the specific filing year.

However, the median settlement amount increased to \$6 million for cases settled two years later.⁴⁵ Note that these results do not necessarily illustrate that the expected settlement amount depends on the speed with which a settlement is reached. We should not over-interpret this empirical regularity and assume that settling a case with utmost speed will reduce expected settlement amount. Large and complex cases may take longer to resolve and also produce higher settlement amounts.

B. *Settlement Amounts Categorized by the Alleged Damages*

We next examined various settlement statistics for all settled cases that fell within a particular range.⁴⁶ These ranges were defined in terms of either (a) potential investor loss (PIL),⁴⁷ or (b) settlement amount.⁴⁸

1. *Potential Investor Loss*

Settlements often depend on the potential loss borne by investors. Thus, in addition to considering the dollar amount of settlements, the paper analyzes settlements relative to PIL, which is measured either by the defendant's "market capitalization drop" or by comparing the defendant's stock price performance relative to an "industry-specific index." The "market capitalization drop" measures the difference between the highest value of the market capitalization during the class period and the market capitalization on the day after the end of the class period. Alternatively, PIL may be calculated by comparing the defendant's stock price to an index of the security prices of other firms in the same industry (as classified by the two-digit Standard Industrial Classification code).⁴⁹ The "industry-specific index" approach uses a proportional decay model to calculate the number of affected shares.

45. See *infra* tbl.8.

46. See *infra* tbl.9.

47. See *infra* tbl.11.

48. See *infra* tbl.12.

49. See EXECUTIVE OFFICE OF THE PRESIDENT, OFFICE OF MANAGEMENT AND BUDGET STANDARD INDUSTRIAL CLASSIFICATION MANUAL (National Technical Information Service 1987), available at <http://www.osha.gov/oshstats/sicser.html> (last visited Mar. 15, 2003).

Table 9. Summary of Potential Investment Losses Measured by the Return on an Industry-Specific Index.

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria: (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices); (2) A class period could be defined for the case; (3) The case pertained to a security violation only; (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

Potential Investment Losses Range	Number of Observations									
	Pre-90	91	92	93	94	95	96	97	98	99
\$0.00 - \$0.99 million	1	2	3	8	16	8	15	6	4	7
\$1.00 - \$1.99 million	1	1	0	0	2	2	3	4	3	0
\$2.00 - \$9.99 million	0	0	6	9	14	14	18	8	9	7
\$10.00 - \$49.99 million	2	3	4	15	37	49	30	34	22	24
\$50.00 - \$99.99 million	1	2	8	13	21	25	26	16	13	5
\$100.00 + million	2	6	13	18	39	44	30	43	44	48
Total	7	14	34	63	129	141	122	111	95	91

Potential Investment Losses Range	Mean of Potential Investment Losses Amount									
	Pre-90	91	92	93	94	95	96	97	98	99
\$0.00 - \$0.99 million	\$0.014	\$0.391	\$0.026	\$0.096	\$0.160	\$0.158	\$0.137	\$0.047	\$0.124	\$0.133
\$1.00 - \$1.99 million	\$1.210	\$1.336			\$1.671	\$1.417	\$1.362	\$1.276	\$1.458	-
\$2.00 - \$9.99 million			\$4.547	\$6.440	\$5.020	\$5.616	\$6.037	\$5.315	\$6.733	\$5.867
\$10.00 - \$49.99 million	\$42.858	\$41.328	\$25.298	\$29.885	\$28.615	\$25.522	\$28.167	\$27.237	\$26.267	\$26.911
\$50.00 - \$99.99 million	\$99.855	\$94.231	\$69.685	\$67.523	\$67.780	\$73.291	\$71.475	\$76.779	\$64.473	\$58.620
\$100.00 + million	\$174.622	\$347.125	\$157.779	\$656.999	\$384.477	\$496.066	\$490.506	\$555.314	\$1,274.348	\$917.209

Potential Investment Losses Range	Median of Potential Investment Losses Amount									
	Pre-90	91	92	93	94	95	96	97	98	99
\$0.00 - \$0.99 million	\$0.014	\$0.391	\$0.001	\$0.013	\$0.000	\$0.002	\$0.000	\$0.000	\$0.039	\$0.057
\$1.00 - \$1.99 million	\$1.210	\$1.336	-	-	\$1.671	\$1.417	\$1.430	\$1.214	\$1.387	-
\$2.00 - \$9.99 million	-	-	\$4.396	\$5.896	\$4.873	\$4.958	\$5.875	\$5.493	\$6.454	\$5.110
\$10.00 - \$49.99 million	\$42.858	\$42.270	\$26.404	\$29.751	\$25.865	\$23.424	\$29.928	\$25.632	\$26.811	\$23.344
\$50.00 - \$99.99 million	\$99.855	\$94.231	\$67.789	\$60.938	\$63.689	\$70.685	\$68.404	\$74.901	\$66.053	\$56.771
\$100.00 + million	\$174.622	\$230.009	\$864.699	\$338.772	\$244.813	\$347.699	\$274.244	\$311.216	\$307.215	\$263.237

Note:

Potential Investment Losses are in millions.

Table 9 presents the mean and median PIL amounts for cases that were settled in a given year, in which PIL is measured using the industry index approach.⁵⁰

Table 10. Summary of Potential Investment Losses Measured by the Market Drop Approach.

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria: (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices); (2) A class period could be defined for the case; (3) The case pertained to a security violation only; (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

Potential Investment Losses Range	Number of Observations									
	Pre - 90	91	92	93	94	95	96	97	98	99
\$0.00 - \$0.99 million	0	1	1	4	13	4	11	6	2	3
\$1.00 - \$1.99 million	0	0	1	0	2	0	0	0	0	0
\$2.00 - \$9.99 million	0	1	1	2	0	1	5	2	1	3
\$10.00 - \$49.99 million	1	1	6	10	20	23	19	15	16	12
\$50.00 - \$99.99 million	0	2	4	13	19	24	23	22	14	16
\$100.00 + million	6	9	21	34	75	89	64	66	62	57
Total	7	14	34	63	129	141	122	111	95	91

Potential Investment Losses Range	Mean of Potential Investment Losses Amount									
	Pre - 90	91	92	93	94	95	96	97	98	99
\$0.00 - \$0.99 million	-	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.152	\$0.000	\$0.144
\$1.00 - \$1.99 million	-	-	\$1.975	-	\$1.741	-	-	-	-	-
\$2.00 - \$9.99 million	-	\$5.310	\$3.005	\$7.944	-	\$5.338	\$7.990	\$4.807	\$8.755	\$5.487
\$10.00 - \$49.99 million	\$11.120	\$10.787	\$27.292	\$26.262	\$30.846	\$30.991	\$32.243	\$31.435	\$28.070	\$28.181
\$50.00 - \$99.99 million	-	\$75.525	\$80.867	\$74.330	\$77.616	\$73.178	\$69.789	\$78.233	\$66.634	\$70.810
\$100.00 + million	\$286.466	\$632.553	\$3,065.722	\$1,075.597	\$617.305	\$1,157.143	\$565.011	\$784.684	\$1,774.573	\$1,624.798

Potential Investment Losses Range	Median of Potential Investment Losses Amount									
	Pre - 90	91	92	93	94	95	96	97	98	99
\$0.00 - \$0.99 million	-	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000
\$1.00 - \$1.99 million	-	-	\$1.975	-	\$1.741	-	-	-	-	-
\$2.00 - \$9.99 million	-	\$5.310	\$3.005	\$7.944	-	\$5.338	\$9.000	\$4.807	\$8.755	\$6.369
\$10.00 - \$49.99 million	\$11.120	\$10.787	\$26.507	\$22.094	\$30.558	\$31.571	\$34.615	\$32.925	\$30.568	\$25.332
\$50.00 - \$99.99 million	-	\$75.525	\$80.859	\$69.483	\$79.943	\$71.787	\$67.672	\$79.100	\$66.235	\$72.244
\$100.00 + million	\$283.762	\$309.384	\$353.084	\$280.263	\$263.153	\$302.895	\$232.382	\$386.900	\$386.738	\$525.430

Note:

Potential Investment Losses are in millions.

Table 10 presents the mean and median PIL amounts for cases that were settled in a given year, in which PIL is measured using the market drop approach.⁵¹

Tables 11 and 12 compare the settlement amounts to the PIL for all settled cases in the final sample.

51. See *supra* tbl.10.

Table 11. Settlements and Potential Investment Losses: Classified by Potential Investment Losses

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria. (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices). (2) A class period could be defined for the case. (3) The case pertained to a security violation only. (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

Panel A: Potential Investment Losses Measured by the Market Drop

Potential Investment Losses Range (1)	Number of Settlements (2)	Average Settlement Amount (3)	Average Potential Investment Losses (4)	Average Settlement Amount Relative to Potential Investment Losses* (5)	Percentage of Cases with Non-Cash Settlement (6)	Percentage of Cases with Miscellaneous Settlement (7)
\$0.00 - \$0.99 million	45	\$7.581	\$0.030	100.00%	20.00%	28.89%
\$1.00 - \$1.99 million	3	\$1.087	\$1.819	41.10%	33.33%	33.33%
\$2.00 - \$9.99 million	16	\$2.999	\$6.520	34.10%	18.75%	12.50%
\$10.00 - \$49.99 million	123	\$2.193	\$29.670	8.67%	24.39%	8.13%
\$50.00 - \$99.99 million	137	\$3.285	\$73.459	4.50%	29.93%	10.22%
\$100.00 + million	483	\$18.241	\$1,135.057	2.56%	22.15%	12.01%
Total	807	\$12.296	\$696.477	4.96%	23.67%	12.14%

Panel B: Potential Investment Losses Measured by the Return on an Industry-Specific Index

Potential Investment Losses Range (1)	Number of Settlements (2)	Average Settlement Amount (3)	Average Potential Investment Losses (4)	Average Settlement Amount Relative to Potential Investment Losses* (5)	Percentage of Cases with Non-Cash Settlement (6)	Percentage of Cases with Miscellaneous Settlement (7)
\$0.00 - \$0.99 million	70	\$5.793	\$0.132	90.94%	25.71%	21.43%
\$1.00 - \$1.99 million	16	\$1.462	\$1.393	73.47%	6.25%	12.50%
\$2.00 - \$9.99 million	84	\$2.903	\$5.731	38.18%	15.48%	11.90%
\$10.00 - \$49.99 million	220	\$3.798	\$27.560	14.21%	28.18%	9.55%
\$50.00 - \$99.99 million	130	\$6.591	\$70.749	7.87%	23.85%	13.08%
\$100.00 + million	287	\$26.333	\$731.783	4.25%	23.00%	11.50%
Total	807	\$12.296	\$279.796	16.66%	23.67%	12.14%

Note:

Potential Investment Losses and Settlement Amounts are in millions.

(*) For each settlement in this potential investment losses (PIL) range, we calculated settlement / PIL. This column presents the arithmetic mean of this ratio for each PIL range.

The majority of settled cases each involved a large PILs (over \$10 million), regardless of the methodology adopted.⁵²

Of the 807 settled cases in the sample, 79% (637 cases) had a PIL over \$10 million using the industry index approach. An even higher percentage (92%, or 743 cases) of the settled cases involve PILs over \$10 million when PIL is measured using the market drop approach.⁵³

52. See *supra* tbl.11 (Panel B).

53. See *id.*

Table 12. Settlements and Potential Investment Losses: Classified by Settlement Range

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria. (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices). (2) A class period could be defined for the case. (3) The case pertained to a security violation only. (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

Panel A: Potential Investment Losses Measured by the Market Drop

Settlement Range (1)	Number of Settlements (2)	Average Settlement Amount (3)	Average Potential Investment Losses (4)	Average Settlement Amount Relative to Potential Investment Losses (5)	Percentage of Cases with Non-Cash Settlement (6)	Percentage of Cases with Miscellaneous Settlement (7)
\$0.00 - \$0.99 million	155	\$0.453	\$522.605	2.00%	38.06%	23.23%
\$1.00 - \$1.99 million	133	\$1.460	\$151.891	2.77%	25.56%	9.02%
\$2.00 - \$9.99 million	355	\$4.846	\$360.257	5.23%	21.41%	7.32%
\$10.00 - \$49.99 million	141	\$18.895	\$1,369.295	8.19%	14.89%	14.89%
\$50.00 - \$99.99 million	16	\$61.880	\$2,676.747	11.03%	0.00%	6.25%
\$100.00 + million	7	\$611.942	\$13,865.989	15.73%	14.29%	28.57%
Total	807	\$12.296	\$696.477	4.96%	23.67%	12.14%

Panel B: Potential Investment Losses Measured by the Return on an Industry-Specific Index

Settlement Range (1)	Number of Settlements (2)	Average Settlement Amount (3)	Average Potential Investment Losses (4)	Average Settlement Amount Relative to Potential Investment Losses* (5)	Percentage of Cases with Non-Cash Settlement (6)	Percentage of Cases with Miscellaneous Settlement (7)
\$0.00 - \$0.99 million	155	\$0.453	\$186.528	16.51%	38.06%	23.23%
\$1.00 - \$1.99 million	133	\$1.460	\$51.917	15.37%	25.56%	9.02%
\$2.00 - \$9.99 million	355	\$4.846	\$143.642	15.98%	21.41%	7.32%
\$10.00 - \$49.99 million	141	\$18.895	\$527.885	17.29%	14.89%	14.89%
\$50.00 - \$99.99 million	16	\$61.880	\$919.752	31.13%	0.00%	6.25%
\$100.00 + million	7	\$611.942	\$7,119.665	35.73%	14.29%	28.57%
Total	807	\$12.296	\$279.796	16.66%	23.67%	12.14%

Note:

Potential Investment Losses and Settlement Amounts are in millions.

(*) For each settlement in this settlement range, we calculated settlement / PIL. This column presents the arithmetic mean of this ratio for each settlement range.

Even though the PIL for most cases is greater than \$10 million, the majority of settled cases (80%, or 643 cases) actually settled for less than \$10 million as shown in Table 12.⁵⁴ Thus, it is clear that although most settled cases involved a large PIL, the actual settlement amount was considerably smaller.

2. Settlement to Potential Investor Loss Ratios

The mean Settlement/Potential Investor Loss (S/PIL) ratio for each potential investor loss range is shown in the fifth column of Table 11 Panels A and B. It is clear that the mean S/PIL ratio declined steadily as the PIL range increased.⁵⁵ Similarly, the fifth column of Table 12 presents the mean ratio corresponding to specific settlement ranges. As Table 12 indicates, the S/PIL does not decline for larger settlement ranges.⁵⁶ This observation makes common sense. For a case in

54. See *supra* tbl.12.

55. See *supra* tbl.11.

56. See *supra* tbl.12.

which potential investment losses are small, plaintiffs are unlikely to file a lawsuit unless expected recovery is a large fraction of alleged losses. On the other hand, a large investor loss can prompt filing of a lawsuit even if the expected recovery as a percentage of potential investor losses is small.

Comparing the fifth column of Table 11 (Panel A), to the fifth column of Table 11 (Panel B), reveals that the mean S/PIL was much higher for most PIL ranges when PIL was computed using the "industry index" approach instead of the "market drop" approach.⁵⁷ Thus, the former method of computing PIL approximates the settlement amount more closely.⁵⁸ This comparison also suggests that actual settlement discussions were likely to have considered the performance of a "damaged" stock⁵⁹ relative an industry index rather than simply examined the stock's market price drop in isolation.

Comparing Tables 11 and 12 also indicates a difference in the terms of settlements across various ranges. Column 6 of Tables 11 and 12 provides the percentage of all settled cases, within the specified PIL or settlement range, which had non-cash settlements.⁶⁰ Of settled cases, 25% (159 of 637) with PIL greater than \$10 million involved non-cash settlements.⁶¹ However, such cases with settlement amounts greater than \$10 million represent only 13% of settled cases (22 of 164).⁶²

57. See *supra* tbl.11. Defendants are not accountable for change in stock price that can be explained by a general decline in the market and/or specific industry that reflects macro-economic reasons unrelated to any alleged wrongdoing. Therefore, it is well-accepted technique to estimate damages after adjusting for the change in stock price of "similar" firms. This approach is usually implemented by using an index of stocks. See NICHOLAS I. CREW ET AL., *Securities Act Violations: Estimation of Damages*, in LITIGATION SERVICES HANDBOOK, THE ROLE OF THE FINANCIAL EXPERT ch.17.4(a), at 11 (Roman L. Weil et al. eds., 3d ed. 2001).

58. If a lawsuit is more likely after a stock price decline and if industry-wide and other macro-economic factors account for a portion of the observed stock price declines, one would expect that S/PIL ratio would be lower when an industry-index approach is used. See *id.*

59. A "damaged" stock refers to a stock that has faced a large stock price decline, which precipitated the suit.

60. There may be various reasons for non-cash settlements, including limits on the defendant's ability to pay cash. Sometime offering warrants or stock in the defendant company as part of a settlement may be an attempt to provide plaintiffs with a stake in preserving the economic viability of the defendant.

61. See *supra* tbl.11 (col.6).

62. See *supra* tbl.12, (col.6). Table 11 indicates that at least 23% of settled cases with PILs in any range greater than \$10 million involved non-cash settlements. Table 12 indicates that cases which settled for an amount in the \$10 million to \$49.99 million range, only 14.89% included non-cash settlements. Table 12 further shows

Table 13 presents trends in the average S/PIL ratio over time.⁶³

Table 13. Average Ratio of Settlement Amount / Potential Investment Losses

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria. (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices). (2) A class period could be defined for the case. (3) The case pertained to a security violation only. (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

Panel A: Potential Investment Losses Measured by the Market Drop

Year Filed	Year Settled									
	Pre - 1991	1991	1992	1993	1994	1995	1996	1997	1998	1999
Pre - 1991	4.49%	7.83%	12.31%	6.79%	3.07%	5.25%	2.06%	2.31%	2.61%	3.57%
1991		2.42%	4.25%	3.86%	2.46%	4.59%	1.37%	4.56%	2.51%	0.35%
1992			4.69%	6.32%	7.40%	2.30%	5.73%	3.47%	0.78%	30.69%
1993				4.01%	5.73%	2.87%	9.15%	9.86%	4.94%	4.67%
1994					3.43%	2.58%	3.89%	7.54%	4.33%	4.89%
1995							3.76%	3.18%	9.64%	5.09%
1996							0.52%	4.89%	3.45%	9.86%
1997								0.12%	3.05%	6.18%
1998									2.96%	3.01%
1999										-

Panel B: Potential Investment Losses Measured by the Return on an Industry-Specific Index

Year Filed	Year Settled									
	Pre - 1991	1991	1992	1993	1994	1995	1996	1997	1998	1999
Pre - 1991	41.15%	27.33%	19.00%	20.69%	16.88%	20.89%	11.08%	8.44%	26.41%	43.24%
1991		3.99%	18.74%	13.28%	9.26%	23.31%	2.21%	9.11%	43.98%	1.04%
1992			28.64%	16.27%	15.90%	12.06%	24.73%	9.37%	3.64%	10.43%
1993				51.04%	17.44%	13.41%	31.42%	29.36%	9.69%	16.24%
1994					19.08%	12.71%	19.73%	17.89%	15.57%	26.28%
1995							16.68%	7.17%	17.19%	24.90%
1996							0.98%	16.50%	14.26%	18.31%
1997								0.22%	11.60%	13.52%
1998									4.97%	16.69%
1999										-

Once again, the average S/PIL ratio is much higher over time when PIL is measured using industry index method⁶⁴ rather than the market drop method.⁶⁵ For instance, for cases filed in 1996 and settled in 1997, the average S/PIL was 16.50% when the PIL was measured using the industry index approach and 4.89% when the PIL was based on the market drop approach.⁶⁶ Similarly, for cases filed in 1996 and settled in 1999,

that no cases which settled for an amount in the \$50 million to \$99.99 million range included non-cash settlements and that only 14.29% of the cases which settled for an amount over \$100 million included non-cash settlements.

63. Potential investor loss (PIL) simply represents the decline in wealth faced by shareholders as a result of decline in stock price of the subject company. To the extent that such a decline cannot generally be proven as being entirely driven by the alleged wrongdoing, one would normally expect PIL to be larger than settlements. Also, given the litigation risk, plaintiffs would normally be expected to settle for an amount less than what they can reasonably expect to recover. Therefore, on average, PIL is expected to be significantly larger than settlements.

64. See *supra* tbl.13 (Panel B).

65. See *supra* tbl.13 (Panel A).

66. See *supra* tbl.13 (Panel A).

the average S/PIL is 18.31% using the industry index approach and 9.86% based on the market drop approach.⁶⁷

Table 14. Median Ratio of Settlement Amount / Potential Investment Losses

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria: (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices); (2) A class period could be defined for the case; (3) The case pertained to a security violation only; (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

Panel A: Potential Investment Losses Measured by the Market Drop

Year Filed	Year Settled									
	Pre - 1991	1991	1992	1993	1994	1995	1996	1997	1998	1999
Pre - 1991	6.30%	3.49%	2.74%	3.31%	1.78%	1.96%	1.99%	1.55%	2.55%	3.57%
1991		1.47%	1.89%	2.25%	1.57%	2.84%	1.37%	4.56%	2.51%	0.35%
1992			4.69%	1.65%	2.12%	1.45%	2.96%	3.08%	0.98%	30.69%
1993				4.01%	1.61%	2.01%	2.56%	3.31%	2.76%	0.75%
1994					2.78%	1.86%	2.52%	2.33%	2.18%	2.88%
1995							1.44%	2.23%	2.89%	2.15%
1996							0.52%	3.86%	2.46%	2.70%
1997								0.12%	2.25%	1.67%
1998									2.96%	1.51%
1999										

Panel B: Potential Investment Losses Measured by the Return on an Industry-Specific Index

Year Filed	Year Settled									
	Pre - 1991	1991	1992	1993	1994	1995	1996	1997	1998	1999
Pre - 1991	14.34%	8.67%	6.77%	11.83%	5.95%	6.20%	3.61%	7.45%	6.71%	43.24%
1991		2.83%	4.12%	5.65%	5.61%	7.78%	2.21%	9.11%	43.98%	1.04%
1992			28.64%	4.00%	8.34%	5.01%	15.64%	4.86%	3.53%	10.43%
1993				51.04%	5.22%	5.39%	9.64%	5.76%	4.38%	2.55%
1994					11.66%	4.02%	8.41%	7.89%	4.18%	8.14%
1995							6.84%	5.67%	7.10%	7.44%
1996							0.98%	8.91%	5.11%	4.80%
1997								0.22%	4.48%	3.85%
1998									4.97%	5.25%
1999										

Table 14, Panels A and B, presents the median S/PIL using the two alternative approaches to measure PIL. There are significant differences between Tables 13 and 14. First, Table 13 demonstrates that cases that take longer to settle typically involved higher average (mean) S/PIL. Although this trend is not particularly noticeable in the pre-PSLRA period (pre-1991 through 1995), it is more apparent for cases filed in the post-PSLRA (1996 through 1999) period.⁶⁸ However, a similar trend cannot be noted in the median S/PIL ratios, even in the post-PSLRA period.⁶⁹ This data suggests that the "trend" in the case of average S/PIL ratios in Table 13 is likely due to a statistical phenomenon driven by a few delayed settlements that are significantly larger than their corresponding PIL.

A comparison of Tables 13 and 14 reveals that the average S/PIL is generally much higher than the corresponding median

67. See *id.*

68. See *supra* tbl.13.

69. See *supra* tbl.14.

S/PIL ratios. Once again, it suggests that the average S/PIL ratio is skewed by a few large settlements relative to PIL. It should be noted, however, that the disparity in the mean S/PIL to the corresponding median S/PIL is most apparent when PIL is measured using the industry index approach.⁷⁰ This disparity is far less noticeable when the PIL is computed using the market drop approach. This is probably due to the fact that the S/PIL is much smaller to begin with in the latter case. Disparities in mean ratios relative to median ratios are, thus, unlikely to be large.

C. Settlement Characteristics over Time

Table 15 presents differences in settlement characteristics over time.⁷¹

Table 15. Settlement Statistics by Year

For the purpose of analyzing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria: (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices); (2) A class period could be defined for the case; (3) The case pertained to a security violation only; (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

Year Settled (1)	Number of Cases Settled (2)	Average Settlement Amount (3)	Median Settlement Amount (4)	Percentage of Cases with Non-Cash Settlement (5)	Percentage of Cases with Miscellaneous Settlement (6)	Market Drop		Industry-Specific Index	
						Average Settlement Amount Relative to Potential Investment Losses* (7)	Median Settlement Amount Relative to Potential Investment Losses (8)	Average Settlement Amount Relative to Potential Investment Losses* (9)	Median Settlement Amount Relative to Potential Investment Losses (10)
1990	7	\$9,786	\$5,650	0.00%	0.00%	4.49%	6.30%	41.15%	14.34%
1991	14	\$5,776	\$4,455	21.43%	14.29%	6.16%	2.63%	20.15%	5.29%
1992	34	\$11,832	\$2,540	11.76%	14.71%	6.23%	1.98%	19.40%	4.66%
1993	63	\$5,536	\$2,650	25.40%	9.52%	5.28%	2.23%	16.93%	5.65%
1994	129	\$6,969	\$3,000	27.13%	10.85%	4.95%	1.88%	15.85%	6.69%
1995	141	\$8,217	\$2,750	27.66%	14.18%	3.36%	1.70%	15.49%	5.73%
1996	122	\$5,948	\$3,000	32.79%	16.39%	4.46%	2.35%	19.64%	7.22%
1997	111	\$7,587	\$4,000	18.02%	17.12%	5.30%	2.33%	13.79%	6.56%
1998	95	\$10,836	\$5,630	12.63%	5.26%	5.45%	2.46%	15.21%	4.97%
1999	91	\$47,992	\$4,350	24.18%	7.69%	6.34%	2.03%	16.99%	4.88%
Average for 1990 - 1996:						5.08%	2.79%	21.50%	7.06%
Average for 1996 - 1999:						5.39%	2.20%	16.41%	5.91%

Note:

Potential Investment Losses and Settlement Amounts are in millions.

(*) For each settlement in the settled year, we calculated settlement/PIL. This column presents the arithmetic mean of this ratio for each settled year.

It is apparent that the mean and median settlement amounts are higher for cases settled in the post-PSLRA period compared to those settled before 1996.⁷² The mean settlement amount for the pre-PSLRA period is \$8.01 million, compared to \$18.09

70. See *supra* tbls.13, 14 (Panels B, respectively).

71. Table 15 uses a PIL computed using the market drop approach, whereas Table 14 relied on a PIL computed using the industry index approach.

72. See *supra* tbl.15.

million in the post-PSLRA period.⁷³ Similarly, the median settlement is \$3.5 million in the pre-PSLRA period compared to \$4.24 million in the post-PSLRA period.⁷⁴ Settlement terms did not change significantly across these two sub-periods. While 18.9% of cases settled in the pre-PSLRA period involved non-cash settlements, this proportion increases slightly to 21.9% in the post-PSLRA period.⁷⁵ The percentage of cases with miscellaneous settlement terms remained almost unchanged.⁷⁶

The number of settlements is approximately equal in the two sub-periods. Out of 807 settled cases in our sample, 48% (388) settled in the pre-PSLRA period, while 52% (419) cases settled in the post-PSLRA period.⁷⁷ There was a moderate decline in both the mean and median S/PIL ratios in the post-PSLRA period with PIL measured using the industry index approach.⁷⁸ However, the mean and median S/PIL are not significantly different across the two-periods when the PIL was computed using the market drop approach.⁷⁹

D. *Settlement Characteristics Across Different Co-defendant Types*

Table 16 indicates that 82 cases in our sample involved accounting firms as co-defendants and 171 cases involved underwriting firms as co-defendants.

73. *See id.*

74. *See id.*

75. *See id.*

76. *See id.* The percentages were 10.59% in the pre-PSLRA period compared to 11.62% in the post-PSLRA period. *See supra* tbl.15.

77. *See id.*

78. *See supra* tbl.14.

79. *See supra* tbl.15.

Table 16. Settlement Statistics by Co-Defendant Type

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria. (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices). (2) A class period could be defined for the case. (3) The case pertained to a security violation only. (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

Co-Defendant (1)	Number of Cases Filed (2)	Number of Cases Settled (3)	Cases Settled as a Percentage of Cases Filed (4) = (3) / (2)	Average Settlement Amount (5)	Median Settlement Amount (6)	Percentage of Cases with Non- Cash Settlement (7)	Percentage of Cases with Miscellaneous Settlement (8)
Arthur Andersen & Co.	11	11	100.00%	\$29,045	\$8,500	27.27%	9.09%
Deloitte & Touche	17	17	100.00%	\$19,101	\$6,900	29.41%	23.53%
Ernst & Young	14	13	92.86%	\$261,526	\$13,825	15.38%	23.08%
KPMG Peat Marwick	10	10	100.00%	\$11,324	\$11,288	20.00%	10.00%
PricewaterhouseCoopers	12	12	100.00%	\$13,201	\$6,450	41.67%	16.67%
Other Accounting Firms	18	17	94.44%	\$9,381	\$1,675	29.41%	17.65%
Investment Banks (underwriters)	171	134	78.36%	\$9,573	\$3,602	22.39%	10.45%

Co-Defendant (1)	Market Drop		Industry-Specific Index	
	Average Settlement Amount Relative to Potential Investment Losses*	Median Settlement Amount Relative to Potential Investment Losses	Average Settlement Amount Relative to Potential Investment Losses*	Median Settlement Amount Relative to Potential Investment Losses
	(9)	(10)	(11)	(12)
Arthur Andersen & Co.	3.37%	2.58%	7.35%	4.23%
Deloitte & Touche	10.62%	4.43%	33.39%	11.86%
Ernst & Young	10.02%	4.81%	11.88%	8.65%
KPMG Peat Marwick	13.24%	2.55%	30.04%	4.54%
PricewaterhouseCoopers	3.07%	2.36%	6.70%	4.03%
Other Accounting Firms	10.27%	3.15%	36.48%	11.53%
Investment Banks (underwriters)	6.64%	3.45%	26.23%	11.63%

Note:

Potential Investment Losses and Settlement Amounts are in millions.

(*) For each settlement in the different category, we calculated settlement / PIL. This column presents the arithmetic mean of this ratio for each category.

Cases involving accounting firms rarely go to trial. Every case that involved a "Big 5" accounting firm⁸⁰ was settled, except for those that involved Ernst & Young.⁸¹ Of the cases involving Ernst & Young, 92.86% were settled.⁸² In contrast, only 78.36% of cases involving underwriter co-defendants were settled.⁸³ The settlement terms did not vary significantly between the various co-defendants.⁸⁴

The median settlement amounts did differ considerably between cases involving different accounting firms and underwriter firms. Most notably, cases that involved Ernst & Young, which were less likely to settle, also had the highest mean and median settlement amounts, \$ 261.5 million and \$13.825 million, respectively.⁸⁵ Mean and median settlements

80. At the time, the "Big 5" were considered PricewaterhouseCoopers, Ernst & Young, Deloitte & Touche, KPMG, and Arthur Andersen.

81. See *infra* tbl.16.

82. See *id.*

83. See *id.*

84. See *id.*

85. See *id.* The high average settlement was due to two very large cash settlements, including one settlement of \$3.49 billion in the Cendant Corporation case and a \$220 million settlement in the Waste Management case. See *In re Waste*

for cases against accounting or underwriting firms were much greater than the mean and median for the sample as a whole.⁸⁶ For the sample as a whole, mean settlements are \$8 million for the pre-PSLRA period and \$18 million for the post-PSLRA period.⁸⁷ In contrast, for cases involving co-defendants (and for the pre- and post-PSLRA period combined), the mean settlement ranges from \$9.38 million to \$261.525 million, depending on the co-defendant involved.⁸⁸

For the sample as a whole, the median settlements were \$3.5 million for the pre-PSLRA period and \$4.25 million for the post-PSLRA period.⁸⁹ In contrast, for cases involving co-defendants (and for the pre- and post-PSLRA period combined), the median settlement ranged from \$1.675 million to \$13.825 million depending on the co-defendant involved.⁹⁰

The mean and median S/PIL ratios varied considerably by co-defendant. When PIL is defined using the industry index method, the mean S/PIL for cases involving underwriting firms (26.23%) was significantly lower than cases involving most accounting firms other than Arthur Andersen and PricewaterhouseCoopers.⁹¹ The mean S/PIL in cases that involved Arthur Andersen and PricewaterhouseCoopers were 7.35% and 6.7%, respectively.⁹²

The median S/PIL for cases involving underwriting firms (11.63%) is strikingly similar to that of cases involving non-Big 5 accounting firms other than the Big 5 firms (11.53%) and those involving Deloitte & Touche (11.86%).⁹³ However, the median S/PIL for cases involving any of the other Big 5 accounting firms was significantly lower.⁹⁴ In cases involving Ernst & Young, the median S/PIL was 8.65%.⁹⁵ The median was below 5% for cases

Mgmt., Inc. Sec. Litig., 128 F. Supp. 2d 401 (S.D. Tex. 2000) ; *In re Cendant Cendant Corp. Sec. Litig.*, 109 F. Supp. 2d 285 (D. N.J. 2000).

86. *See supra* tbl.16.

87. *See supra* tbl.8. As previously noted, in the post-PSLRA period cases that took longer to settle and usually had higher S/PIL ratios. Therefore, it is not surprising that settlement dollars were higher in the post-PSLRA period for the sample as a whole.

88. *See supra* tbl.16.

89. *See supra* tbl.15.

90. *See id.*

91. *See id.*

92. *See id.*

93. *See id.*

94. *See id.*

95. *See supra* tbl.15.

involving any of the remaining three of the Big 5 accounting firms.⁹⁶ The disparity in the median S/PIL of cases involving various co-defendants is far less when the PIL is computed using the market drop approach.⁹⁷ Finally, as noted earlier, the disparity between the mean and median S/PIL is also significant for most cases.

E. Settlements for Different Types of Allegations

The majority of cases considered involved disclosure-related allegations as shown in Table 17.⁹⁸

Table 17. Settlement Statistics by Allegation Type

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria. (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices). (2) A class period could be defined for the case. (3) The case pertained to a security violation only. (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

Allegation Type (1)	Number of Cases Settled (2)	Average Settlement Amount (3)	Median Settlement Amount (4)	Percentage of Cases with Non-Cash Settlement (5)	Percentage of Cases with Miscellaneous Settlement (6)
Misleading/ False Statement	417	\$16,366	\$3,500	23.50%	11.51%
Failure to Disclose	328	\$7,451	\$3,000	25.00%	11.28%
Disclosure Violation	44	\$16,006	\$3,038	20.45%	6.82%
Breach of Fiduciary Responsibility	93	\$7,604	\$3,000	22.58%	20.43%
Registration Proxy Statement	42	\$5,692	\$3,500	28.57%	16.67%
Insider Trading	10	\$7,777	\$4,488	20.00%	10.00%
Revenue Restatement	23	\$144,481	\$4,500	34.78%	8.70%
IPO	62	\$3,509	\$2,675	27.42%	4.84%
Improper Accounting Practice	33	\$115,464	\$10,000	24.24%	12.12%
Revenue Recognition	15	\$8,450	\$8,800	33.33%	6.67%

Allegation Type (1)	Market Drop		Industry-Specific Index	
	Average Settlement Amount Relative to Potential Investment Losses*	Median Settlement Amount Relative to Potential Investment Losses	Average Settlement Amount Relative to Potential Investment Losses*	Median Settlement Amount Relative to Potential Investment Losses
	(7)	(8)	(9)	(10)
	(7)	(8)	(9)	(10)
Misleading/ False Statement	4.79%	2.29%	17.78%	6.49%
Failure to Disclose	4.69%	2.01%	18.16%	6.09%
Disclosure Violation	6.07%	2.34%	14.38%	4.30%
Breach of Fiduciary Responsibility	6.59%	2.06%	15.33%	4.93%
Registration Proxy Statement	5.20%	2.63%	25.82%	9.35%
Insider Trading	2.03%	1.35%	6.63%	4.86%
Revenue Restatement	7.13%	3.08%	19.01%	6.74%
IPO	6.03%	3.06%	33.00%	14.00%
Improper Accounting Practice	6.02%	2.77%	16.80%	6.78%
Revenue Recognition	2.95%	2.02%	12.26%	5.32%

Note:

Potential Investment Losses and Settlement Amounts are in millions.

(*) For each settlement in the different allegation type, we calculated settlement / PIL. This column presents the arithmetic mean of this ratio for each allegation type.

96. *See id.*

97. *See id.*

98. *See supra* tbl.17.

Settlement terms did not vary significantly between cases involving different types of allegations.⁹⁹ The median settlement amount is generally similar for all types of allegations and ranged between \$2.675 million and \$4.5 million, except for cases that alleged improper accounting practice, for which the median settlement was \$10.0 million.¹⁰⁰ Interestingly, however, even though cases involving improper accounting practice allegations faced the highest median settlement, this category's median S/PIL was not especially high (median S/PIL ratio of 6.78% using the industry index approach).¹⁰¹ This result held true for revenue recognition-related allegations, which had the second highest median settlement (\$8.8 million), but a low median S/PIL ratio (5.32% using the industry index approach).¹⁰² This suggests that the PIL (using the industry index approach) is significantly larger for improper accounting practice and revenue recognition related cases compared to cases involving other types of allegations. It is also worth noting in this context, that initial public offering (IPO) related allegations resulted in the highest median S/PIL using the industry index approach (14%) and the second-highest median S/PIL using the market drop approach (3.06%).¹⁰³

The mean and median S/PIL varied considerably among cases involving various types of allegations when PIL was measured using the industry index approach.¹⁰⁴ This difference in mean and median S/PIL is less pronounced when PIL is measured using the market drop approach.¹⁰⁵ Moreover, the mean and median S/PIL is generally much higher according to the former approach.¹⁰⁶ The mean S/PIL ranges from 6.63% to 33% using the industry index approach and from 2.03% to 7.13% using the market drop approach.¹⁰⁷ Similarly, the median S/PIL ranges from 4.30% to 14% using the industry index approach and from 1.35% to 3.08% using the market drop approach.¹⁰⁸

99. *See id.*

100. *See id.*

101. *See id.*

102. *See id.*

103. *See id.*

104. *See supra* tbl.17.

105. *See id.*

106. *See id.*

107. *See id.*

108. *See id.*

F. Settlements Among Industries

Table 18 provides settlement statistics across various industries classified by their 2-digit primary Standard Industrial Code (SIC).¹⁰⁹

Table 18. Settlement Statistics by Industry

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria: (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices). (2) A class period could be defined for the case. (3) The case pertained to a security violation only. (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

SIC Code* (1)	Number of Cases Settled (2)	Average Settlement Amount (3)	Median Settlement Amount (4)	Percentage of Cases with Non-Cash Settlement (5)	Percentage of Cases with Miscellaneous Settlement (6)	Market Drop		Industry-Specific Index	
						Average Settlement Amount Relative to Potential Investment Losses** (7)	Median Settlement Amount Relative to Potential Investment Losses (8)	Average Settlement Amount Relative to Potential Investment Losses** (9)	Median Settlement Amount Relative to Potential Investment Losses (10)
73	84	\$7.211	\$4.300	35.71%	11.90%	3.61%	2.01%	12.89%	4.84%
36	77	\$5.768	\$2.800	22.08%	5.19%	5.75%	2.31%	15.37%	6.84%
35	69	\$6.989	\$4.500	28.99%	5.80%	4.68%	2.36%	14.76%	5.89%
67	61	\$5.949	\$3.200	11.48%	16.39%	5.34%	2.12%	18.26%	8.58%
28	57	\$5.762	\$2.800	33.33%	14.04%	5.93%	1.28%	15.77%	3.62%
80	41	\$12.360	\$5.750	24.39%	4.88%	6.81%	3.28%	15.57%	5.77%
38	39	\$5.942	\$2.200	15.38%	7.69%	4.71%	1.96%	13.84%	4.98%
60	31	\$5.194	\$4.000	12.90%	12.90%	3.51%	2.70%	12.49%	5.01%
50	23	\$6.900	\$1.550	26.09%	8.70%	9.53%	2.49%	27.10%	4.62%
49	24	\$18.592	\$2.875	29.17%	25.00%	2.18%	2.03%	6.49%	4.52%
Other	301	\$20.581	\$3.000	21.59%	14.95%	4.75%	2.08%	19.44%	7.01%

Notes:

Potential Investment Losses and Settlement Amounts are in millions.

(*) The SIC Codes listed on this table represent the major group code for a particular industry.

73 - Business Services

36 - Electronic and Other Electrical Equipment and Components, Except Computer Equipment

35 - Industrial and Commercial Machinery and Computer Equipment

67 - Holding and Other Investment Offices

28 - Chemicals and Allied Products

80 - Health Services

38 - Measuring, Analyzing, and Controlling Instruments; Photographic, Medical and Optical Goods; Watches and Clocks

60 - Depository Institutions

50 - Wholesale Trade - Durable Goods

49 - Electric, Gas and Sanitary Services

(**) For each settlement in the different SIC code, we calculated settlement / PIL. This column presents the arithmetic

Most cases were filed against firms in the areas of, declining order, Business Services (SIC 73), Electronics (SIC 36) and Industrial and Commercial Machinery (SIC 35).¹¹⁰ There does not appear to be significant differences in the median settlements across industries or noticeable systematic differences in settlement terms. The highest median S/PIL (8.58%) is for cases against firms in Holding and Other Investment Offices (SIC 67) when PIL is measured using the industry index approach.¹¹¹ The highest median S/PIL (3.28%) is for cases against firms in Health Services (SIC 80) when PIL is measured

109. See EXECUTIVE OFFICE OF THE PRESIDENT, *supra* note 49.

110. See *supra* tbl.18.

111. See *id.*

using the market drop method.¹¹²

G. Settlements Among Circuit Courts

Most cases were filed and settled in the Ninth Circuit Court of Appeals (403 filings and 260 settlements) followed by the Second, Third, and Eleventh Circuit Courts of Appeals.¹¹³

Table 19. Settlement Statistics by Circuit Court

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria: (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices). (2) A class period could be defined for the case. (3) The case pertained to a security violation only. (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

Circuit Court (1)	Number of Cases Filed (2)	Number of Cases Settled (3)	Cases Settled as a Percentage of Cases Filed (4) = (3) / (2)	Average Settlement Amount (5)	Median Settlement Amount (6)	Percentage of Cases with Non- Cash Settlement (7)	Percentage of Cases with Miscellaneous Settlement (8)
First	83	52	62.65%	\$4,663	\$3,118	28.85%	7.69%
Second	209	134	64.11%	\$8,553	\$2,828	23.13%	14.93%
Third	109	79	72.48%	\$51,024	\$2,625	21.52%	11.39%
Fourth	32	17	53.13%	\$6,879	\$3,750	17.65%	11.76%
Fifth	75	41	54.67%	\$8,704	\$3,050	24.39%	7.32%
Sixth	51	26	50.98%	\$5,682	\$3,200	30.77%	11.54%
Seventh	58	34	58.62%	\$14,531	\$4,300	14.71%	20.59%
Eighth	38	19	50.00%	\$3,645	\$2,464	21.05%	5.26%
Ninth	403	260	64.52%	\$8,283	\$3,900	25.38%	6.54%
Tenth	43	31	72.09%	\$11,535	\$5,850	19.35%	19.35%
Eleventh	101	54	53.47%	\$7,816	\$3,388	31.48%	14.81%

Circuit Court (1)	Market Drop		Industry-Specific Index	
	Average Settlement Amount Relative to Potential Investment Losses* (9)	Median Settlement Amount Relative to Potential Investment Losses (10)	Average Settlement Amount Relative to Potential Investment Losses* (11)	Median Settlement Amount Relative to Potential Investment Losses (12)
First	2.69%	1.94%	9.82%	4.97%
Second	3.94%	1.91%	18.66%	5.65%
Third	3.67%	1.89%	15.80%	5.91%
Fourth	2.00%	1.67%	7.10%	6.15%
Fifth	5.30%	2.34%	20.30%	6.69%
Sixth	7.68%	2.22%	17.26%	7.48%
Seventh	5.75%	1.41%	15.60%	4.00%
Eighth	4.21%	1.98%	20.66%	9.31%
Ninth	4.79%	2.32%	15.16%	5.92%
Tenth	5.60%	3.42%	21.90%	8.26%
Eleventh	8.56%	2.48%	20.74%	7.36%

Note:

Potential Investment Losses and Settlement Amounts are in millions.

(*) For each settlement in the different circuit court, we calculated settlement / PIL. This column presents the arithmetic mean of this ratio for each circuit court.

These courts also have among the highest settlement/filings ratios ranging from 53.47% to 72.48%. Of all cases filed in the Ninth Circuit Court of Appeals, 64.52% settled within the sample period.¹¹⁴ Median settlements and settlement terms do

112. *See id.*

113. *See supra* tbl.19.

114. *See id.*

not vary significantly across circuit courts with one possible caveat. In the Ninth Circuit Court of Appeals, significantly fewer cases (as a percentage of settled cases) involve miscellaneous settlements compared to the cases filed in the Second, Third, and Eleventh Circuit Courts of Appeals.¹¹⁵

The mean and median S/PIL varied widely across circuit courts using either the industry index or market drop approach.¹¹⁶ In the former case, the mean S/PIL ranged from 7.1% for cases filed in the Fourth Circuit to 21.9% for cases filed in the Tenth Circuit Court of Appeals.¹¹⁷ The differences in median S/PIL using the industry index approach is smaller than the differences noted for mean S/PIL ratios. The median S/PIL ranges from 4% for cases filed in the Seventh Circuit Court of Appeals to 9.31% for cases filed in the Eighth Circuit Court of Appeals.¹¹⁸ Mean and median S/PIL calculated using the market drop approach are significantly smaller than the corresponding figures computed using the industry index based approach.¹¹⁹ The mean S/PIL using the market drop approach ranged from 2% to 8.56% and the median S/PIL ranges from 1.41% to 3.42%.¹²⁰ Thus, the rank of mean and median S/PIL across the various circuit courts depended on the approach used in computing PIL.¹²¹

H. *Settlements Involving Milberg, Weiss, Berhad, Hynes, & Lerach (Milberg Weiss), and Other Plaintiffs' Attorneys*

Milberg Weiss has a significant share of all security class actions included in our sample as shown in Table 20.

115. *See id.*

116. *See id.*

117. *See id.*

118. *See id.*

119. *See supra* tbl.19.

120. *See id.*

121. *See id.*

Table 20. Settlement Statistics by Plaintiff's Attorneys

For the purpose of analysing settlement trends, we relied on a sub-sample of the SCAA dataset that met the following four criteria. (1) Stock market data on the firm was available in CRSP (Center for Research and Security Prices). (2) A class period could be defined for the case. (3) The case pertained to a security violation only. (4) Potential Investment Losses data on the firm was available in CRSP. Table 1 is based on this final sample that comprises of 1,203 federal case filings and 92 state court filings, spanning from 1988 to 1999. Prior to 1991, there were a total of 132 Federal court, 11 State court, and 3 unidentified filings that were included in our final sample.

Plaintiff's Attorneys (1)	Number of Cases Filed (2)	Number of Cases Settled (3)	Cases Settled as a Percentage of Cases Filed (4) = (3) / (2)	Average Settlement Amount (5)	Median Settlement Amount (6)	Percentage of Cases with Non-Cash Settlement (7)	Percentage of Cases with Miscellaneous Settlement (8)
Milberg, Weiss, Berhad, Hynes, & Lerach	408	259	63.48%	\$8,325	\$4,500	24.32%	9.27%
Other Attorney Firms	904	548	60.62%	\$14,173	\$2,800	23.36%	13.50%

Plaintiff's Attorneys (1)	Market Drop		Industry-Specific Index	
	Average Settlement Amount Relative to Potential Investment Losses* (9)	Median Settlement Amount Relative to Potential Investment Losses* (10)	Average Settlement Amount Relative to Potential Investment Losses* (11)	Median Settlement Amount Relative to Potential Investment Losses* (12)
Milberg, Weiss, Berhad, Hynes, & Lerach	5.03%	2.25%	15.20%	5.46%
Other Attorney Firms	4.93%	2.06%	17.39%	6.57%

Note:

Potential Investment Losses and Settlement Amounts are in millions.

(*) For each settlement in the different plaintiff's attorneys, we calculated settlement / PIL. This column presents the arithmetic mean of this ratio for each plaintiff's attorneys.

This law firm filed 408 cases or 31% of all filings. Milberg Weiss cases settle for a median amount that is 61% higher than the median settlements in cases involving other attorneys (\$4.5 million compared to \$2.8 million). The mean settlement for cases in which Milberg Weiss was the lead counsel is lower than that for cases in which other plaintiff firms were the lead counsel.

However, the comparison of the mean settlement amounts is misleading because it is being driven by a couple of large settlements (e.g., the largest settlement during the time period of our study is a 3.15 billion dollar settlement for Cendant Corporation in which Milberg was not the lead plaintiff's counsel). If the two largest settlements were excluded, Milberg's average settlement would be greater than the average settlement for other plaintiff firms. It is important to note that these numbers cannot be used to draw inferences about whether the handling of cases by Milberg Weiss are in any way different from the other plaintiff attorneys.

IV. CONCLUDING REMARKS

This paper analyzed a comprehensive sample of security class action settlements. The final sample for which stock market data is also available includes 1,203 federal and 92 state filings spanning from 1988 to 1999. The paper contrasts settlement figures with two estimates of potential investor

losses, based on an industry index benchmark and on a market drop model, respectively. Additionally, the paper considers differences in settlements across cases with different allegations. The statistics presented here reveals that the nature of settlements has varied considerably over time, across industries and different allegation types.

Our study of the legislative changes in 1995 and 1998 examined whether the nature of securities litigation has changed over time. This paper provides a comprehensive statistical analysis of securities class actions settlements. The main results of the paper are as follows:

1. The shift of cases from federal to state court was reversed in 1998.
2. The settlement process, as well as the rate of dismissals, has declined since the passage of the PSLRA.
3. Quick settlements generally involve relatively small settlement amounts. The median settlement was less than \$6.3 million for cases that settled within two years of being filed.¹²²
4. The majority of settled cases involve potential investor loss in excess of \$10 million, but the majority of settlements are below that amount.
5. The mean settlement to potential investor loss ("PIL") ratio is 16.6% when the PIL is measured using the industry-specific index method.
6. The mean settlement to PIL ratio is 4.96% when the PIL is measured using the market drop method.
7. The settlement to PIL ratio is skewed by some large settlements such as the Cendant case, which involved a case settlement of \$3.49 billion.
8. Mean and median settlements have increased in the post-PSLRA period.
9. Cases naming accounting firms as co-

122. This statistic refers to cases filed in the 1991-1998 period. See *supra* tbl.8.

defendants, while relatively rare, involve average and median settlements that are greater than the sample as a whole.

10. The median settlement, as well as the PIL (measured using the industry index method), are significantly higher in cases involving improper accounting practice or revenue recognition allegation compared to other types of allegations.
11. Settlements as a percentage of PIL vary considerably across federal circuit courts.