

EXHIBIT 4

CORNERSTONE RESEARCH

Economic and Financial Consulting and Expert Testimony

The background of the cover features a dark, grayscale image of a financial chart. It includes candlestick patterns, a grid, and a curved line that might represent a trend or a technical indicator. Some numerical values are visible on the chart, such as '51.25%', '86.72', and '72.48'.

Securities Class Action Settlements

2015 Review and Analysis

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This report analyzes 1,537 securities class actions filed after passage of the Private Securities Litigation Reform Act of 1995 (Reform Act) and settled from 1996 through year-end 2015, and explores a variety of factors that influence settlement outcomes. The sample includes cases alleging fraudulent inflation in the price of a corporation's common stock (i.e., excluding cases with alleged classes of only bondholders, preferred stockholders, etc., and excluding cases alleging fraudulent depression in price and M&A cases). See page 24 for a detailed description of the research sample. For purposes of this report and related research, a settlement refers to a negotiated agreement between the parties to the securities class action that is publicly announced to potential class members by means of a settlement notice.

HIGHLIGHTS

- There were 80 securities class action settlements approved in 2015, representing a 27 percent rise in the number of settlements over 2014 and the highest number since 2010. (page 3)
- Total settlement dollars in 2015 increased substantially over the 2014 historic low to \$3 billion and were 9 percent higher than the average for the prior five years. (page 3)
- In 2015, there were eight mega settlements (those greater than or equal to \$100 million), up from just one in 2014. (page 4)
- The average settlement size climbed from \$17 million in 2014 to \$37.9 million in 2015 (an increase of 123 percent), while the median settlement amount (representing the typical case) remained relatively flat (\$6.0 million in 2014 and \$6.1 million in 2015). (page 6)
- Average “estimated damages” rose 151 percent from 2014. Since “estimated damages,” the simplified damages calculation used in this research, is the most important factor in predicting settlement amounts, this increase contributed to the substantially higher average settlement amounts in 2015. (page 7)
- Median settlements as a percentage of “estimated damages” decreased to historic low levels in 2015. (page 8)
- In 2015, 35 percent of accounting-related cases had a named auditor defendant, representing a 50 percent increase over the prior 10-year average. Underwriter defendants were named in 76 percent of cases with Section 11 claims. (page 15)
- Although the proportion of securities class action settlements involving financial sector firms was lower in 2014 and 2015 compared to prior years, these cases continue to be some of the largest when measured by “estimated damages.” In 2015, 55 percent of financial sector settlements involved “estimated damages” of greater than \$1 billion. (page 21)

FIGURE 1: SETTLEMENT STATISTICS

(Dollars in Millions)

	1996–2014	2014	2015
Minimum	\$0.1	\$0.3	\$0.4
Median	\$8.2	\$6.0	\$6.1
Average	\$55.6	\$17.0	\$37.9
Maximum	\$8,503.8	\$265.3	\$970.5
Total Amount	\$80,944.5	\$1,069.3	\$3,034.2
Number of Settlements	1,457	63	80

Note: Settlement dollars are adjusted for inflation; 2015 dollar equivalent figures are used.

2015 FINDINGS—PERSPECTIVE AND DEVELOPING TRENDS

The number of settlements approved in 2015 increased to 80, reversing four years of relatively low settlement volume. This surge can be attributed, at least in part, to three consecutive year-over-year increases in the number of case filings.¹ Since many cases take three to four years to settle, the increased number of case filings in 2015 may suggest that higher numbers of settlements will persist in the near future.

There were eight mega settlements (equal to or greater than \$100 million) in 2015, compared to only one in 2014. Reflecting that analyses show that the most important factor affecting settlement amounts is a proxy for shareholder damages, this increase was likely driven by a corresponding uptick in cases with very high “estimated damages.” In fact, median “estimated damages” for mega settlements in 2015 was the second highest over the last 10 years.

While larger damages appear to have driven up settlement values for some cases in 2015, other factors that are also associated with higher settlements were less prevalent in 2015. For example, the proportion of mega settlements involving financial statement restatements, public pension plan lead plaintiffs, and/or SEC actions was lower. Consistent with this, the median settlement as a percentage of “estimated damages” for mega settlements reached a historical low.

At the opposite end of the spectrum, the proportion of settlements for \$2 million or less was the highest in 18 years. The increased number of settlements of cases related to Chinese reverse mergers contributed to the growth in very small settlements, as these cases tend to involve relatively low “estimated damages” and settle for comparatively low amounts.

The number of cases settling within two years from filing date increased to 16 cases in 2015, more than two-and-a-half times the number in 2014. Cases that settle within two years tend to be smaller (indicated by asset size of the defendant company and “estimated damages”) and less likely to be characterized by indicators associated with higher settlements (e.g., restatement or reported accounting irregularity, parallel SEC action or companion derivative action, or public pension as a lead or co-lead plaintiff).

Overall, while a handful of very large settlements produced a higher average settlement value in 2015, the size of the typical settlement (as represented by the median) was similar to 2014, and the median “estimated damages” was lower. Looking ahead, the most recent data on case filings provide a mixed outlook for the size of settlements. In particular, Cornerstone Research’s *Securities Class Action Filings—2015 Year in Review* reported a substantial increase in the average size of case filings but a decrease in the median filing size.²

“The increases in case filings may suggest that higher numbers of settlements will persist in the near future.”

Dr. Laura Simmons
Cornerstone Research
Senior Advisor

NUMBER AND SIZE OF SETTLEMENTS

TOTAL SETTLEMENT DOLLARS

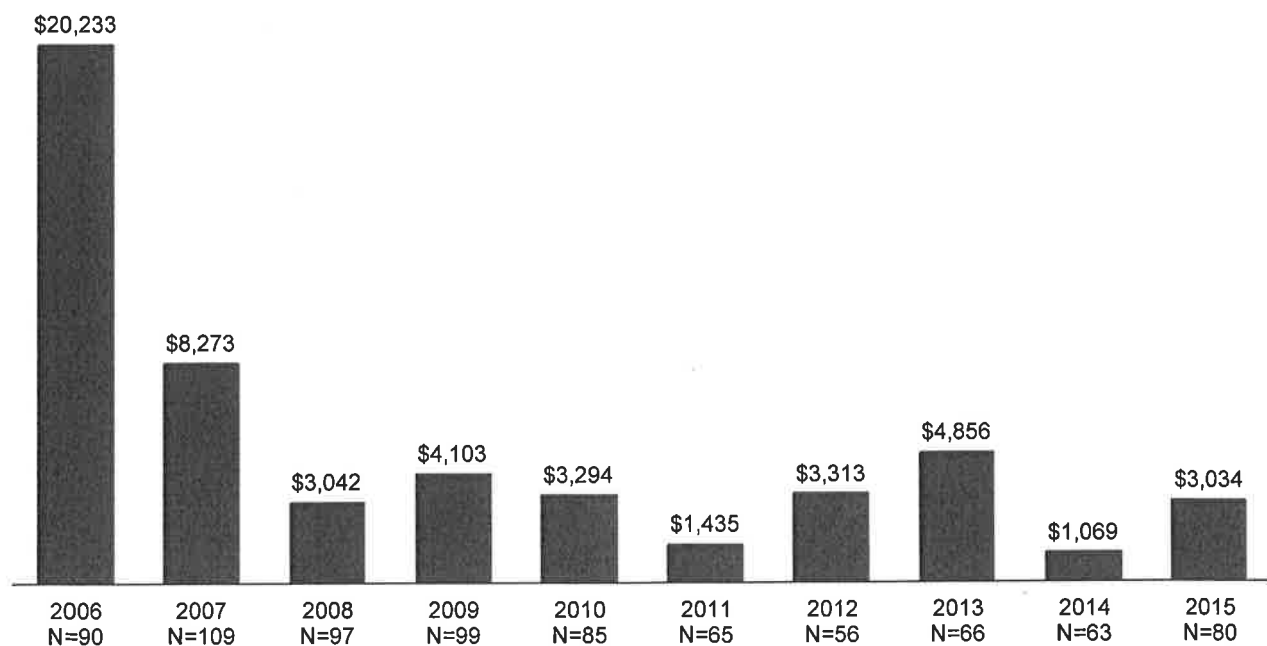
- The total value of settlements approved by courts in 2015 was \$3 billion, similar to the annual average of \$2.8 billion for the prior five years but a substantial increase over the unusually low level for 2014.
- Contributing to the rise in total settlement dollars in 2015 was the notable increase in mega settlements (see page 4).
- The increased total settlement value in 2015 was also due to the 27 percent rise in the number of settlements over 2014.
- While substantially higher than 2014, the total settlement value in 2015 did not approach the levels reached in 2006 and 2007.

Total settlement dollars in 2015 rebounded from a historic low in 2014.

FIGURE 2: TOTAL SETTLEMENT DOLLARS

2006–2015

(Dollars in Millions)



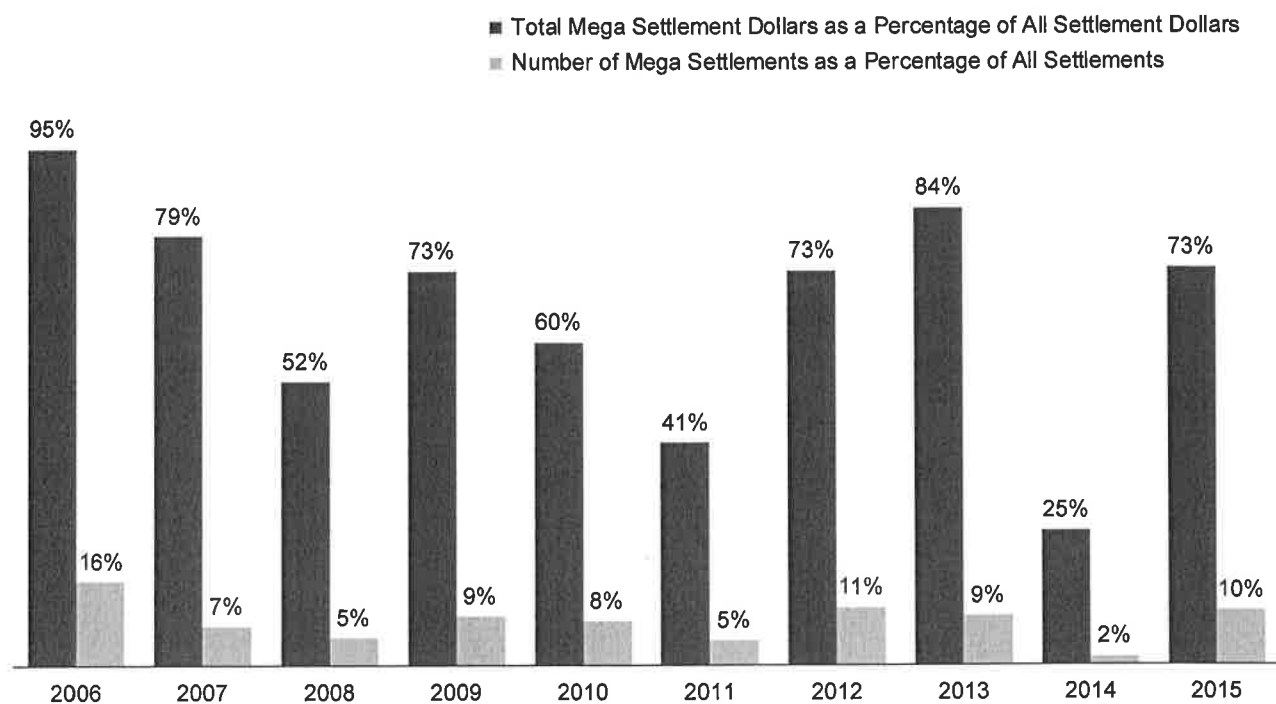
Note: Settlement dollars are adjusted for inflation; 2015 dollar equivalent figures are used.

MEGA SETTLEMENTS

- In 2015, the percentage of settlement dollars from mega settlements (those greater than or equal to \$100 million) returned to historical levels.
- The eight mega settlements in 2015 represented a dramatic increase over the one mega settlement approved in 2014.
 - In 2015, six of the eight mega settlements approved were between \$100 million and \$200 million.
 - There was one case with a settlement of more than \$970 million, which drove up both settlement totals and the average settlement in 2015.

Over the last decade, mega settlements have generally accounted for more than 50 percent of settlement dollars.

**FIGURE 3: MEGA SETTLEMENTS
2006–2015**



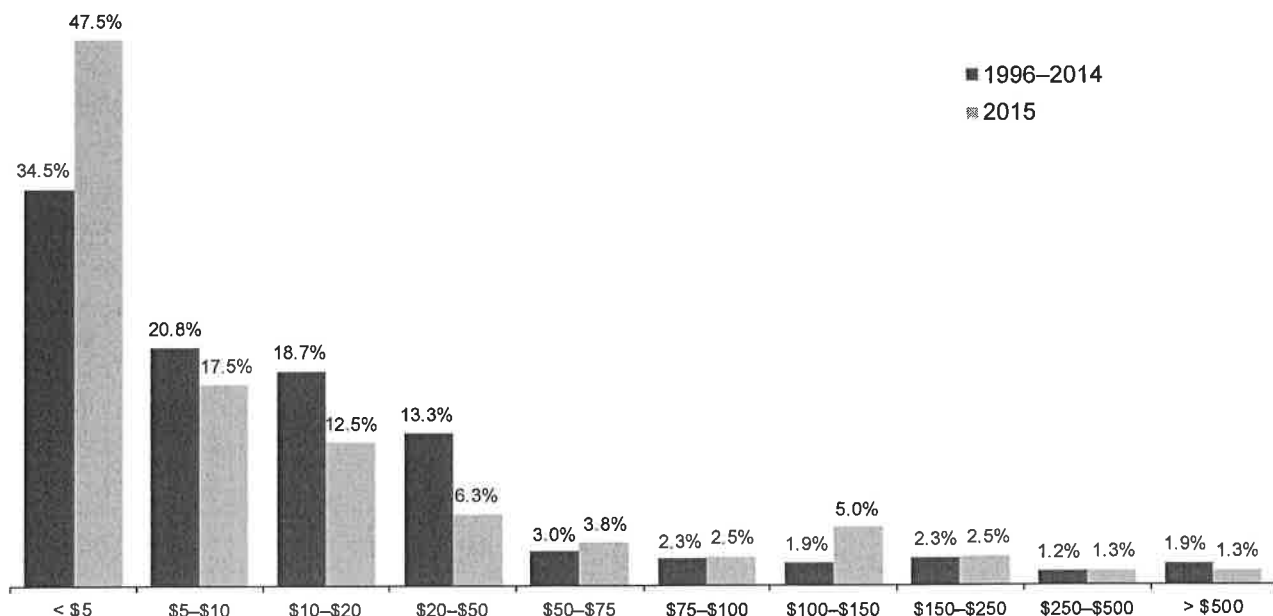
SETTLEMENT SIZE

- The proportion of cases settling for \$2 million or less (often referred to as “nuisance suits”) in 2015 was 26 percent, the highest single-year proportion since 1997.
- In 2015, 29 percent of cases that settled for \$2 million or less were Chinese reverse merger cases, which historically have settled for very small amounts.
- There were fewer settlements in the \$5 million to \$50 million range in 2015 compared to prior years, while more occurred in the \$100 million to \$150 million range.

Since 1996, the vast majority of securities class actions have settled for less than \$25 million.

**FIGURE 4: DISTRIBUTION OF POST-REFORM ACT SETTLEMENTS
1996–2015**

(Dollars in Millions)



Note: Settlement dollars are adjusted for inflation; 2015 dollar equivalent figures are used.

SETTLEMENT SIZE *continued*

- The average settlement amount in 2015 was 123 percent higher than the average in 2014, but was still 25 percent lower than the average for all prior post-Reform Act years.
- The median settlement amount in 2015 was also lower than the median for all prior post-Reform Act years.
- Nearly 50 percent of settlements approved in 2015 settled for less than \$5 million; 80 percent settled for less than \$25 million; and 90 percent settled for less than \$100 million.
- Average settlements have varied widely over the last 10 years, while median settlements have fluctuated within a narrower range.

The median settlement amount has remained largely unchanged in the last three years.

FIGURE 5: SETTLEMENT PERCENTILES
2006–2015

(Dollars in Millions)

Year	Average	10th	25th	Median	75th	90th
2015	\$37.9	\$1.3	\$2.0	\$6.1	\$15.3	\$91.0
2014	\$17.0	\$1.7	\$2.9	\$6.0	\$13.2	\$39.9
2013	\$73.6	\$1.9	\$3.1	\$6.6	\$22.6	\$83.9
2012	\$59.2	\$1.2	\$2.8	\$9.5	\$36.6	\$118.7
2011	\$22.1	\$1.9	\$2.6	\$6.1	\$19.0	\$44.0
2010	\$38.8	\$2.2	\$4.6	\$12.2	\$27.2	\$86.5
2009	\$41.4	\$2.6	\$4.2	\$8.8	\$22.1	\$73.4
2008	\$31.4	\$2.2	\$4.1	\$8.8	\$20.9	\$55.5
2007	\$75.9	\$1.7	\$3.4	\$10.3	\$20.0	\$91.3
2006	\$131.8	\$2.0	\$3.7	\$8.2	\$27.3	\$268.5

Note: Settlement dollars are adjusted for inflation; 2015 dollar equivalent figures are used.

DAMAGES ESTIMATES AND MARKET CAPITALIZATION LOSSES

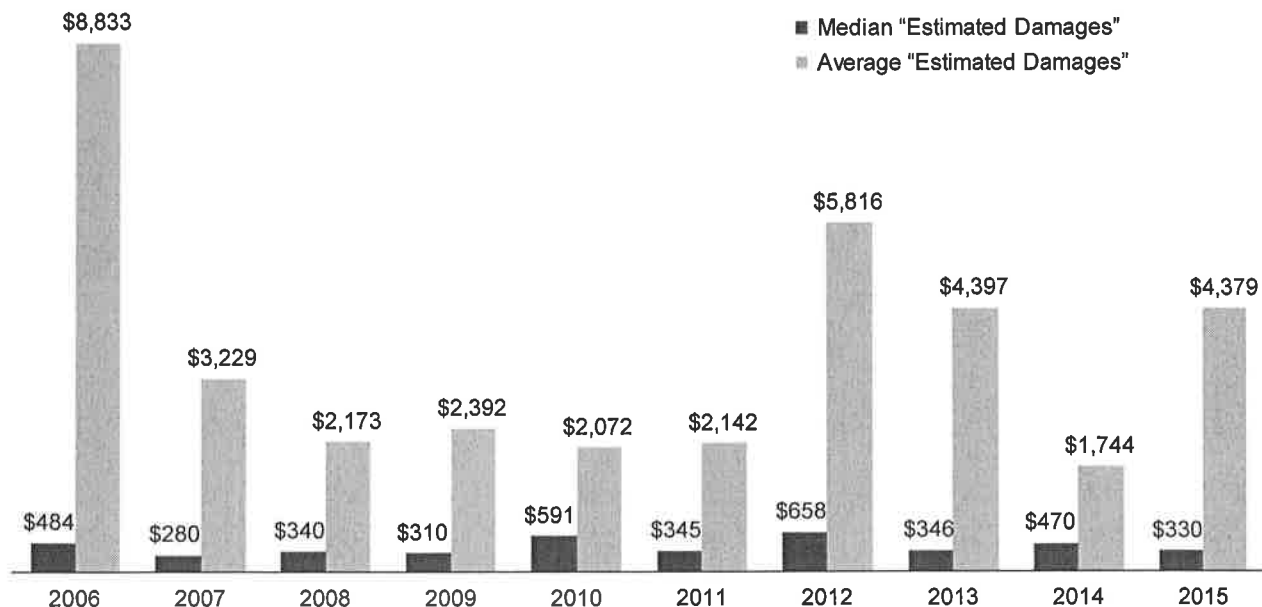
“ESTIMATED DAMAGES”

For purposes of this research, the use of a consistent method for estimating potential shareholder losses allows for the identification and analysis of potential trends. A simplified measure, referred to here as “estimated damages,” is used as a proxy for potential shareholder losses. “Estimated damages” are the most important factor in predicting settlement amounts. These “estimated damages” are not necessarily linked to the allegations included in the associated court pleadings.³ The damages estimates presented in this report are not intended to be indicative of actual economic damages borne by shareholders.

- Average “estimated damages” for 2015 increased 151 percent from 2014.
- While average “estimated damages” increased, median “estimated damages” (representing the midpoint) were 30 percent lower in 2015 than in 2014.
- In 2015, 23 percent of settlements involved “estimated damages” of \$1 billion or more, the lowest percentage in the last seven years. This suggests that a small number of cases with very large “estimated damages” contributed to the relatively high average “estimated damages” in 2015.

A small number of cases contributed to the relatively high average “estimated damages” in 2015.

**FIGURE 6: MEDIAN AND AVERAGE “ESTIMATED DAMAGES”
2006–2015**
(Dollars in Millions)



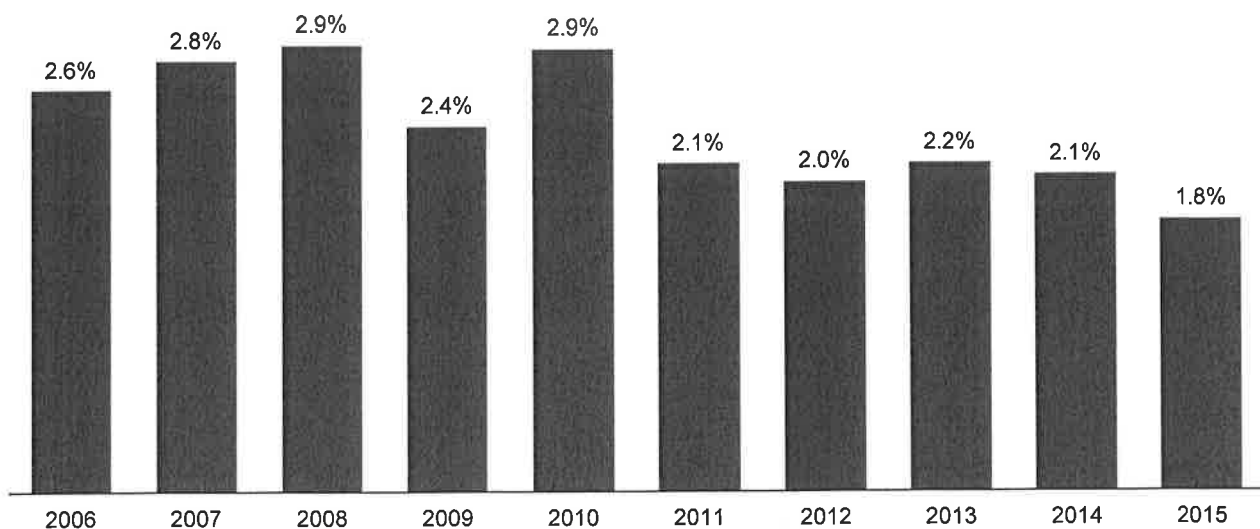
Note: “Estimated damages” are adjusted for inflation based on class period end dates.

“ESTIMATED DAMAGES” *continued*

- In 2015, median “estimated damages” and median settlements as a percentage of “estimated damages” both decreased compared to 2014.
- In contrast to the typical pattern observed for prior years, in 2015, the median settlement as a percentage of “estimated damages” was similar for non-mega settlements and mega settlements. Typically, mega settlements occur at lower percentages of “estimated damages” but, in 2015, non-mega settlements also settled for a relatively low percentage of “estimated damages.”
- Overall, the combination of lower median “estimated damages” and lower settlements as a percentage of “estimated damages” suggests that other factors, including those discussed in the following pages, may have contributed to lower median settlements as a percentage of “estimated damages” in 2015.

In 2015, median settlements as a percentage of “estimated damages” decreased to historic low levels.

**FIGURE 7: MEDIAN SETTLEMENTS AS A PERCENTAGE OF “ESTIMATED DAMAGES”
2006–2015**



“ESTIMATED DAMAGES” *continued*

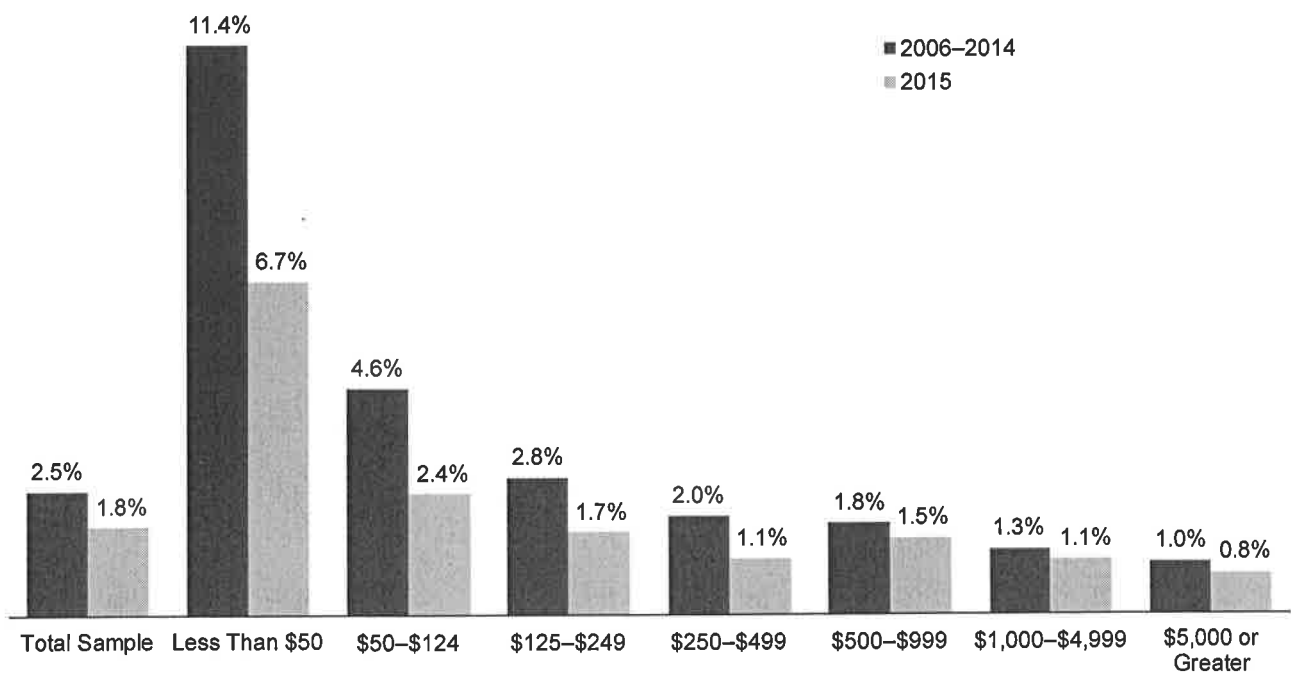
- Median settlements as a percentage of “estimated damages” decreased 29 percent from the 2006–2014 median.
- In 2015, smaller cases continued to settle for substantially higher percentages of “estimated damages,” although the median settlement of very small cases—those with “estimated damages” less than \$50 million—declined sharply in 2015 compared with the 2006–2014 median.

Median settlements declined across all damages ranges in 2015.

FIGURE 8: MEDIAN SETTLEMENTS AS A PERCENTAGE OF “ESTIMATED DAMAGES” BY DAMAGES RANGES

2006–2015

(Dollars in Millions)



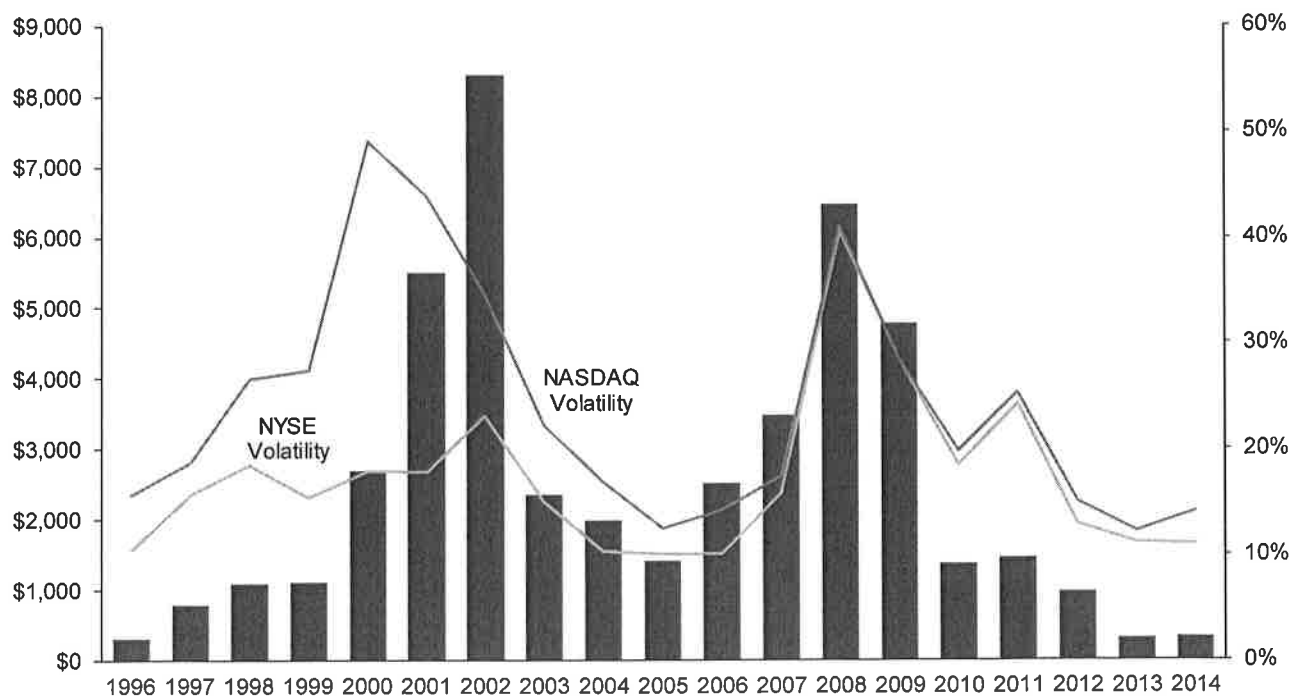
“ESTIMATED DAMAGES” *continued*

- The size of “estimated damages” is correlated with market volatility around the time of a case filing, which tends to occur two to four years before the settlement.
- In the past decade, NYSE and NASDAQ volatility peaked in 2008. Consistent with this, “estimated damages” for settled cases filed in 2008 and 2009 were the highest since 2002.
- For cases filed in more recent years (2010 through 2014), market volatility has generally been trending downward, which may have contributed to the reduction in median “estimated damages” and Disclosure Dollar Loss (DDL) for cases settled in 2015 (see page 11).

Continued low market volatility was tied to smaller median “estimated damages” among 2015 settlements.

FIGURE 9: AVERAGE “ESTIMATED DAMAGES” FOR SETTLED CASES BY FILING YEAR 1996–2014

(Dollars in Millions)



Note: “Estimated damages” are adjusted for inflation; 2014 dollar equivalent figures are used. Volatility is calculated as the annualized standard deviation of daily market returns. Chart shows filing years for settled cases through December 2014.

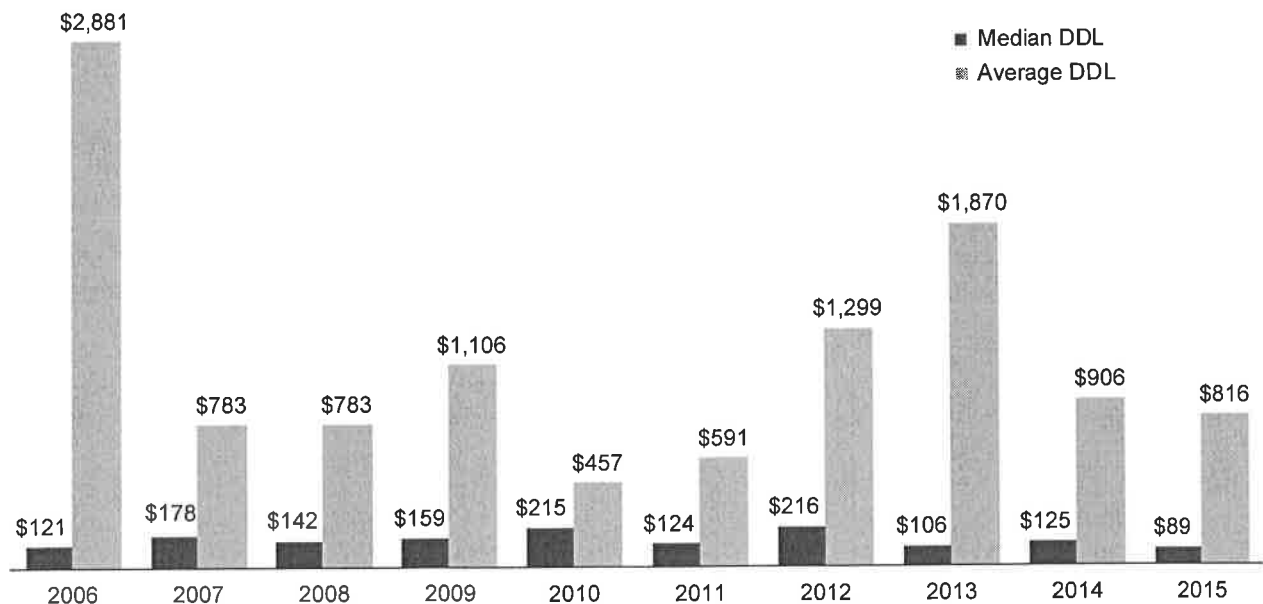
DISCLOSURE DOLLAR LOSS

Disclosure Dollar Loss (DDL) captures the stock price reaction to the disclosure that resulted in the first filed complaint. DDL is calculated as the decline in the market capitalization of the defendant firm from the trading day immediately preceding the end of the class period to the trading day immediately following the end of the class period.⁴

- Unlike the pattern observed with “estimated damages” in 2015 (where the average increased and the median decreased from 2014), both the average and median DDL decreased in 2015, with the median DDL declining 29 percent and average DDL declining 10 percent.
- Total DDL associated with settlements approved in 2015 was \$61.2 billion, 30 percent below the average from 2006 through 2014.

**Median DDL
in 2015 was
the lowest
since 1999.**

**FIGURE 10: MEDIAN AND AVERAGE DISCLOSURE DOLLAR LOSS
2006–2015**
(Dollars in Millions)



Note: DDL is adjusted for inflation based on class period end dates.

TIERED ESTIMATED DAMAGES

This research also considers an alternative measure of damages to account for the U.S. Supreme Court's 2005 landmark decision in *Dura*, which states that damages cannot be associated with shares sold before information regarding the alleged fraud reaches the market.⁵ This alternative damages measure is referred to as tiered estimated damages and is based on the stock-price drops on alleged corrective disclosure dates as described in the settlement plan of allocation.⁶

As noted in past reports, this measure has not yet surpassed "estimated damages" in terms of its power as a predictor of settlement outcomes. However, it is highly correlated with settlement amounts and provides an alternative measure of investor losses for more recent securities class action settlements.

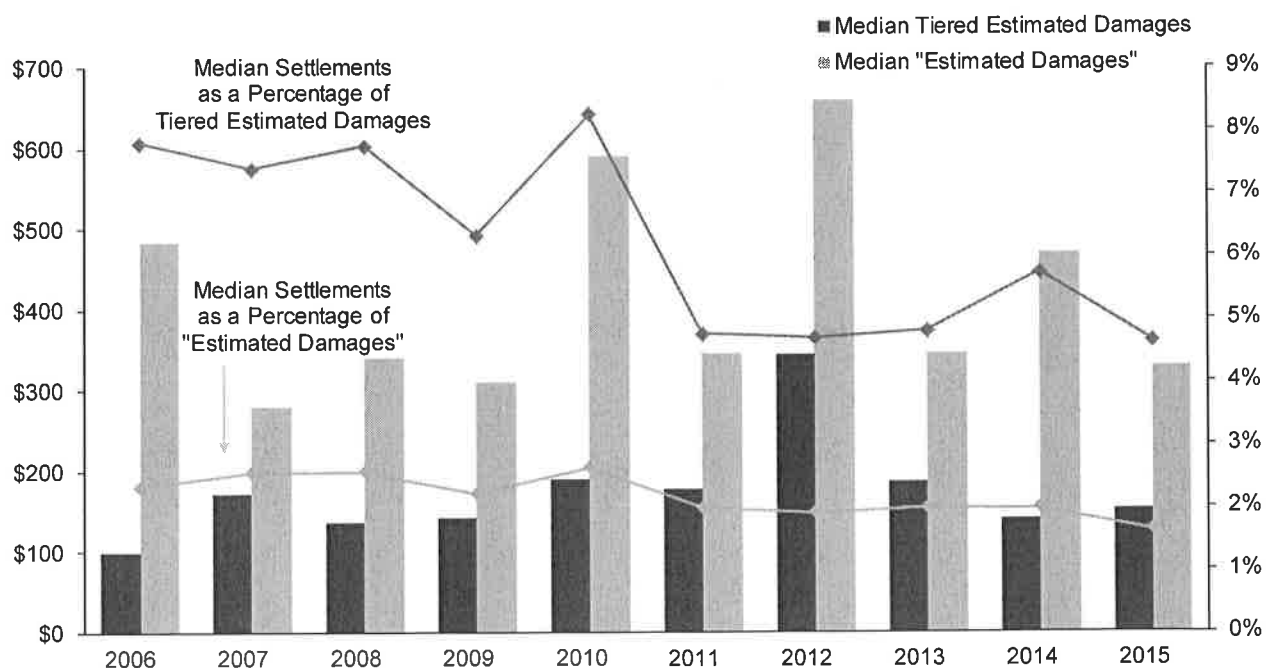
- While median "estimated damages" declined, median tiered "estimated damages" increased in 2015.
- The median settlement as a percentage of tiered "estimated damages" declined 19 percent in 2015 from 2014.
- Median settlements as a percentage of tiered estimated damages are higher than median settlements as a percentage of "estimated damages," as tiered estimated damages are typically lower than "estimated damages."⁷

Tiered estimated damages are highly correlated with settlement amounts.

FIGURE 11: TIERED ESTIMATED DAMAGES

2006–2015

(Dollars in Millions)



Note: Damages figures are adjusted for inflation based on class period end dates.

ANALYSIS OF SETTLEMENT CHARACTERISTICS

NATURE OF CLAIMS

- In 2015, there were five settlements involving Section 11 and/or Section 12(a)(2) claims that did not involve Rule 10b-5 allegations. This is consistent with the historical rate of 6 percent of settlements with only Section 11 claims
- Intensified activity in the U.S. IPO market in recent years, in tandem with the increase in filings involving Section 11 claims (either alone or together with Rule 10b-5 claims),⁸ suggests that these cases are likely to be more prevalent in the near future. However, a slowdown in IPO activity reported in 2015 may contribute to a reduction in Section 11-only cases in the long term.
- Settlements and “estimated damages” are considerably higher for cases involving Section 11 and/or Section 12(a)(2) claims in addition to Rule 10b-5 claims. These cases are more likely to include allegations related to other securities of the defendant company in addition to common stock in the alleged class. The cases may also represent more complex matters.
- On average, from 2011 through 2015, cases with combined claims took four years from filing date to the settlement hearing date compared to 3.6 years for cases with only Rule 10b-5 claims. Cases with only Section 11 and/or Section 12(a)(2) claims had settlement hearing dates, on average, 3.4 years after filing. (See page 19 for additional discussion on time to settlement.)

Settlements are considerably higher for cases involving combined Section 11 and/or Section 12(a)(2) claims and Rule 10b-5 claims.

FIGURE 12: SETTLEMENTS BY NATURE OF CLAIMS
1996–2015

(Dollars in Millions)

	Number of Settlements	Median Settlements	Median "Estimated Damages"	Median Settlements as a Percentage of "Estimated Damages"
Section 11 and/or 12(a)(2) Only	87	\$4.0	\$54.9	7.6%
Both Rule 10b-5 and Section 11 and/or 12(a)(2)	265	\$13.5	\$532.8	3.2%
Rule 10b-5 Only	1,162	\$7.9	\$367.6	2.7%
All Post-Reform Act Settlements	1,514	\$8.2	\$335.5	3.0%

Note: Settlement dollars and "estimated damages" are adjusted for inflation; 2015 dollar equivalent figures are used. "Estimated damages" are adjusted for inflation based on class period end dates.

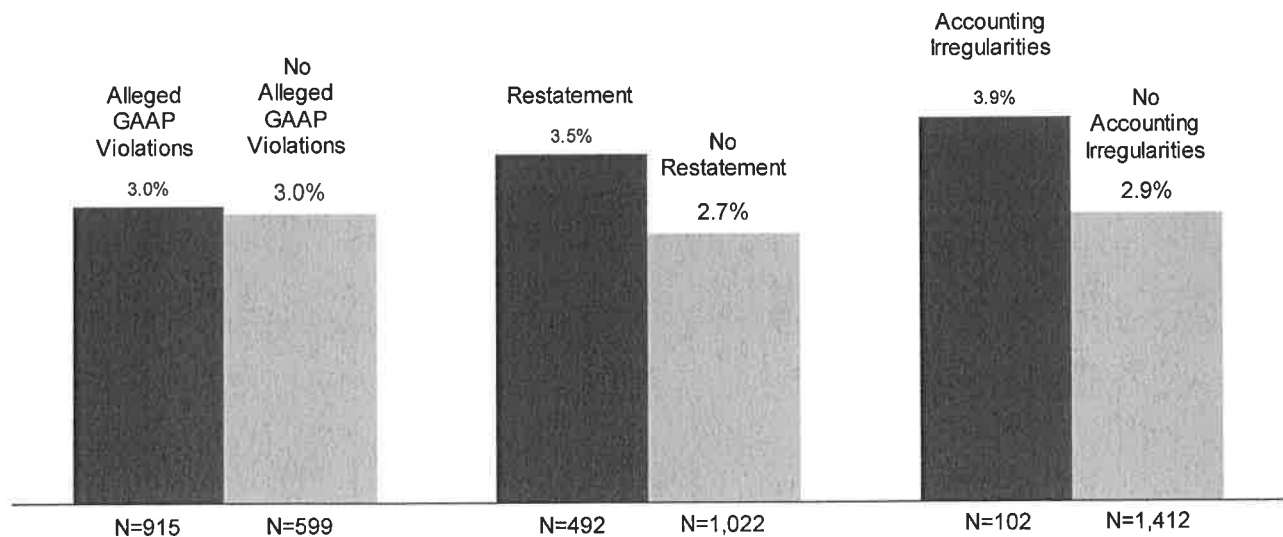
ACCOUNTING ALLEGATIONS

This research examines three types of accounting allegations among settled cases: (1) alleged GAAP violations, (2) restatements, and (3) reported accounting irregularities.⁹ For further details regarding settlements of accounting cases, see Cornerstone Research's annual report, *Accounting Class Action Filings and Settlements*.

- In early post-Reform Act years, cases involving GAAP allegations were associated with higher settlements as a percentage of "estimated damages," but this pattern has not been consistent in recent years.
- Restatements were involved in 22 percent of cases settled in 2015 and were associated with higher settlements as a percentage of "estimated damages" compared to cases without restatements.
- Of the cases approved for settlement in 2015, only one involved reported accounting irregularities, well below the rate of 7 percent for prior years. These cases continued to settle for the highest amounts in relation to "estimated damages."

In 2015,
52 percent of
settled cases
alleged GAAP
violations, a
decrease from
67 percent
in 2014.

FIGURE 13: MEDIAN SETTLEMENTS AS A PERCENTAGE OF "ESTIMATED DAMAGES" AND ACCOUNTING ALLEGATIONS 1996–2015

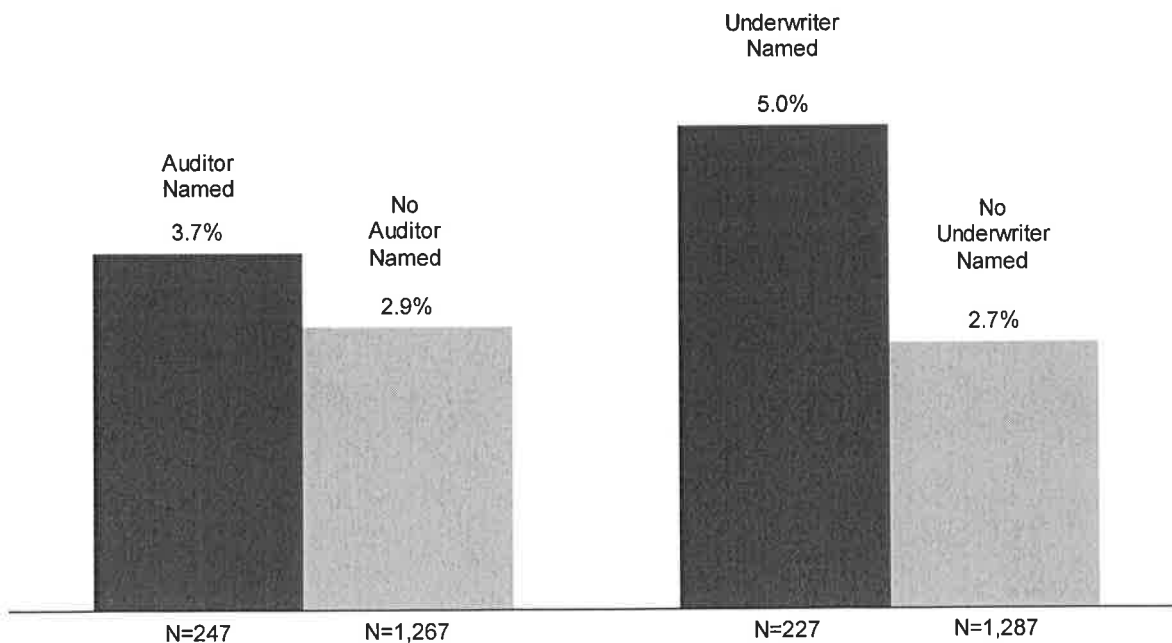


THIRD-PARTY CODEFENDANTS

- Third parties, such as an auditor or an underwriter, are often named as codefendants in larger, more complex cases and can provide an additional source of settlement funds.
- Historically, cases with third-party codefendants have settled for substantially higher amounts as a percentage of “estimated damages.” In 2015, however, cases with third-party defendants settled for lower percentages of “estimated damages,” and the difference in the median settlement amount with and without a third-party named defendant was one of the lowest in the last 10 years.
- The presence of outside auditor defendants is typically associated with cases involving GAAP violations; the presence of underwriter defendants is highly correlated with Section 11 claims.
- In 2015, 35 percent of accounting-related cases had a named auditor defendant, representing a 50 percent increase over the prior 10-year average. Underwriter defendants were named in 76 percent of cases with Section 11 claims.

Overall,
30 percent of
settlements in
2015 involved a
named auditor or
underwriter
codefendant.

FIGURE 14: MEDIAN SETTLEMENTS AS A PERCENTAGE OF “ESTIMATED DAMAGES” AND THIRD-PARTY CODEFENDANTS 1996–2015



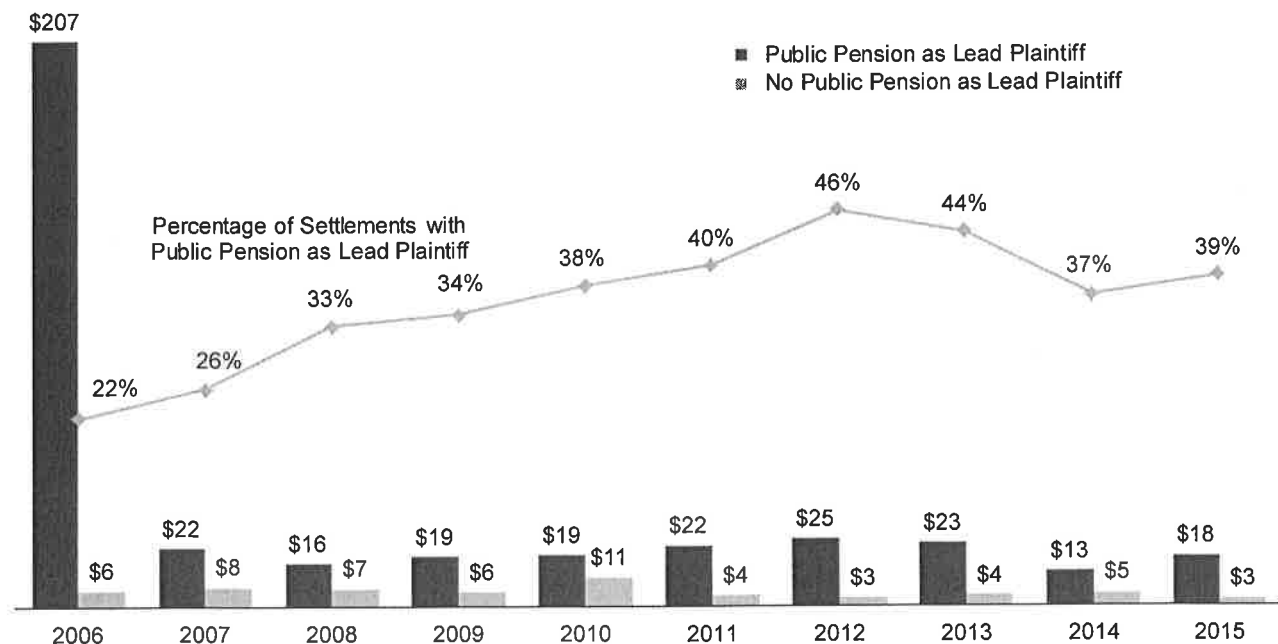
INSTITUTIONAL INVESTORS

- Public pension plans (a subset of institutional investors) tend to be involved as plaintiffs in larger cases (i.e., cases with higher “estimated damages”). In 2015, 64 percent of settlements with “estimated damages” greater than \$500 million involved a public pension plan as lead plaintiff, compared to 23 percent for cases with “estimated damages” of \$500 million or less.
- The median settlement in 2015 for cases with a public pension as a lead plaintiff was \$18 million. This compares to a median settlement of \$6.4 million for cases with non-public pension lead plaintiff institutional investors and \$2.7 million for cases where the lead plaintiff was not an institutional investor.
- While public pension participation in 2015 settlements was up compared with 2014, as a group, public pensions were involved in fewer settled cases in 2015 than in 2012 and 2013.

In 2015,
64 percent of
cases approved
for settlement
had institutional
investor lead
plaintiffs.

**FIGURE 15: MEDIAN SETTLEMENT AMOUNTS AND PUBLIC PENSIONS
2006–2015**

(Dollars in Millions)



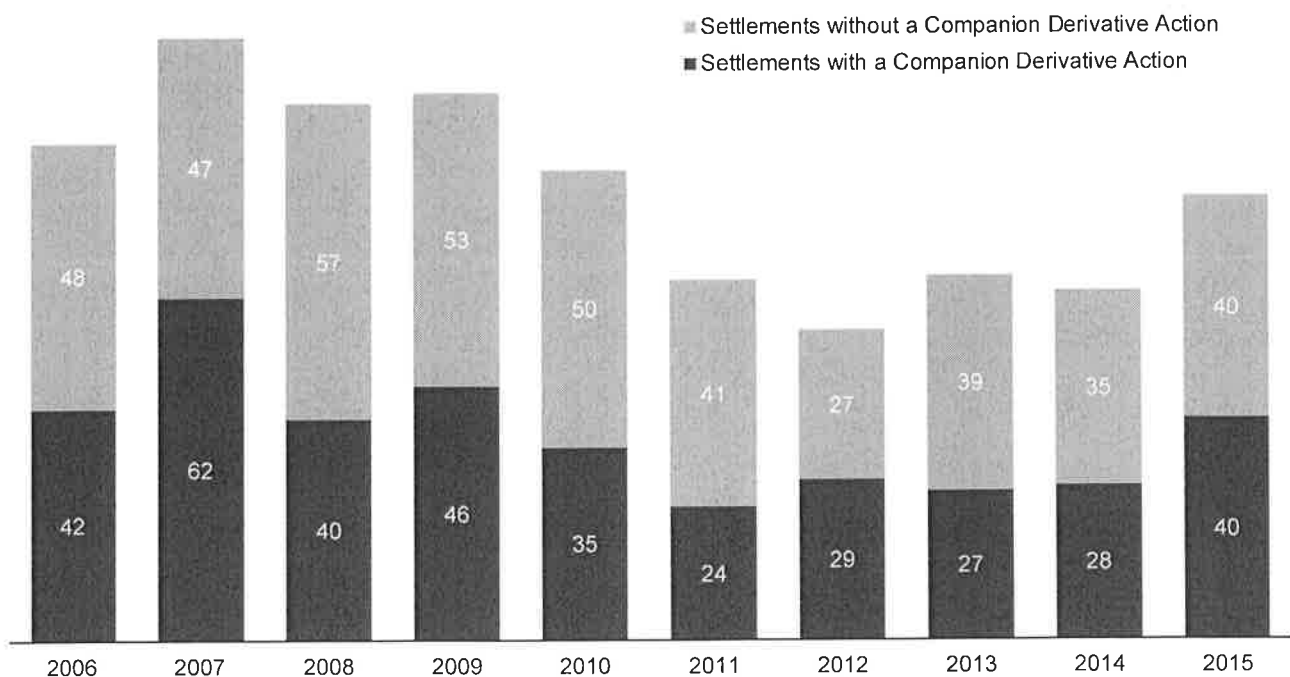
Note: Settlement dollars are adjusted for inflation; 2015 dollar equivalent figures are used.

DERIVATIVE ACTIONS

- In 2015, 50 percent of settled cases were accompanied by derivative actions. For the past nine years, derivative actions have accompanied an average of 46 percent of settlements.
- Historically, accompanying derivative actions have been associated with relatively large securities class actions.¹⁰ In 2015, 64 percent of cases with “estimated damages” of more than \$500 million involved a companion derivative action, compared to 40 percent for cases with damages of \$500 million or less.
- Median “estimated damages” for settlements in 2015 with an accompanying derivative action were two-and-a-half times larger than for settlements without an accompanying derivative action.

In 2015, the median settlement for a case with a companion derivative action was \$8.3 million versus \$3.1 million for those without.

FIGURE 16: FREQUENCY OF DERIVATIVE ACTIONS
2006–2015



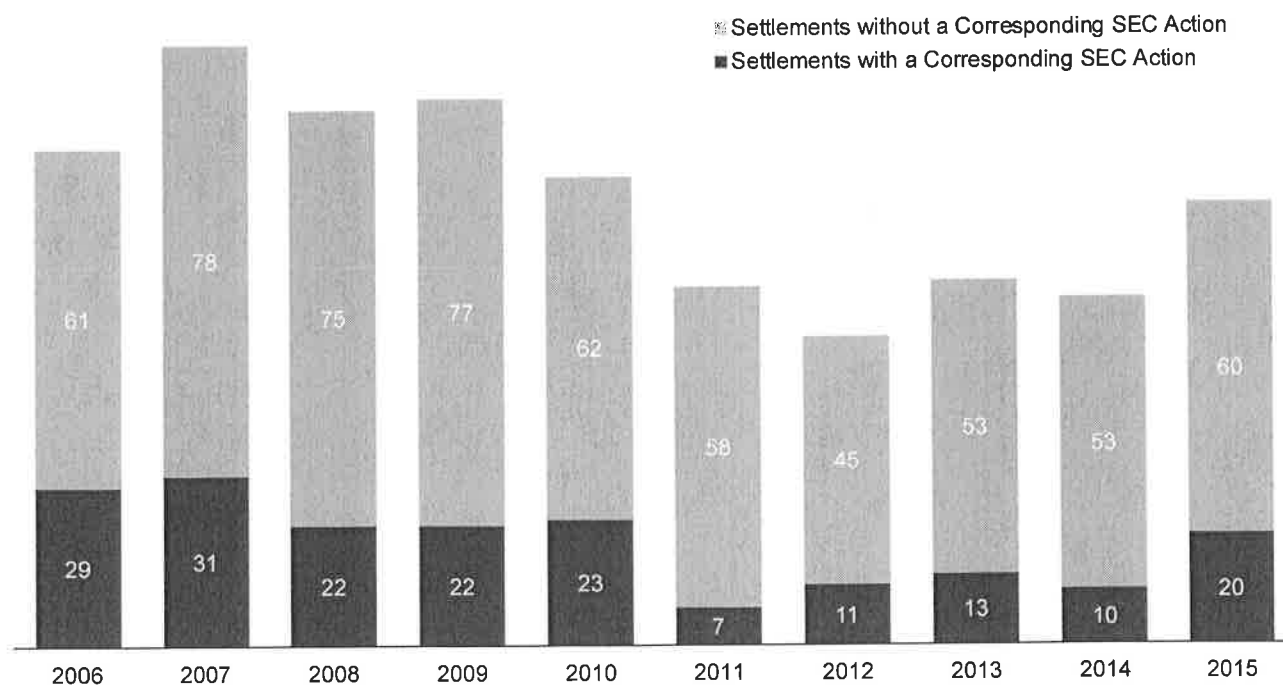
CORRESPONDING SEC ACTIONS

Cases with a corresponding SEC action related to the allegations (evidenced by the filing of a litigation release or administrative proceeding prior to settlement) are associated with significantly higher settlement amounts and have higher settlements as a percentage of "estimated damages."¹¹

- The median settlement for all post-Reform Act cases with an SEC action (\$12.1 million) was more than twice the median settlement for cases without a corresponding SEC action (\$6 million).
- In 2015, however, the median settlement for cases with a corresponding SEC action was only \$5.3 million, while cases without an associated SEC action had a higher median settlement of \$6.1 million.
- Closely related to the increased proportion of settlements with corresponding SEC actions in 2015, recent data indicate an increase in the volume of SEC enforcement actions involving financial reporting allegations over the last few years.¹²

In 2015,
institutional
investors were
involved as lead
plaintiffs in 15 out
of 20 cases with a
corresponding
SEC action.

**FIGURE 17: FREQUENCY OF SEC ACTIONS
2006–2015**



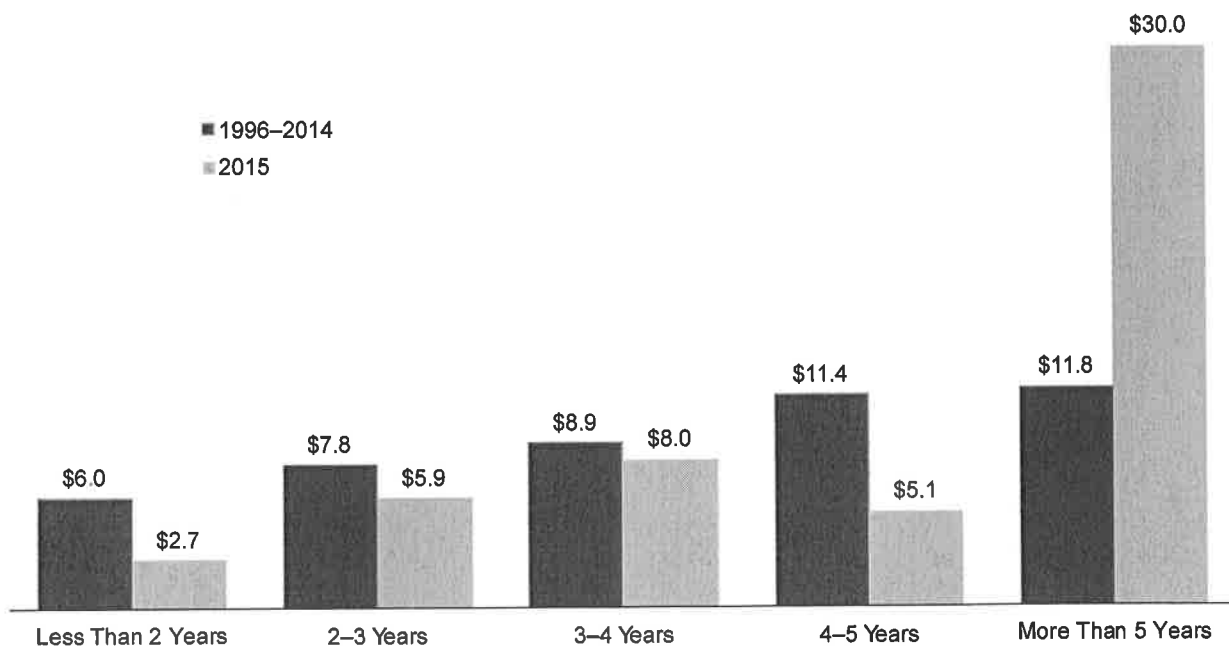
TIME TO SETTLEMENT AND CASE COMPLEXITY

- In 2015, 20 percent of settlements occurred within two years after the filing date, up considerably from 10 percent of settlements in 2014.
 - Median settlements were 67 percent lower for cases settling within two years than for cases taking longer to settle.
 - Cases settling within two years were also less likely to include allegations of GAAP violations or corresponding SEC actions or have a public pension as a lead plaintiff.
- Overall, larger cases (as measured by “estimated damages”) and cases involving larger firms tend to take longer to reach settlement.
- In 2015, settlement amounts for cases that took five years or longer to finalize were substantially higher than those that reached quicker settlements.

In 2015, the median time from filing date to settlement was three years.

**FIGURE 18: MEDIAN SETTLEMENT BY DURATION
FROM FILING DATE TO SETTLEMENT HEARING DATE
1996–2015**

(Dollars in Millions)



Note: Settlement dollars are adjusted for inflation; 2015 dollar equivalent figures are used.

LITIGATION STAGES

This report studies three stages in the litigation process that may be considered an indication of the strength of the merits of a case (e.g., surviving a motion to dismiss) and/or the time and effort invested by the lead plaintiff counsel:

Stage 1: Settlement before the first ruling on a motion to dismiss

Stage 2: Settlement after a ruling on motion to dismiss, but before a ruling on motion for summary judgment

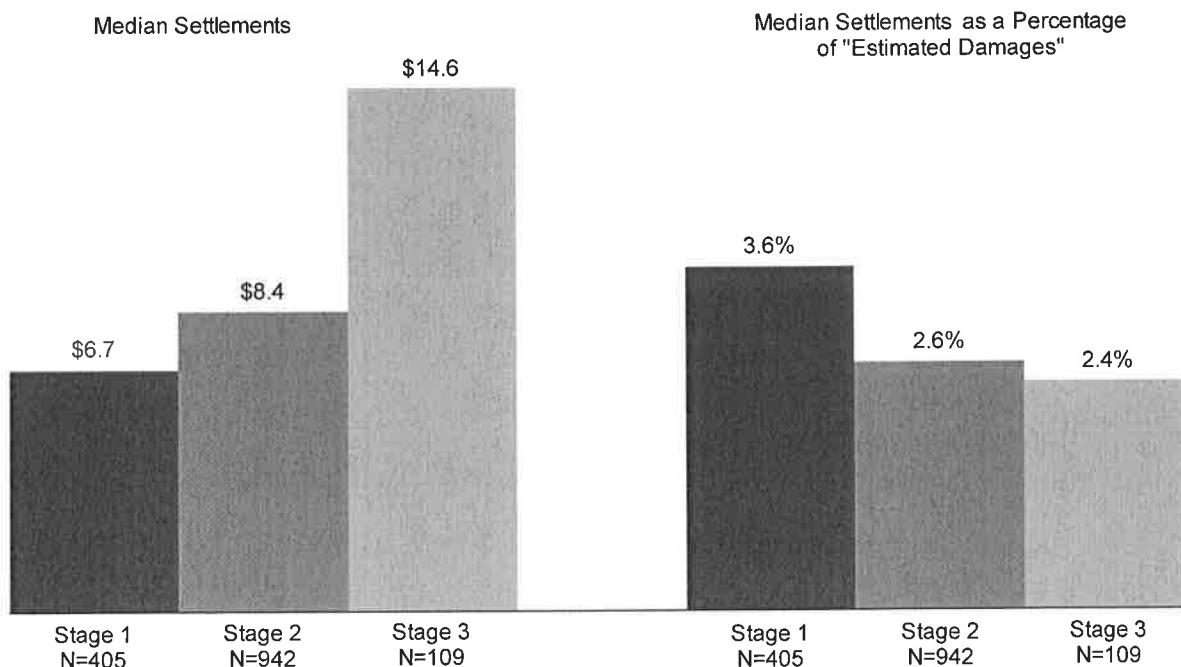
Stage 3: Settlement after a ruling on motion for summary judgment¹³

- In 2015, 30 percent of settlements occurred in Stage 1, compared to 26 percent for cases settled in 1996–2014.
- Larger cases, denoted by “estimated damages,” tend to settle at more advanced stages of litigation and tend to take longer to reach settlement.
 - Cases settling in Stage 3 had median “estimated damages” that were three-and-a-half times higher than the median “estimated damages” of cases settling in Stage 1.
 - Cases settling in Stage 1 had the lowest dollar amount but the highest percentage of “estimated damages.”

Settlement amounts tend to increase the longer a case continues.

FIGURE 19: LITIGATION STAGES
1996–2015

(Dollars in Millions)



Note: Settlement dollars are adjusted for inflation; 2015 dollar equivalent figures are used.

INDUSTRY SECTORS

- There were 11 settled cases in the financial sector in 2015, up 57 percent over 2014 but lower than in earlier years. This is consistent with the resolution of a majority of the credit crisis–related cases filed since 2007 and the absence of securities class actions related to the credit crisis filed since 2012.¹⁴
- Reflecting their larger “estimated damages,” cases in the financial sector have settled for the highest amounts among all post–Reform Act cases. In 2015, 55 percent of financial sector settlements involved “estimated damages” of greater than \$1 billion.
- The proportion of settled cases involving pharmaceutical firms rose 40 percent in 2015 from 2014 (from 10 percent to 14 percent of cases).
- Industry sector is not a significant determinant of settlement amounts when controlling for other variables that influence settlement outcomes (such as “estimated damages,” asset size, and other factors discussed on page 23).

The proportion of settled cases in 2015 involving technology firms reached 18 percent.

FIGURE 20: SELECT INDUSTRY SECTORS

1996–2015

(Dollars in Millions)

Industry	Number of Settlements	Median Settlements	Median "Estimated Damages"	Median Settlements as a Percentage of "Estimated Damages"
Technology	345	\$7.8	\$327.7	2.9%
Financial	186	\$13.6	\$762.6	2.7%
Telecommunications	147	\$9.4	\$495.5	2.4%
Retail	126	\$6.6	\$231.2	4.1%
Pharmaceuticals	111	\$8.2	\$460.3	2.6%
Healthcare	62	\$8.2	\$283.6	3.5%

Note: Settlement dollars and “estimated damages” adjusted for inflation; 2015 dollar equivalent figures used. “Estimated damages” are adjusted for inflation based on class period end dates.

FEDERAL COURT CIRCUITS

- In 2015, 53 percent of settlements occurred in the Second or Ninth Circuits
- Reflecting the concentration of financial industry cases in the Second Circuit, median “estimated damages” of cases filed in this circuit were more than two times the median for all settlements in 2015.
- Cases in the DC and Sixth Circuits have settled for the highest dollar amounts and also relatively high median settlements as a percentage of “estimated damages.”

The Second and Ninth Circuits continued to lead other circuits in the number of settlements.

**FIGURE 21: SETTLEMENTS BY FEDERAL COURT CIRCUIT
2006–2015**
(Dollars in Millions)

Circuit	Number of Settlements	Median Number of Docket Entries	Median Duration from Tentative Settlement to Approval Hearing (in months)	Median Settlements	Median Settlements as a Percentage of "Estimated Damages"
First	37	140	6.4	\$6.9	2.7%
Second	201	113	6.5	\$12.0	2.3%
Third	75	121	6.3	\$8.9	2.8%
Fourth	30	118	4.8	\$8.4	1.9%
Fifth	49	107	5.3	\$6.6	2.3%
Sixth	37	142	4.5	\$17.1	3.0%
Seventh	41	149	5.2	\$9.8	2.5%
Eighth	22	195	5.9	\$8.1	3.6%
Ninth	211	165	6.4	\$7.5	2.3%
Tenth	24	153	6.4	\$8.2	1.5%
Eleventh	56	133	5.4	\$5.2	2.6%
DC	4	190	6.5	\$31.2	3.7%

Note: Settlement dollars adjusted for inflation; 2015 dollar equivalent figures used.

CORNERSTONE RESEARCH'S SETTLEMENT PREDICTION ANALYSIS

This research applies regression analysis to examine which characteristics of securities cases were associated with settlement outcomes. Based on the research sample of post-Reform Act cases that settled through December 2015, the factors that were important determinants of settlement amounts included the following:

- "Estimated damages"
- Disclosure Dollar Loss (DDL)
- Most recently reported total assets of the defendant firm
- Number of entries on the lead case docket
- The year in which the settlement occurred
- Whether the issuer reported intentional misstatements or omissions in financial statements
- Whether a restatement of financials related to the alleged class period was announced
- Whether there was a corresponding SEC action against the issuer, other defendants, or related parties
- Whether the plaintiffs named an auditor and/or underwriter as a codefendant
- Whether the issuer defendant was distressed
- Whether a companion derivative action was filed
- Whether a public pension was a lead plaintiff
- Whether noncash components, such as common stock or warrants, made up a portion of the settlement fund
- Whether the plaintiffs alleged that securities other than common stock were damaged
- Whether criminal charges/indictments were brought with similar allegations to the underlying class action
- Whether the issuer traded on a nonmajor exchange

Settlements were higher when "estimated damages," DDL, defendant asset size, or the number of docket entries were larger. Settlements were also higher in cases involving intentional misstatements or omissions in financial statements reported by the issuer, a restatement of financials, a corresponding SEC action, an underwriter and/or auditor named as codefendant, an accompanying derivative action, a public pension involved as lead plaintiff, a noncash component to the settlement, filed criminal charges, or securities other than common stock alleged to be damaged. Settlements were lower if the settlement occurred in 2009 or later, if the issuer was distressed, or if the issuer traded on a nonmajor exchange.

The regression analysis is designed to better understand and predict the total settlement amount, given the characteristics of a particular securities case. This analysis can also be applied to estimate the probabilities associated with reaching alternative settlement levels. These probability estimates can be useful for clients in considering the different layers of insurance coverage available and likelihood of contributing to the settlement fund. Regression analysis can also be used to explore hypothetical scenarios, including, but not limited to, the effects on settlement amounts given the presence or absence of particular factors found to significantly affect settlement outcomes.

RESEARCH SAMPLE

- The database used in this report focuses on cases alleging fraudulent inflation in the price of a corporation's common stock (i.e., excluding cases with alleged classes of only bondholders, preferred stockholders, etc., and excluding cases alleging fraudulent depression in price and M&A cases).
- The sample is limited to cases alleging Rule 10b-5, Section 11, and/or Section 12(a)(2) claims brought by purchasers of a corporation's common stock. These criteria are imposed to ensure data availability and to provide a relatively homogeneous set of cases in terms of the nature of the allegations.
- The current sample includes 1,537 securities class actions filed after passage of the Reform Act (1995) and settled from 1996 through 2015. These settlements are identified based on a review of case activity collected by Securities Class Action Services LLC (SCAS).¹⁵
- The designated settlement year, for purposes of this report, corresponds to the year in which the hearing to approve the settlement was held.¹⁶ Cases involving multiple settlements are reflected in the year of the most recent partial settlement, provided certain conditions are met.¹⁷

DATA SOURCES

In addition to SCAS, data sources include Dow Jones Factiva, Bloomberg, the Center for Research in Security Prices (CRSP) at University of Chicago Booth School of Business, Standard & Poor's Compustat, court filings and dockets, SEC registrant filings, SEC litigation releases and administrative proceedings, LexisNexis, and public press.

ENDNOTES

- ¹ See *Securities Class Action Filings—2015 Year in Review*, Cornerstone Research, 2016, page 4.
- ² See *Securities Class Action Filings—2015 Year in Review*, Cornerstone Research, 2016, page 30.
- ³ The simplified “estimated damages” model is applied to common stock only. For all cases involving Rule 10b-5 claims, damages are calculated using a market-adjusted, backward-pegged value line. For cases involving only Section 11 and/or Section 12(a)(2) claims, damages are calculated using a model that caps the purchase price at the offering price. Volume reduction assumptions are based on the exchange on which the issuer’s common stock traded. Finally, no adjustments for institutions, insiders, or short sellers are made to the underlying float.
- ⁴ This measure does not incorporate additional stock price declines during the alleged class period that may affect certain purchasers’ potential damages claims. As this measure does not isolate movements in the defendant’s stock price that are related to case allegations, it is not intended to represent an estimate of investor losses. The DDL calculation also does not apply a model of investors’ share-trading behavior to estimate the number of shares damaged.
- ⁵ Tiered estimated damages are calculated for cases that settled after 2005. The calculation of tiered estimated damages utilizes a single value line when there is one alleged corrective disclosure date (at the end of the class period) or a tiered value line when there are multiple alleged corrective disclosure dates.
- ⁶ The dates used to identify the applicable inflation bands may be supplemented with information from the operative complaint at the time of settlement.
- ⁷ Tiered estimated damages applies inflation bands to specific date intervals during the alleged class period. As such, it does not reflect all declines during the alleged class period as captured by “estimated damages.”
- ⁸ See *Securities Class Action Filings—2015 Year in Review*, Cornerstone Research, 2016, page 10.
- ⁹ The three categories of accounting allegations analyzed in this report are: (1) GAAP violations—cases with allegations involving Generally Accepted Accounting Principles (GAAP); (2) restatements—cases involving a restatement (or announcement of a restatement) of financial statements; and (3) accounting irregularities—cases in which the defendant has reported the occurrence of accounting irregularities (intentional misstatements or omissions) in its financial statements.
- ¹⁰ This is true whether or not the settlement of the derivative action coincides with the settlement of the underlying class action, or occurs at a different time.
- ¹¹ It could be that the merits in such cases are stronger, or simply that the presence of an accompanying SEC action provides plaintiffs with increased leverage when negotiating a settlement.
- ¹² See *SEC Enforcement Activity against Public Company Defendants, Fiscal Years 2010–2015*, Cornerstone Research, 2016.
- ¹³ Litigation stage data obtained from Stanford Law School’s Securities Class Action Clearinghouse. Sample does not add to 100 percent as there is a small sample of cases with other litigation stage classifications.
- ¹⁴ See *Securities Class Action Filings—2015 Year in Review*, Cornerstone Research, 2016.
- ¹⁵ Available on a subscription basis.
- ¹⁶ Movements of partial settlements between years can cause differences in amounts reported for prior years from those presented in earlier reports.
- ¹⁷ This categorization is based on the timing of the settlement approval. If a new partial settlement equals or exceeds 50 percent of the then-current settlement fund amount, the entirety of the settlement amount is recategorized to reflect the settlement hearing date of the most recent partial settlement. If a subsequent partial settlement is less than 50 percent of the then-current total, the partial settlement is added to the total settlement amount and the settlement hearing date is left unchanged.

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