CORNERSTONE RESEARCH

Economic and Financial Consulting and Expert Testimony

Securities Class Action Filings

2017 Year in Review

Table of Contents

Table of Figures and Appendices

Executive Summary

Widespread securities class action activity occurred throughout 2017. Last year, plaintiffs filed more federal securities fraud class actions than in any previous year since the enactment of the Private Securities Litigation Reform Act of 1995 (PSLRA). The primary contributor to this rise was filings related to merger and acquisition (M&A) transactions, which doubled in number.

Number and Size of Filings

- Plaintiffs filed a record 412 **new federal class action securities cases** (filings) in 2017. This was 52 percent greater than 2016 and more than double the 1997–2016 average. "Core" filings—those excluding M&A claims—increased for the fifth consecutive year. (pages 5–6)
- **Disclosure Dollar Loss (DDL)** increased by $24 billion to $131 billion in 2017. (page 7)
- **Maximum Dollar Loss (MDL)** declined by $283 billion in 2017 to $521 billion. (page 8)
- In 2017, seven **mega filings** made up 36 percent of DDL and 14 mega filings made up 49 percent of MDL. Both of these percentages are below historical averages. Filings with a DDL of at least $5 billion or an MDL of at least $10 billion are considered mega filings. (pages 27–29)

Other Measures of Filing Intensity

- In 2017, the likelihood of litigation for **U.S. exchange-listed companies** was greater than in any previous year. This measure reached record levels because of both the heightened filing activity against public companies and a recent decline in the number of public companies. (page 10)
- One in about 15 **S&P 500** companies (6.4 percent) was sued in 2017. Companies in the Industrials sector were the most frequent targets of new class actions. (pages 11–12)

More federal securities class actions were filed in 2017 than in any of the past 20 years.

Figure 1: Federal Class Action Filings Summary

(Dollars in Billions)

	Annual (1997–2016) Average	Max	Min	2016	2017
Class Action Filings	193	271	120	271	412
Core Filings	*180*	*242*	*120*	*186*	*214*
Disclosure Dollar Loss (DDL)	$120	$240	$42	$107	$131
Maximum Dollar Loss (MDL)	$606	$2,046	$145	$804	$521

Key Trends

M&A Filings

- Federal filings of class actions involving M&A transactions increased to 198, more than double the number in 2016. (page 5)
- Driven by an increase in filings against the financial sector, M&A filings in the Fourth Circuit more than quadrupled. (page 13)
- M&A filings continued to be most common in the Ninth and Third Circuits. (page 13)
- M&A filings had a higher rate of dismissal (78 percent) than core federal filings (48 percent) from 2009 to 2016. (page 14)

For the first time, M&A-related class actions accounted for nearly half of all federal filings.

New Developments

- At the end of 2017, a new type of class action emerged against firms that had previously undertaken an initial coin offering (ICO) tied to cryptocurrencies. There were five filings involving ICOs, all in December 2017. (page 36)
- In *Leidos Inc. v. Indiana Public Retirement System*, the U.S. Supreme Court agreed to hear whether failure to make a disclosure required by Item 303 of Reg. S-K was actionable under Section 10(b) and Rule 10b-5. Argument had been scheduled for November 6, 2017, but the case settled before that date. (page 36)
- Two other cases before the U.S. Supreme Court with interest to securities law practitioners are *Cyan Inc. v. Beaver County Employees Retirement Fund* and *Lucia v. Securities and Exchange Commission*. (pages 18, 36)

Core Filings

- The **outcomes of securities class action filings** in 2015 showed higher rates of dismissals than in previous years. Filings in the 2017 cohort are on pace to have the highest **rate of dismissals** within the first year of filing on record. (pages 15–16)
- The median **filing lag** was 11 days, continuing to remain at historically low levels. (page 23)
- The **Consumer Non-Cyclical secto**r, which includes **biotechnology, pharmaceuticals, and healthcare**, again had the most filings with 85 core filings. (pages 30–32)
- Companies listed on the NASDAQ **exchange** continued to be the targets of more core filings than those listed on the NYSE. (page 33)
- Core filings in the **Third Circuit** more than doubled from 2016. The Third Circuit includes the districts of Delaware, New Jersey, Pennsylvania, and the U.S. Virgin Islands. (page 34)

Non-U.S. Company Litigation Likelihood

- More **European** issuers were targeted in 2017 than in any previous year, as the number of filings against **non-U.S. issuers** continued to increase. (pages 24–26)
- Core filings against non-U.S. companies exceeded the overall rate against all U.S. exchange-listed companies. (page 26)

Filings by Lead Plaintiff

- In 2017, individuals were appointed lead plaintiff more often than institutional investors, a trend that has continued since 2013. (page 17)

Appointment of Plaintiff Lead Counsel

- The growth in core filings over the last six years has coincided with the activity of three plaintiff law firms that have increasingly been involved in securities class actions. (page 35)

Annual Rank of Filing Intensity

The last two years saw heightened levels of new class actions, without the financial market turbulence that accompanied prior years with substantial filing activity. On several dimensions, 2016 and 2017 were the most active years on record.

The total number of filings reached unprecedented levels, and companies on U.S. exchanges were more likely to be the subject of a class action than in any previous year. Filings against companies with large market capitalizations, however, did not peak in the same manner. This indicates that smaller companies were relatively more common targets with corresponding lower amounts of DDL and MDL in dispute.

Figure 2: Annual Rank of Measurements of Federal Filing Intensity

	2015	2016	2017
Number of Total Filings	9th	2nd	1st
Core Filings	14th	10th	8th
M&A Filings	5th	2nd	1st
Size of Core Filings			
Disclosure Dollar Loss	9th	11th	8th
Maximum Dollar Loss	14th	4th	10th
Percentage of U.S. Exchange-Listed Companies Sued			
Total Filings	3rd	2nd	1st
Core Filings	4th	2nd	1st
Percentage of S&P 500 Companies Subject to Core Filings	16th	4th	6th

Note: Rankings cover 1997 through 2017 with the exceptions of M&A filings, which have been tracked as a separate category since 2009, and analysis of the litigation likelihood of S&P 500 companies, which began in 2001. Core filings are those excluding M&A claims. See also Appendix 1.

California State Court Section 11 Cases

Class actions with Section 11 claims had been increasingly filed in California state courts (California state Section 11 filings) in recent years, although that trend abated in 2017. These California state Section 11 filings exclude Rule 10b-5 claims, but can include Section 12 or Section 15 claims.

- From 2010 through 2017, plaintiffs filed 55 Section 11 cases in California state courts. (page 18)
- In 2017, California state Section 11 filings declined by nearly two-thirds from 2016 levels. (page 18)
- The MDL of California state Section 11 filings also declined by approximately two-thirds to a level below the 2010–2016 average. (page 19)
- Unlike recent years, all California state Section 11 filings in 2017 had a parallel action in federal court (no filings were made exclusively in California state courts). (page 21)
- A greater percentage of California state Section 11 filings are unresolved compared to Section 11–only federal filings, largely due to a lower dismissal rate for the state filings. (page 20)
- The changes seen in 2017 compared to previous years coincided with the U.S. Supreme Court's decision to hear *Cyan Inc. v. Beaver County Employees Retirement Fund*, a case challenging the appropriateness of state court jurisdiction in Section 11 litigation.

California state Section 11 filings declined sharply compared to the previous two years.

Figure 3: California State Court Section 11 Class Action Filings Summary

(Dollars in Billions)

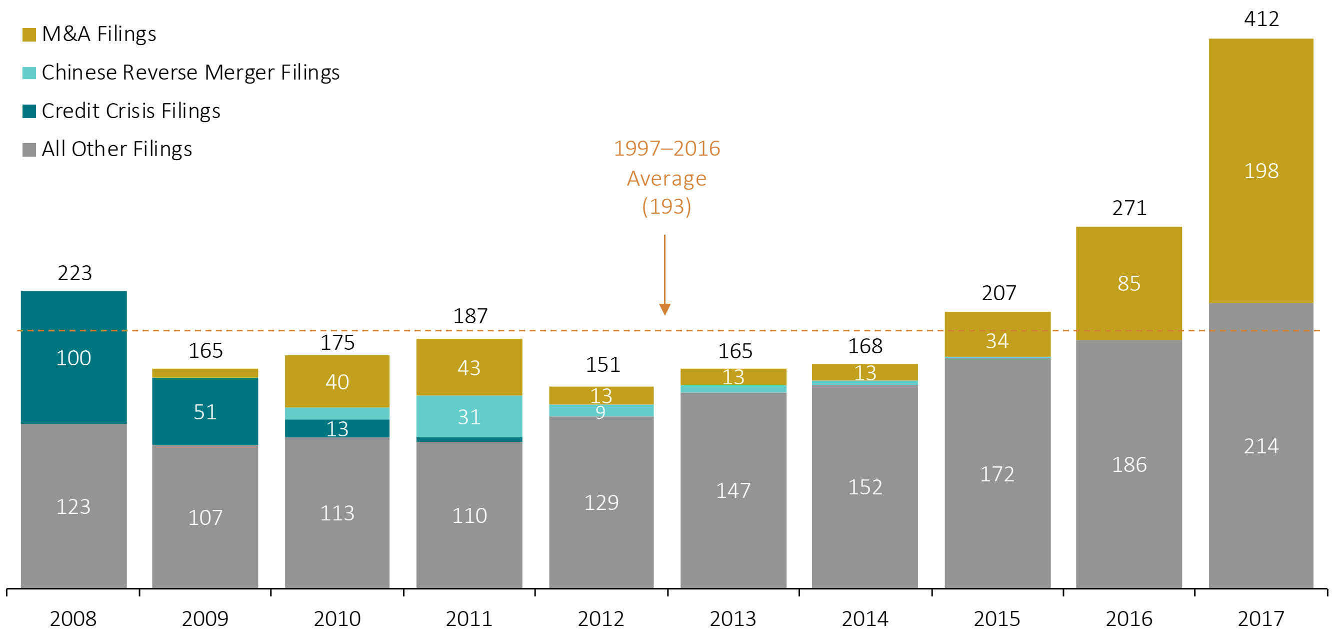
	Average 2010–2016	2016	2017
Section 11 Class Action Filings in State Courts			
Filings in State Courts Only	4	11	0
Parallel Filings in State and Federal Courts	3	6	7
Total	7	17	7
Maximum Dollar Loss of State Court Filings			
MDL of Filings in State Courts Only	$8	$16	$0
MDL of Filings in State and Federal Courts	$4	$13	$10
Total MDL	$12	$29	$10

Number of Filings

- Plaintiffs filed a record 412 new federal class action securities cases in 2017.
- The number of filings in 2017 was 52 percent higher than in 2016 and more than double the 1997–2016 average.
- The 198 M&A filings in 2017 was the largest number since 2009 (when this report began separately identifying these filings) and the primary contributor to the total increase.
- Core filings—those excluding M&A claims—were 15 percent higher in 2017 than in 2016.
- The growth in core filings over the last six years has coincided with the activity of three plaintiff law firms that have increasingly been involved in securities class actions. See additional discussion at page 35.

The number of federal filings leapt to record levels for the second consecutive year.

Figure 4: Class Action Filings Index® (CAF Index®) Annual Number of Class Action Filings 2008–2017

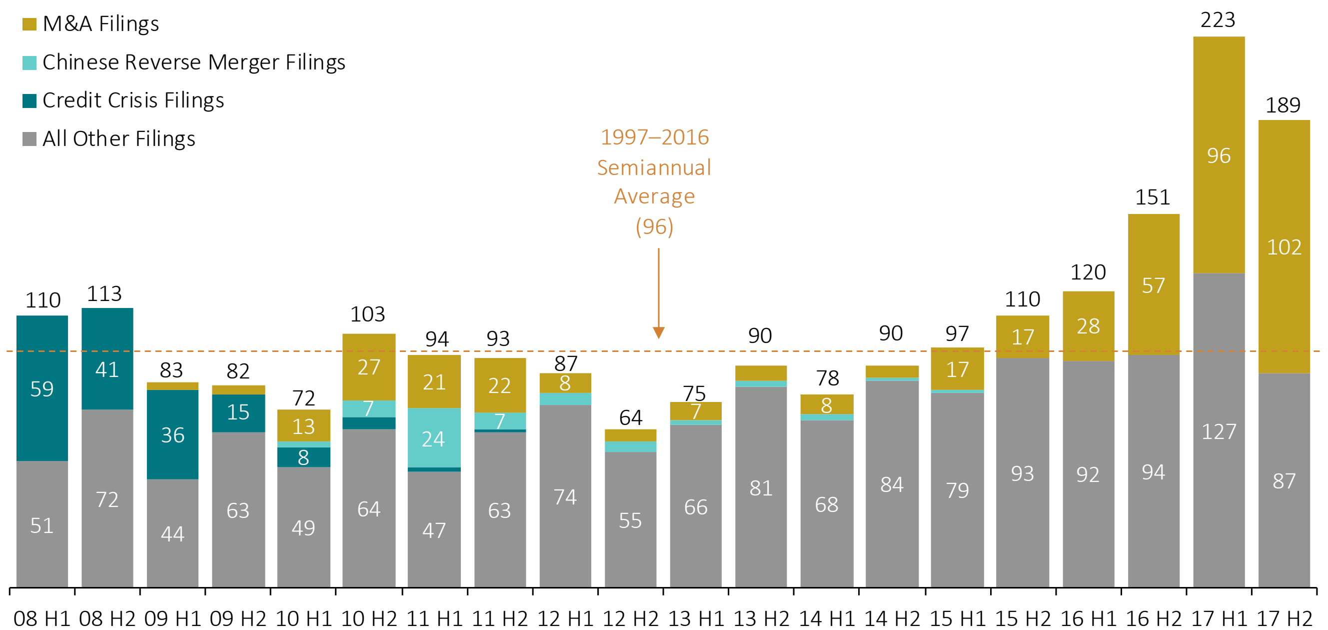


Note: There were two cases in 2011 that were both an M&A filing and a Chinese reverse merger filing. These filings were classified as M&A filings in order to avoid double counting.

- Total filing activity decreased by 15 percent in the second half of 2017 compared to the first half.
- The pace of core filings slowed in the second half of the year. The 87 core filings in the second half of 2017 was the lowest number in a semiannual period since the first half of 2015.
- There were 102 M&A filings in the second half of 2017, the most in any semiannual period.
- In the second half of the year, a new phenomenon emerged. There were five class actions related to initial coin offerings, or ICOs, of cryptocurrencies.

For the first time in a semiannual period, the number of M&A filings exceeded the number of core filings.

Figure 5: Class Action Filings Index® (CAF Index®) Semiannual Number of Class Action Filings 2008–2017



Note: There were two cases in 2011 that were both an M&A filing and a Chinese reverse merger filing. These filings were classified as M&A filings in order to avoid double counting.

Market Capitalization Losses

Disclosure Dollar Loss Index® (DDL Index®)

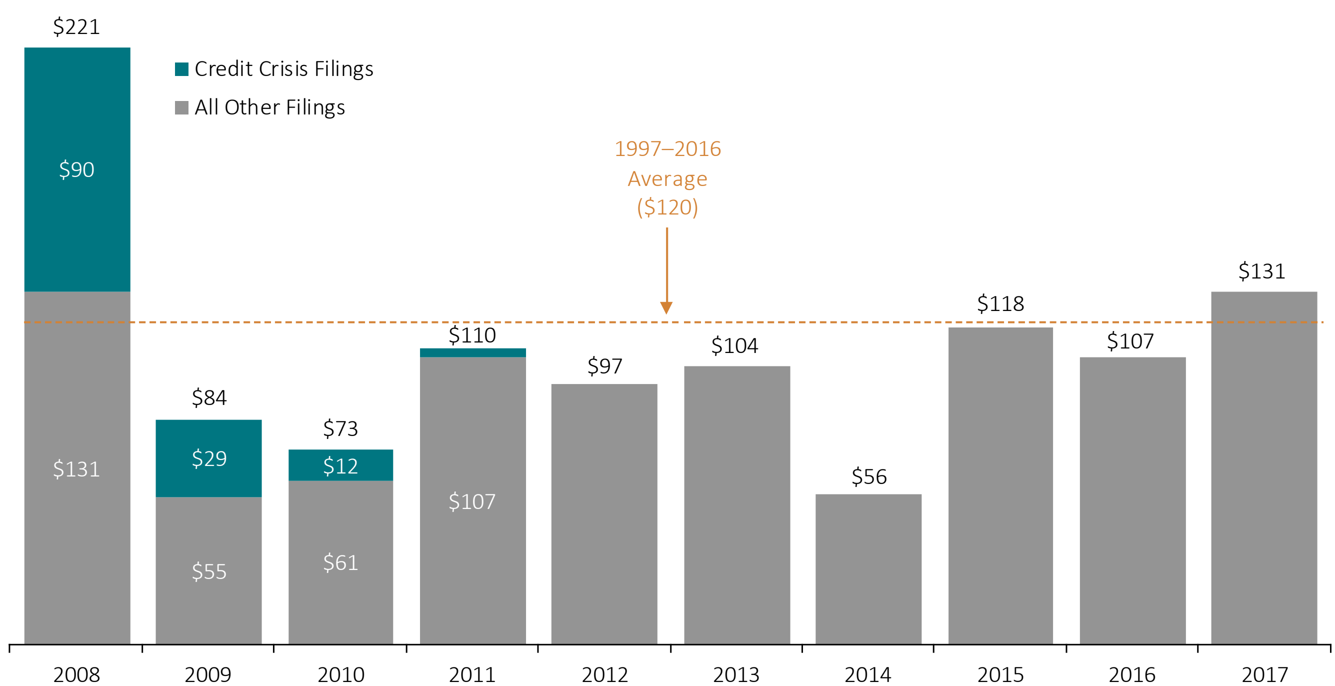
This index measures the aggregate DDL for all filings over a period of time. DDL is the dollar value change in the defendant firm's market capitalization between the trading day immediately preceding the end of the class period and the trading day immediately following the end of the class period. See the glossary for additional discussion on market capitalization losses and DDL.

The DDL Index exceeded the 1997–2016 average for the first time in nine years.

- The DDL Index increased 22 percent from 2016 to 2017, exceeding the 1997–2016 average by 9 percent.
- In 2017, mega DDL accounted for only 36 percent of the DDL Index. Typically, these filings are more than 50 percent.
- The change in per-filing DDL size was mixed in 2017. Average DDL per filing increased, while the median DDL per filing decreased. See Appendix 1.

Figure 6: Disclosure Dollar Loss Index® (DDL Index®)
2008–2017

(Dollars in Billions)



Note:
1. See Appendix 1 for the average and median values of DDL.
2. Numbers may not add due to rounding.

Maximum Dollar Loss Index® (MDL Index®)

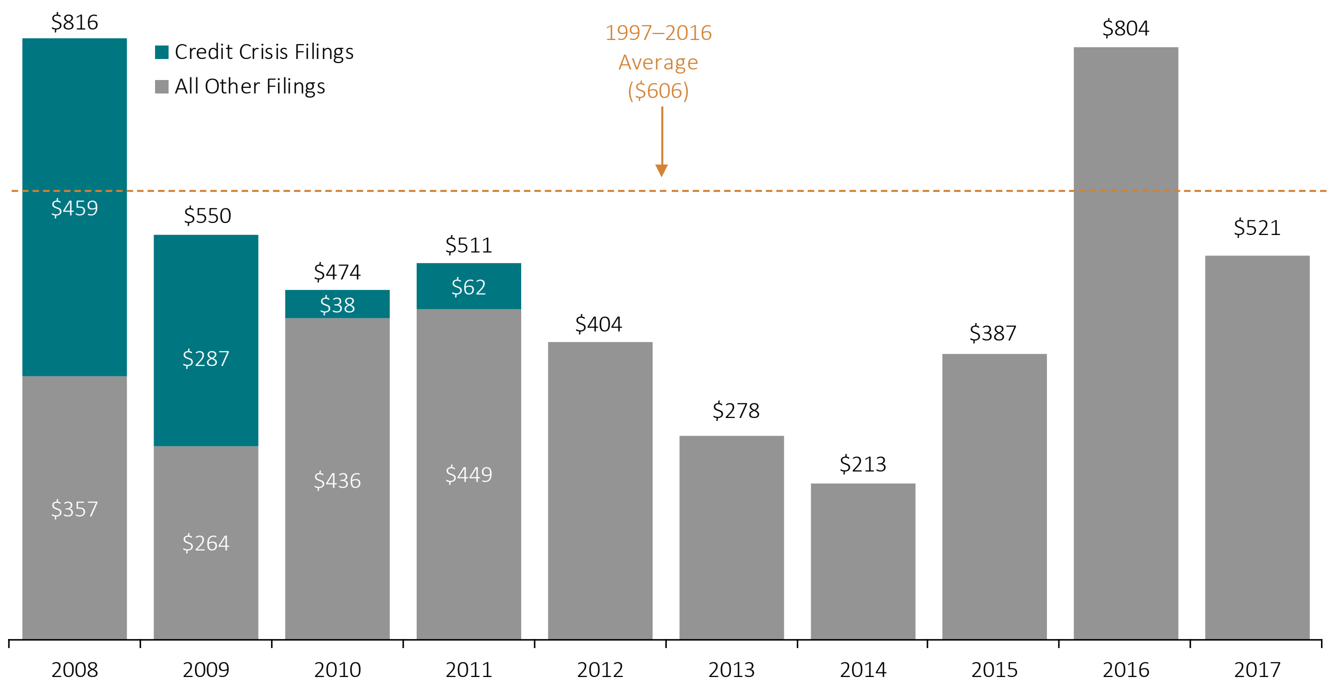
This index measures the aggregate MDL for all filings over a period of time. MDL is the dollar value change in the defendant firm's market capitalization from the trading day with the highest market capitalization during the class period to the trading day immediately following the end of the class period. See the glossary for additional discussion on market capitalization losses and MDL.

- The MDL Index decreased 35 percent from 2016 to 2017, returning to the levels before 2016 and post financial crisis.
- The decrease in the 2017 MDL Index is due in part to fewer mega MDL filings.
- Additionally, the rising stock market reduced market value losses over class periods for many filings.

The MDL Index dropped from a nine-year high in 2016 to below the historical average in 2017.

Figure 7: Maximum Dollar Loss Index® (MDL Index®) 2008–2017

(Dollars in Billions)



Note:
1. See Appendix 1 for the average and median values of MDL.
2. Numbers may not add due to rounding.

Classification of Complaints

- Non-core filings—those without rule 10b-5, Section 11, or Section 12(2) claims—increased from 29 percent of federal filings in 2016 to 49 percent in 2017. Non-core filings in 2017 were primarily related to proposed merger and other shareholder transactions.
- With the exception of misrepresentations in financial documents, each of the allegation categories measured has declined in frequency relative to 2013.
- Allegations of trading by company insiders, GAAP violations, and internal control weaknesses all declined by at least 7 percentage points compared to 2016.

Core filings decreased as a percentage of all filings, as non-core filings continued to grow.

Figure 8: Allegations Box Score

	Percentage of Filings[1]				
	2013	2014	2015	2016	2017
General Characteristics of All Filings					
Rule 10b-5 Claims	84%	85%	84%	67%	47%
Section 11 Claims	9%	14%	15%	9%	7%
Section 12(2) Claims	7%	6%	8%	4%	2%
No Rule 10b-5, Section 11, or Section 12(2) Claims	11%	9%	9%	29%	49%
Allegations in Core Filings[2]					
Misrepresentations in Financial Documents	99%	95%	99%	99%	100%
False Forward-Looking Statements	58%	51%	53%	45%	46%
Trading by Company Insiders	18%	16%	16%	10%	3%
GAAP Violations[3]	27%	39%	38%	30%	22%
Announced Restatement[4]	13%	19%	12%	10%	6%
Internal Control Weaknesses[5]	23%	26%	26%	21%	14%
Announced Internal Control Weaknesses[6]	9%	11%	11%	7%	7%
Underwriter Defendant	10%	12%	12%	7%	8%
Auditor Defendant	2%	1%	1%	2%	0%

Note:
1. The percentages do not add to 100 percent because complaints may include multiple allegations.
2. Core filings in this analysis represent those filings containing allegations related to Rule 10b-5, Section 11, and/or Section 12(2) claims, and therefore exclude ICO filings and a small number of other filings that do not have these allegations. Note that non-core filings may include allegations related to GAAP (e.g., that a non-GAAP metric was not reconciled to GAAP in Schedule 14A, Schedule 14D-9, or other forms issued in connection with a proposed merger or other shareholder transaction).
3. First identified complaint (FIC) includes allegations of GAAP violations. In some cases, plaintiff(s) may not have expressly referenced GAAP; however, the allegations, if true, would represent GAAP violations.
4. FIC includes allegations of GAAP violations and refers to an announcement during or subsequent to the class period that the company will restate, may restate, or has unreliable financial statements.
5. FIC includes allegations of internal control weaknesses over financial reporting.
6. FIC includes allegations of internal control weaknesses and refers to an announcement during or subsequent to the class period that the company has internal control weaknesses over financial reporting.

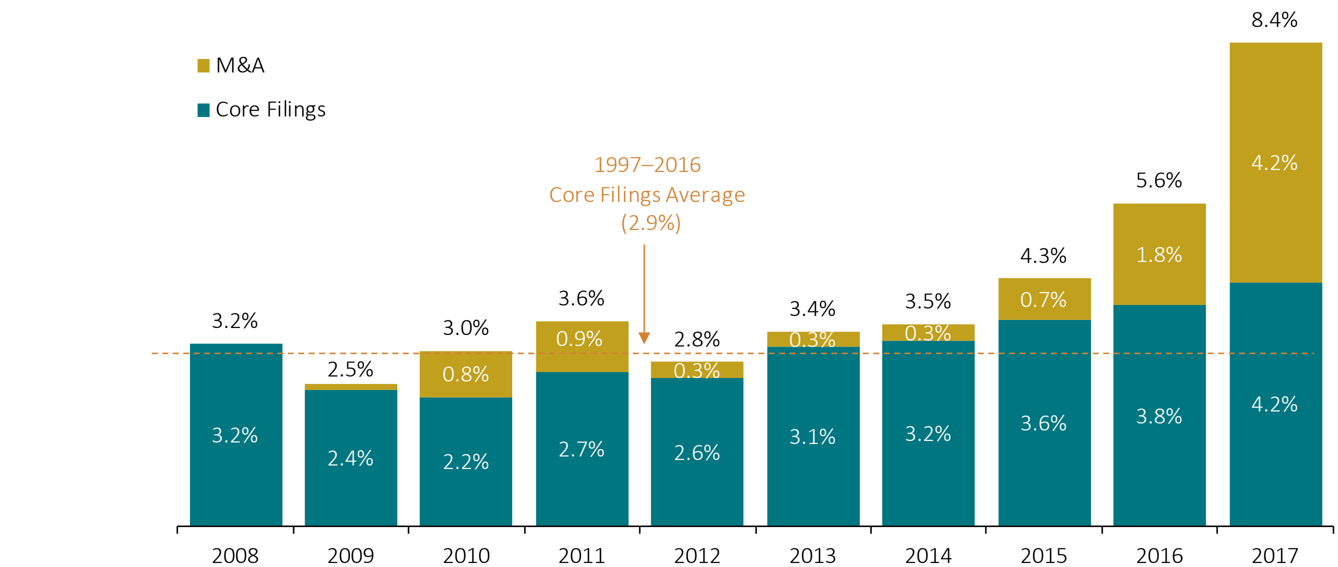
U.S. Exchange-Listed Companies

The percentages in the figure below are calculated as the unique number of companies listed on the NYSE or NASDAQ that were subject to federal securities fraud class actions in a given year divided by the unique number of companies listed on the NYSE or NASDAQ.

- The litigation likelihood of U.S. exchange-listed companies to core filings increased for a fifth consecutive year, from 2.6 percent in 2012 to 4.2 percent in 2017.
- Approximately one in 25 companies listed on U.S. exchanges was the subject of a core filing in 2017. See Appendix 1 for litigation likelihood over a longer time frame.
- Including M&A filings, 8.4 percent of U.S. exchange-listed companies were subject to filings in 2017.

The likelihood of securities litigation against U.S. exchange-listed companies was greater in 2017 than in any previous year.

Figure 9: Percentage of U.S. Exchange-Listed Companies Subject to Filings 2008–2017



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Number of Firms	5,339	5,042	4,764	4,660	4,529	4,411	4,416	4,578	4,593	4,411
Percent Change	(2.34%)	(5.56%)	(5.51%)	(2.18%)	(2.81%)	(2.61%)	0.11%	3.67%	0.33%	(3.96%)

Legend	<(5%)	(5%)–0%	>0%

Source: Securities Class Action Clearinghouse; Center for Research in Security Prices (CRSP)

Note:

1. Percentages are calculated by dividing the count of issuers listed on the NYSE or NASDAQ subject to filings by the number of companies listed on the NYSE or NASDAQ as of the beginning of the year.
2. Listed companies were identified by taking the count of listed securities at the beginning of each year and accounting for cross-listed companies or companies with more than one security traded on a given exchange. Securities were counted if they were classified as common stock or American Depository Receipts (ADRs) and listed on the NYSE or NASDAQ.
3. Percentages may not sum due to rounding.

Heat Maps: S&P 500 Securities Litigation™

The Heat Maps illustrate securities class action activity by industry sector for companies in the S&P 500 index. Starting with the composition of the S&P 500 at the beginning of each year, the Heat Maps examine two questions for each sector:

(1) What percentage of these companies were subject to new securities class actions in federal court during each calendar year?

(2) What percentage of the total market capitalization of these companies was subject to new securities class actions in federal courts during each calendar year?

The Industrials sector was more active in 2017 than in the previous 16 years.

- Of the companies in the S&P 500 at the beginning of 2017, one in about 15 companies (6.4 percent) was a defendant in a class action filed during the year. While this was a slight decline from 2016, it is still above the 2001–2016 average.
- The percentage of filings in the Consumer Discretionary sector (8.5 percent) was almost double the 2001–2016 average.
- Activity in the Industrials sector picked up, with 8.7 percent subject to new filings—nearly triple the 2001–2016 average.

Figure 10: Heat Maps of S&P 500 Securities Litigation™ Percentage of Companies Subject to New Core Filings

	Average 2001–2016	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Consumer Discretionary	4.8%	4.5%	3.8%	5.1%	3.8%	4.9%	8.4%	1.2%	0.0%	3.6%	8.5%
Consumer Staples	2.9%	2.6%	4.9%	0.0%	2.4%	2.4%	0.0%	0.0%	5.0%	2.6%	2.7%
Energy/Materials	1.4%	0.0%	1.5%	4.3%	0.0%	2.7%	0.0%	1.3%	0.0%	4.5%	3.3%
Financials/Real Estate	8.4%	31.2%	10.7%	10.3%	1.2%	3.7%	0.0%	1.2%	1.2%	6.9%	3.3%
Health Care	8.3%	13.7%	3.7%	13.5%	2.0%	1.9%	5.7%	0.0%	1.9%	17.9%	8.3%
Industrials	3.1%	3.6%	6.9%	0.0%	1.7%	1.6%	0.0%	4.7%	0.0%	6.1%	8.7%
Telecommunications/ Information Tech	5.9%	2.5%	1.2%	2.4%	7.1%	3.8%	9.1%	0.0%	4.2%	6.8%	8.5%
Utilities	5.1%	3.2%	0.0%	0.0%	2.9%	0.0%	0.0%	0.0%	3.4%	3.4%	7.1%
All S&P 500 Companies	5.2%	9.2%	4.4%	4.8%	2.8%	3.0%	3.4%	1.2%	1.6%	6.6%	6.4%

Legend	0%	0–5%	5–15%	15–25%	25%+

Note:
1. The chart is based on the composition of the S&P 500 as of the last trading day of the previous year.
2. Sectors are based on the Global Industry Classification Standard (GICS).
3. Percentage of Companies Subject to New Filings equals the number of companies subject to new securities class action filings in federal courts in each sector divided by the total number of companies in that sector. See Appendix 2A for additional detail.
4. In August 2016, GICS added a new industry sector, Real Estate. This analysis begins using the Real Estate industry sector in 2017.

- The total market capitalization of S&P 500 companies subject to filings fell from 10.0 percent in 2016 to 6.1 percent in 2017.
- Larger S&P 500 companies have historically been more likely targets of class actions. However, 2017 appears to defy this pattern. The percentage of S&P 500 companies subject to filings (6.4 percent) was greater than their share of the S&P 500 market capitalization (6.1 percent).

Class actions against Industrial companies encompassed nearly a quarter of the market capitalization of the sector, its largest percentage since 2009.

Figure 11: Heat Maps of S&P 500 Securities Litigation™ Percentage of Market Capitalization Subject to New Core Filings

	Average 2001–2016	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Consumer Discretionary	4.9%	7.2%	1.9%	4.9%	4.6%	1.6%	4.4%	2.5%	0.0%	2.8%	8.2%
Consumer Staples	2.7%	2.6%	3.9%	0.0%	0.8%	14.0%	0.0%	0.0%	1.9%	1.0%	6.7%
Energy/Materials	3.1%	0.0%	0.8%	5.2%	0.0%	0.9%	0.0%	0.2%	0.0%	19.8%	2.3%
Financials/Real Estate	16.9%	55.0%	31.2%	31.1%	6.9%	11.0%	0.0%	0.3%	3.0%	11.9%	1.5%
Health Care	12.3%	20.0%	1.7%	32.7%	0.7%	0.8%	4.4%	0.0%	3.1%	13.2%	2.7%
Industrials	5.8%	26.4%	23.2%	0.0%	2.1%	1.2%	0.0%	1.7%	0.0%	8.7%	22.3%
Telecommunications/ Information Tech	8.6%	1.4%	0.3%	5.9%	13.4%	2.2%	16.6%	0.0%	7.0%	12.3%	4.4%
Utilities	5.6%	4.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	3.7%	4.4%	9.6%
All S&P 500 Companies	8.4%	16.2%	7.7%	11.1%	5.0%	4.3%	4.7%	0.6%	2.8%	10.0%	6.1%

Legend	0%	0–5%	5–15%	15–25%	25%+

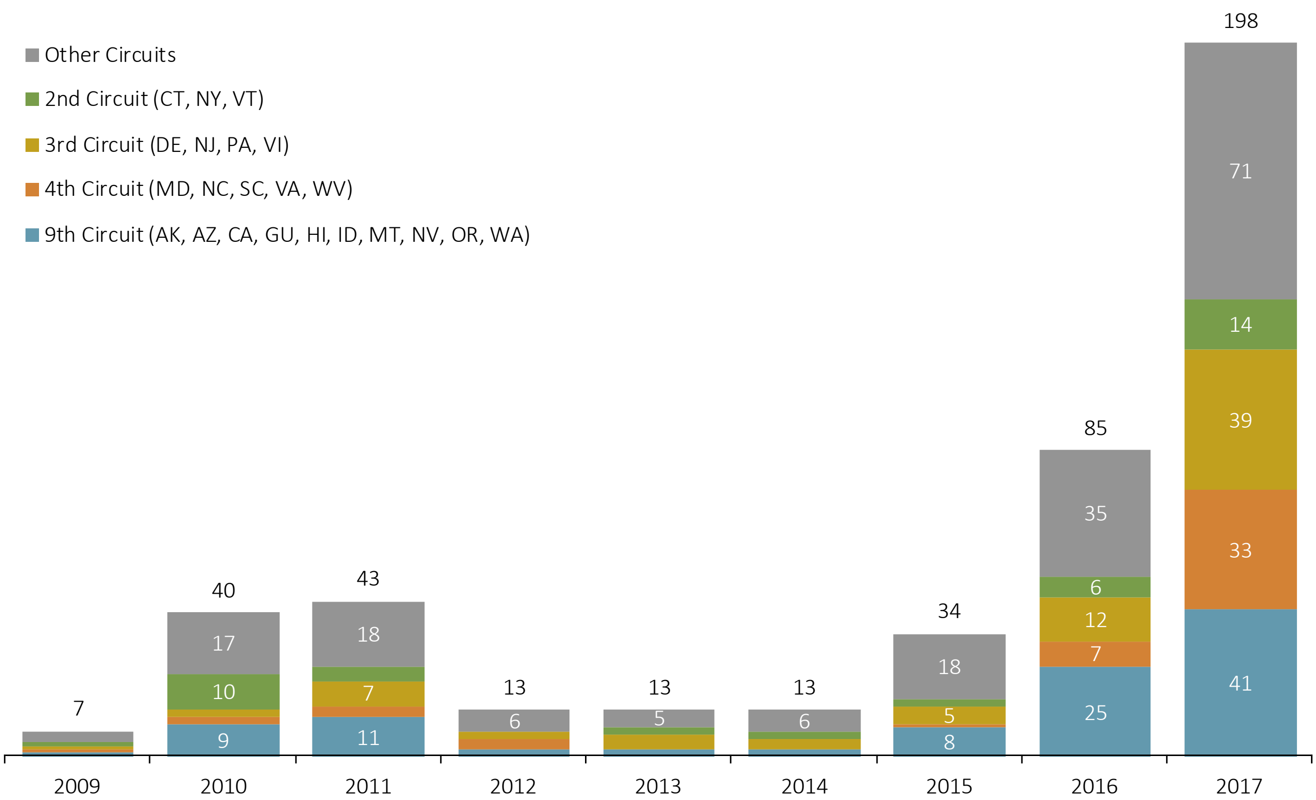
Note:
1. The chart is based on the composition of the S&P 500 as of the last trading day of the previous year.
2. Sectors are based on the Global Industry Classification Standard (GICS).
3. Percentage of Market Capitalization Subject to New Filings equals the market capitalization of companies subject to new securities class action filings in federal courts in each sector divided by the total market capitalization of companies in that sector. See Appendix 2B for additional detail.
4. In August 2016, GICS added a new industry sector, Real Estate. This analysis begins using the Real Estate industry sector in 2017.

M&A Filings by Circuit

- The number of M&A filings in each of the Second, Third, Fourth, and Ninth Circuits was the highest since this report began identifying them separately in 2009. They accounted for 64 percent of M&A filings in 2017.
- The number of M&A filings in the Third Circuit increased over threefold, from 12 in 2016 to 39 in 2017.
- The Fourth Circuit exhibited the highest year-over-year growth with 33 filings in 2017, more than a fourfold increase from 2016. Over 60 percent of these filings came from the financial sector, with banks and REITS accounting for half of the Fourth Circuit's filings in 2017.
- In January 2016, the Delaware Court of Chancery rejected a disclosure-only settlement in Zillow's acquisition of Trulia.[1] This appears to have resulted in some venue shifting for merger objection lawsuits from state to federal courts.

M&A filings in the Third and Fourth Circuits ballooned.

Figure 12: Annual M&A Filings by Circuit
2009–2017



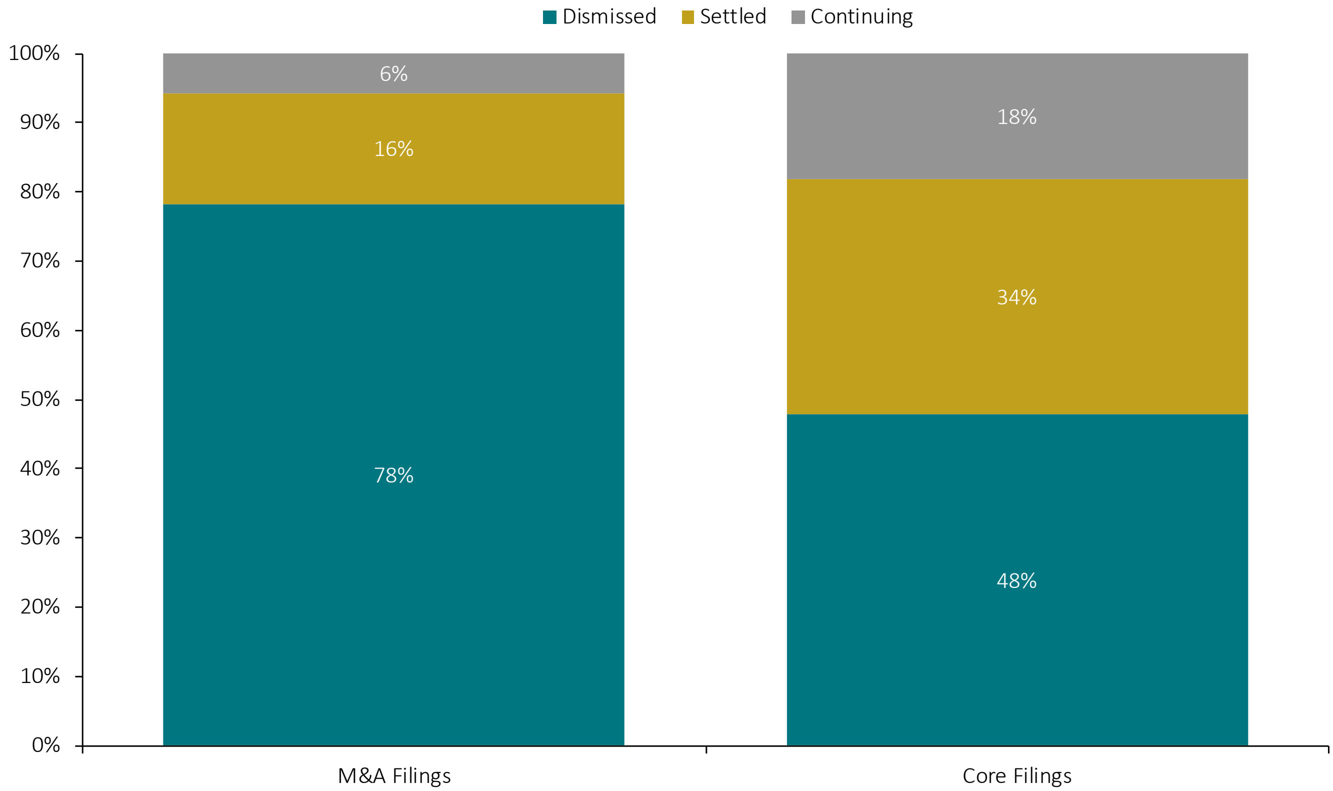
Note:
1. See http://courts.delaware.gov/opinions/download.aspx?ID=235370.
2. The Securities Class Action Clearinghouse began tracking M&A filings as a separate category in 2009.

Status of M&A Filings

- There were 248 M&A filings between 2009 and 2016, compared to 1,241 core filings. See Figure 4.
- M&A filings were dismissed at higher rates and resolved more quickly than core filings.
- M&A filings exhibited dismissal rates 30 percentage points greater than core filings.

M&A filings were dismissed at a much higher rate than core filings initiated between 2009 and 2016.

Figure 13: Status of M&A Filings Compared to Core Federal Filings
2009–2016



Note:
1. The Securities Class Action Clearinghouse began tracking M&A filings as a separate category in 2009.
2. The 2017 filing cohort is excluded since a large percentage of cases are ongoing.
3. See Appendix 3 for an annual history of the status of M&A filings.

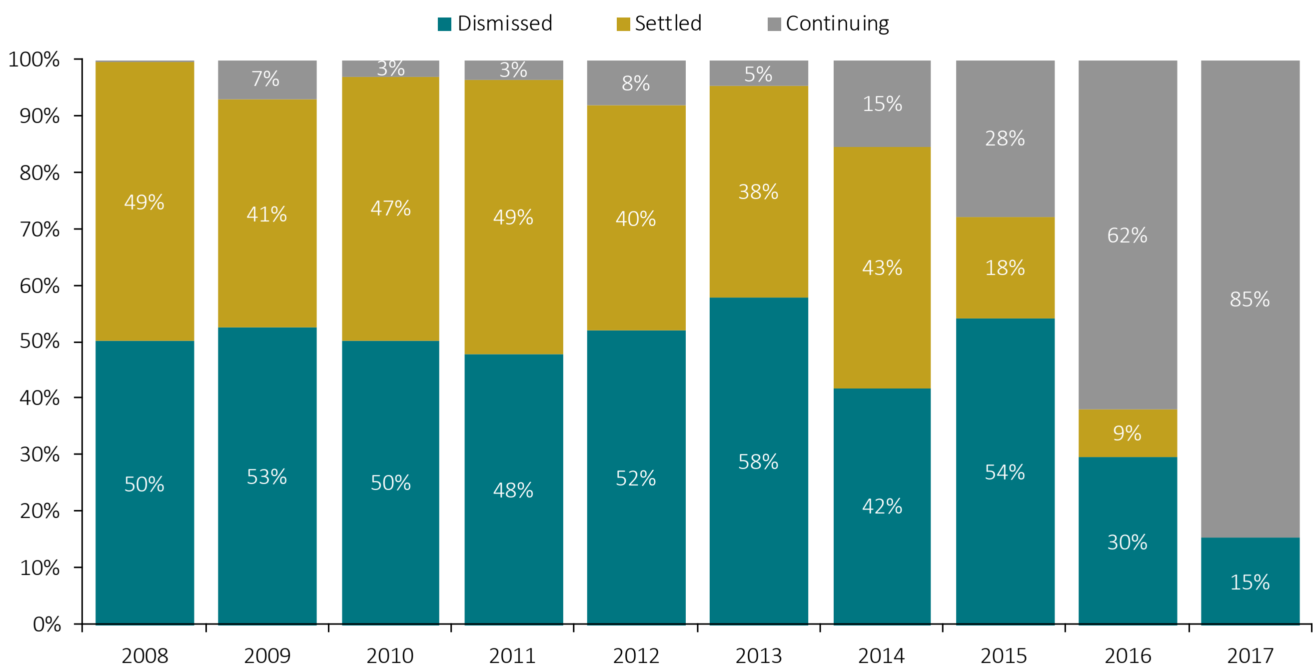
Status of Securities Class Action Filings

This report examines whether filing outcomes have changed over time and compares the outcomes of filing cohort groups. As each cohort ages, a larger percentage of filings are resolved—whether through dismissal, settlement, or trial verdict outcome.

- From 1997 to 2016, 50 percent of filings settled, 43 percent were dismissed, and 6 percent are continuing. Overall, less than 1 percent of filings have reached a trial verdict.
- Filings from the 2014 cohort had a higher settlement rate and lower dismissal rate than either the 2013 or 2015 filing cohort groups.

Dismissal rates for 2015 and 2016 are tracking more closely with the peak rate in 2013.

Figure 14: Status of Filings by Year—Core Filings
2008–2017



Note: Percentages may not add to 100 percent due to rounding.

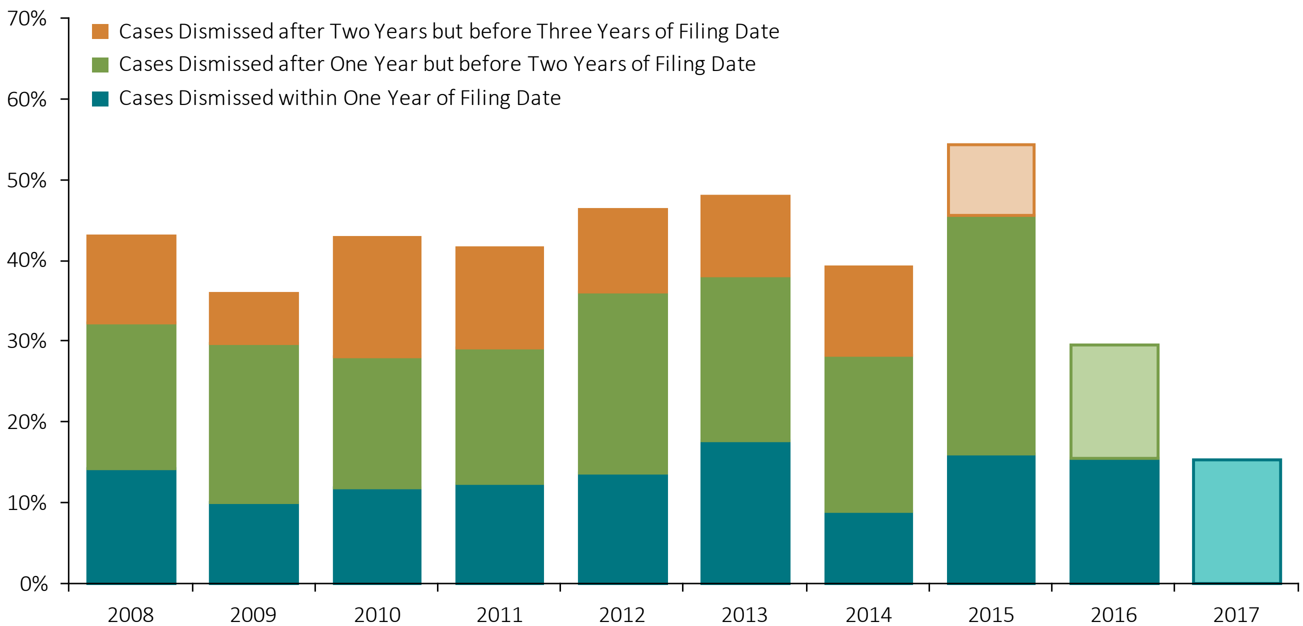
Timing of Dismissals

Given the length of time that may exist between the filing of a class action and its outcome, it may not be possible to immediately determine whether trends in dismissal rates observed in earlier annual cohort years will persist in later annual cohorts. This analysis looks at dismissal trends within the first several years of the filing of a class action to gain insight on recent dismissal rates.

Early dismissal rates for filings in cohort years 2016 and 2017 are comparable to the record high dismissal rate of the 2015 filing cohort.

- While the percentage of cases dismissed within three years of filing had generally increased for filing cohorts prior to 2013, it decreased for 2014 cohort filings before increasing again for 2015 cohort filings.
- The early dismissal rates of the 2016 filing cohort suggest that dismissals may continue at an elevated rate.
- Early indications of the 2017 cohort put it on par with or in excess of the highest dismissal rates on record.

Figure 15: Percentage of Cases Dismissed within Three Years of Filing Date—Core Filings
2008–2017



Note:
1. Percentage of cases in each category is calculated as the number of cases that were dismissed within one, two, or three years of the filing date divided by the total number of cases filed each year.
2. The outlined portions of the stacked bars for years 2015 through 2017 indicate the percentage of cases dismissed through the end of 2017. The outlined portions of these stacked bars therefore present only partial-year observed resolution activity, whereas their counterparts in earlier years show an entire year.
3. Appendix 4 shows dismissals over a longer time frame.

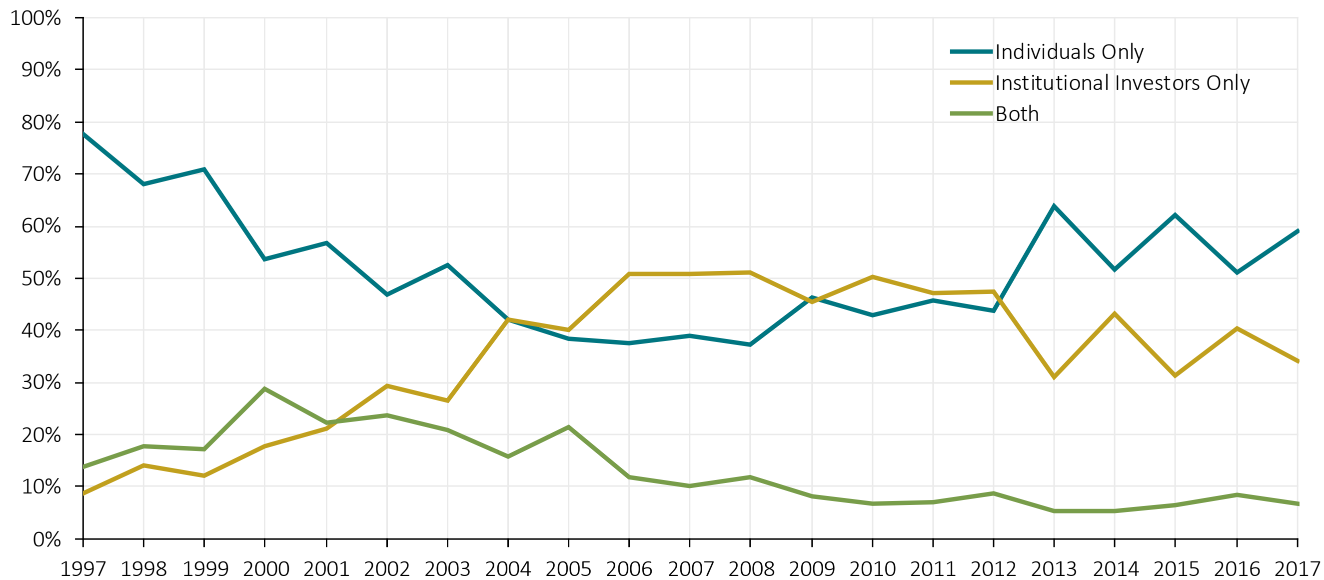
Updated Analysis: Filings by Lead Plaintiff

This analysis examines how frequently individual or institutional investors were appointed as lead plaintiff in core filings.

Annually for the last five years, individuals have been appointed as the lead plaintiff in more than half of core filings.

- From 1997 to 2003, while individuals were appointed as lead plaintiff more often than institutional investors in core filings, the difference narrowed.
- From 2004 to 2012, institutional investors were as or more likely to be appointed lead plaintiff than were individuals.
- Starting in 2013, individuals were appointed as lead plaintiff more often than institutional investors. This suggests a shift in litigation strategies by some plaintiff law firms.

Figure 16: Percentage of Federal Class Action Filings by Lead Plaintiff—Core Filings
1997–2017



Note:
1. Multiple plaintiffs can be designated as co-leads on a single case. This table separates percentages for which a case had only individuals as the lead/co-leads, institutional investors or investor groups as the lead/co-leads, or both individuals and institutional investors.
2. Cases may not have lead plaintiff data due to dismissal or settlement before a lead plaintiff is appointed or because the cases have not yet reached the stage when a lead plaintiff can be identified.
3. Lead plaintiff data are available for over 99 percent of core filings for each year from 1997 to 2016. Lead plaintiff data are available for 55 percent of 2017 core filings.

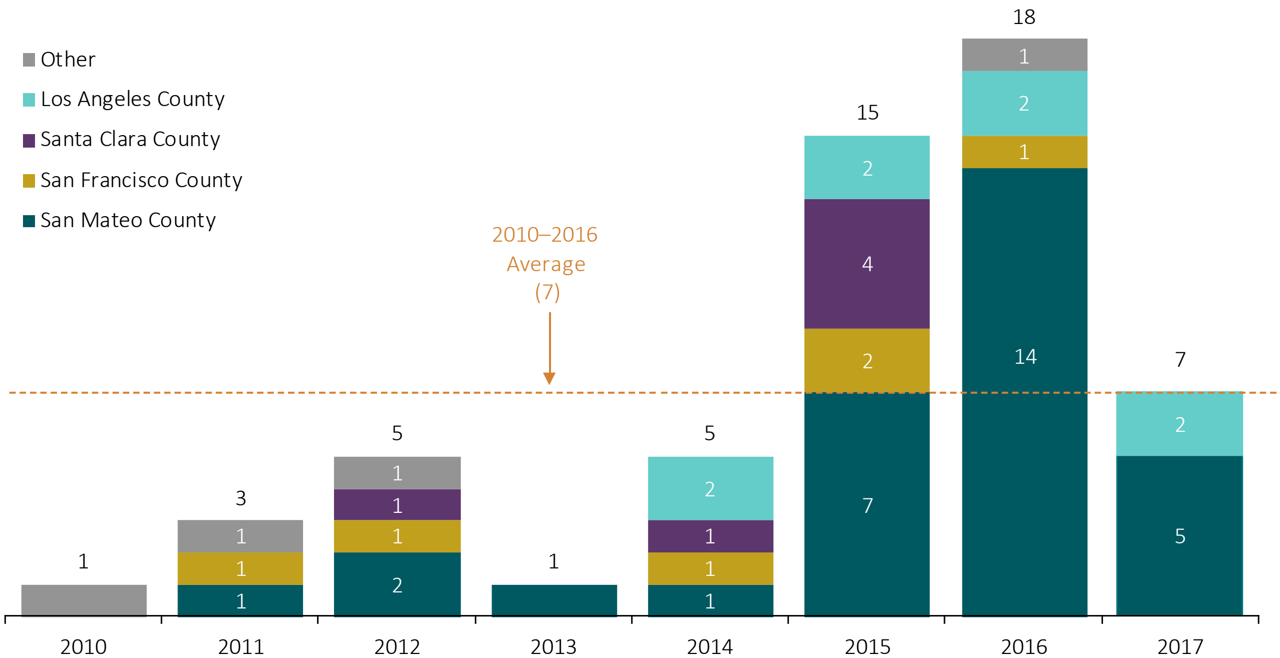
Updated Analysis: Section 11 Cases Filed in California State Courts

After an increasing number of Section 11 claims were filed in California state courts in the previous two years, this trend reversed in 2017. This coincided with the U.S. Supreme Court's decision to hear *Cyan Inc. v. Beaver County Employees Retirement Fund*. This case will decide the use of state venues for adjudicating class actions with Section 11 claims.

- Seven class actions were filed in California state courts alleging violations of Section 11. The filings may also include Section 12 and Section 15 claims, but do not include Rule 10b-5 violations.
- As in recent years, San Mateo County remained the most prevalent filing location.
- Los Angeles County had two filings in 2017.

In 2017, California state Section 11 filings decreased to numbers more similar to pre-2015 levels.

Figure 17: California State Section 11 Filings by County 2010–2017



Note: Other contains filings from Alameda, Kern, Orange, and San Diego Counties. California state Section 11 filings have only been identified as early as 2010. See Appendix 5 for more detail.

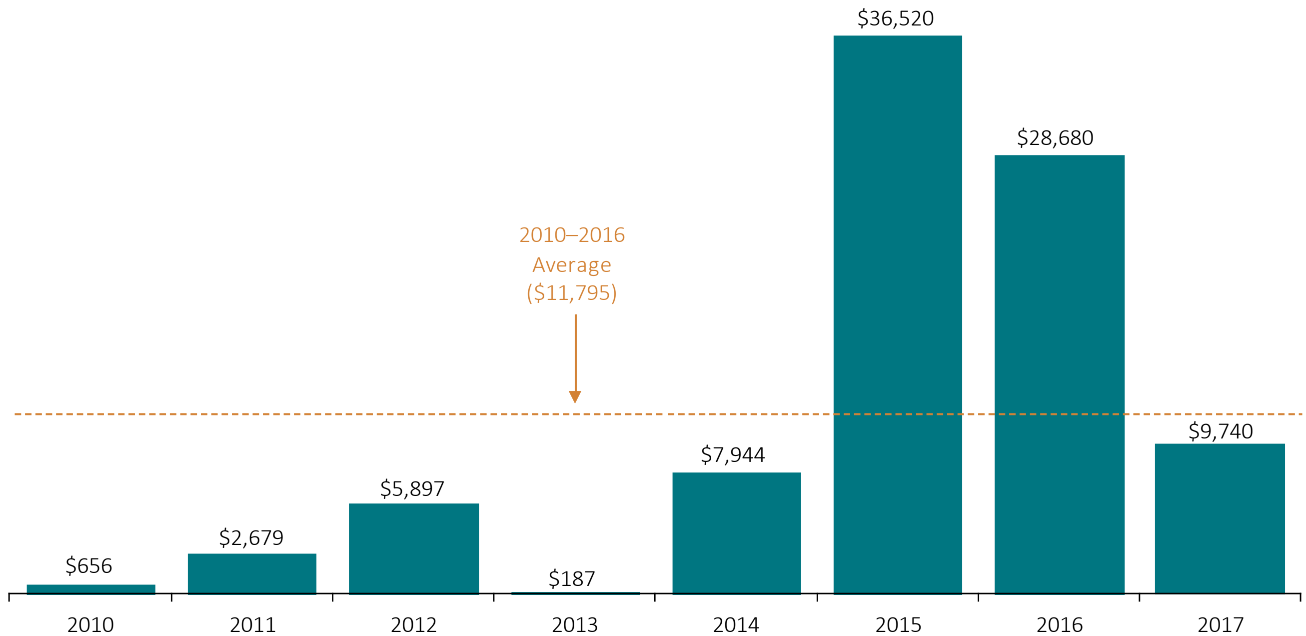
Updated Analysis: Section 11 Cases Filed in California State Courts—Size of Filings

- In 2017, the MDL for California state Section 11 filings dropped below the 2010–2016 average.
- The MDL declined from $28.7 billion in 2016 to $9.7 billion in 2017.

The decrease in MDL for California state Section 11 filings tracked the decline in the number of filings.

Figure 18: Maximum Dollar Loss (MDL) of California State Section 11 Filings 2010–2017

(Dollars in Millions)



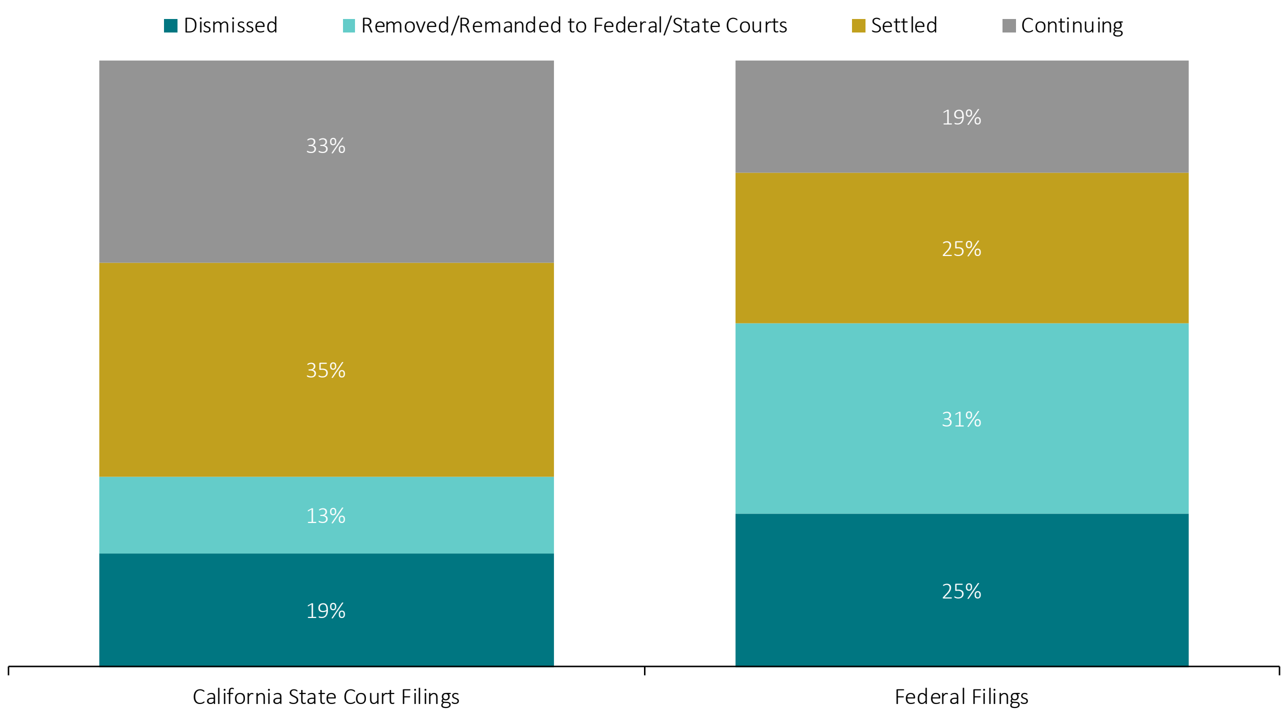
Updated Analysis: Section 11 Cases Filed in California State Courts—Case Status

This analysis examines the outcomes of California state Section 11 filings to comparable federal filings. Because there were few California state Section 11 filings before 2015, the analysis weights the outcomes for the comparable federal filings by the number of California state Section 11 filings in each year to create a comparable benchmark.

A smaller portion of Section 11–only cases were dismissed in California state courts compared to federal courts.

- A higher percentage of California state Section 11 filings are continuing compared to Section 11–only federal filings.
- Only 19 percent of California state Section 11 filings were dismissed in 2010–2016 compared to 25 percent of Section 11–only federal filings.

Figure 19: Resolution of California State Section 11 Filings Compared with Section 11–Only Federal Filings
2010–2016



Note:
1. See Appendix 5 for more detail.
2. The 2017 filing cohort is excluded since a large percentage of cases are ongoing.
3. If a matter is remanded from federal court to California state court, it is recorded as remanded in the column on federal filing resolutions and also recorded in the California state court column based on its state court disposition. Alternatively, if a matter is removed from California state court to federal court, it is recorded as removed in the column on California state court filing resolutions and also recorded in the federal filings column based on its federal court disposition.

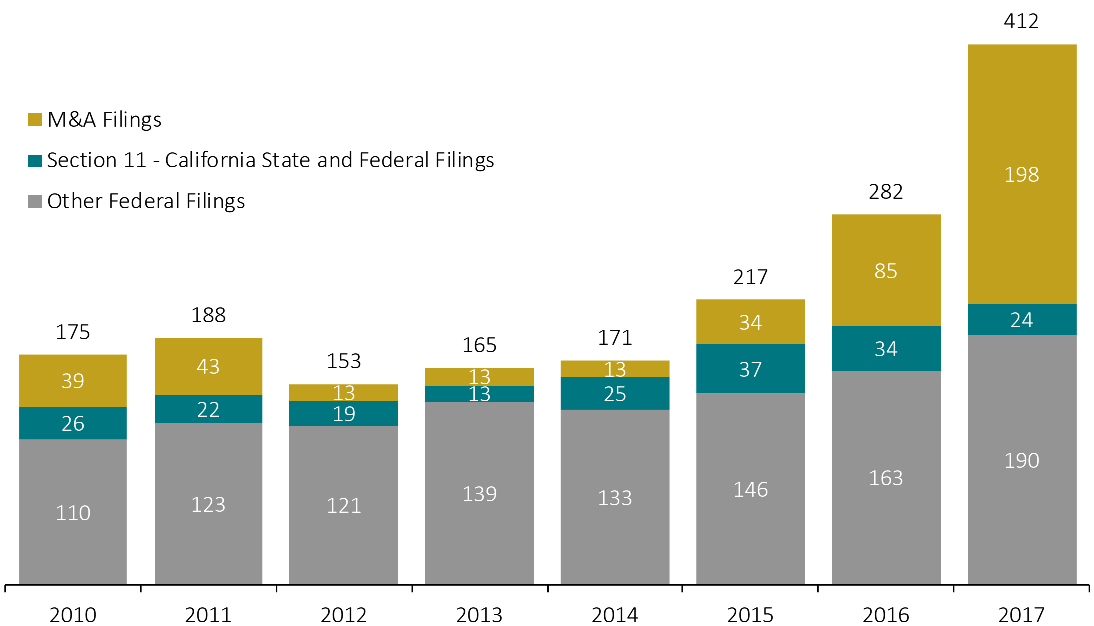
Updated Analysis: Combined Federal and California State Section 11 Filings

This chart is a combined measure of class action filing activity in federal and California state courts. It highlights Section 11 claims and the extent to which parallel actions were filed.

Combined federal and California state Section 11 filings decreased for the second consecutive year.

- In 2017, the combined number of federal filings and California state Section 11 filings was 24, because all seven California state Section 11 filings had a parallel federal filing.
- Overall, Section 11 filings in 2017 declined by nearly one-third compared to 2016.
- Section 11 filings in federal courts stayed constant but declined 59 percent in California state courts.

Figure 20: Federal and California State Class Action Filings with Section 11 Allegations by Venue
2010–2017



	Section 11 California State and Federal Filings							
	2010	2011	2012	2013	2014	2015	2016	2017
Federal Courts Only	25	20	14	12	20	21	17	17
State Courts Only	0	1	2	0	3	10	11	0
Parallel Filings	1	1	3	1	2	6	6	7
Total	**26**	**22**	**19**	**13**	**25**	**37**	**34**	**24**

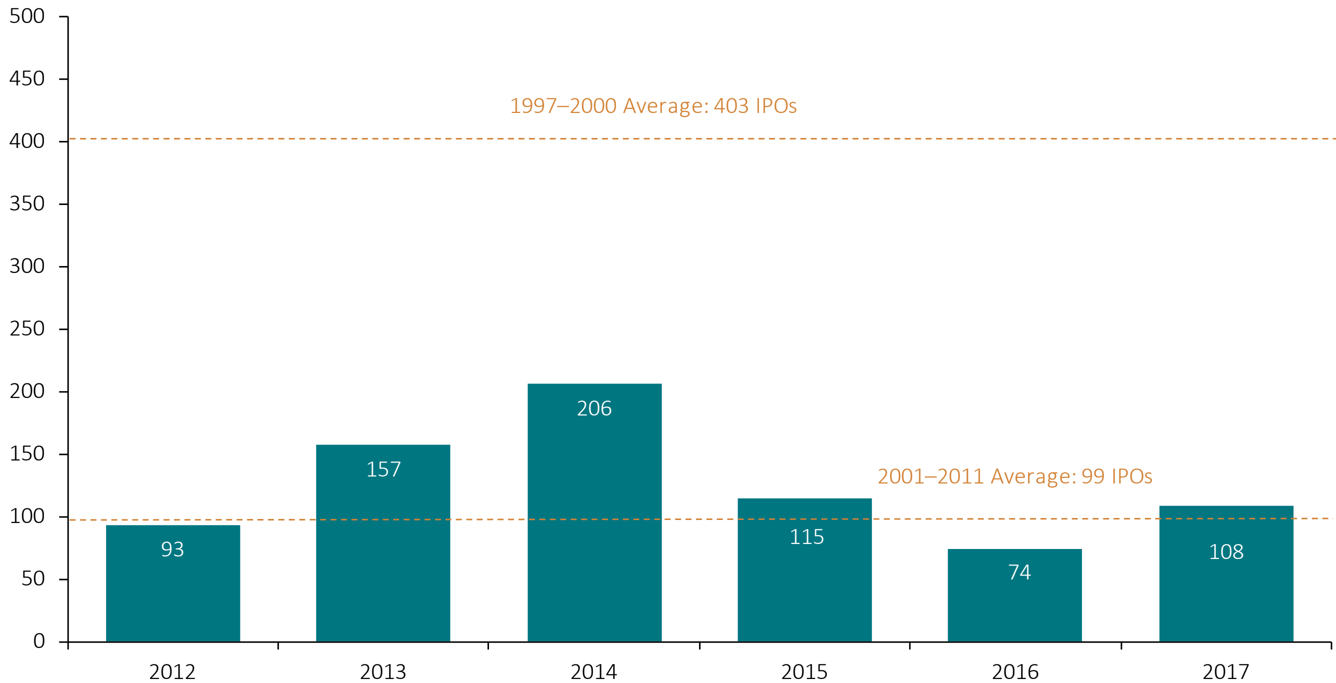
Note: Section 11 filings in federal courts may include parallel cases filed in California state courts. When parallel cases are filed in different years, the earlier filing is counted. For this reason, counts may not reconcile with other figures showing annual counts of California state Section 11 filings. Additionally, the parallel filings in federal court may include allegations involving Rule 10b-5 in addition to Section 11 claims, whereas the California state filings will not have Rule 10b-5 allegations.

Updated Analysis: IPO Activity

- IPO activity increased 46 percent from 2016 to 2017.
- With 108 IPOs, 2017 was in line with the 2001–2011 average of 99 IPOs but remained well below the 1997–2000 average of 403 IPOs per year.
- As discussed in the Cornerstone Research *Securities Class Action Filings—2015 Year in Review*, newer public companies are subject to securities class actions more frequently than their larger, more established counterparts in the S&P 500 index.

IPO activity rebounded from 2016 levels, but remained below levels from 2013 to 2015.

Figure 21: Number of IPOs on Major U.S. Exchanges
2012–2017



Source: Jay R. Ritter, "Initial Public Offerings: Updated Statistics" (University of Florida, January 2, 2018)

Note: These data exclude the following IPOs: those with an offer price of less than $5, American Depository Receipts (ADRs), unit offers, closed-end funds, real estate investment trusts (REITs), natural resource limited partnerships, small best efforts offers, banks and S&Ls, and stocks not listed in the Center for Research in Security Prices (CRSP) database.

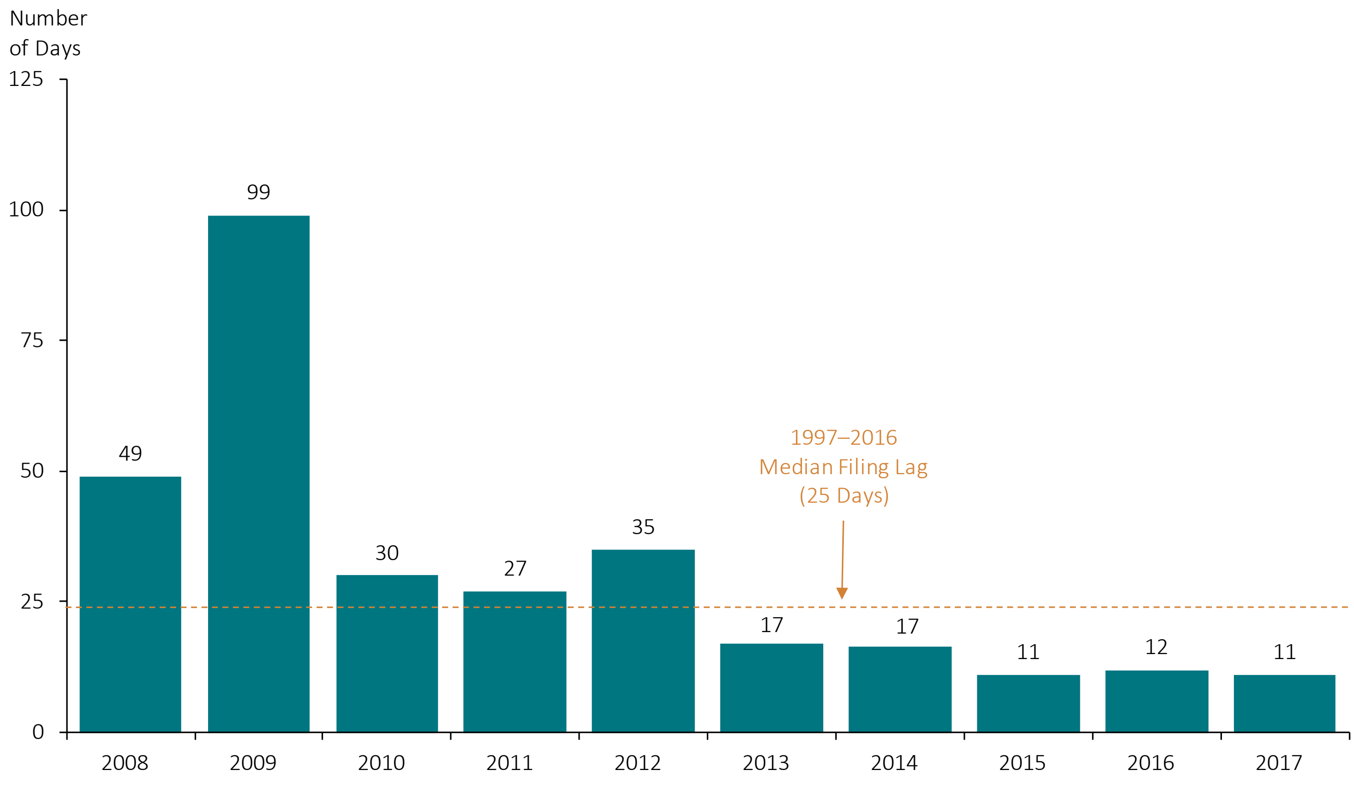
Filing Lag

This analysis reviews the number of days between the end of the class period and the filing date of the securities class action.

- The median filing lag in 2017 excluding M&A and Section 11–only cases was 11 days, tied for the shortest median filing lag for this subset of filings.
- However, about 15 percent of all class actions were filed more than 180 days after the end of the alleged class period in 2017—the highest percentage since 2013.

The median filing lag has been generally decreasing since 2012.

Figure 22: Annual Median Lag between Class Period End Date and Filing Date—Core Filings 2008–2017



Note: This analysis also excludes filings with only Section 11 claims because there is often no specified end of the class period.

Non-U.S. Filings

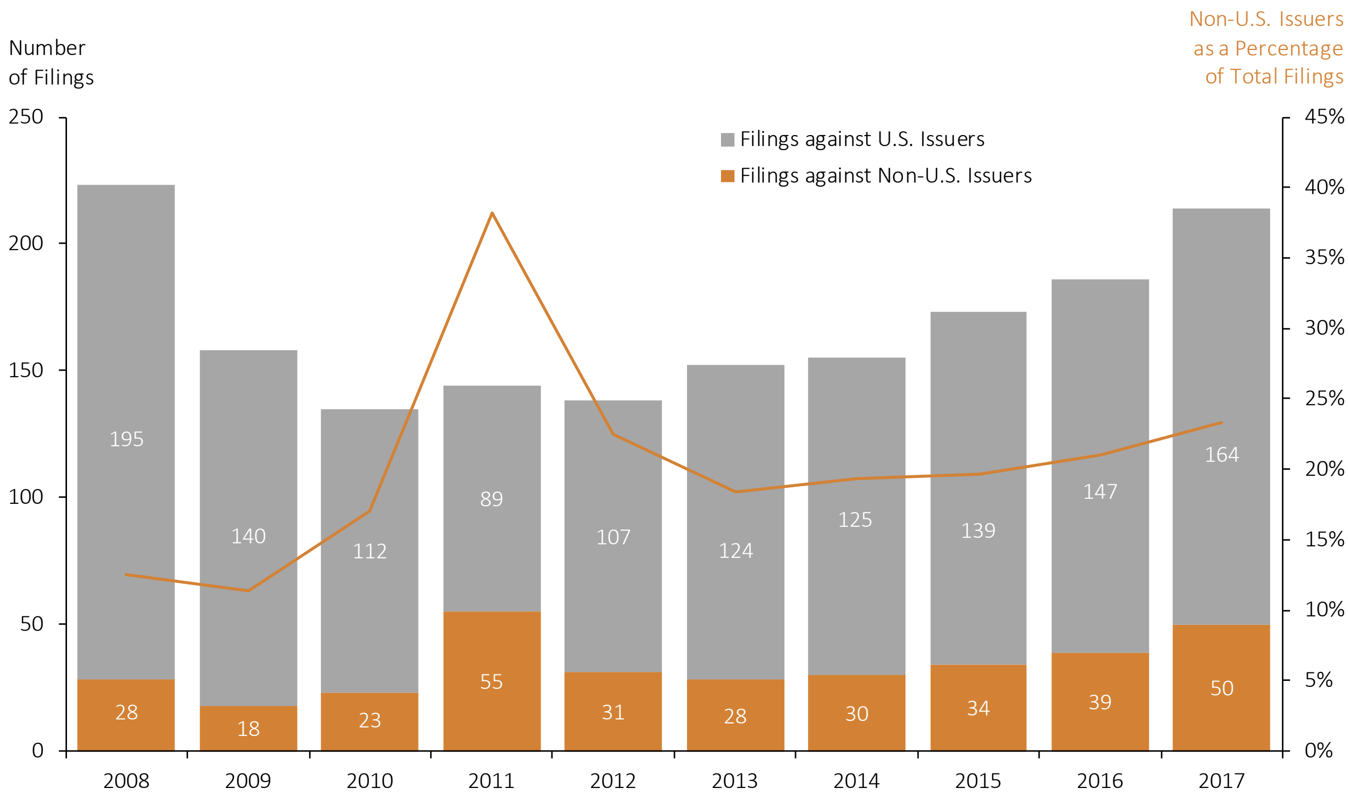
Class Action Filings Non-U.S. Index

This index tracks the number of filings against companies headquartered outside the United States relative to total core filings.

- The number of filings against non-U.S. issuers increased to 50 in 2017, well above the 1997–2016 average of 23 filings.
- As a percentage of total filings, filings against non-U.S. issuers increased to the highest rate since 2011.
- Filings against Chinese companies increased from 2 percent of all core filings in 2016 to 5 percent in 2017. This is still less than the 8 percent observed in 2015, when companies headquartered in China were the most common targets of non-U.S. filings.

Filings against non-U.S. companies increased for the fourth consecutive year.

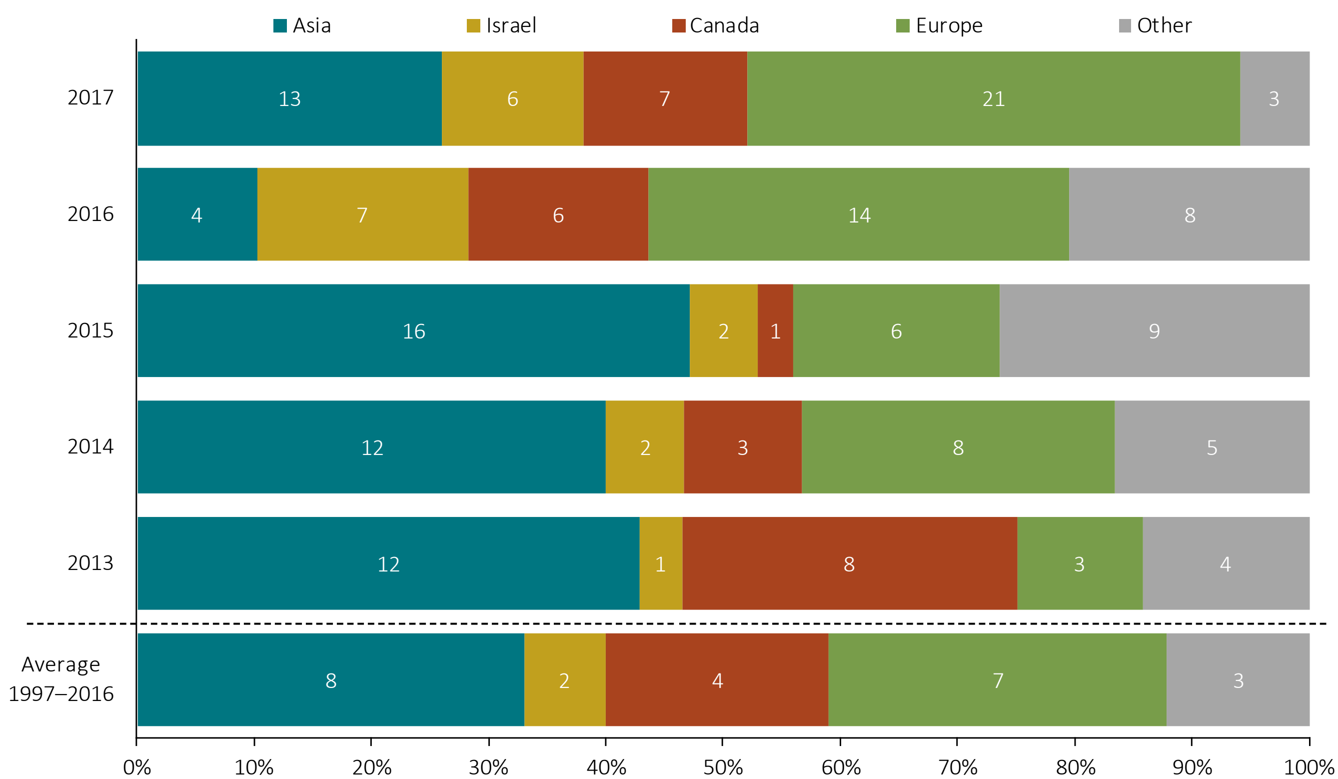
Figure 23: Annual Number of Class Action Filings by Location of Headquarters—Core Filings
2008–2017



- The number of filings against European companies was triple the 1997–2016 average and increased 50 percent from 2016. This marks the largest number of European filings on record.
- Filings against companies headquartered in the United Kingdom and Greece were the highest on record, with five and three filings, respectively. Ireland had five filings, the same as in 2016.
- All filings against companies headquartered in Greece involved transportation firms. All filings against companies headquartered in Ireland involved biotechnology or pharmaceutical firms.
- Filings against Chinese companies increased from four in 2016 to 11 in 2017, still fewer than the 14 seen in 2015.
- Companies headquartered in Israel were subject to six class actions, a small decrease from last year's high of seven.

Filings against European companies were more common than filings against Chinese companies for the second consecutive year.

Figure 24: Non-U.S. Filings by Location of Headquarters—Core Filings



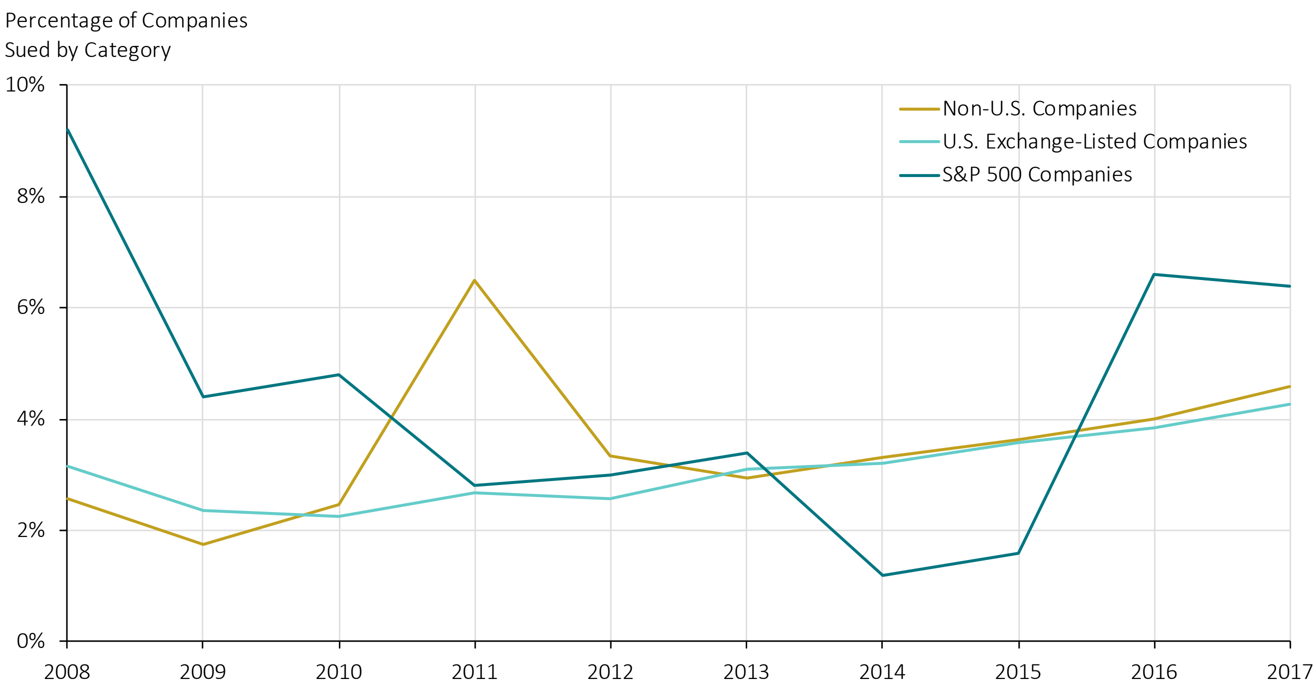
Updated Analysis: Non-U.S. Company Litigation Likelihood

This analysis examines the incidence of non-U.S. filings relative to the likelihood of S&P 500 companies or U.S. exchange-listed companies being the subject of a class action.

Filings against non-U.S. companies exceeded the overall rate against all U.S. exchange-listed companies.

- The percentage of non-U.S. companies sued relative to the total number of non-U.S. companies listed on U.S. exchanges increased from 4.0 percent in 2016 to 4.6 percent in 2017. These data indicate that plaintiffs are increasingly likely to target non-U.S. companies.
- The likelihood of S&P 500 companies being sued decreased in 2017. Non-U.S. companies were less likely to be sued than S&P 500 companies

Figure 25: Percentage of Companies Sued by Listing Category or Domicile—Core Filings 2008–2017



Source: Center for Research in Security Prices (CRSP); Yahoo Finance

Note:

1. Non-U.S. companies are defined as companies with headquarters outside the United States, Puerto Rico, and Virgin Islands. Companies were counted if they issue common stock or ADRs and are listed on the NYSE or NASDAQ.
2. Percentage of companies sued is calculated as the number of filings against unique companies in each category divided by the total number of companies in each category in a given year.

Mega Filings

Mega DDL filings have a disclosure dollar loss (DDL) of at least $5 billion. Mega MDL filings have a maximum dollar loss (MDL) of at least $10 billion. MDL and DDL are only measured for core filings.

- Seven mega DDL filings accounted for $47 billion of DDL in 2017.
- Mega DDL in 2017 accounted for only 36 percent of total DDL, well below the 1997–2016 average of 53 percent.
- There were 14 mega MDL filings in 2017 with a total MDL of $253 billion, a marked decrease from 2016. This is despite the fact that the number of filings with calculated MDL increased by 12 percent from 2016.
- Mega MDL, as a percentage of total MDL, decreased by 17 percentage points from 2016 and remained significantly below the 1997–2016 average of 71 percent.

Mega MDL activity decreased significantly both in terms of the number of filings and dollar amounts.

Figure 26: Mega Filings

(Dollars in Billions)

	Average 1997–2016	2015	2016	2017
Mega Disclosure Dollar Loss (DDL) Filings[1]				
Mega DDL Filings	5	6	5	7
DDL	$64	$68	$33	$47
Percentage of Total DDL	53%	58%	31%	36%
Mega Maximum Dollar Loss (MDL) Filings[2]				
Mega MDL Filings	13	9	21	14
MDL	$428	$223	$533	$253
Percentage of Total MDL	71%	58%	66%	49%

Note:
1. Mega DDL filings have a disclosure dollar loss of at least $5 billion.
2. Mega MDL filings have a maximum dollar loss of at least $10 billion.

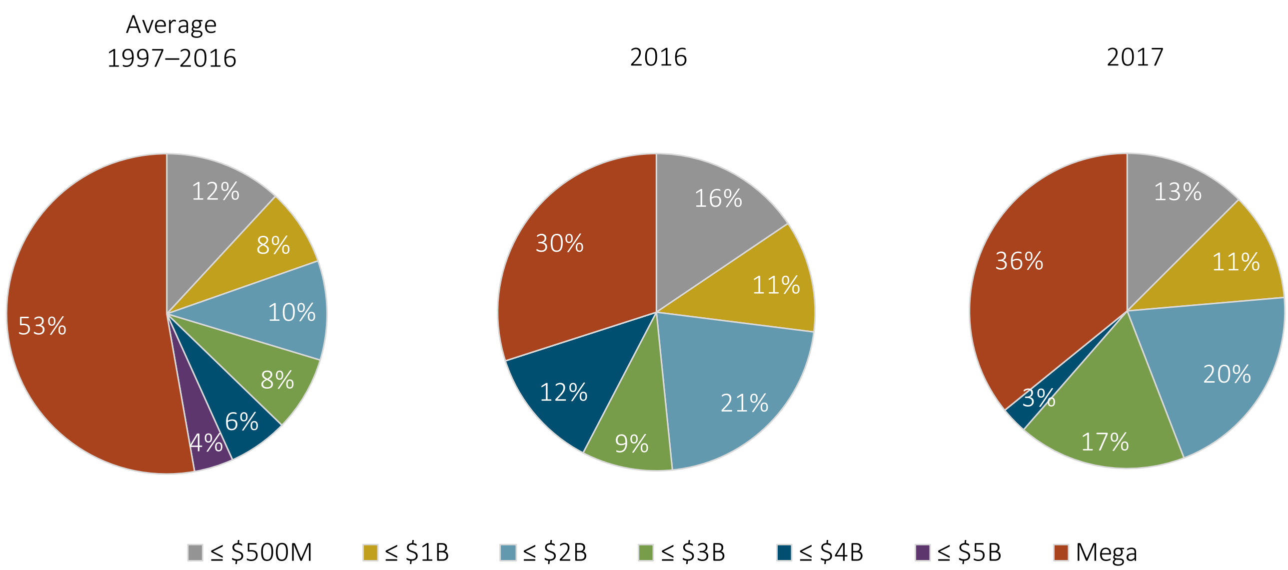
Distribution of DDL Values

These charts compare the distribution of DDL attributable to filings of a given size in 2017 with the historical distribution of DDL.

- Mega DDL accounted for 4 percent of the total number of filings and 36 percent of DDL in 2017.
- Historically, mega DDL filings have accounted for 4 percent of total filings and 53 percent of total DDL. The percentage of mega DDL accounting for total DDL in 2017 was below the 1997–2016 average.
- The portion of DDL attributable to midsized filings (DDL greater than $500 million but less than or equal to $5 billion) decreased slightly from 2016, but was still higher than the 1997–2016 average. This suggests a change of focus by some plaintiff law firms in recent years.

DDL continued to be more evenly distributed in 2017 than historical averages.

Figure 27: Distribution of DDL—Percentage of Total DDL Attributable to Filings in the Grouping



Note:
1. Values are calculated only for filings with positive DDL data.
2. Size of each slice represents the percentage of total DDL.
3. Percentages may not add to 100 percent due to rounding.

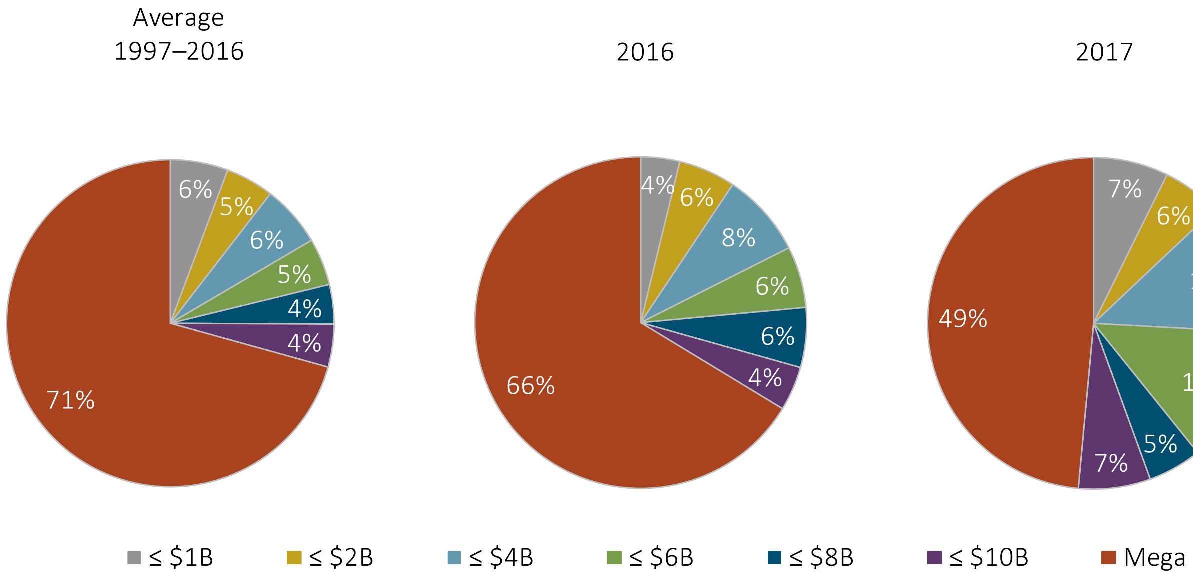
Distribution of MDL Values

These charts compare the distribution of MDL attributable to filings of a given size in 2017 with the historical distribution of MDL.

- In 2017, mega MDL filings represented 7 percent of the total number of filings and 49 percent of total MDL.
- The distribution of MDL in 2017 deviated further from the 1997–2016 average compared to 2016. The percentage of mega MDL filings decreased in 2017 from 2016, while the percentage of MDL under $1 billion increased.

The distribution of MDL in 2017 diverged more from historical averages than in 2016.

Figure 28: Distribution of MDL—Percentage of Total MDL Attributable to Filings in the Grouping



Note:
1. Values are calculated only for filings with positive MDL data.
2. Size of each slice represents the percentage of total MDL.
3. Percentages may not add to 100 percent due to rounding.

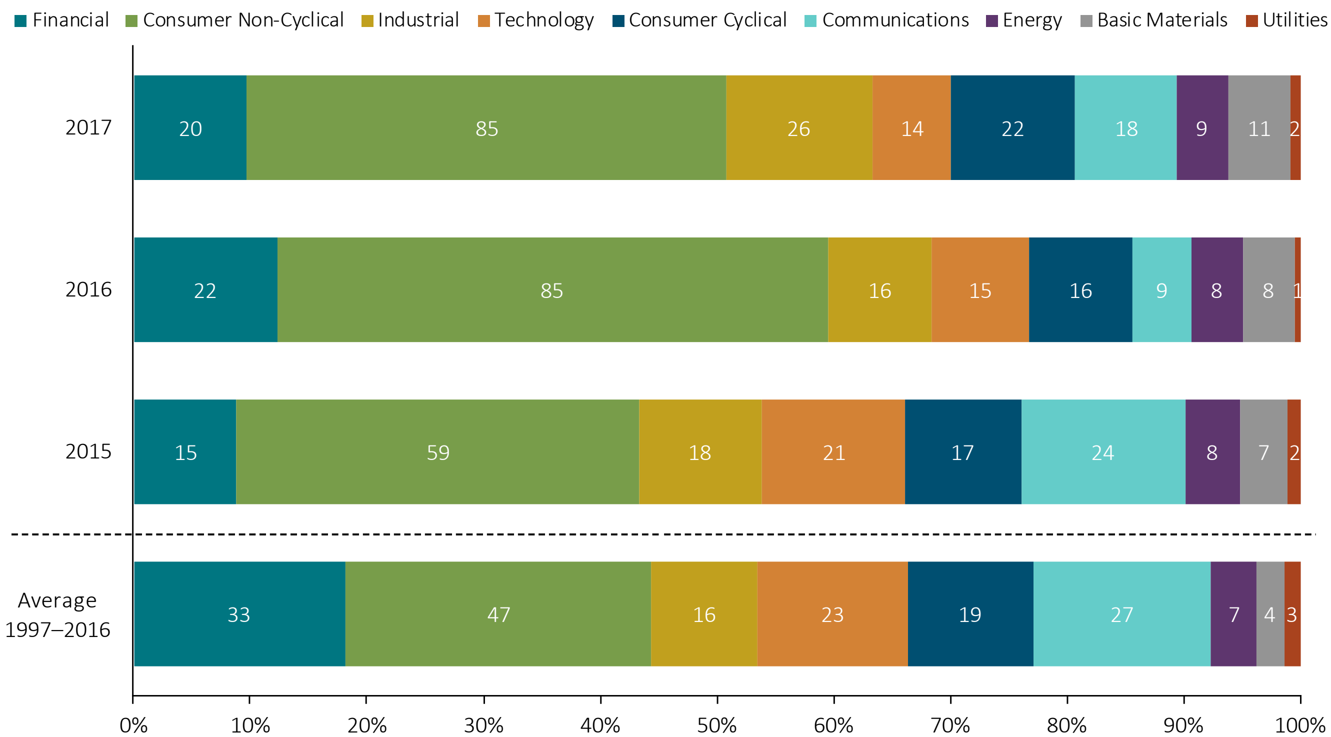
Industry

This analysis includes both the large capitalization companies of the S&P 500 as well as smaller companies.

- There were more Basic Materials filings in 2017 than in any other year.
- Core filings against companies in the Financial sector fell from 22 in 2016 to 20 in 2017, a 9 percent decline. The MDL of these cases, however, fell 72 percent from 2016. The $14 billion DDL for filings in this sector was 30 percent below the 2016 figure and 26 percent below the 1997–2016 average. See Appendix 6.
- The number of filings against companies in the Consumer Non-Cyclical sector stayed constant in 2017. While DDL for these filings increased 11 percent, MDL fell 49 percent from 2016.

The Consumer Non-Cyclical sector had the most filings for the eighth consecutive year.

Figure 29: Filings by Industry—Core Filings



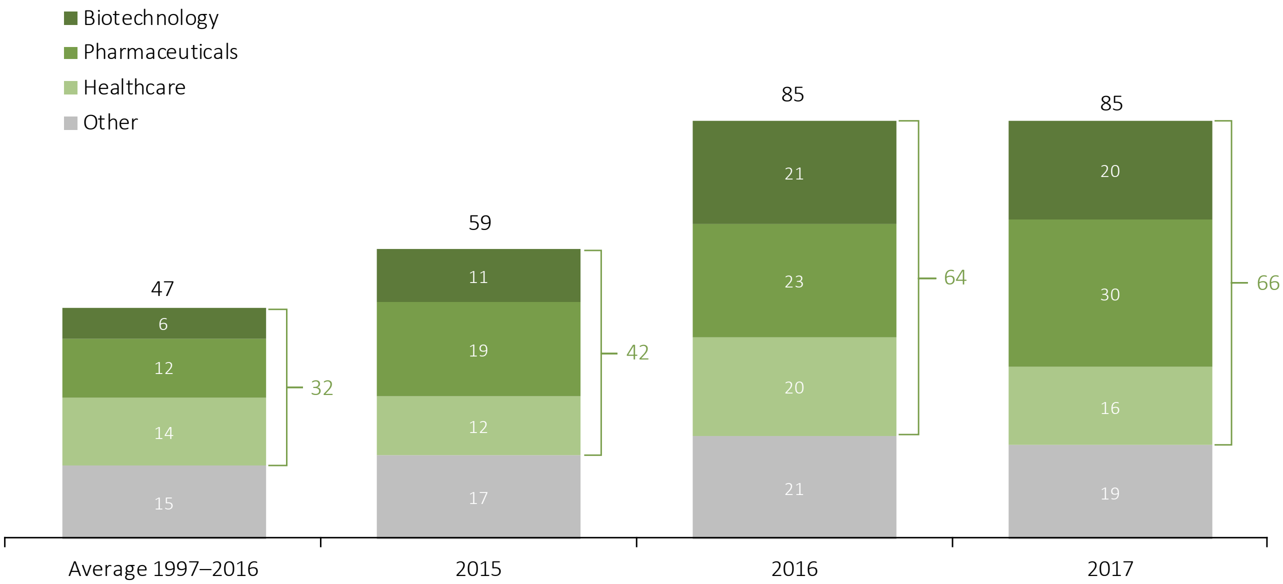
Note:
1. Filings with missing sector information or infrequently used sectors may be excluded. For more information, see Appendix 6.
2. Sectors are based on the Bloomberg Industry Classification System.

Consumer Non-Cyclical Sector

- In the Consumer Non-Cyclical sector, core filings involving biotechnology, pharmaceutical, and healthcare companies totaled 66, slightly above 2016 filings.
- The number of filings against pharmaceutical companies increased 30 percent, from 23 to 30. However, filings against biotechnology and, more noticeably, healthcare companies declined in a near-offsetting amount.

Filings against biotechnology, pharmaceutical, and healthcare companies remained at high levels.

Figure 30: Consumer Non-Cyclical Sector—Core Filings 2015–2017



Note:
1. Sectors and subsectors are based on the Bloomberg Industry Classification System.
2. The “Other” category is a grouping primarily encompassing the Agriculture, Beverage, Commercial Services, and Food subsectors.

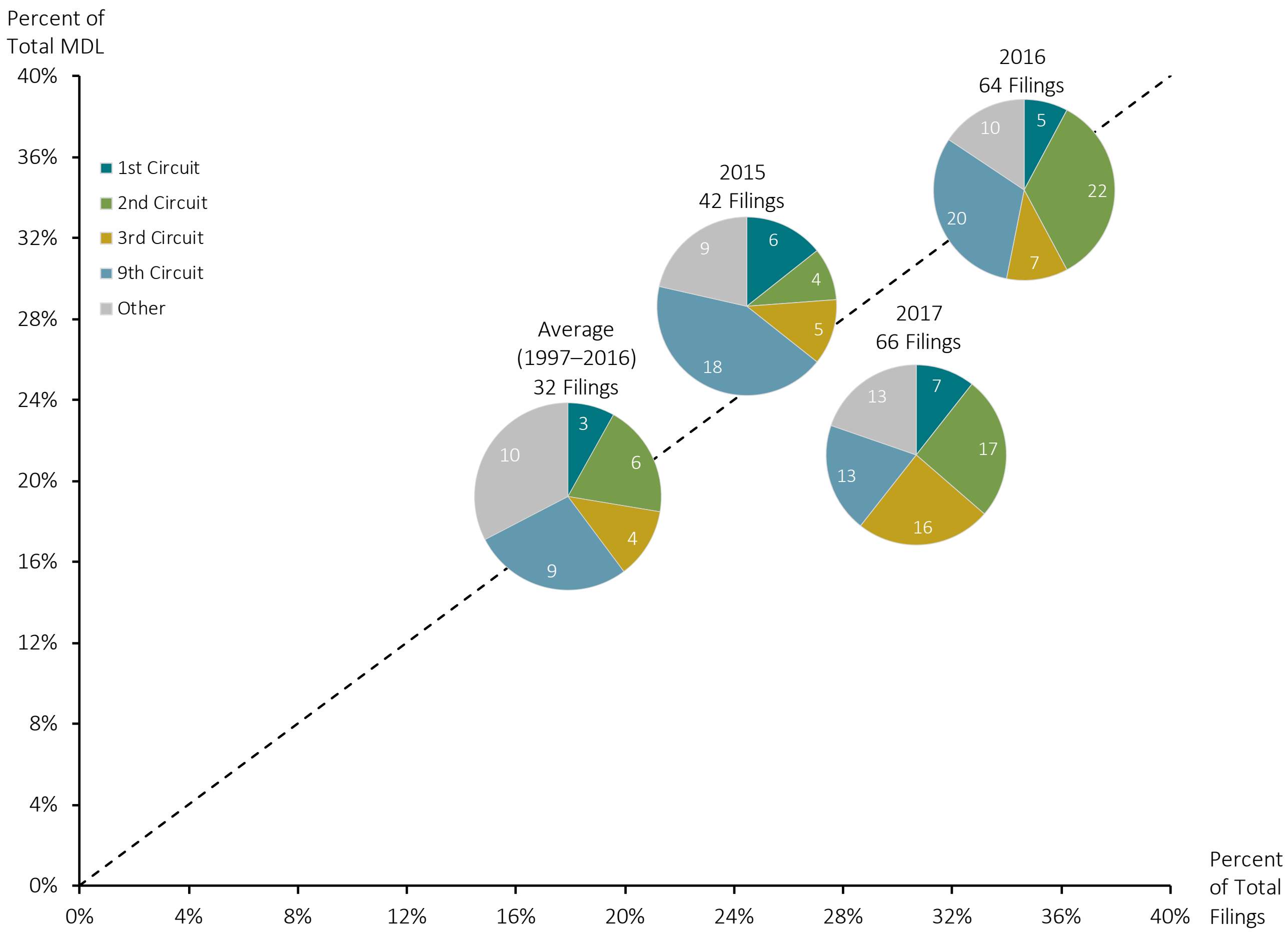
Updated Analysis: Biotechnology, Pharmaceutical, and Healthcare Subsectors

- In recent years, biotechnology, pharmaceutical, and healthcare filings in terms of MDL have been larger than the average filing, but 2017 bucked this trend.

MDL involving biotechnology, pharmaceutical, and healthcare filings declined.

- In 2017, 31 percent of all core filings involved biotechnology, pharmaceutical, and healthcare companies, but their collective MDL was 21 percent of total MDL. In 2016, the comparable figures were 35 percent and 34 percent, respectively.
- Biotechnology, pharmaceutical, and healthcare filings were most common in the Second, Third, and Ninth Circuits in 2017.

Figure 31: Annual Number and Percentage of MDL for Biotechnology, Pharmaceuticals, and Healthcare—Core Filings 2015–2017



Note: Biotechnology, pharmaceuticals, and healthcare filings are part of the Consumer Non-Cyclical sector based on the Bloomberg Industry Classification System. See Appendix 7 for more detail.

Exchange

- In 2017, 223 class actions were filed against NASDAQ-listed companies, and 159 class actions were filed against companies listed on the NYSE.
- The number of filings against NASDAQ and NYSE companies increased by 56 percent and by 33 percent, respectively, compared to 2016. However, core filings decreased slightly against NYSE-listed companies.
- While median DDL for core filings against NYSE companies increased by 21 percent in 2017, median MDL decreased by 32 percent.
- Both the median DDL and MDL for filings against NASDAQ-listed companies decreased in 2017 compared to 2016.

Filings against NASDAQ companies remained more common than filings against NYSE companies for the fifth consecutive year.

Figure 32: Filings by Exchange Listing—Core Filings

	Average (1997–2016)		2016		2017	
	NYSE/Amex	NASDAQ	NYSE	NASDAQ	NYSE	NASDAQ
Class Action Filings	79	98	120	143	159	223
Core Filings	73	92	82	96	81	111
Disclosure Dollar Loss						
DDL Total ($ Billions)	$84	$35	$76	$31	$84	$46
Average ($ Millions)	$1,267	$404	$941	$328	$1,053	$424
Median ($ Millions)	$251	$97	$321	$128	$387	$105
Maximum Dollar Loss						
MDL Total ($ Billions)	$407	$197	$584	$219	$324	$196
Average ($ Millions)	$6,054	$2,179	$7,215	$2,356	$4,054	$1,794
Median ($ Millions)	$1,291	$452	$2,250	$672	$1,528	$415

Note:
1. Average and median numbers are calculated only for filings with MDL and DDL data.
2. NYSE/Amex was renamed NYSE MKT in May 2012.

Circuit

- Core filings in the Second Circuit increased to 75, the most since 2008 at the height of the financial crisis and an increase of 27 percent from 2016.
- Core filings in the Ninth Circuit declined to 45 filings, a 26 percent decline from 2016.
- The Second and Ninth Circuits combined made up 56 percent of all core filings, marginally higher than the 1997–2016 average of 53 percent.
- Core filings in the Third Circuit more than doubled from the 1997–2016 average to a record 35 filings. Almost half of these cases comprised biotechnology and pharmaceutical cases.
- The largest industry subsectors for core filings in the Ninth Circuit were healthcare and pharmaceuticals (five filings each) followed by Internet and software companies (four filings each).
- As a result of the decline in mega filings, MDL in the Second and Ninth Circuits decreased significantly from 2016 to 2017. See Appendix 8.

Core filings in the Third Circuit were the highest on record.

Figure 33: Filings by Circuit—Core Filings

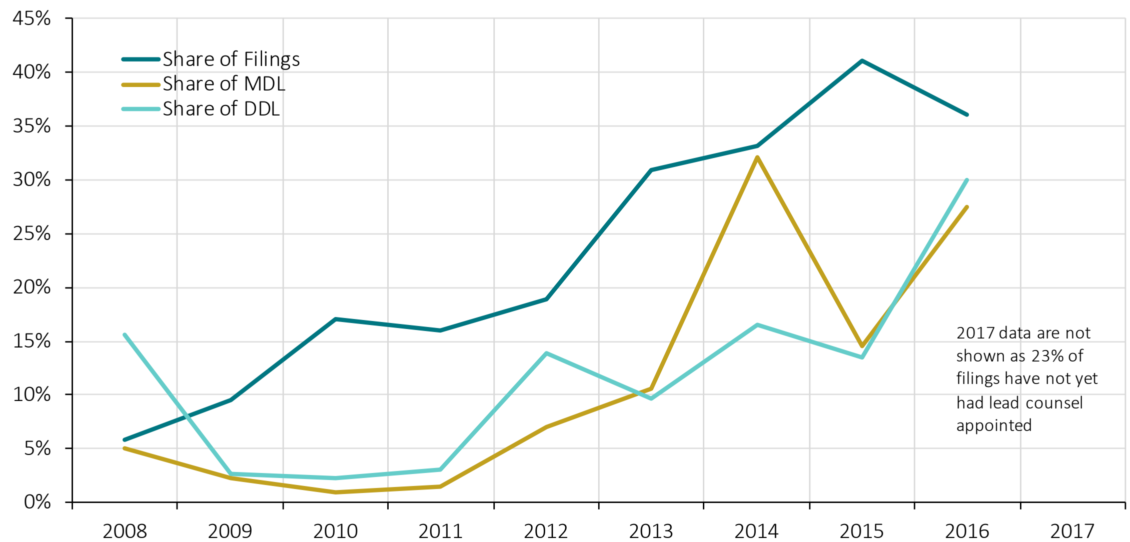
Note: For more information, see Appendix 8.

Appointment of Plaintiff Lead Counsel

- This analysis looks at three law firms—The Rosen Law Firm, Pomerantz LLP, and Glancy Prongay & Murray LLP.
- The percentage of cases for which these firms were appointed lead counsel rose steadily from 2008 to 2015, peaking at 41 percent, before declining to 36 percent in 2016.
- With the exception of 2008, these firms were typically appointed lead counsel for smaller cases (i.e., their share of filings exceeded their share of total MDL and DDL).
- For the last four years, these firms have been responsible for more than 50 percent of the initial complaints filed.
- These firms have been the counsel of record on the first identified complaint a greater percentage of the time than they have been appointed lead counsel. For example, in 2016, these firms filed 66 percent of the initial complaints, but were appointed lead counsel 36 percent of the time.
- These firms have been largely responsible for the declining median filing lag discussed on page 23 and for the increasing frequency of the appointment of individuals, rather than institutional investors, as lead plaintiff discussed on page 17.

From 2008 to 2016, three plaintiff law firms were increasingly appointed lead or co-lead plaintiff counsel in smaller-than-average-sized cases.

Figure 34: Frequency of Three Law Firms' Appointment as Lead or Co-lead Plaintiff Counsel—Core Filings 2008–2017



Frequency of These Firms as the Counsel of Record on the First Identified Complaint	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Number of Core Filings	22	23	26	35	40	66	79	104	122	127
% of Total Core Filings	10%	15%	19%	24%	29%	43%	52%	60%	66%	59%

Note:
1. This analysis considers law firms that were appointed lead or co-lead counsel by the court. For filings in which the case was resolved prior to the appointment of lead counsel, the counsel listed on the first identified complaint (FIC) are considered the lead counsel.
2. One percent of filings in 2014, 5 percent of filings in 2016, and 23 percent of filings in 2017 have not yet had lead counsel appointed.
3. These counts include circumstances when the FIC includes one or any of these law firms, regardless of whether other plaintiff counsel are also listed on the complaint.

New Developments

Initial Coin Offerings

With the rise of cryptocurrencies in 2017, initial coin offerings, or ICOs, emerged. Price volatility of various cryptocurrencies at the end of the year resulted in multiple class actions involving ICOs.

The Clearinghouse tracked five ICO filings, all of them in December 2017. Some of these cases included Section 10(b), Section 11, and/or Section 12 claims; however, many of these cases were filed based on Section 5. Although Section 5 claims are extremely rare, they are still Securities Act claims and will therefore be tracked going forward.

According to the SEC,

> Virtual coins or tokens are created and disseminated using distributed ledger or blockchain technology. Recently promoters have been selling virtual coins or tokens in ICOs. Purchasers may use fiat currency (e.g., U.S. dollars) or virtual currencies to buy these virtual coins or tokens. Promoters may tell purchasers that the capital raised from the sales will be used to fund development of a digital platform, software, or other projects and that the virtual tokens or coins may be used to access the platform, use the software, or otherwise participate in the project. Some promoters and initial sellers may lead buyers of the virtual coins or tokens to expect a return on their investment or to participate in a share of the returns provided by the project. After they are issued, the virtual coins or tokens may be resold to others in a secondary market on virtual currency exchanges or other platforms.
>
> Depending on the facts and circumstances of each individual ICO, the virtual coins or tokens that are offered or sold may be securities. If they are securities, the offer and sale of these virtual coins or tokens in an ICO are subject to the federal securities laws. ("Investor Bulletin: Initial Coin Offerings," U.S. Securities and Exchange Commission, July 25, 2017, available at https://www.sec.gov/oiea/investor-alerts-and-bulletins/ib_coinofferings.)

Item 303 Required Disclosures and Actionable Statements

Leidos Inc. v. Indiana Public Retirement System was scheduled to be argued by the U.S. Supreme Court on November 6, 2017. The case addressed whether omissions or the failure to make a disclosure required by Item 303 of Reg. S-K are actionable under Section 10(b) and Rule 10b-5, if the omitted information is required to be disclosed by the U.S. Securities and Exchange Commission (SEC) regulations in periodic reports but does not render any affirmative statement false or misleading.

The U.S. Supreme Court granted the writ of certiorari after a circuit split on the issue—with the Second Circuit holding that Item 303 creates a duty to disclose, while the Ninth and Third Circuits held that it does not.

The case settled before it could be heard in the U.S. Supreme Court for $6.5 million, with plaintiff counsel seeking only an award for costs and expenses and not attorney's fees.

Administrative Law Judge Appointments

Lucia v. Securities and Exchange Commission addresses the question of whether the administrative law judges (ALJs) of the SEC are Officers of the United States within the meaning of the Appointments Clause.

The case is now at the U.S. Supreme Court after an opinion split between the Tenth Circuit (which found ALJ appointments violated the Appointments Clause of the U.S. Constitution) and the D.C. Circuit (which considered the rulings of ALJ not final and therefore that ALJ appointments do not violate the Appointments Clause).

Glossary

California state Section 11 filing is a class action filed in a California state court that has Section 11 claims. These filings may also have Section 12 and/or Section 15 claims, but do not have Rule 10b-5 claims.

Chinese reverse merger (CRM) filing is a securities class action against a China-headquartered company listed on a U.S. exchange as a result of a reverse merger with a public shell company. See Cornerstone Research, *Investigations and Litigation Related to Chinese Reverse Merger Companies*.

Class Action Filings Index® (CAF Index®) tracks the number of federal securities class action filings.

Class Action Filings Non-U.S. Index tracks the number of filings against non-U.S. issuers (companies headquartered outside the United States) relative to total filings, excluding M&A filings.

Core filings are all federal securities class actions excluding those defined as M&A filings.

Cohort is the group of securities class actions all filed in a particular calendar year.

Disclosure Dollar Loss Index® (DDL Index®) measures the aggregate DDL for all filings over a period of time. DDL is the dollar value change in the defendant firm's market capitalization between the trading day immediately preceding the end of the class period and the trading day immediately following the end of the class period. DDL should not be considered an indicator of liability or measure of potential damages. Instead, it estimates the impact of all information revealed at the end of the class period, including information unrelated to the litigation.

Filing lag is the number of days between the end of a class period and the filing date of the securities class action.

First identified complaint (FIC) is the first complaint filed of one or more securities class action complaints with the same underlying allegations filed against the same defendant or set of defendants.

Heat Maps of S&P 500 Securities Litigation™ analyze securities class action activity by industry sector. The analysis focuses on companies in the Standard & Poor's 500 (S&P 500) index, which comprises 500 large, publicly traded companies in all major sectors. Starting with the composition of the S&P 500 at the beginning of each year, the Heat Maps examine two questions for each sector: (1) What percentage of these companies were subject to new securities class actions in federal court during each calendar year? (2) What percentage of the total market capitalization of these companies was subject to new securities class actions in federal courts during each calendar year?

Market capitalization losses measure changes to market values of the companies subject to class action filings. This report tracks market capitalization losses for defendant firms during and at the end of class periods. They are calculated for publicly traded common equity securities, closed-ended mutual funds, and exchange-traded funds where data are available. Declines in market capitalization may be driven by market, industry, and/or firm-specific factors. To the extent that the observed losses reflect factors unrelated to the allegations in class action complaints, indices based on class period losses would not be representative of potential defendant exposure in class actions. This is especially relevant in the post-*Dura* securities litigation environment. In April 2005, the U.S. Supreme Court ruled that plaintiffs in a securities class action are required to plead a causal connection between alleged wrongdoing and subsequent shareholder losses. This report tracks market capitalization losses at the end of each class period using DDL, and market capitalization losses during each class period using MDL.

Maximum Dollar Loss Index® (MDL Index®) measures the aggregate MDL for all filings over a period of time. MDL is the dollar value change in the defendant firm's market capitalization from the trading day with the highest market capitalization during the class period to the trading day immediately following the end of the class period. MDL should not be considered an indicator of liability or measure of potential damages. Instead, it estimates the impact of all information revealed during or at the end of the class period, including information unrelated to the litigation.

Mega filings include mega DDL filings, securities class action filings with a DDL of at least $5 billion; and mega MDL filings, securities class action filings with an MDL of at least $10 billion.

Merger and acquisition (M&A) filings are securities class actions that have Section 14 claims, but no Rule 10b-5, Section 11, or Section 12(2) claims, and involve merger and acquisition transactions.

Securities Class Action Clearinghouse is an authoritative source of data and analysis on the financial and economic characteristics of federal securities fraud class action litigation, cosponsored by Cornerstone Research and Stanford Law School.

Appendices

Appendix 1: Filings Basic Metrics

Year	Class Action Filings	Core Filings	Disclosure Dollar Loss: DDL Total ($ Billions)	Disclosure Dollar Loss: Average ($ Millions)	Disclosure Dollar Loss: Median ($ Millions)	Maximum Dollar Loss: MDL Total ($ Billions)	Maximum Dollar Loss: Average ($ Millions)	Maximum Dollar Loss: Median ($ Millions)	U.S. Exchange-Listed Firms: Core Filings: Number	U.S. Exchange-Listed Firms: Core Filings: Number of Listed Firms Sued	U.S. Exchange-Listed Firms: Core Filings: Percentage of Listed Firms Sued
1997	174	174	$42	$272	$57	$145	$940	$405	8,113	165	2.0%
1998	242	242	$80	$365	$61	$224	$1,018	$294	8,190	225	2.7%
1999	209	209	$140	$761	$101	$364	$1,978	$377	7,771	197	2.5%
2000	216	216	$240	$1,251	$119	$761	$3,961	$689	7,418	205	2.8%
2001	180	497	$198	$1,215	$93	$1,487	$9,120	$771	7,197	168	2.3%
2002	224	266	$201	$989	$136	$2,046	$10,080	$1,494	6,474	204	3.2%
2003	192	228	$77	$450	$100	$575	$3,363	$478	5,999	181	3.0%
2004	228	239	$144	$739	$108	$726	$3,722	$498	5,643	210	3.7%
2005	182	182	$93	$595	$154	$362	$2,321	$496	5,593	168	3.0%
2006	120	120	$52	$496	$109	$294	$2,827	$413	5,525	114	2.1%
2007	177	177	$158	$1,013	$156	$700	$4,489	$715	5,467	158	2.9%
2008	223	223	$221	$1,516	$208	$816	$5,591	$1,077	5,339	169	3.2%
2009	165	158	$84	$830	$138	$550	$5,447	$1,066	5,042	119	2.4%
2010	175	135	$73	$691	$146	$474	$4,515	$598	4,764	107	2.2%
2011	187	144	$110	$827	$91	$511	$3,842	$422	4,660	125	2.7%
2012	151	138	$97	$767	$151	$404	$3,183	$659	4,529	116	2.6%
2013	165	152	$104	$750	$153	$278	$2,011	$532	4,411	137	3.1%
2014	168	155	$56	$384	$168	$213	$1,460	$528	4,416	142	3.2%
2015	207	173	$118	$702	$145	$387	$2,305	$502	4,578	164	3.6%
2016	271	186	$107	$603	$195	$804	$4,541	$1,155	4,593	176	3.8%
2017	412	214	$131	$667	$148	$521	$2,657	$658	4,411	187	4.2%
Average (1997–2016)	193	201	$120	$761	$129	$606	$3,836	$658	5,786	163	2.9%

Note:
1. Average and median numbers are calculated only for filings with MDL and DDL data. Filings without MDL and DDL data include M&A-only filings, ICO filings, and other filings where calculations of MDL and DDL are non-obvious.
2. The number and percentage of U.S. exchange-listed firms sued are based on core filings.

Appendix 2A: S&P 500 Securities Litigation—Percentage of S&P 500 Companies Subject to Core Filings

Year	Consumer Discretionary	Consumer Staples	Energy / Materials	Financials / Real Estate	Health Care	Industrials	Telecom / IT	Utilities	All S&P 500 Companies
2001	2.4%	8.3%	0.0%	1.4%	7.1%	0.0%	18.0%	7.9%	5.6%
2002	10.2%	2.9%	3.1%	16.7%	15.2%	6.0%	11.0%	40.5%	12.0%
2003	4.6%	2.9%	1.7%	8.6%	10.4%	3.0%	5.6%	2.8%	5.2%
2004	3.4%	2.7%	1.8%	19.3%	10.6%	8.5%	3.2%	5.7%	7.2%
2005	10.3%	8.6%	1.7%	7.3%	10.7%	1.8%	6.7%	3.0%	6.6%
2006	4.4%	2.8%	0.0%	2.4%	6.9%	0.0%	8.1%	0.0%	3.6%
2007	5.7%	0.0%	0.0%	10.3%	12.7%	5.8%	2.3%	3.1%	5.4%
2008	4.5%	2.6%	0.0%	31.2%	13.7%	3.6%	2.5%	3.2%	9.2%
2009	3.8%	4.9%	1.5%	10.7%	3.7%	6.9%	1.2%	0.0%	4.4%
2010	5.1%	0.0%	4.3%	10.3%	13.5%	0.0%	2.4%	0.0%	4.8%
2011	3.8%	2.4%	0.0%	1.2%	2.0%	1.7%	7.1%	2.9%	2.8%
2012	4.9%	2.4%	2.7%	3.7%	1.9%	1.6%	3.8%	0.0%	3.0%
2013	8.4%	0.0%	0.0%	0.0%	5.7%	0.0%	9.1%	0.0%	3.4%
2014	1.2%	0.0%	1.3%	1.2%	0.0%	4.7%	0.0%	0.0%	1.2%
2015	0.0%	5.0%	0.0%	1.2%	1.9%	0.0%	4.2%	3.4%	1.6%
2016	3.6%	2.6%	4.5%	6.9%	17.9%	6.1%	6.8%	3.4%	6.6%
2017	8.5%	2.7%	3.3%	3.3%	8.3%	8.7%	8.5%	7.1%	6.4%
Average 2001–2016	4.8%	2.9%	1.4%	8.4%	8.3%	3.1%	5.9%	5.1%	5.2%

Appendix 2B: S&P 500 Securities Litigation—Percentage of Market Capitalization of S&P 500 Companies Subject to Core Filings

Year	Consumer Discretionary	Consumer Staples	Energy / Materials	Financials / Real Estate	Health Care	Industrials	Telecom / IT	Utilities	All S&P 500 Companies
2001	1.3%	6.3%	0.0%	0.8%	5.4%	0.0%	32.6%	17.4%	10.9%
2002	24.7%	0.3%	1.2%	29.2%	35.2%	13.3%	9.1%	51.0%	18.8%
2003	2.0%	2.3%	0.4%	19.9%	16.3%	4.6%	1.7%	4.3%	8.0%
2004	7.9%	0.1%	29.7%	46.1%	24.1%	8.8%	1.2%	4.8%	17.7%
2005	5.7%	11.4%	1.6%	22.2%	10.1%	5.6%	10.3%	5.6%	10.7%
2006	8.9%	0.8%	0.0%	8.2%	18.1%	0.0%	8.3%	0.0%	6.7%
2007	4.4%	0.0%	0.0%	18.1%	22.5%	2.2%	3.4%	5.5%	8.2%
2008	7.2%	2.6%	0.0%	55.0%	20.0%	26.4%	1.4%	4.0%	16.2%
2009	1.9%	3.9%	0.8%	31.2%	1.7%	23.2%	0.3%	0.0%	7.7%
2010	4.9%	0.0%	5.2%	31.1%	32.7%	0.0%	5.9%	0.0%	11.1%
2011	4.6%	0.8%	0.0%	6.9%	0.7%	2.1%	13.4%	0.6%	5.0%
2012	1.6%	14.0%	0.9%	11.0%	0.8%	1.2%	2.2%	0.0%	4.3%
2013	4.4%	0.0%	0.0%	0.0%	4.4%	0.0%	16.6%	0.0%	4.7%
2014	2.5%	0.0%	0.2%	0.3%	0.0%	1.7%	0.0%	0.0%	0.6%
2015	0.0%	1.9%	0.0%	3.0%	3.1%	0.0%	7.0%	3.7%	2.8%
2016	2.8%	1.0%	19.8%	11.9%	13.2%	8.7%	12.3%	4.4%	10.0%
2017	8.2%	6.7%	2.3%	1.5%	2.7%	22.3%	4.4%	9.6%	6.1%
Average 2001–2016	4.9%	2.7%	3.1%	16.9%	12.3%	5.8%	8.6%	5.6%	8.4%

Appendix 3: M&A Filings Overview

Year	M&A Filings	M&A Case Status: Dismissed	M&A Case Status: Settled	M&A Case Status: Continuing	Case Status of All Other Filings: Dismissed	Case Status of All Other Filings: Settled	Case Status of All Other Filings: Continuing
2009	7	5	2	0	83	64	11
2010	40	34	6	0	68	63	4
2011	43	40	2	1	69	70	5
2012	13	9	4	0	72	55	11
2013	13	7	6	0	88	57	7
2014	13	10	2	1	65	66	24
2015	34	26	6	2	94	31	48
2016	85	63	12	10	55	16	115
2017	198	147	0	51	33	0	181
Average (2009–2016)	31	24	5	2	74	53	28

Note:
1. The Securities Class Action Clearinghouse began tracking M&A filings as a separate category in 2009.
2. Case status is as of the end of 2017.

Appendix 4: Case Status by Year—Core Filings

Filing Year	In the First Year: Settled	In the First Year: Dismissed	In the First Year: Trial	In the First Year: Total Resolved	In the Second Year: Settled	In the Second Year: Dismissed	In the Second Year: Trial	In the Second Year: Total Resolved	In the Third Year: Settled	In the Third Year: Dismissed	In the Third Year: Trial	In the Third Year: Total Resolved within Three Years
1997	0.0%	7.5%	0.6%	8.0%	14.9%	8.6%	0.0%	31.6%	16.7%	4.0%	0.0%	52.3%
1998	0.8%	7.9%	0.0%	8.7%	16.1%	12.0%	0.0%	36.8%	16.1%	8.3%	0.0%	61.2%
1999	0.5%	7.2%	0.0%	7.7%	11.0%	11.5%	0.0%	30.1%	18.2%	9.1%	0.0%	57.4%
2000	1.9%	4.2%	0.0%	6.0%	11.6%	13.0%	0.0%	30.6%	15.7%	10.6%	0.5%	57.4%
2001	1.7%	6.7%	0.0%	8.3%	11.7%	10.6%	0.0%	30.6%	18.3%	5.0%	0.0%	53.9%
2002	0.9%	5.8%	0.4%	7.1%	6.7%	9.4%	0.0%	23.2%	15.2%	11.6%	0.0%	50.0%
2003	0.5%	7.8%	0.0%	8.3%	7.8%	13.5%	0.0%	29.7%	14.6%	14.6%	0.0%	58.9%
2004	0.0%	10.5%	0.0%	10.5%	9.6%	16.2%	0.0%	36.4%	12.3%	9.6%	0.0%	58.3%
2005	0.5%	11.5%	0.0%	12.1%	8.2%	20.3%	0.0%	40.7%	17.6%	8.8%	0.0%	67.0%
2006	0.8%	9.2%	0.0%	10.0%	8.3%	16.7%	0.0%	35.0%	14.2%	6.7%	0.0%	55.8%
2007	0.6%	6.8%	0.0%	7.3%	7.9%	13.6%	0.0%	28.8%	17.5%	14.1%	0.0%	60.5%
2008	0.0%	14.3%	0.0%	14.3%	3.6%	17.9%	0.0%	35.9%	9.9%	10.8%	0.0%	56.5%
2009	0.0%	10.1%	0.0%	10.1%	4.4%	19.6%	0.0%	34.2%	8.2%	6.3%	0.0%	48.7%
2010	1.5%	11.9%	0.0%	13.3%	7.4%	16.3%	0.0%	37.0%	3.7%	14.8%	0.0%	55.6%
2011	0.0%	12.5%	0.0%	12.5%	2.1%	16.7%	0.0%	31.3%	18.8%	12.5%	0.0%	62.5%
2012	0.7%	13.8%	0.0%	14.5%	4.3%	22.5%	0.0%	41.3%	8.7%	10.1%	0.0%	60.1%
2013	0.0%	17.8%	0.0%	17.8%	5.3%	20.4%	0.0%	43.4%	10.5%	9.9%	0.0%	63.8%
2014	0.6%	9.0%	0.0%	9.7%	7.1%	19.4%	0.0%	36.1%	16.8%	11.0%	0.0%	63.9%
2015	0.0%	16.2%	0.0%	16.2%	6.4%	29.5%	0.0%	52.0%	11.6%	8.7%	0.0%	72.3%
2016	0.5%	15.6%	0.0%	16.1%	8.1%	14.0%	0.0%	38.2%	-	-	-	-
2017	0.0%	15.4%	0.0%	15.4%	-	-	-	-	-	-	-	-

Note: Numbers may not add due to rounding. Figures below the dashed lines indicate cohorts for which data are not complete.

Appendix 5: California State Section 11 Filings Overview

Year	California State Section 11 Filings: Los Angeles County	Santa Clara County	San Francisco County	San Mateo County	Other	California State Section 11 Filing Status: Ongoing	Settled	Dismissed	Removed to Federal Court	Federal Section 11–Only Filing Status: Ongoing	Settled	Dismissed	Remanded to State Court
2010	0	0	0	0	1	0	1	0	0	2	7	8	1
2011	0	0	1	1	1	0	1	2	0	0	4	5	1
2012	0	1	1	2	1	0	2	2	1	1	5	3	2
2013	0	0	0	1	0	0	1	0	0	0	2	5	1
2014	2	1	1	1	0	1	3	1	0	2	3	4	2
2015	2	4	2	7	0	3	8	2	2	1	4	4	4
2016	2	0	1	14	1	12	1	2	3	4	1	1	5
2017	2	0	0	5	0	3	0	0	4	10	0	1	3
Average (2010–2016)	1	1	1	4	1	2	2	1	1	1	4	4	2

Appendix 6: Filings by Industry—Core Filings

(Dollars in Billions)

Industry	Class Action Filings: Average 1997–2016	2015	2016	2017	Disclosure Dollar Loss: Average 1997–2016	2015	2016	2017	Maximum Dollar Loss: Average 1997–2016	2015	2016	2017
Financial	33	15	22	20	$19	$8	$20	$14	$113	$26	$169	$48
Consumer Non-Cyclical	47	59	85	85	$36	$52	$38	$42	$134	$141	$326	$165
Industrial	16	18	16	26	$12	$2	$18	$26	$36	$11	$77	$85
Technology	23	21	15	14	$17	$25	$12	$8	$78	$90	$33	$58
Consumer Cyclical	19	17	16	22	$9	$16	$5	$15	$48	$31	$41	$84
Communications	27	24	9	18	$21	$8	$1	$13	$151	$39	$49	$37
Energy	7	8	8	9	$4	$3	$11	$5	$23	$18	$56	$20
Basic Materials	4	7	8	11	$1	$2	$2	$7	$14	$26	$51	$17
Utilities	3	2	1	2	$1	$1	$0	$1	$9	$6	$2	$8
Unknown/ Unclassified	1	2	6	7	-	-	-	-	-	-	-	-
Total	180	173	186	214	$120	$118	$107	$131	$606	$387	$803	$521

Appendix 7: Biotechnology, Pharmaceutical, and Healthcare Subsectors—Core Filings

Year	Filings	Circuit 1st	Circuit 2nd	Circuit 3rd	Circuit 9th	Circuit Other	Percent of Total MDL
1997	28	2	4	3	9	10	20.3%
1998	40	3	7	6	11	13	19.6%
1999	28	1	3	2	10	12	10.8%
2000	22	2	4	5	3	9	9.4%
2001	18	0	3	2	6	7	2.9%
2002	33	3	6	6	6	13	13.9%
2003	37	5	4	2	9	17	30.7%
2004	40	4	8	4	11	13	19.4%
2005	32	5	4	4	3	17	41.1%
2006	25	0	5	3	3	14	18.9%
2007	29	0	11	2	7	9	25.9%
2008	25	5	5	2	2	11	17.4%
2009	22	1	1	2	11	7	6.1%
2010	32	3	6	2	15	6	45.3%
2011	21	0	5	0	6	10	5.6%
2012	28	2	5	5	5	11	7.0%
2013	34	2	10	5	11	6	14.8%
2014	38	3	8	11	11	5	13.8%
2015	42	6	4	5	18	9	30.1%
2016	64	5	22	7	20	10	35.4%
2017	66	7	17	16	13	13	21.4%
Average (1997–2016)	32	3	6	4	9	10	19.4%

Appendix 8: Filings by Circuit—Core Filings

Circuit	Class Action Filings Average 1997–2016	Class Action Filings 2015	Class Action Filings 2016	Class Action Filings 2017	Disclosure Dollar Loss Average 1997–2016	Disclosure Dollar Loss 2015	Disclosure Dollar Loss 2016	Disclosure Dollar Loss 2017	Maximum Dollar Loss Average 1997–2016	Maximum Dollar Loss 2015	Maximum Dollar Loss 2016	Maximum Dollar Loss 2017
1st	9	8	8	10	$8	$23	$3	$1	$22	$45	$7	$6
2nd	48	50	59	75	$41	$29	$16	$46	$217	$119	$247	$161
3rd	15	17	17	35	$17	$17	$7	$27	$59	$64	$44	$106
4th	6	4	4	7	$2	$1	$2	$5	$13	$7	$3	$17
5th	11	12	8	8	$7	$5	$11	$4	$37	$22	$55	$16
6th	8	2	8	7	$7	$0	$6	$4	$27	$1	$24	$36
7th	8	4	7	4	$6	$13	$15	$3	$25	$17	$62	$20
8th	6	2	2	1	$3	$1	$2	$0	$14	$9	$13	$0
9th	47	63	61	45	$21	$25	$43	$31	$144	$94	$331	$114
10th	6	5	5	7	$3	$3	$0	$2	$13	$5	$11	$14
11th	14	6	7	14	$5	$1	$2	$8	$23	$4	$6	$20
D.C.	1	0	0	1	$1	$0	$0	$0	$3	$0	$0	$11
Total	180	173	186	214	$120	$118	$107	$131	$596	$387	$804	$521

Note: Totals may not sum due to rounding.

Research Sample

- The Stanford Law School Securities Class Action Clearinghouse, in collaboration with Cornerstone Research, has identified 4,784 federal securities class action filings between January 1, 1996, and December 31, 2017 (securities.stanford.edu). The analysis in this report is based on data identified by Stanford as of January 12, 2018.
- The sample used in this report includes federal filings that allege violations of the Securities Exchange Act of 1933 Section 11, the Securities Exchange Act of 1934 Section 10b, Section 12(a) (registration requirements), or Section 14(a) (proxy solicitation requirements).
- The sample is referred to as the "classic filings" sample and excludes IPO allocation, analyst, and mutual fund filings (313, 68, and 25 filings, respectively).
- Multiple filings related to the same allegations against the same defendant(s) are consolidated in the database through a unique record indexed to the first identified complaint.
- In addition to federal filings, class actions filed in California state courts since January 1, 2010, alleging violations of the Securities Exchange Act of 1933 Section 11 are also separately tracked.
- An additional 55 state class action filings in California courts from January 1, 2010, to December 31, 2017, have also been identified.

The authors request that you reference Cornerstone Research and the Stanford Law School Securities Class Action Clearinghouse in any reprint of the information or figures included in this study.

Please direct any questions to:

Alexander Aganin
650.853.1660
aaganin@cornerstone.com

Cornerstone Research

Cornerstone Research provides economic and financial consulting and expert testimony in all phases of complex litigation and regulatory proceedings. The firm works with an extensive network of prominent faculty and industry practitioners to identify the best-qualified expert for each assignment. Cornerstone Research has earned a reputation for consistent high quality and effectiveness by delivering rigorous, state-of-the-art analysis for over 25 years. The firm has 700 staff and offices in Boston, Chicago, London, Los Angeles, New York, San Francisco, Silicon Valley, and Washington.

www.cornerstone.com