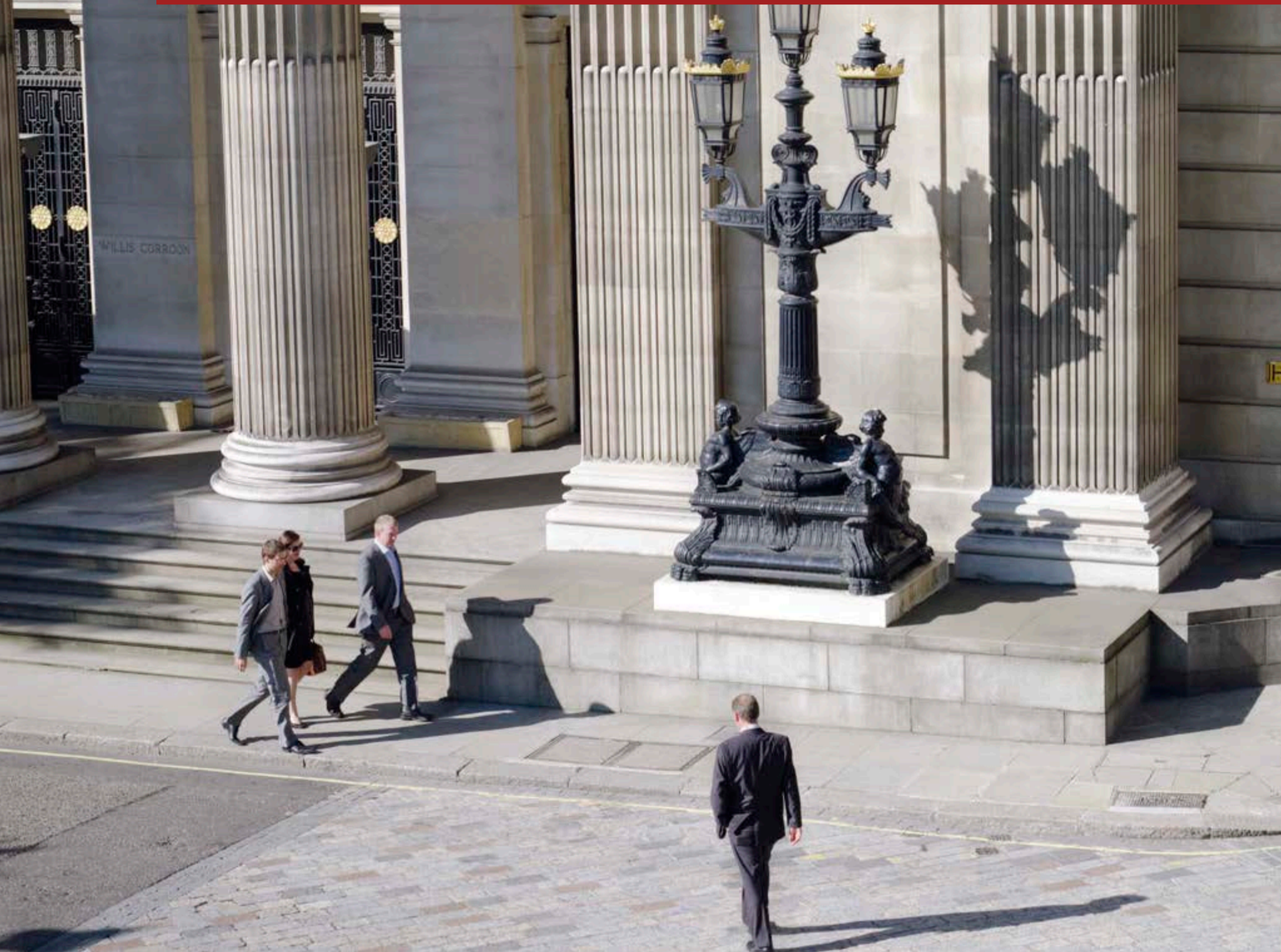


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May 2018

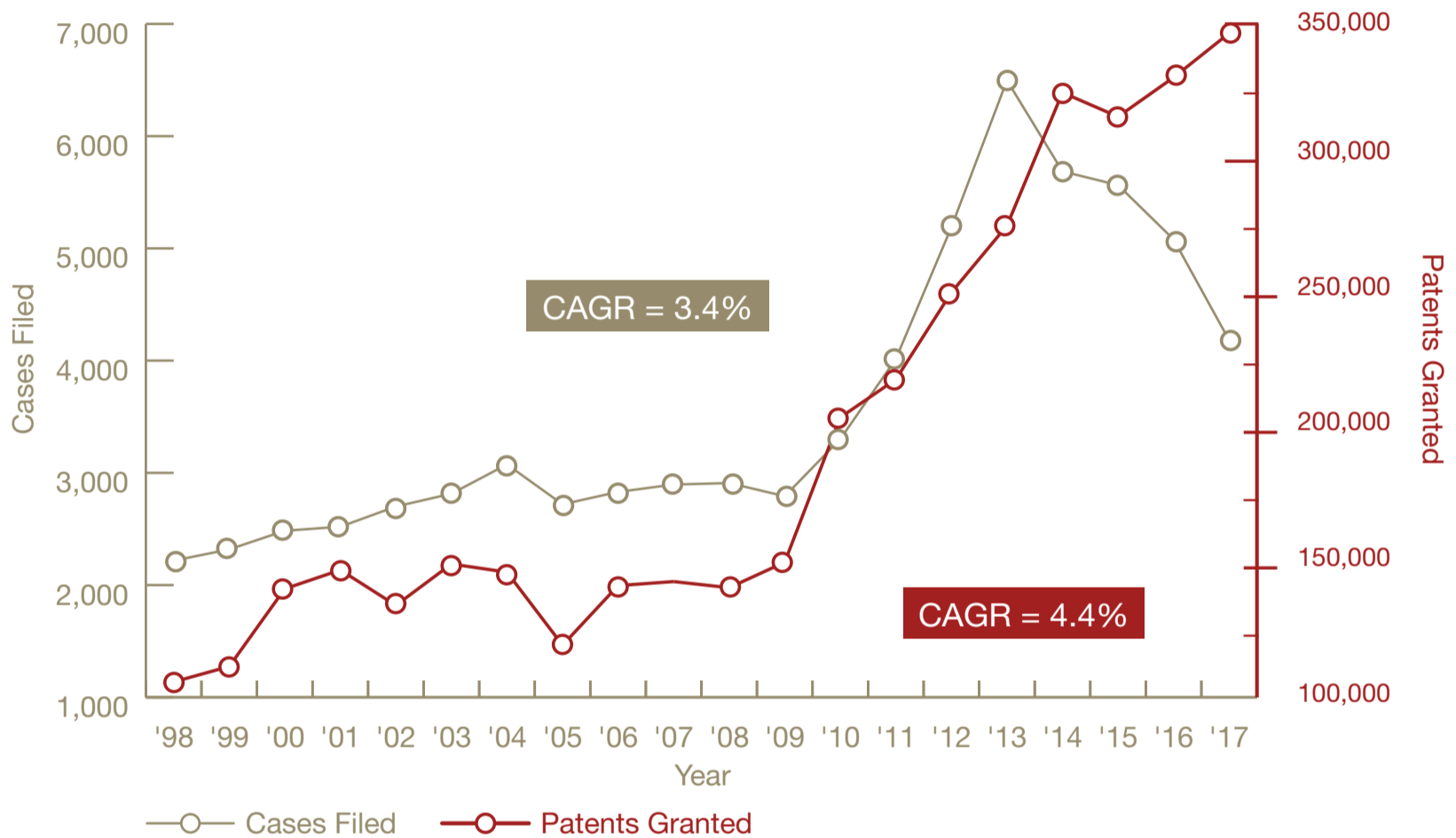
# *2018 Patent Litigation Study*



The number of patent cases filed in District Court and the number of patents granted by the US Patent & Trademark Office (USPTO) continue to move in diverging directions after many years of concurrent growth. Patent cases have now dropped to the lowest level since 2011, while patent grants continue to set new highs.

## Patent case filings and grants

Fig 1



Years are based on September year-end.

Sources: Performance & Accountability Report (USPTO) and Judicial Facts and Figures (US Courts)

## Top ten largest initial adjudicated damages awards: 1998–2017

Fig 2

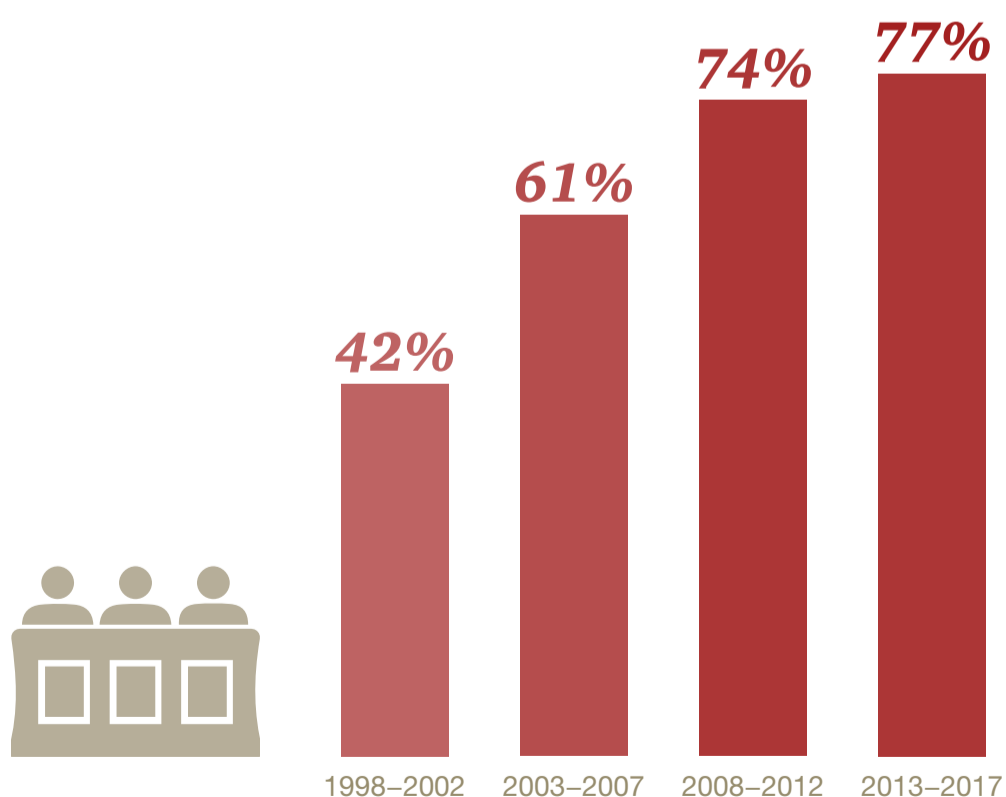
*Idenix (Merck) v. Gilead* remains the largest initial damages award, although it was reversed by the District Court in February 2018. No awards in 2017 breached the top ten.

Year	Plaintiff	Defendant	Technology	Award (in \$M)
2016	Idenix Pharmaceuticals	Gilead Sciences Inc.	Hepatitis C drugs	\$2,540
2009	Centocor Ortho Biotech Inc.	Abbott Laboratories	Arthritis drugs	\$1,673
2007	Lucent Technologies Inc.	Microsoft Corp.	MP3 technology	\$1,538
2012	Carnegie Mellon University	Marvell Technology Group	Noise reduction on circuits for disk drives	\$1,169
2012	Apple Inc.	Samsung Electronics Co.	Smartphone software	\$1,049
2012	Monsanto Company	E.I. Du Pont De Nemours and Co.	Genetically modified soybean seeds	\$1,000
2005	Cordis Corp.	Medtronic Vascular, Inc.	Vascular stents	\$595
2015	Smartflash LLC	Apple Inc.	Media storage	\$533
2004	Eolas Technologies Inc.	Microsoft Corp.	Internet browser	\$521
2011	Bruce N. Saffran M.D.	Johnson & Johnson	Drug-eluting stents	\$482

## Percent of cases decided by juries

Fig 3

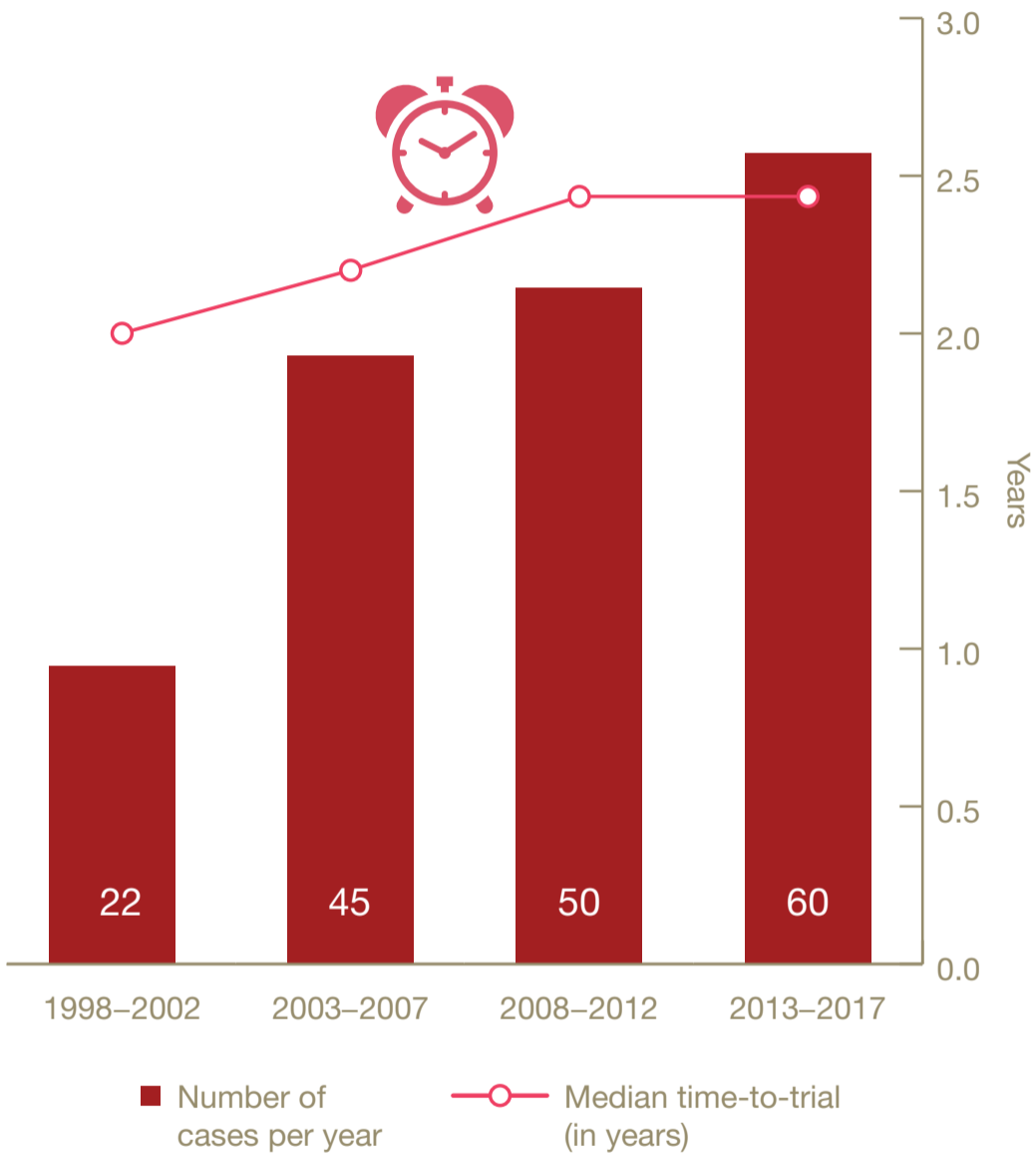
Even though juries have grown to be the predominant trier of fact, the percent of cases decided by juries has stayed relatively consistent over the last 10 years. (Percent of cases decided by juries excludes Abbreviated New Drug Application (ANDA) cases).



# Median time-to-trial

Fig 4

Time to trial has not increased in recent years despite delays caused by detours to the Patent and Trial Appeal Board.



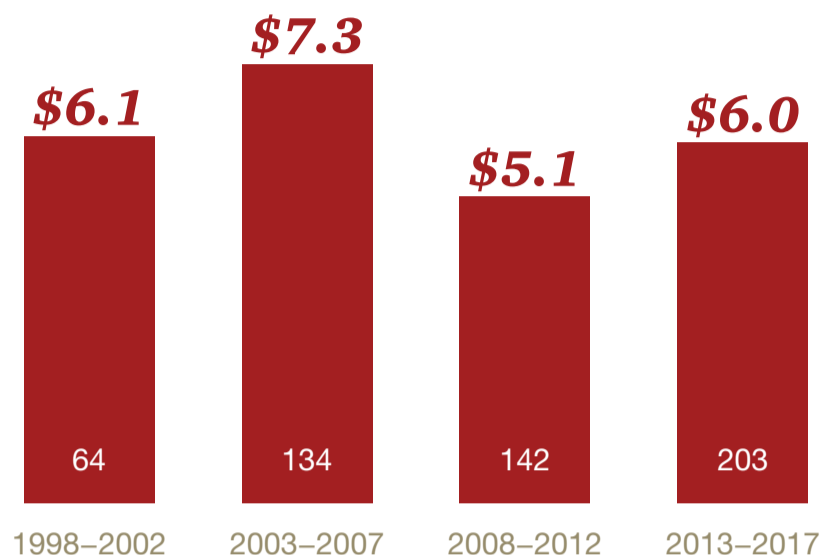
The number of identified decisions is indicated within the respective column.



## Median damages award (\$M)

Fig 5a

The annual median damages award between 1998 and 2017 ranged from a low of \$1.9 million (2010) to a high of \$17.4 million (1999), with an overall median award for the entire 20-year period of \$5.9 million. The 2017 median damages award increased to \$10.2 million, up from \$6.1 million in 2016.

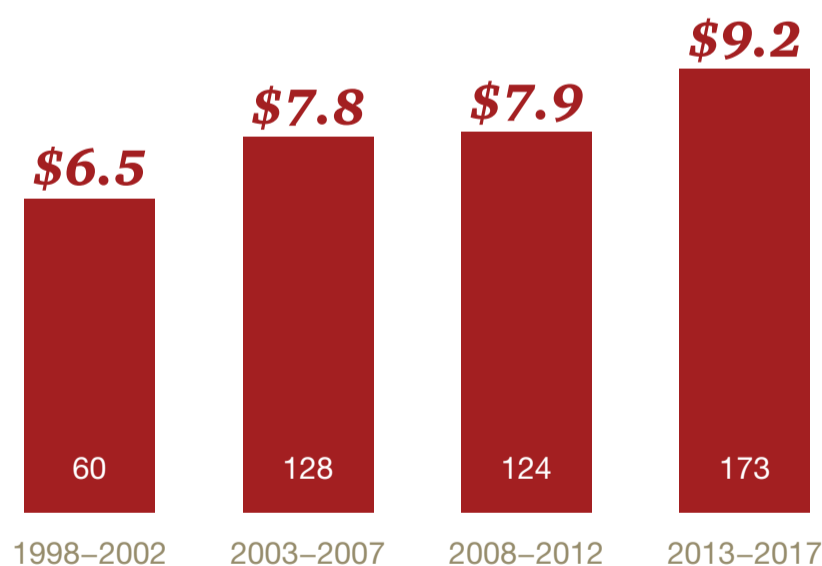


The number of identified decisions is indicated within the respective column.

## Median damages award excluding summary and default judgments (\$M)

Fig 5b

Median damages have been trending upward for the last 20 years when summary and default judgments are excluded.

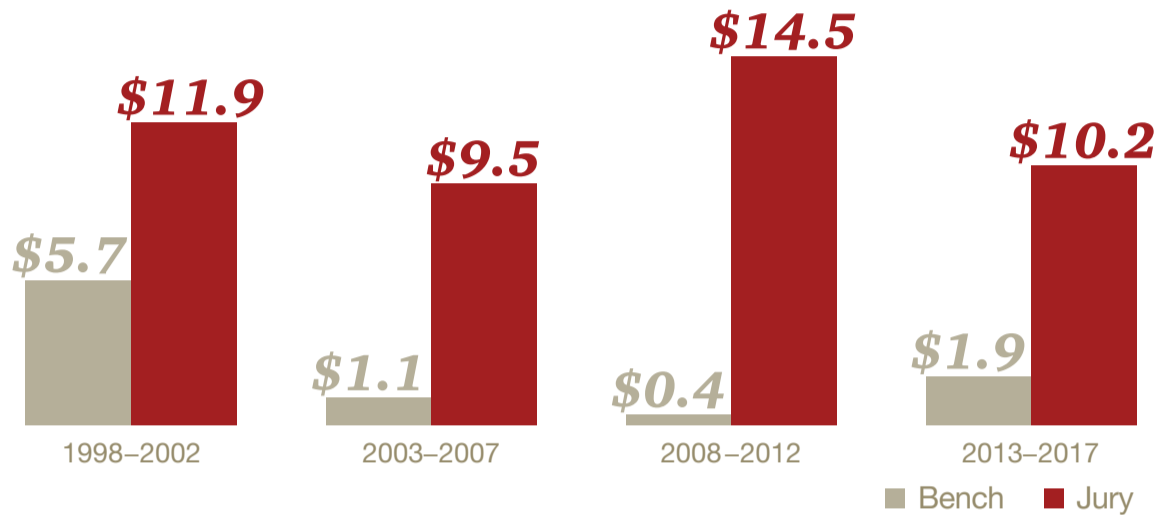


The number of identified decisions is indicated within the respective column.

## Median damages award: Bench vs. jury decisions (\$M)

Fig 6

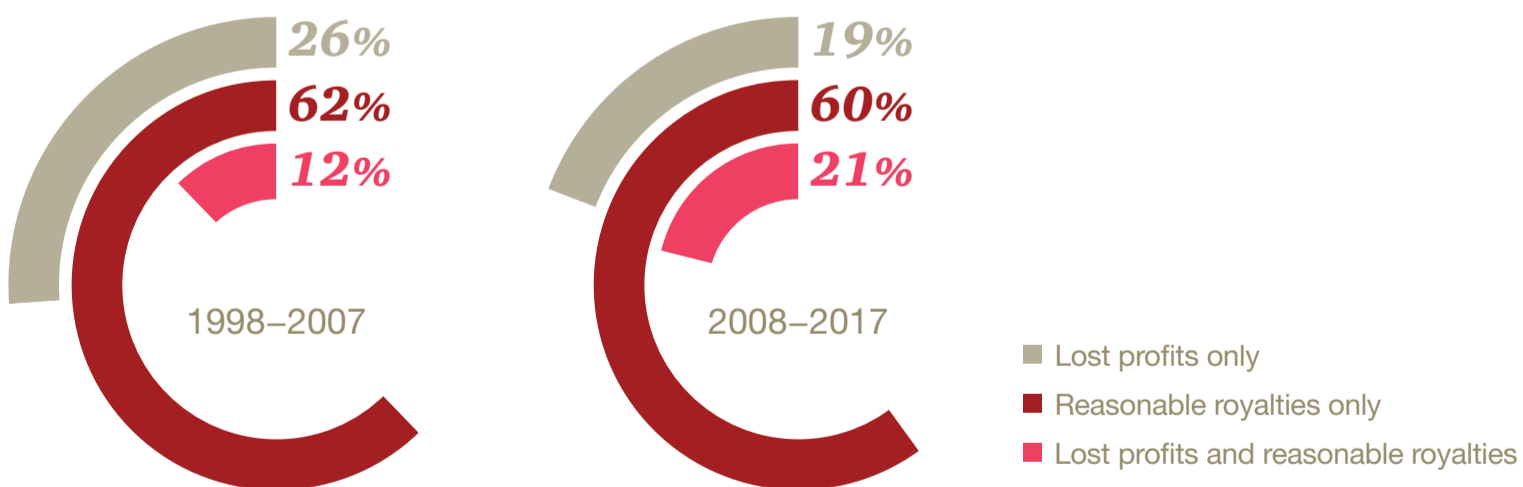
The gap between median bench and jury awards has narrowed in the most recent 5-year period, but remains significant.



## Composition of damages awards (practicing entities only)

Fig 7

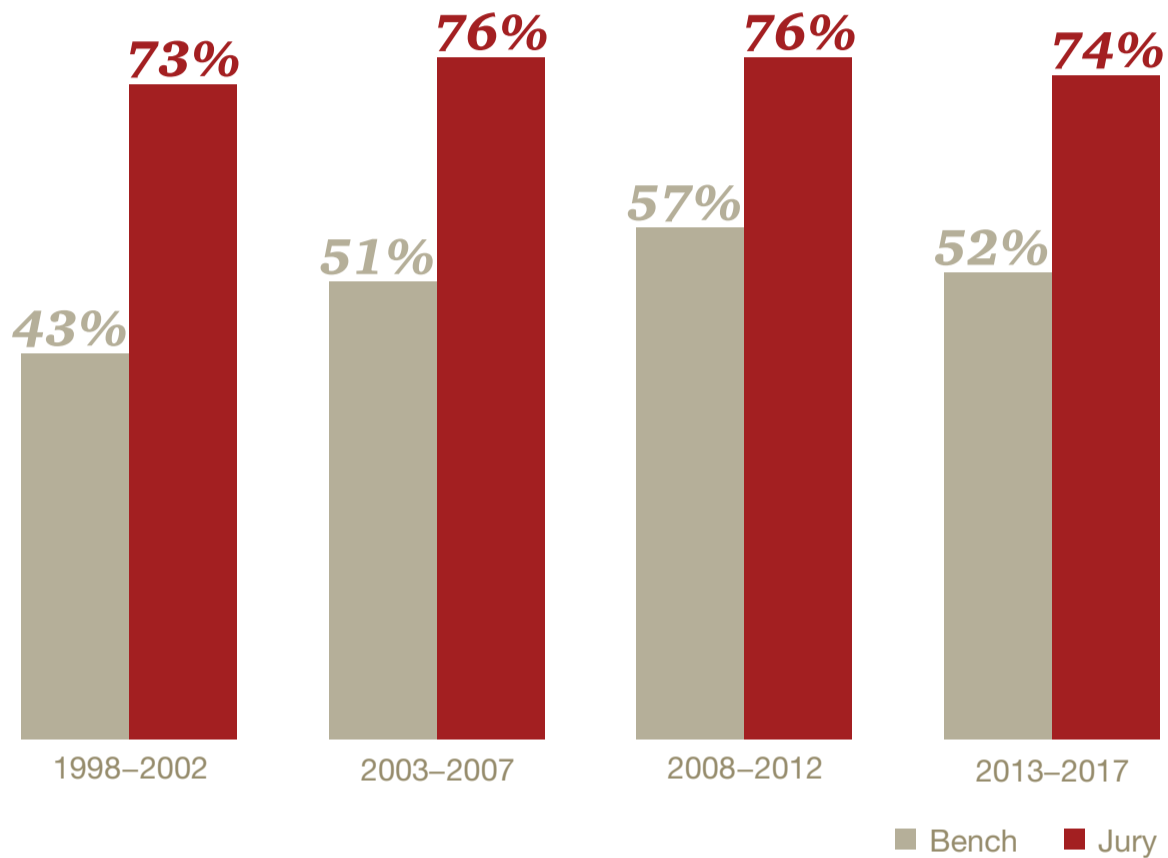
Among Practicing Entities (PEs), reasonable-royalty-only awards continue to be the type of damages most frequently awarded—more than 3 times as often as lost-profits-only awards.



## Trial success rates: Bench vs. jury

Fig 8

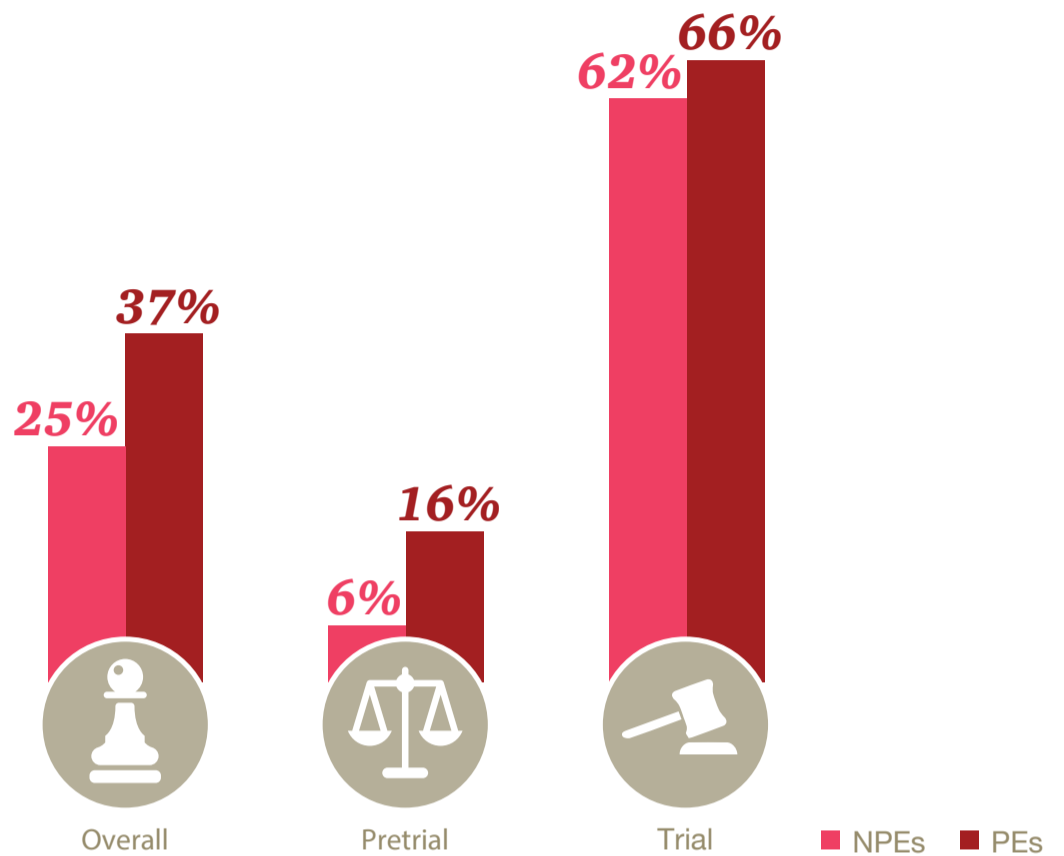
Over the last 20 years, patent holders have enjoyed much higher trial success rates with juries than with the bench.



## Patent holder success rates: 1998–2017

Fig 9

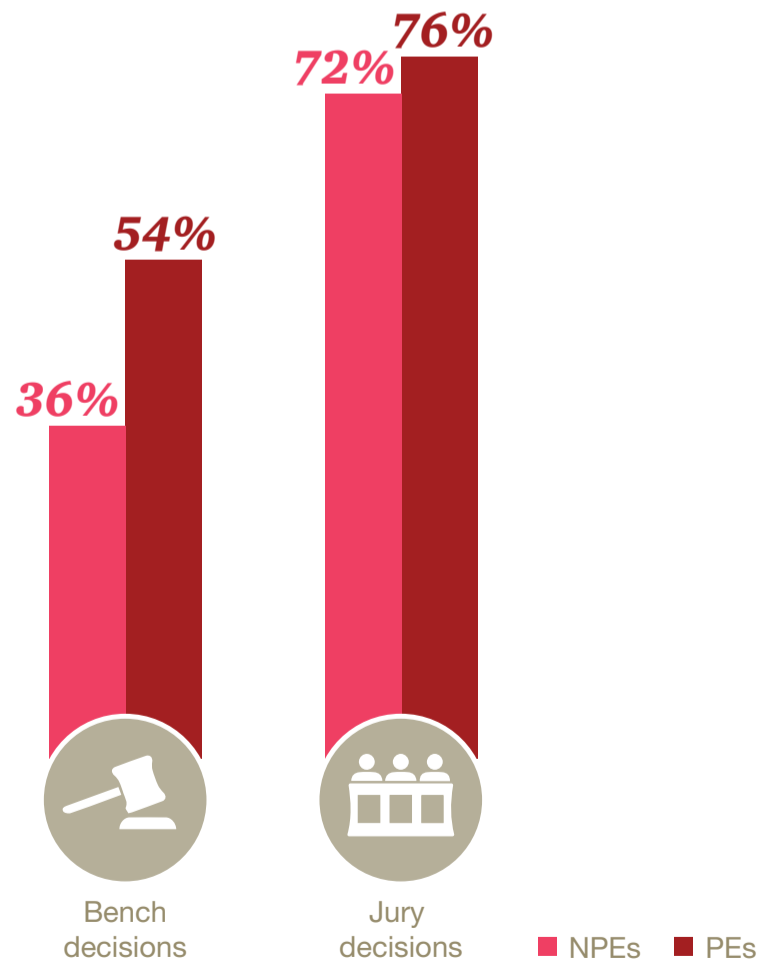
While Non-practicing entities (NPEs) have consistently been less successful than PEs, both have experienced increasing success rates over time. However, NPE success rates have declined slightly in the last 5 years, while PE success rates continue to rise.



## Patent holder success rates at trial: 1998–2017

Fig 10

There is a pronounced difference in trial success rates for NPEs vs. PEs depending on the trier of fact. While both entity types experience similar—and higher—success rates with juries, NPEs are much less successful with the bench.





# Median damages award: NPEs vs. PEs (\$M)

Fig 11

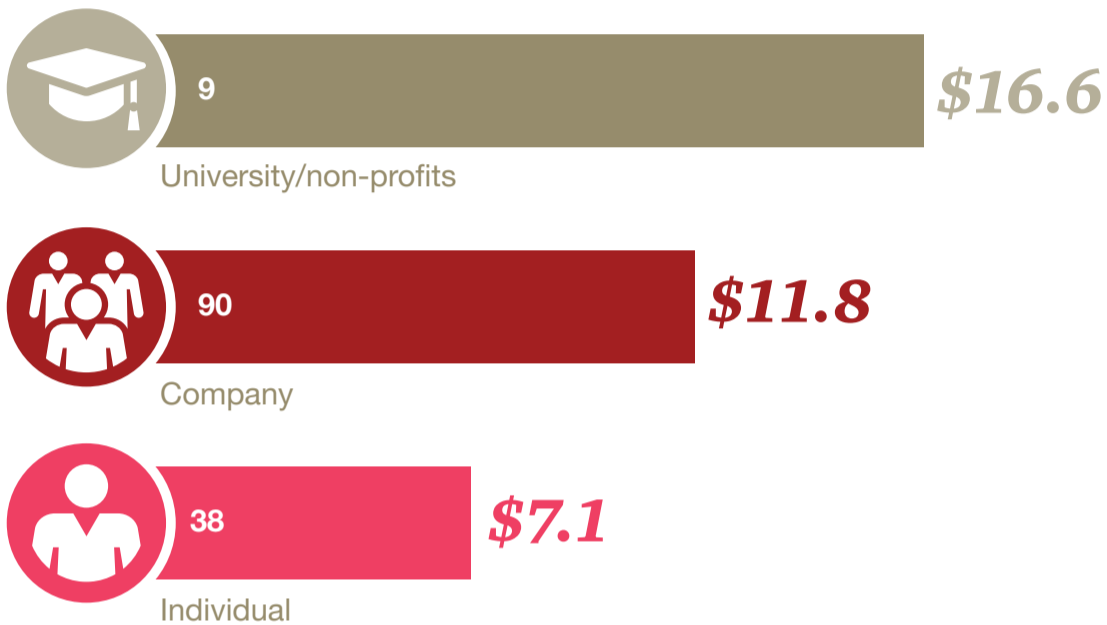
NPEs continue to rack up higher damages awards, reflected in a much higher median award compared to PEs—a recurring trend since the early 2000s.



## Patent holder median damages award by NPE type: 1998–2017 (\$M)

Fig 12

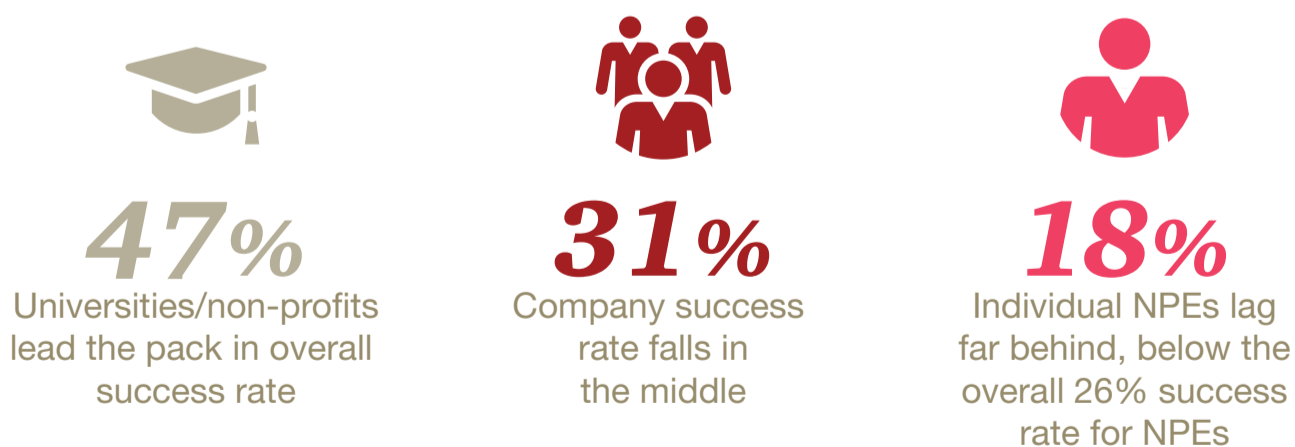
University/non-profits continue to garner the highest damages awards and success rates—although the sample size of cases is significantly smaller than company and individual NPEs.



The number of cases is indicated within the respective row.

## Patent holder success rates by NPE type: 1998–2017

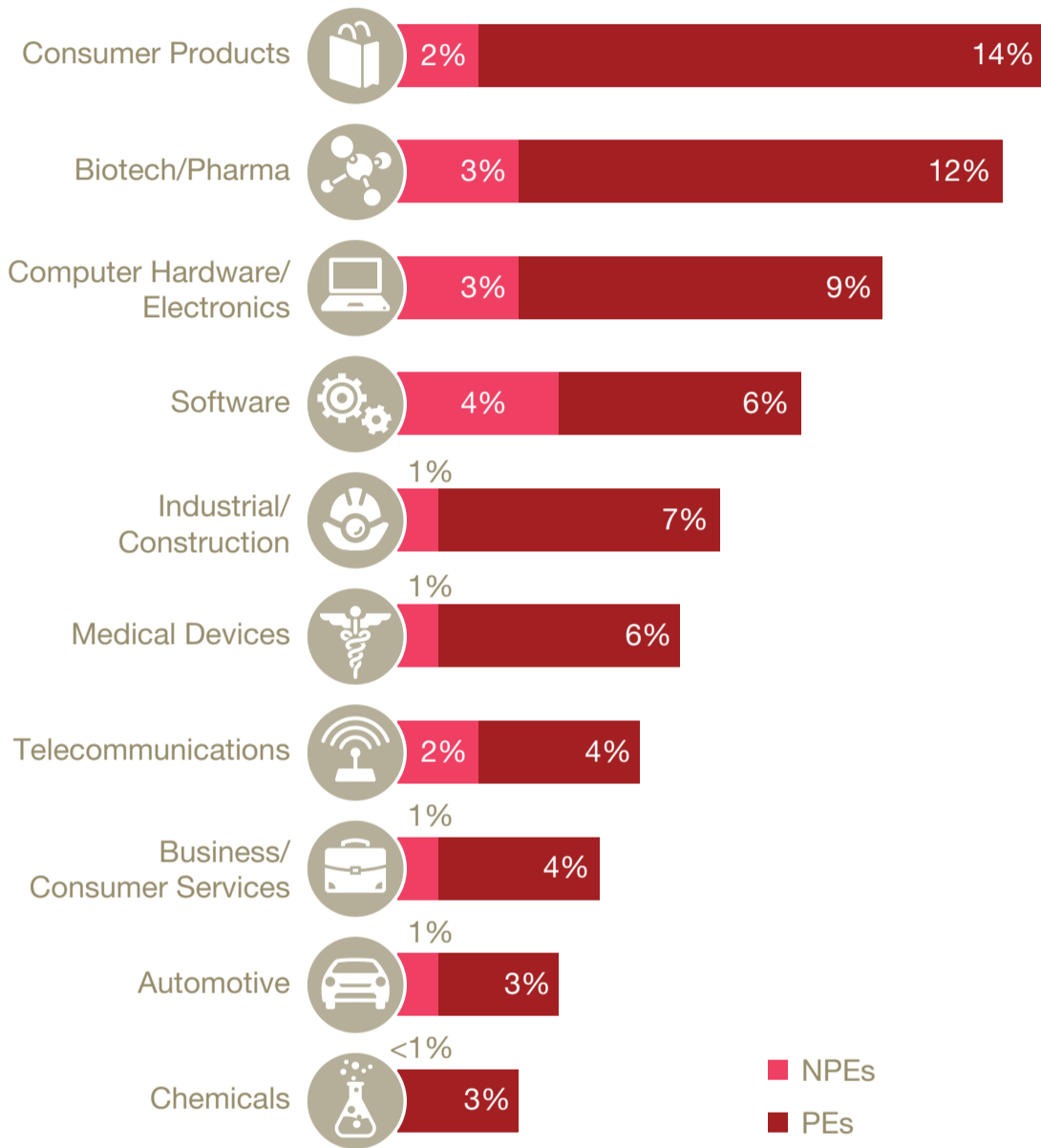
Fig 13



# Distribution of cases: Top ten industries: 1998-2017

Fig 14

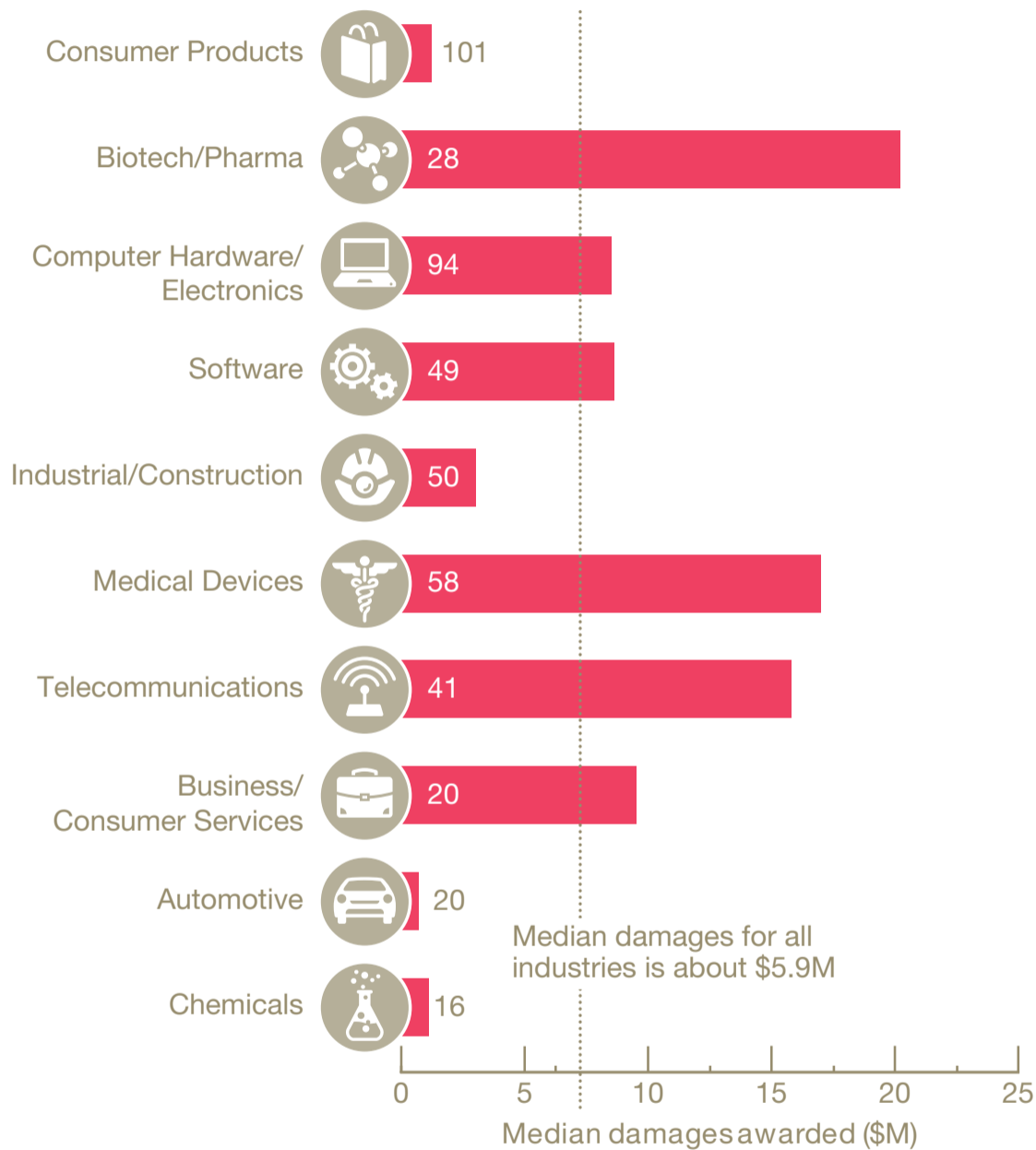
Consumer Products and Biotech/Pharma hold the top spots as most active industries for patent infringement litigation. NPE concentration is highest in the Software industry.



# Median damages award: Top ten industries: 1998–2017

Fig 15

Biotech/Pharma surpassed Medical Devices in this year's study as the industry with the highest median damages award.



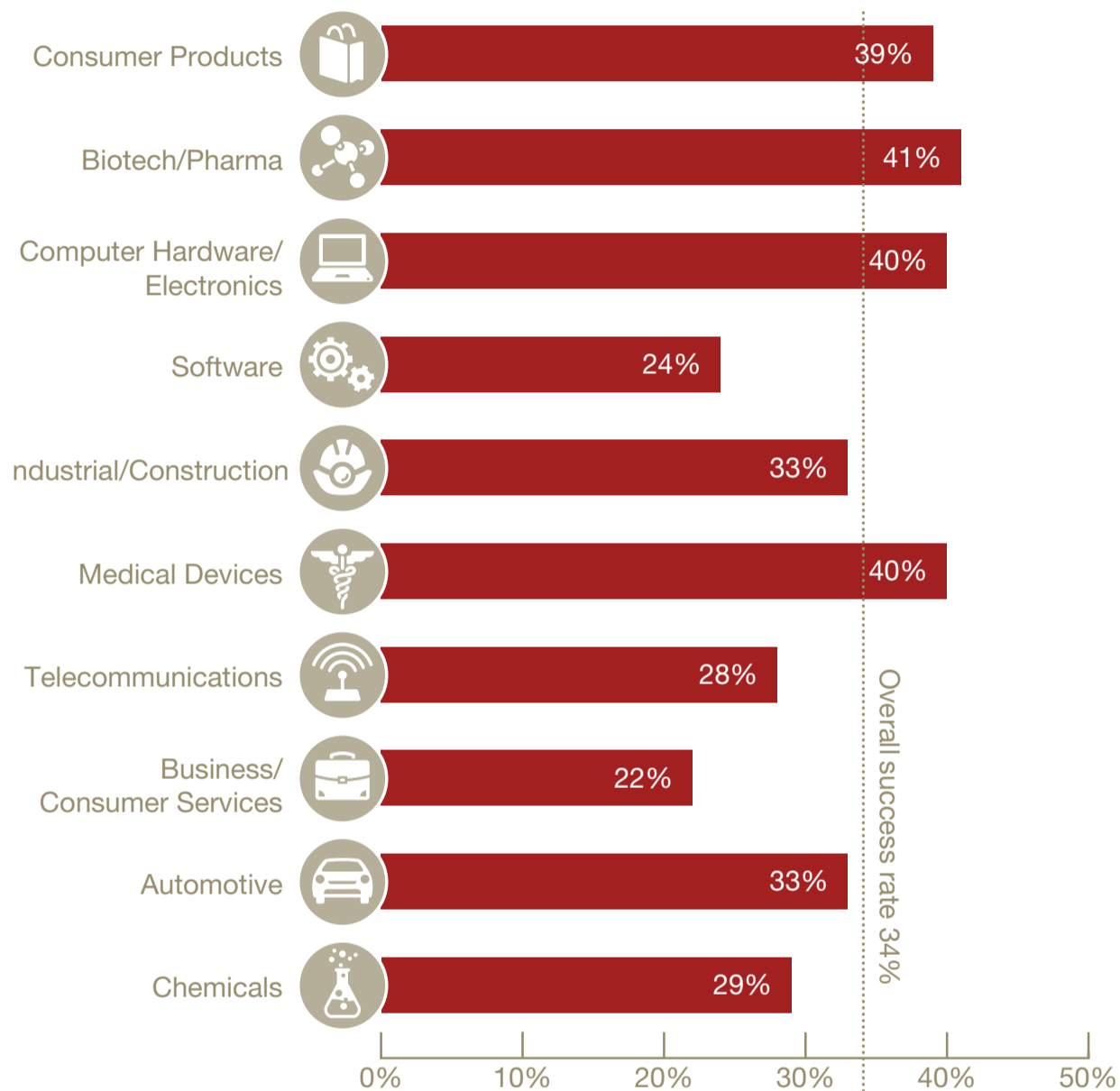
The number of identified decisions is indicated within the respective row.



# Patent holder success rates: Top ten industries: 1998–2017

## Fig 16

Along with the highest median damages, patent holders in the Biotech/Pharma industry have experienced the highest overall success rates (although only by a slim margin).



## District Court rankings for the last ten years: 2008–2017

Fig 17

After the Supreme Court's *TC Heartland* decision, a continued shift to Delaware as the most popular venue for patent litigation should not be surprising. It will be interesting to see how the shift to Delaware continues to impact these metrics over the coming years.

Overall rank	District	Case Count	Rank	Overall success rate	Rank	Median damages award	Rank	Median time-to-trial (in years)	Rank
1	Delaware	241	1	41%	5	\$15,332,276	3	2.1	6
2	Texas Eastern	184	2	54%	2	\$11,932,921	4	2.2	8
3	New Jersey	81	4	48%	4	\$11,048,463	5	2.7	12
4	Virginia Eastern	36	10	22%	13	\$26,366,936	2	1.0	1
5	Florida Middle	37	9	49%	3	\$369,863	14	1.9	3
6	Wisconsin Western	29	13	31%	8	\$9,996,534	8	1.4	2
7	California Southern	34	11	32%	7	\$1,676,460	12	1.9	4
8	Texas Southern	30	12	17%	14	\$108,123,900	1	2.1	7
9	Florida Southern	27	14	37%	6	\$3,149,243	11	2.0	5
10	Texas Northern	20	15	55%	1	\$8,117,824	9	2.5	11
11	California Northern	163	3	28%	10	\$4,591,222	10	2.7	13
12	California Central	80	5	28%	11	\$809,244	13	2.3	9
13	Massachusetts	43	8	30%	9	\$10,210,071	7	3.5	14
14	Illinois Northern	76	6	16%	15	\$10,563,047	6	4.0	15
15	New York Southern	69	7	25%	12	\$327,666	15	2.4	10
	All identified decisions	1,634		37%		\$5,647,065		2.4	

The rankings for these courts are based on their relative ranking for each of the four statistical measures, equally weighted.

## District Courts with most identified NPE decisions: 2008–2017

Fig 18

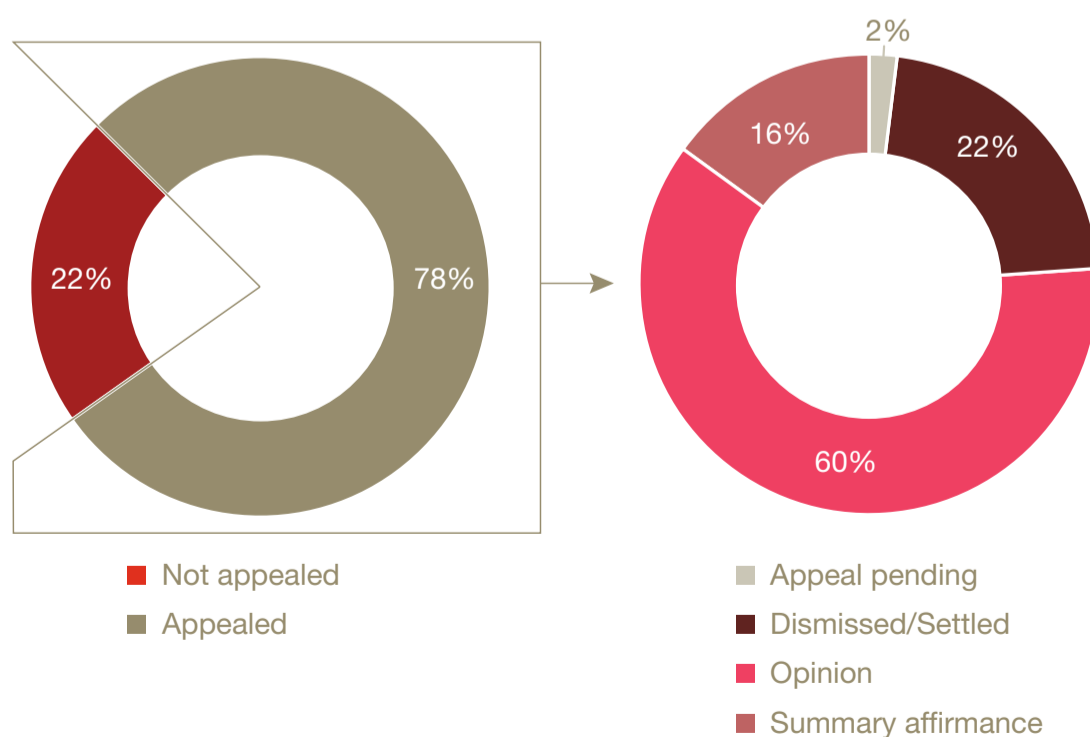
While Texas Eastern has the highest percentage of NPE activity when looking at a ten-year history, Delaware saw the biggest year-over-year jump in NPE cases. This trend is not surprising given the *TC Heartland* ruling.

District	Decisions involving NPEs	Total identified decisions	NPE % of total decisions	NPE success rate
Texas Eastern	73	184	40%	52%
Delaware	53	241	22%	25%
California Northern	38	163	23%	13%
Illinois Northern	23	76	30%	9%
California Central	16	80	20%	31%
New York Southern	15	69	22%	13%
All identified decisions	358	1,634	22%	28%

## Appellate status of District Court cases: 2006–2015 decisions

Fig 19

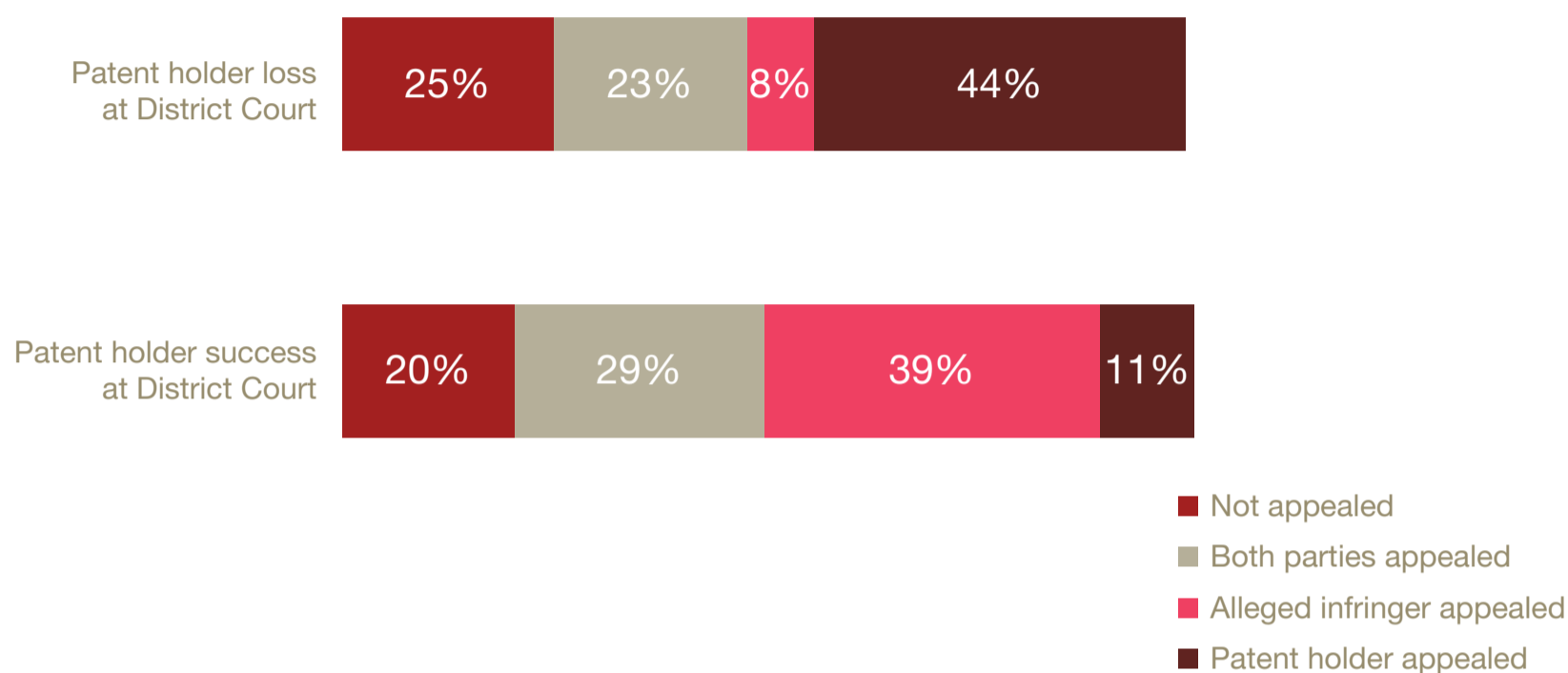
The vast majority of trial outcomes are appealed in some capacity, with more than half of the appeals receiving a written opinion from the Federal Circuit.



## Appeals after District Court decisions: 2006–2015

Fig 20

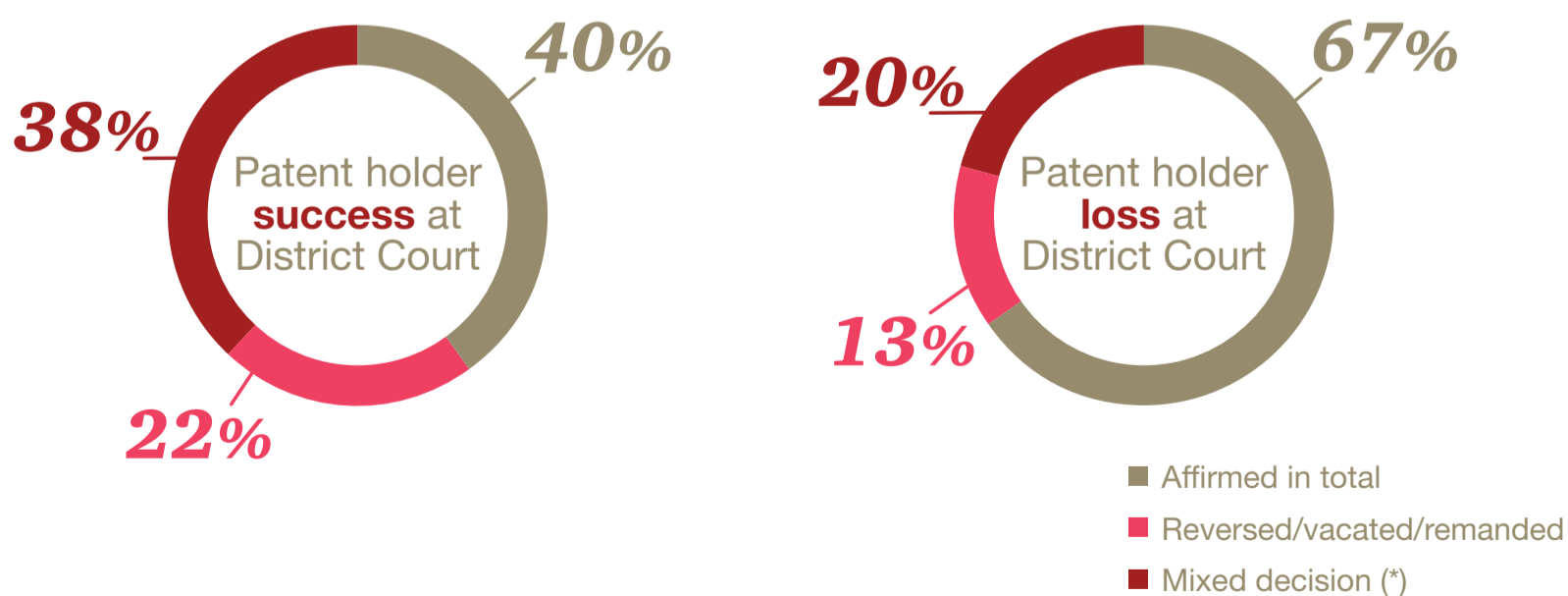
Appeals are largely driven by the unsuccessful party. Still, a decent number of successful parties in patent litigation appeal, with 11% of winning patent holders and 8% of winning accused infringers filing an appeal.



## Appellate outcome: 2006–2015

Fig 21

Over the last ten years, the Federal Circuit has affirmed a significantly higher percentage of trial decisions where the patent holder lost.



(\*) Mixed decisions are decisions in which the appeal was both affirmed in part and reversed, vacated or remanded in part.

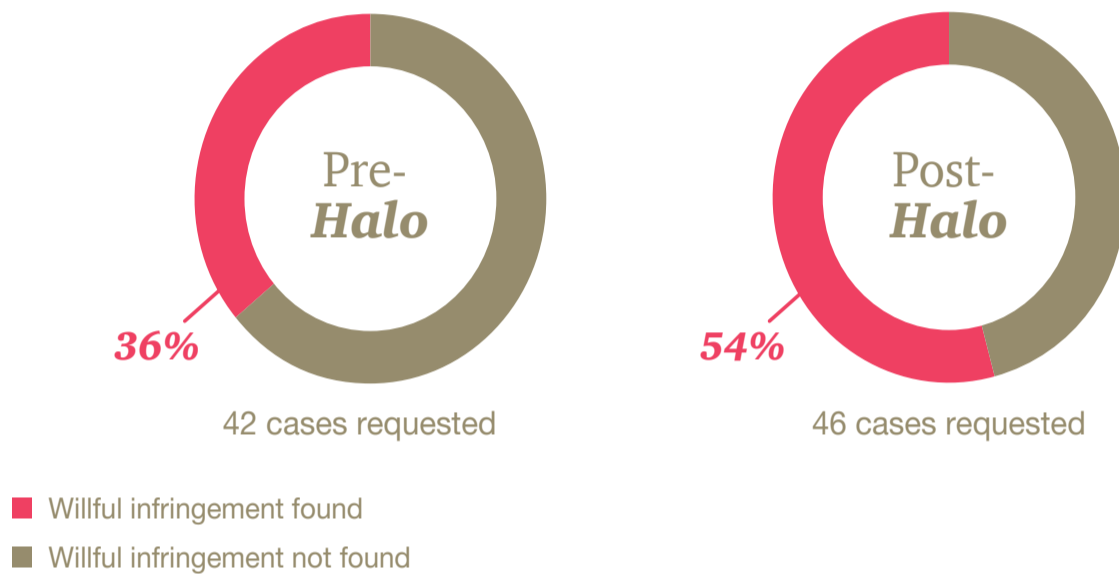


# Willful infringement

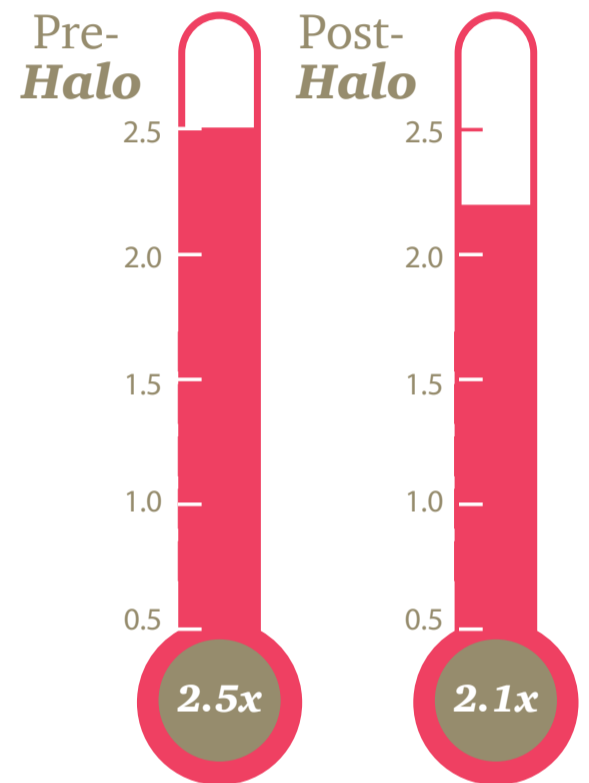
Fig 22

It's not surprising that the likelihood of a willful infringement finding increased after *Halo v. Pulse*, but it is intriguing that the average enhancement multiplier declined at the same time. Only time will tell whether this lower multiplier is the new reality or merely a random occurrence.

## Willfulness findings



## Damages multiplier



# Methodology

To study the trends related to patent decisions, PwC identified final decisions at summary judgment and trial recorded in two Lexis Advance databases, US District Court Cases and Jury Verdicts and Settlements, as well as in corresponding docket entries from LexisNexis CourtLink.

The study identified 2,570 District Court patent decisions issued since 1998. Some figures cited in this study have been rounded, therefore totals may not equal the sum of their components.

Definitions for important terms used throughout the study are listed here:

- **Cases decided at summary judgment** include those District Court patent infringement cases where a judge has issued a dispositive opinion regarding invalidity and/or infringement at summary judgment.
- **Cases decided at trial** include those District Court patent infringement cases where a decision was rendered by a judge or jury after trial.
- **Successes** are instances where a liability decision was made in favor of the patent holder.
- **Time-to-trial** is calculated from the complaint date to the first day of either the bench or jury trial for each case.
- A **nonpracticing entity (NPE)** is an entity that does not have the capability to design, manufacture, or distribute products with features protected by the patent.
- **Median damages** have been adjusted for inflation to 2017 US dollars.

## **Contacts:**

### **Doug Branch**

Partner

(214) 754-7278

doug.branch@pwc.com

### **Landan Ansell**

Director

(678) 419-1194

landan.ansell@pwc.com

## **Authors:**

Landan Ansell, Ronen Arad, Doug Branch, HyeYun Lee, Adil Pasha, Paul Robinson

## **Additionally, the following individuals contributed significantly to this study:**

Abhishak Singh, Abigail Cariker, Adrian Fowler, Alexis Egidio, Andrew Breckel, Chloe Partsch, Chris Vatti, Fareed Yousif, Hanbi Lee, Jimmy Wang, Julia Chura, Matthew Rao, Roberta Bazotti Stelkens, Samantha Donovan, Sarah Jaffe, Sarah Stanley, Valarie Jeffries, Wyllesha Curry, Natasha Birch, Peter Adamo, Andrew Quinn