2019 Insurance Fact Book

INSURANCE INFORMATION INSTITUTE

TO THE READER

Imagine a world without insurance.

Some might say, “So what?” or “Yes to that!” when reading the sentence above. And that’s understandable, given that often the best experience one can have with insurance is not to receive the benefits of the product at all, after a disaster or other loss. And others—who already have some understanding or even appreciation for insurance—might say it provides protection against financial aspects of a premature death, injury, loss of property, loss of earning power, legal liability or other unexpected expenses.

All that is true. We are the financial first responders. But there is so much more.

Insurance drives economic growth. It provides stability against risks. It encourages resilience. Recent disasters have demonstrated the vital role the industry plays in recovery—and that without insurance, the impact on individuals, businesses and communities can be devastating. As insurers, we know that even with all that we protect now, the coverage gap is still too big. We want to close that gap.

That desire is reflected in changes to this year’s Insurance Information Institute (I.I.I.) *Insurance Fact Book*. We have added new information on coastal storm surge risk and hail as well as reinsurance and the growing problem of marijuana and impaired driving. We have updated the section on litigiousness to include tort costs and compensation by state, and assignment of benefits litigation, a growing problem in Florida.

As always, the book provides valuable information on:

- World and U.S. catastrophes
- Property/casualty and life/health insurance results and investments
- Personal expenditures on auto and homeowners insurance
- Major types of insurance losses, including vehicle accidents, homeowners claims, crime and workplace accidents
- State auto insurance laws

The I.I.I. *Insurance Fact Book* is meant to be used along with the institute’s website, www.iii.org, which features information for consumers, researchers, public policymakers and businesses alike. The I.I.I. remains a vital source for the media, which rely on I.I.I. spokespersons, the *Fact Book*, videos and other materials for credible, timely information. Social networks are another way to stay in touch with the I.I.I. We welcome you to like our Facebook page and follow us on Twitter at @iiiorg and @III_Research, or connect with us on LinkedIn.

Thank you to the many associations, consultants and others who collect industry statistics and who have generously given permission to use their data—and to our members, for their longstanding support.

A world without insurance? Let’s hope not.

Sean Kevelighan
Chief Executive Officer
Insurance Information Institute

The *2019 Insurance Fact Book* is published by the Insurance Information Institute, a primary source for information, analysis and referral on insurance subjects. The *Fact Book* contains material from numerous sources. Because these sources define and collect data in various ways, and moreover, are constantly refining the data, differences among similar data may occur.

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Chapter 7: Property/Casualty Insurance By Line

Chapter 8: Losses

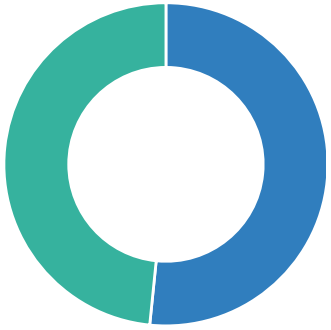
Chapter 9: Factors Affecting Costs

Appendices

Insurance Industry At A Glance

- U.S. insurance industry net premiums written totaled $1.2 trillion in 2017, with premiums recorded by life/health (L/H) insurers accounting for 52 percent, and premiums by property/casualty (P/C) insurers accounting for 48 percent, according to S&P Global Market Intelligence.
- P/C insurance consists primarily of auto, home and commercial insurance. Net premiums written for the sector totaled $558.2 billion in 2017.
- The L/H insurance sector consists primarily of annuities and life insurance. Net premiums written for the sector totaled $594.9 billion in 2017.
- Health insurance is generally considered separate. The sector includes private health insurance companies as well as government programs. P/C and L/H insurers also write some health insurance.
- There were 5,954 insurance companies in 2017 in the U.S. (including territories). According to the National Association of Insurance Commissioners those were comprised of the following: P/C (2,509); life/annuities (852); health (907); fraternal (82); title (58); risk retention groups (240) and other companies (1,306).
- Insurance carriers and related activities contributed $602.7 billion, or 3.1 percent, to the nation's gross domestic product (GDP) in 2017, according to the U.S. Bureau of Economic Analysis.

U.S. P/C And L/H Insurance Premiums, 2017 ($ billions)



L/H	51.6%	$594.9
P/C	48.4	558.2
Total	**100.0%**	**$1,153.1**

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

- The U.S. insurance industry employed 2.7 million people in 2017, according to the U.S. Department of Labor. Of those, 1.5 million worked for insurance companies, including L/H insurers (847,600 workers), P/C insurers (646,400 workers) and reinsurers (25,900 workers). The remaining 1.1 million people worked for insurance agencies, brokers and other insurance-related enterprises.
- Total P/C cash and invested assets were $1.69 trillion in 2017, according to S&P Global Market Intelligence. L/H cash and invested assets totaled $4.07 trillion in 2017. The total of cash and invested assets for both sectors was $5.77 trillion. The majority of these assets were in bonds (58 percent of P/C assets and 73 percent of L/H assets).
- P/C and L/H insurance companies paid $21 billion in premium taxes in 2017, or $64 for every person living in the United States, according to the U.S. Department of Commerce.
- P/C insurers paid out $101.9 billion in property losses related to catastrophes in 2017, according to the Property Claims Services (PCS) division of Verisk Analytics, the highest since PCS began collecting insured loss data in 1949. The $101.9 billion in losses in 2017 was 370 percent higher than $21.7 billion in 2016. There were 46 catastrophes in 2017, compared with 42 in 2016.

Employment In Insurance, 2008-2017 (Annual averages, 000)

Year	Insurance carriers				Insurance agencies, brokerages and related services			Total industry
	Direct insurers[1]		Reinsurers	Total	Insurance agencies and brokers	Other insurance-related activities[3]	Total	
	Life and health[2]	Property/ casualty						
2008	800.8	646.7	27.9	1,475.4	671.6	258.1	929.6	2,405.1
2009	802.8	632.9	27.5	1,463.2	653.3	254.2	907.4	2,370.6
2010	804.1	614.3	26.8	1,445.2	642.3	253.1	895.5	2,340.6
2011	788.9	611.6	25.6	1,426.1	649.2	261.1	910.3	2,336.4
2012	811.3	599.5	25.7	1,436.5	659.6	272.3	931.8	2,368.3
2013	813.2	593.7	26.2	1,433.1	672.3	283.5	955.8	2,388.9
2014	829.0	594.7	25.1	1,448.8	720.0	297.1	1,017.1	2,465.8
2015	829.8	611.6	25.1	1,466.5	762.8	309.1	1,071.8	2,538.3
2016	818.9	643.5	25.3	1,487.7	783.5	321.5	1,105.0	2,592.7
2017	847.6	646.4	25.9	1,519.9	804.9	330.9	1,135.7	2,655.7

[1]Establishments primarily engaged in initially underwriting insurance policies. [2]Includes establishments engaged in underwriting annuities, life insurance and health and medical insurance policies. [3]Includes claims adjusters, third-party administrators of insurance funds and other service personnel such as advisory and insurance ratemaking services.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Chapter 1

World Insurance Markets

PREMIUMS

World Life And Nonlife Insurance In 2017

Outside the United States, the insurance industry is divided into life and nonlife (or general insurance), rather than life/health and property/casualty. Swiss Re's 2017 world insurance study is based on direct premium data from 147 countries, with detailed information on the largest 88 markets. World insurance premiums rose 1.5 percent in 2017, adjusted for inflation, down from 2.2 percent in 2016. Nonlife premiums slowed to 2.8 percent growth in 2017, adjusted for inflation, from 3.3 percent growth in 2016. Life insurance premiums grew by 0.5 percent after inflation in 2017, slower than the 1.4 percent growth reported for 2016.

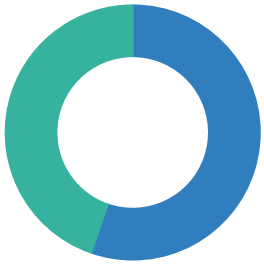
Top 10 Countries By Life And Nonlife Direct Premiums Written, 2017[1] (US$ millions)

Rank	Country	Life premiums	Nonlife premiums[2]	Total premiums		
				Amount	Percent change from prior year	Percent of total world premiums
1	United States[3, 4]	$546,800	$830,315	$1,377,114	-0.1%	28.15%
2	P.R. China[5]	317,570	223,876	541,466	16.2	11.07
3	Japan[4, 6]	307,232	114,818	422,050	-6.5	8.63
4	United Kingdom[4]	189,833	93,499	283,331	-2.6	5.79
5	France[7]	153,520	88,083	241,603	1.8	4.94
6	Germany[7, 8]	96,973	126,005	222,978	3.8	4.56
7	South Korea[4, 6]	102,839	78,378	181,218	2.4	3.70
8	Italy[4]	113,947	41,562	155,509	-2.6	3.18
9	Canada[4, 9]	51,592	67,927	119,520	5.5	2.44
10	Taiwan	98,602	18,873	117,474	15.8	2.40

[1]Before reinsurance transactions. [2]Includes accident and health insurance. [3]Nonlife premiums include state funds; life premiums include an estimate of group pension business. [4]Estimated. [5]Provisional. [6]April 1, 2017 to March 31, 2018. [7]Nonlife premiums are provisional. [8]Life premiums are estimated. [9]Life premiums are net premiums.

Source: Swiss Re, *sigma*, No. 3/2018.

World Life And Nonlife Insurance Direct Premiums Written, 2017[1] (US$ billions)



Life	$2,657	54%
Nonlife[2]	2,234	46
Total	**$4,892**	**100%**

World Life And Nonlife Insurance Direct Premiums Written, 2015-2017[1] (US$ millions)

Year	Life	Nonlife[2]	Total
2015	$2,543,100	$2,056,752	$4,599,853
2016	2,581,972	2,120,869	4,702,841
2017	2,657,270	2,234,424	4,891,694

[1]Before reinsurance transactions. [2]Includes accident and health insurance.
Source: Swiss Re, *sigma* database, *sigma*, No. 3/2018.

Life And Nonlife Insurance Direct Premiums Written By Country, 2017[1] (US$ millions)

Country	Nonlife premiums[2]	Life premiums	Total premiums	
			Amount	Percent of total world premiums
Algeria	$1,099	$117	$1,215	0.02%
Angola	764	15	780	0.02
Argentina	13,959	2,476	16,435	0.34
Australia	47,893	32,169	80,061	1.64
Austria	12,726	6,549	19,275	0.39
Bahamas	550	230	780	0.02
Bahrain	623	139	762	0.02
Bangladesh	371	974	1,345	0.03
Belgium	17,060	17,650	34,710	0.71
Brazil	36,441	46,874	83,315	1.70
Bulgaria	1,022	213	1,236	0.03
Canada	67,927	51,592	119,520	2.44
Cayman Islands	716	30	746	0.02
Chile	4,900	8,394	13,294	0.27
Colombia	6,089	2,802	8,890	0.18
Costa Rica	1,134	198	1,331	0.03
Croatia	923	444	1,367	0.03
Cyprus	526	394	920	0.02
Czech Republic	3,989	2,448	6,438	0.13
Denmark	8,941	24,200	33,141	0.68
Dominican Republic	862	179	1,040	0.02
Ecuador	1,614	431	2,046	0.04
Egypt	826	761	1,587	0.03
Finland	4,788	21,370	26,158	0.53
France	88,083	153,520	241,603	4.94

(table continues)

Life And Nonlife Insurance Direct Premiums Written By Country, 2017[1] (US$ millions) (Cont'd)

Country	Nonlife premiums[2]	Life premiums	Total premiums	
			Amount	Percent of total world premiums
Germany	$126,005	$96,973	$222,978	4.56%
Greece	2,428	1,984	4,412	0.09
Guatemala	738	194	932	0.02
Hong Kong	11,477	49,808	61,286	1.25
Hungary	1,741	1,670	3,411	0.07
India	24,764	73,240	98,003	2.00
Indonesia	4,649	19,312	23,960	0.49
Iran	7,893	1,274	9,166	0.19
Ireland	8,626	55,680	64,306	1.31
Israel	8,058	9,368	17,426	0.36
Italy	41,562	113,947	155,509	3.18
Jamaica	442	290	732	0.01
Japan	114,818	307,232	422,050	8.63
Jordan	746	108	854	0.02
Kazakhstan	815	203	1,018	0.02
Kenya	1,192	807	2,000	0.04
Kuwait	668	153	821	0.02
Lebanon	1,130	505	1,634	0.03
Liechtenstein	2,732	2,417	5,149	0.11
Luxembourg	3,727	26,549	30,277	0.62
Macao	230	734	964	0.02
Malaysia	4,666	10,739	15,405	0.31
Malta	3,147	1,544	4,691	0.10
Mexico	13,449	11,844	25,293	0.52
Morocco	2,195	1,523	3,718	0.08
Namibia	279	686	965	0.02
Netherlands	63,404	15,610	79,013	1.62
New Zealand	8,437	1,749	10,186	0.21
Nigeria	628	274	902	0.02
Norway	8,501	11,289	19,790	0.40
Oman	1,053	161	1,214	0.02
Pakistan	788	1,810	2,598	0.05
Panama	1,072	371	1,444	0.03
Peru	1,831	1,642	3,473	0.07

(table continues)

Life And Nonlife Insurance Direct Premiums Written By Country, 2017[1] (US$ millions) (Cont'd)

Country	Nonlife premiums[2]	Life premiums	Total premiums	
			Amount	Percent of total world premiums
Philippines	$1,718	$3,885	$5,602	0.11%
Poland	10,934	5,036	15,970	0.33
Portugal	5,142	8,101	13,243	0.27
P.R China	223,876	317,570	541,446	11.07
Romania	1,951	516	2,467	0.05
Russia	16,215	5,683	21,898	0.45
Saudi Arabia	9,434	283	9,717	0.20
Serbia	665	198	864	0.02
Singapore	7,309	21,522	28,831	0.59
Slovakia	1,455	956	2,410	0.05
Slovenia	1,724	738	2,462	0.05
South Africa	9,510	38,286	47,796	0.98
South Korea	78,378	102,839	181,218	3.70
Spain	37,331	33,216	70,547	1.44
Sri Lanka	530	458	987	0.02
Sweden	9,744	26,836	36,580	0.75
Switzerland	27,960	29,944	57,904	1.18
Taiwan	18,873	98,602	117,474	2.40
Thailand	7,710	16,352	24,062	0.49
Trinidad and Tobago	547	515	1,062	0.02
Tunisia	647	166	814	0.02
Turkey	10,200	1,855	12,054	0.25
Ukraine	1,523	110	1,633	0.03
United Arab Emirates	10,388	3,133	13,521	0.28
United Kingdom	93,499	189,833	283,331	5.79
United States	830,315	546,800	1,377,114	28.15
Uruguay	911	665	1,576	0.03
Venezuela	1,673	40	1,714	0.04
Vietnam	1,786	2,865	4,651	0.10
Other	14,759	4,408	19,171	0.39
World [3]	**$2,234,424**	**$2,657,270**	**$4,891,694**	**100.00%**

[1]Before reinsurance transactions. For more information on country data see www.swissre.com. [2]Includes accident and health insurance. [3]Totals may not add up due to rounding.

Source: Swiss Re, *sigma*, No. 3/2018.

Top 10 Countries By Total Insurance Premiums Per Capita And Percent Of Gross Domestic Product (GDP), 2017[1]
(US$ millions)

Rank	Country	Total premiums per capita
1	Cayman Islands	$12,122
2	Hong Kong	8,313
3	Switzerland	6,811
4	Denmark	5,772
5	Luxembourg	5,011
6	Taiwan	4,997
7	Singapore	4,749
8	Finland	4,737
9	Ireland	4,687
10	Netherlands	4,631
Total world		**$650**

Rank	Country	Total premiums as a percent of GDP
1	Taiwan	21.32%
2	Cayman Islands	19.61
3	Hong Kong	17.94
4	South Africa	13.75
5	South Korea[2]	11.57
6	Finland	10.65
7	Denmark	10.21
8	United Kingdom	9.58
9	Netherlands	9.56
10	France	8.95
Total world		**6.13%**

[1]Includes nonlife and life insurance and cross-border business. [2]April 1, 2017 to March 31, 2018.
Source: Swiss Re, *sigma*, No. 3/2018.

Leading Companies Of The Top 10 Countries By Life And Nonlife Premiums

Top 10 Life And Nonlife Insurance Companies, United States, 2017 (US$ millions)

Life		
Rank	Company	Direct premiums written[1]
1	MetLife Inc.	$86,621.6
2	Prudential Financial Inc.	47,465.7
3	New York Life Insurance Group	31,852.4
4	Principal Financial Group Inc.	28,153.2
5	Massachusetts Mutual Life Insurance Co.	24,735.1
6	Jackson National Life Group	22,439.1
7	American International Group	21,465.7
8	Transamerica	21,317.7
9	AXA	21,290.3
10	Lincoln National Corp.	20,397.4

Nonlife		
Rank	Company	Direct premiums written[2]
1	State Farm Mutual Automobile Insurance	$64,892.6
2	Berkshire Hathaway Inc.	38,408.3
3	Liberty Mutual	33,831.7
4	Allstate Corp.	31,501.7
5	Progressive Corp.	27,862.9
6	Travelers Companies Inc.	24,875.1
7	Chubb Ltd.	21,266.7
8	USAA Insurance Group	20,151.4
9	Farmers Insurance Group of Companies[3]	19,855.5
10	Nationwide Mutual Group	19,218.9

[1]Includes life insurance, annuity considerations, deposit-type contract funds and other considerations; excludes accident and health insurance. Before reinsurance transactions. [2]Before reinsurance transactions, includes state funds. [3]Data for Farmers Insurance Group of Companies and Zurich Financial Group (which owns Farmers' management company) are reported separately by S&P Global Market Intelligence.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Top 10 Life and Nonlife Insurance Companies, People's Republic of China, 2017 (US$ millions)

Life			Nonlife		
Rank	Company	Premium income[1]	Rank	Company	Premium income
1	China Life Insurance Co., Ltd.	$75,802.6	1	PICC Property and Casualty Co., Ltd.	$51,686.0
2	Ping An Life Insurance Company of China, Ltd.	54,592.8	2	Ping An Property & Casualty	31,960.1
3	Anbang Life Insurance Co., Ltd.	28,052.6	3	China Pacific Property Insurance Co., Ltd. (CPIC)	15,388.5
4	CPIC Life (China Pacific Insurance (Group) Co., Ltd.)	25,744.9	4	China Life Property and Casualty Co., Ltd.	9,798.1
5	Taikang Life Insurance Co., Ltd.	17,072.9	5	China United Property Insurance Company	5,745.6
6	Taiping Life Insurance Co., Ltd.	16,858.0	6	China Continent Property & Casualty Insurance Co., Ltd.	5,493.3
7	New China Life Insurance Co., Ltd.	16,172.6	7	Sunshine Property & Casualty Insurance Co., Ltd.	4,951.0
8	PICC Life Insurance Co., Ltd.	15,720.0	8	Taiping General Insurance Co., Ltd.	3,265.6
9	Huaxia Life Insurance Co., Ltd.	12,867.6	9	China Export & Credit Insurance Corporation	2,735.9
10	Funde Sino Life Insurance Co., Ltd.	11,897.6	10	Tian An Property Insurance Company	2,097.1

[1]Includes personal accident and health.

Source: China Insurance Regulatory Commission (www.circ.gov.cn), sourced from Timetric. © Global Data.

Top 10 Life And Nonlife Insurance Companies, Japan, 2016 (US$ millions)

Life			Nonlife		
Rank	Company	Gross premiums written[1]	Rank	Company	Gross premiums written[1]
1	Nippon Life Insurance Company	$46,343.7	1	Sompo Japan Nipponkoa Insurance Inc.	$25,467.9
2	Japan Post Insurance Co. Ltd.	42,717.3	2	Tokio Marine & Nichido Fire Insurance Co., Ltd.	25,300.7
3	Meiji Yasuda Life Insurance Company	30,475.2	3	Mitsui Sumitomo Insurance Co., Ltd.	17,347.5
4	Sumitomo Life Insurance Company	24,044.5	4	Aioi Nissay Dowa Insurance Co., Ltd.	13,740.7
5	Dai-ichi Life Insurance Co., Ltd.	23,416.8	5	The Fuji Fire & Marine Insurance Co., Ltd.	2,793.6
6	Dai-ichi Frontier Life Insurance Co., Ltd.	21,010.4	6	AIU Insurance Co., Ltd.	2,346.4
7	MetLife Life Insurance Co., Ltd.	13,236.1	7	The Kyoei Fire & Marine Insurance Co., Ltd.	1,938.7
8	Mitsui Sumitomo Primary Life Insurance Co., Ltd.	10,445.9	8	Nisshin Fire & Marine Insurance Co., Ltd.	1,531.7
9	Gibraltar Life Insurance Co., Ltd.	9,962.9	9	Sony Assurance Inc.	926.1
10	Sony Life Insurance Co., Ltd.	9,089.5	10	American Home Assurance Co., Ltd.	779.9

[1]Gross premiums written: direct premiums written and reinsurance assumed premium before taking into account deductions for reinsurance and ceding commissions. Includes personal accident and health.

Source: The Life Insurance Association of Japan (www.seiho.or.jp) and The General Insurance Association Of Japan (www.sonpo.or.jp/en), sourced from Timetric. © Global Data.

Top 10 Life And Nonlife Insurance Companies, United Kingdom, 2016 (US$ millions)

Life			Nonlife		
Rank	Company	Gross premiums written[1]	Rank	Company	Gross premiums written[1]
1	Prudential	$13,490.7	1	AVIVA Plc	$6,127.1
2	Legal & General	11,634.8	2	AXA Insurance UK Plc	4,870.6
3	Aegon	10,908.6	3	Direct Line Insurance Group Plc	4,436.3
4	Lloyds Banking Group	10,006.7	4	RSA Insurance Group Plc	3,821.6
5	Royal London Mutual	9,830.7	5	Zurich Insurance Group Ltd. (Zurich)	3,273.5
6	Rothesay Life	9,323.4	6	Allianz Insurance Plc	2,800.5
7	Aviva Plc	6,127.1	7	BUPA Insurance Limited	2,221.8
8	Invesco	3,717.5	8	Liverpool Victoria Friendly Society Limited	2,147.2
9	Just Group Plc	3,687.2	9	AIG Europe Limited	1,933.9
10	Pension Insurance Corporation	3,521.6	10	Ageas (UK) Limited	1,905.6

[1]Gross premiums written: direct premiums written and reinsurance assumed premium before taking into account deductions for reinsurance and ceding commissions.

Source: The Solvency and Financial Conditions Reports (SFCR) of these companies, sourced by Timetric. © Global Data.

Top 10 Life and Nonlife Insurance Companies, France, 2016 (US$ millions)

Life			Nonlife		
Rank	Company	Direct premiums written[1]	Rank	Company	Gross premiums written[2]
1	CNP	$25,361.2	1	AXA	$11,172.9
2	Credit Agricole Assurances	23,837.5	2	Covea	11,167.8
3	AXA France Assurance	16,113.7	3	Groupama	8,828.2
4	Credit Mutuel	14,959.6	4	Allianz	6,119.7
5	BNP Paribas Cardif	12,268.4	5	Groupe Macif	4,330.2
6	Societe Generale	10,928.4	6	Credit Agricole	4,236.7
7	Generali	8,703.1	7	Generali	3,066.1
8	Allianz	7,717.1	8	Credit Mutuel	2,399.5
9	BPCE	7,615.3	9	Maif	2,261.3
10	Aviva	6,326.2	10	Matmut	1,507.2

[1]The total amount of premiums written by an insurer before taking into account the premiums that are ceded to reinsurers; provisional. [2]Gross premiums written: direct premiums written and reinsurance assumed premium before taking into account deductions for reinsurance and ceding commissions.

Source: Life: French Insurance Federation, sourced by Timetric; Nonlife: compiled by Timetric using the Solvency and Financial Conditions Reports of insurance companies that operate in France. © Global Data.

Top 10 Life And Nonlife Insurance Companies, Germany, 2016 (US$ millions)

Life			Nonlife		
Rank	Company	Gross premiums written[1]	Rank	Company	Gross premiums written[1]
1	Allianz Leben	$19,902.5	1	Allianz Vers	$10,376.9
2	R+V Lebensver AG	5,608.3	2	Allianz Global Corporate & Specialty SE	4,503.5
3	Aachenmünchener Leben AG	5,410.0	3	HDI-Gerling Industrie	4,421.7
4	Zurich Deutsch Herold	3,865.1	4	AXA Vers	4,327.5
5	Debeka Leben	3,766.0	5	R+V Allgemeine Vers	4,098.4
6	Generali Leben AG	3,479.0	6	Ergo Vers	3,661.2
7	AXA Leben	2,993.1	7	LVM	2,450.0
8	Ergo Leben AG	2,978.0	8	HUK-COBURG Allgemeine Vers	2,160.5
9	Bayern-Vers	2,806.3	9	Generali Vers	1,996.1
10	Alte Leipziger Leben	2,611.8	10	Gothaer Allgemeine Vers	1,905.0

[1]Gross premiums written: direct premiums written and reinsurance assumed premium before taking into account deductions for reinsurance and ceding commissions. Excludes personal accident and health.

Source: Federal Financial Supervisory Authority (www.bafin.de), sourced by Timetric. © Global Data.

Top 10 Life And Nonlife Insurance Companies, South Korea, 2017 (US$ millions)

Life			Nonlife[2]		
Rank	Company	Direct premiums written[1]	Rank	Company	Direct premiums written[1]
1	Samsung Life Insurance	$23,246.6	1	Samsung Fire	$15,914.7
2	Hanwha Life Insurance Co., Ltd.	12,200.4	2	Hyundai Marine and Fire Insurance Co., Ltd.	11,207.4
3	Kyobo Life Insurance	10,264.0	3	Dongbu Fire	10,754.7
4	NongHyup Life Insurance Company	7,187.5	4	KB Insurance Co., Ltd.	8,491.7
5	Tongyang Life Insurance	5,218.1	5	Meritz Fire & Marine Insurance Co., Ltd.	5,623.0
6	SK Life Insurance	4,956.7	6	Hanwha General Insurance Co., Ltd.	4,638.6
7	Shinhan Life Insurance	4,601.5	7	Heungkuk Fire and Marine Insurance Co., Ltd.	2,784.8
8	Hungkuk Life Insurance	4,194.8	8	NongHyup Property & Casualty Insurace Company	2,750.1
9	ING Life Insurance	3,632.8	9	Lotte Non-Life Insurance Co., Ltd.	1,994.8
10	Hyundai Life	3,590.9	10	Seoul Guarantee Insurance	1,326.7

[1]The total amount of premiums written by an insurer before taking into account the premiums that are ceded to reinsurers. Excludes personal accident and health. [2]Includes premium received from foreign markets.

Source: Financial Supervisory Service (www.fss.or.kr), Timetric. © Global Data.

Top 10 Life And Nonlife Insurance Companies, Italy, 2017 (US$ millions)

Life			Nonlife		
Rank	Company	Direct premiums written[1]	Rank	Company	Direct premiums written[1]
1	Poste Vita	$22,849.1	1	Unipolsai Assicurazioni	$6,668.4
2	Intesa Sanpaolo Vita	11,057.4	2	Generali Italia	4,319.1
3	Generali Italia	9,055.3	3	Allianz	3,294.8
4	Intesa Sanpaolo Life (LPS)	8,947.8	4	Società Cattolica	1,602.4
5	Creditras Vita	5,672.4	5	Axa Assicurazioni	1,423.1
6	Alleanza Assicurazioni	5,543.6	6	Società Reale Mutua	1,376.5
7	Fideuram Vita	5,404.1	7	Vittoria Assicurazioni	1,147.8
8	Genertellife	4,909.8	8	Zurich Insurance Plc	1,137.9
9	BNP Paribas Cardif Vita	4,329.1	9	Groupama Assicurazioni	1,116.6
10	Darta Saving Life Assurance (LPS)	3,475.3	10	Itas Mutua	797.1

[1]The total amount of premiums written by an insurer before taking into account the premiums that are ceded to reinsurers. Excludes personal accident and health.
Source: National Association of Insurance Companies (www.ania.it), sourced by Timetric. © Global Data.

Top 10 Life and Nonlife Insurance Companies, Canada, 2017 (US$ millions)

Life			Nonlife		
Rank	Company	Gross premiums written[1]	Rank	Company	Gross premiums written[1]
1	The Manufacturers Life Insurance Company	$28,020.9	1	Intact Insurance Company	$5,240.6
2	The Great-West Life Assurance Company	26,537.0	2	Aviva Insurance Company of Canada	3,109.4
3	Sun Life Financial Inc.	15,255.3	3	Security National Insurance Company	2,306.8
4	RBC Life Insurance Company	1,593.4	4	The Wawanesa Mutual Insurance Company	2,277.5
5	Co-operators Life Insurance Company	915.4	5	Co-operators General Insurance Company	2,114.1
6	BMO Life Insurance Company	912.9	6	Economical Mutual Insurance Company	1,762.2
7	The Empire Life Insurance Company	743.3	7	Royal & Sun Alliance Insurance Company of Canada	1,388.8
8	The Equitable Life Insurance Company of Canada	696.3	8	Certas Home and Auto Insurance Company	1,309.8
9	Ivari Insurance Company	622.4	9	Allstate Insurance Company of Canada	1,136.3
10	Blue Cross Life Insurance Company of Canada	285.1	10	The Personal Insurance Company	1,104.7

[1]Gross premiums written: direct premiums written and reinsurance assumed premium before taking into account deductions for reinsurance and ceding commissions.
Source: Office of the Superintendent of Financial Institutions (www.osfi-bsif.gc.ca), sourced by Timetric. © Global Data.

Top 10 Life And Nonlife Insurance Companies, Taiwan, 2017 (US$ millions)

Life			Nonlife		
Rank	Company	Direct premiums written[1]	Rank	Company	Direct premiums written[1]
1	Cathay Life	$21,888.0	1	Fubon	$1,012.5
2	Nan Shan Life	15,346.2	2	Cathay Century	570.6
3	Fubon Life	14,421.0	3	Shin Kong	485.2
4	Shin Kong Life	8,995.6	4	Tokio Marine Newa	371.8
5	Taiwan Life	7,820.0	5	Mingtai	371.0
6	China Life	6,034.5	6	Union	266.6
7	Chunghwa Pos	4,716.1	7	South China	259.8
8	Mercuries Life	3,733.0	8	Taian	218.6
9	TransGlobe Life	2,614.2	9	Chung Kuo	207.2
10	Farglory Life	2,598.2	10	The First	205.8

[1]The total amount of direct premiums written by an insurer before taking into account the premiums that are ceded to reinsurers. Personal accident and health and domestic and foreign business are included.

Source: Taiwan Insurance Institute (www.tii.org.tw), sourced by Timetric. © Global Data.

REINSURANCE

Each year the Reinsurance Association of America (RAA) provides an overview of the countries from which U.S. insurance companies obtain reinsurance, i.e., the countries to which they have ceded, or transferred, some of their risk. The analysis includes premiums that a U.S. insurance company cedes to offshore, i.e., foreign, reinsurance companies that are not part of the insurer's own corporate group (unaffiliated offshore reinsurers in the chart below), as well as business ceded to overseas reinsurers that are part of the insurer's corporate family (affiliated offshore reinsurers in the chart below).

The RAA report, Offshore Reinsurance in the U.S. Market, compares U.S. insurance premiums ceded to U.S. professional reinsurance companies to the U.S. premiums ceded to offshore, i.e., foreign, companies. U.S. professional reinsurance companies accounted for 35.6 percent of the U.S. premium written that was ceded in 2016, while offshore companies accounted for 64.4 percent. However, a number of U.S.-based reinsurers are owned by foreign companies. Taking this into consideration, offshore or foreign owned U.S. reinsurers accounted for 91.2 percent of premiums assumed in 2016, while U.S. professional reinsurers accounted for 8.8 percent.

Top 10 Countries By U.S. Reinsurance Premiums Ceded To Unaffiliated And Affiliated Offshore Reinsurers, 2016 (US$ millions)

Unaffiliated offshore reinsurers			Affiliated offshore reinsurers		
Rank	**Country**	**Premiums ceded**	**Rank**	**Country**	**Premiums ceded**
1	Bermuda	$10,176	1	Bermuda	$24,770
2	United Kingdom	5,495	2	Switzerland	15,243
3	Switzerland	4,835	3	Germany	3,706
4	Germany	4,231	4	Cayman Islands	1,401
5	Cayman Islands	3,955	5	France	735
6	Turks and Caicos	1,600	6	United Kingdom	676
7	Channel Islands	622	7	Spain	534
8	Barbados	597	8	Turks and Caicos	495
9	British Virgin Islands	573	9	Japan	480
10	Ireland	502	10	Malta	468
Total, top 10 countries		**$32,586**	**Total, top 10 countries**		**$48,508**
Total world		**$34,652**	**Total world**		**$49,019**

Source: Reinsurance Association of America.

U.S. Reinsurance Premiums Ceded to Unaffiliated and Affiliated Offshore Reinsurers, 2014-2016 (US$ millions)

	2014	2015	2016
Unaffiliated offshore reinsurers	$30,211	$33,035	$34,652
Affiliated offshore reinsurers	42,295	45,469	49,019
Total	**$72,506**	**$78,504**	**$83,671**

Source: Reinsurance Association of America.

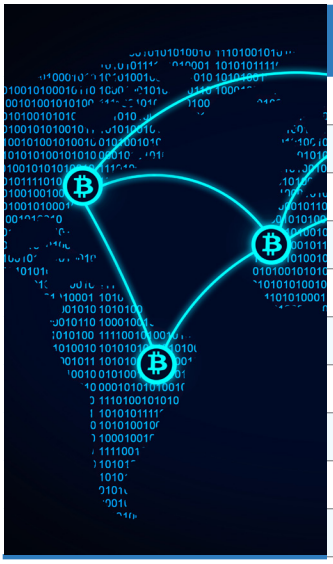
LEADING COMPANIES

Top 10 Global Insurance Companies By Revenues, 2017[1] (US$ millions)

Rank	Company	Revenues	Country	Industry
1	Berkshire Hathaway	$242,137	U.S.	Property/casualty
2	AXA	149,461	France	Life/health
3	Ping An Insurance	144,197	China	Life/health
4	Allianz	123,532	Germany	Property/casualty
5	China Life Insurance	120,224	China	Life/health
6	Japan Post Holdings	116,616	Japan	Life/health
7	Prudential	111,458	U.K.	Life/health
8	Assicurazioni Generali	100,552	Italy	Life/health
9	State Farm Insurance Cos.	78,331	U.S.	Property/casualty
10	People's Insurance Company of China	71,579	China	Property/casualty

[1]Based on an analysis of companies in the Global Fortune 500. Includes stock and mutual companies.
Source: Fortune.

Top 10 Global Property/Casualty Reinsurers By Gross Reinsurance Premiums Written, 2017[1] (US$ millions)



Rank	Company	Gross reinsurance premiums written	Country
1	Munich Reinsurance Co.	$21,377	Germany
2	Swiss Re Ltd.	20,371	Switzerland
3	Berkshire Hathaway Inc.	17,815	U.S.
4	Lloyd's of London[2]	14,250	U.K.
5	Hannover Re S.E.	12,832[3]	Germany
6	Scor S.E.	7,218	France
7	Everest Re Group Ltd.	5,115	Bermuda
8	XL Group PLC	4,682	Ireland
9	Transatlantic Holdings Inc.	4,211	U.S.
10	PartnerRe Ltd.	4,189	Bermuda

[1]Ranked by unaffiliated gross premiums written. [2]Lloyd's premiums are reinsurance only. Premiums for certain groups within the rankings also may include Lloyd's syndicate premiums when applicable. [3]Net premiums earned.
Source: A.M. Best Co. Inc., Business Insurance (www.businessinsurance.com), October 2018.

Top 10 Global Insurance Brokers By Revenues, 2017[1] (US$ millions)

Rank	Company	Brokerage revenues	Country
1	Marsh & McLennan Cos. Inc.	$14,035	U.S.
2	Aon P.L.C.	9,966	U.K.
3	Willis Towers Watson P.L.C.	8,116	U.K.
4	Arthur J. Gallagher & Co.	4,539	U.S.
5	BB&T Insurance Holdings Inc.	1,918	U.S.
6	Hub International Ltd.	1,871	U.S.
7	Jardine Lloyd Thompson Group P.L.C.	1,865	U.K.
8	Brown & Brown Inc.	1,857	U.S.
9	USI Insurance Services L.L.C.	1,635	U.S.
10	Lockton Cos. L.L.C.[2]	1,564	U.S.

[1]Revenue generated by insurance brokerage and related services. [2]Fiscal year ending April 30.
Source: Business Insurance (www.businessinsurance.com), July, 2018.

Revenue generated by the world's 10 largest brokers increased slightly to $47.4 billion in 2017 from $46.1 billion in 2016.

In 2007 the 10 largest broker revenue totaled $27.7 billion.

Top Five Global Reinsurance Brokers By Reinsurance Brokerage and Related Services Revenues, 2017[1]

(US$ millions)

Rank	Company	Gross reinsurance revenues	Country
1	Aon Benfield	$1,417.0	U.K.
2	Guy Carpenter & Co. L.L.C.	1,188.6	U.S.
3	Willis Re	853.4	U.K.
4	JLT Reinsurance	383.1	U.K.
5	UIB Holdings Ltd.	64.3	U.K.

[1]Includes all reinsurance revenue reported through holding and/or subsidiary companies.
Source: Business Insurance (www.businessinsurance.com), October 2018.

INTERNATIONAL SALES

The U.S. Department of Commerce provides estimates on two methods of international delivery of insurance services: cross-border trade, in which a domestic company transacts directly with a foreign company (for example, a European firm purchasing insurance from a U.S. firm through a broker); and sales by subsidiaries of multinational corporations (for example, sales to the European market through a European-based subsidiary of a U.S. insurer). The combination of these methods of delivery creates a broad measure of insurance services provided and received from abroad.

U.S. Insurance Sales Abroad, 2009-2016 (US$ millions)

Year	Sold directly[1]	Sold through majority-owned foreign affiliates of U.S. multinational corporations[2]
2009	$14,586	$61,609
2010	14,397	58,379
2011	15,114	59,942
2012	16,790	64,346
2013	16,696	65,239
2014	17,333	67,126
2015	16,229	64,940
2016	16,348	NA

[1]Largely based on premiums. Includes adjustments for "normal," i.e., expected losses and premium supplements (income due to policyholders). Bureau of Economic Analysis refers to this category as "cross border sales." Includes property/casualty, life insurance and reinsurance. [2] Based on sales by primary industry of the affiliate; there could be other services, such as financial services, included in the data.

NA=Data not available.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, International Division.

Insurance Business In The U.S. Written By Subsidiaries Of Foreign Controlled Companies, 2012-2016
(US$ millions)

	Gross premiums written					
					2016	
	2012	2013	2014	2015	Amount	Percent of total
Life	$141,524	$143,429	$150,000	$145,373	$154,523	62.6%
Nonlife	69,668	74,219	76,306	78,314	92,272	37.4
Total	**$211,192**	**$217,648**	**$226,306**	**$223,687**	**$246,795**	**100.0%**

Source: Organization for Economic Cooperation and Development.

CAPTIVES AND OTHER RISK-FINANCING OPTIONS

A number of alternatives to traditional commercial insurance have emerged to respond to fluctuations in the marketplace. Captives—a special type of insurance company set up by a parent company, trade association or group of companies to insure the risks of its owner or owners—emerged during the 1980s when businesses had trouble obtaining some types of commercial insurance coverage. Today alternative risk transfer (ART) arrangements include self insurance, risk retention groups and risk purchasing groups and more recent innovations such as catastrophe bonds and microinsurance.

Leading Captive Domiciles, 2016-2017

Rank	Domicile	Number of captives	
		2016	2017
1	Bermuda	776	739
2	Cayman Islands	683[1]	669
3	Vermont	593	566
4	Utah	462	480
5	Delaware	385	391
6	Guernsey	321	315
7	Barbados	246	266
8	Anguilla	287[2]	258[2]
9	Hawaii	208[1]	230
10	North Carolina	189[1]	220
11	Nevada	200[1]	204
12	Luxembourg	208	203
13	South Carolina	164	172
14	Tennessee	149[1]	155
15	Nevis	150[1,3]	151
16	Montana	163[1]	140
17	Arizona	113	121
18	British Virgin Islands	137	111
19	Isle of Man	111[1]	109
20	District of Columbia	100	102
Total, top 20		**5,645**	**5,602**
Total, all captives		**6,700[1]**	**6,647**

[1]Restated. [2]Business Insurance estimate. [3]Restated to exclude individual cells/cell members from total captive count.
Source: Business Insurance (www.businessinsurance.com), March 2018.

The Securitization Of Insurance Risk: Catastrophe Bonds

Catastrophe (cat) bonds are one of a number of innovative risk transfer products that have emerged as an alternative to traditional insurance and reinsurance products. Insurers and reinsurers typically issue cat bonds through a special purpose vehicle, a company set up specifically for this purpose. Cat bonds pay high interest rates and diversify an investor's portfolio because natural disasters occur randomly, and are not correlated with other economic risk. Depending on how the cat bond is structured, if losses reach the threshold specified in the bond offering, the investor may lose all or part of the principal or interest.

Catastrophe bond issuance in 2017, at a record high of $10.3 billion, substantially increased from $5.5 billion in 2016 and was about $2.3 billion more than the previous high of $8.0 billion in 2014, according to the GC Securities division of MMC Securities Corp. Catastrophe bond risk capital outstanding in 2017 of $25.2 billion was slighter higher than $22.5 billion in 2016 and the 10-year high of $22.9 billion in 2014.

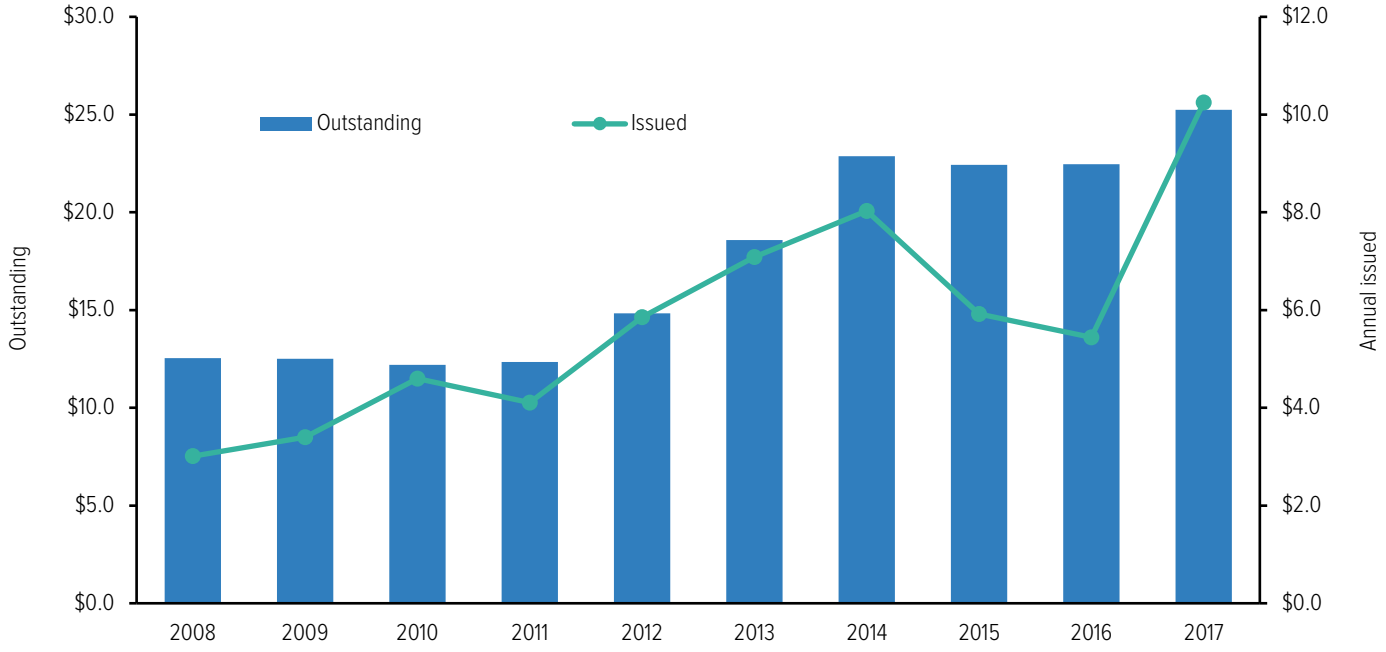
Top 10 Catastrophe Bond Transactions, 2017[1] (US$ millions)

Rank	Special purpose vehicle	Sponsor name	Risk amount	Peril and risk location
1	Kilimanjaro Re Ltd. 2017-1	Everest Re	$950	U.S./Canada named storm, earthquake
2	Ursa Re Ltd. 2017-1	California Earthquake Authority	925	California earthquake
3	Galilei Re Ltd. 2017-1	XL Insurance (Bermuda) Ltd.	525	U.S. named storm, U.S./Canada earthquake, European windstorm, Australian tropical cyclone, Australian earthquake
4	Aozora Re Ltd. 2017-1	Sampo Japan Nipponkoa	480	Japan typhoon
5	Residential Re Ltd. 2017-1	USAA	425	U.S. tropical cyclone, earthquake including fire following, severe thunderstorm, winter storm, wildfire, volcanic eruption, meteorite impact, other perils
6	Alamo Re Ltd. 2017-1	Texas Insurance Windstorm Association	400	Texas named storm, severe thunderstorm
7	Ursa Re Ltd. 2017-2	California Earthquake Authority	400	California earthquake
8	Tailwind Re Ltd. 2017-1	Validus Re	400	U.S./Canada named storm, earthquake
9	Sanders Re Ltd. 2017-1	Allstate	375	U.S. named storm, earthquake including fire following, severe thunderstorm, winter storm, volcanic eruption, meteorite impact
10	Caelus Re V Ltd. 2017-1	Nationwide	375	U.S. named storm, earthquake, severe thunderstorm, winter storm, wildfire, volcanic eruptions, meteorite impact, other perils

[1]Excludes non-property/casualty deals.

Source: GC Securities, a division of MMC Securities LLC., a registered broker-dealer, member FINRA/SIPC.

Catastrophe Bonds, Risk Capital Outstanding And Annual Issued, 2008-2017 (US$ billions)



Source: GC Securities, a division of MMC Securities Corp., a registered broker-dealer, member FINRA/SIPC, and Guy Carpenter.

MICROINSURANCE AND EMERGING MARKETS

A growing number of insurers are tapping into markets in developing countries through microinsurance projects, which provide low-cost insurance to individuals generally not covered by traditional insurance or government programs. Microinsurance products tend to be much less costly than traditional products and thus extend protection to a much wider market. Products vary in type and structure but are generally distinguished by high volumes, low cost and efficient administration. Policies may be offered along with a small loan, with premiums that are a small percentage of the loan amount. The approach is an outgrowth of the microfinancing projects developed by Bangladeshi Nobel Prize-winning banker and economist Muhammad Yunus, which helped millions of low-income individuals in Asia and Africa to set up businesses and buy houses. Today many innovative microinsurance products have been developed to protect the working poor against the financial impact of losses.

The Microinsurance Network is a nonprofit global organization of microinsurance industry experts comprised of 80 institutional members from more than 40 countries committed to promoting the development and delivery of valuable insurance services for low-income people. According to the Network's Annual Report 2017, while emerging markets account for around one-fifth of total global premium, they represent 80 percent of the world population, pointing toward an enormous potential for growth. The Network's World Map of Microinsurance shows that over 280 million people worldwide are covered by at least one microinsurance policy with premiums totaling $2.4 billion.

Insurance In Emerging Markets

With limited growth prospects in the insurance markets of developed countries, insurers see emerging economies as presenting significant potential for growth and profitability. Premium growth in developing countries has been outpacing growth in industrialized countries. Swiss Re's 2018 *sigma* report on world insurance markets reported that premiums in emerging countries rose 10.3 percent in 2017, after adjusting for inflation, following a 13.7 percent rise in 2016, reflecting strong growth in life premiums in China. Growth in developing markets outpaced growth in advanced markets, where premiums decreased by 0.6 percent in 2017 after falling 0.3 percent in 2016. Emerging markets accounted for 21.9 percent of total global premium volume in 2017, up from 19.7 percent in 2016.

Swiss Re identifies emerging markets as countries in South and East Asia, Latin America and the Caribbean, Central and Eastern Europe, Africa, the Middle East (excluding Israel), Central Asia, and Turkey. Emerging market premiums rose to $1.1 trillion in 2017 from $939.5 billion in 2016, driven by a strong increase in the life sector. Life sector premiums grew 13.8 percent in 2017, after inflation, compared with 17.1 percent in 2016. Nonlife sector premiums saw 6.1 percent growth in 2017, adjusted for inflation, down from 9.8 percent in 2016.

Insurance In Emerging Markets, 2017

	Direct premiums written, 2017[1]	Percent change from 2016[2]	Share of world market	Premiums as a percent of GDP[3]	Premiums per capita (US$)
Total industry					
Advanced markets	$3,819,644	-0.6%	78.1%	7.8%	$3,517
Emerging markets	1,072,050	10.3	21.9	3.3	166
Total	**$4,891,694**	**1.5%**	**100.0%**	**6.1%**	**$650**
Life					
Advanced markets	$2,059,481	-2.7%	77.5%	4.2%	$1,899
Emerging markets	597,790	13.8	22.5	1.9	92
Total	**$2,657,270**	**0.5%**	**100.0%**	**3.3%**	**$353**
Nonlife					
Advanced markets	$1,760,163	1.9%	78.8%	3.6%	$1,618
Emerging markets	474,261	6.1	21.2	1.5	73
Total	**$2,234,424**	**2.8%**	**100.0%**	**2.8%**	**$297**

[1]Expressed in millions of U.S. dollars. [2]Inflation-adjusted. [3]Gross Domestic Product.
Source: Swiss Re, *sigma*, No. 3/2018.

According to Swiss Re, China is the largest emerging market country based on insurance premiums written (including life and nonlife business) with $541.4 billion in premiums written in 2017, followed by India with $98.0 billion and Brazil with $83.3 billion. However when measured by insurance density, the Bahamas ranked first, with $1,976 in premiums per capita (including life and nonlife business).

Top 10 Emerging Markets By Insurance Density, 2017[1]

Rank	Country	Total premiums[2]	
		Per capita (US$)	As a percent of GDP[3]
1	Bahamas	$1,976	8.59%
2	Macao	1,552	1.98
3	United Arab Emirates	1,436	3.65
4	Slovenia	1,184	4.94
5	South Africa	842	13.75
6	Trinidad and Tobago	777	4.07
7	Chile	736	4.88
8	Czech Republic	609	2.85
9	Bahrain	577	2.22
10	Malaysia	486	4.77

[1]Based on total insurance premiums per capita. Excludes cross-border business. [2]Life and nonlife premiums. Data are estimated for Bahrain, Chile, Malaysia, South Africa and the United Arab Emirates. [3]Gross Domestic Product.

Source: Swiss Re, *sigma*, No. 3/2018.

Total Insurance Premiums, Emerging Markets, 2017[1] (US$ millions, end of year)

Emerging Asia	67.1%	$719,778
Latin America and Caribbean	15.7	167,888
Africa	6.2	66,691
Central and Eastern Europe	5.9	63,013
Middle East and Central Asia	5.1	54,680
Total	**100.0%**	**$1,072,050**

[1]Includes life and nonlife insurance premiums.

Source: Insurance Information Institute using data from Swiss Re, *sigma*, No. 3/2018.

Chapter 2

U.S. Insurance Industry, All Sectors

PREMIUMS

Net Premiums Written, Property/Casualty And Life/Health

There are three main insurance sectors. Property/casualty (P/C) consists mainly of auto, home and commercial insurance. Life/health (L/H) consists mainly of life insurance and annuity products. Most private health insurance is written by insurers whose main business is health insurance. However, L/H and P/C insurers also write health coverage. In 2017 P/C net premiums written rose by 4.6 percent while L/H net premiums written fell by 0.5 percent.

Property/Casualty And Life/Health Insurance Net Premiums Written, 2008-2017 ($000)

Year	Property/casualty[1]	Life/health[2]	Total
2008	$440,318,983	$607,250,216	$1,047,569,199
2009	423,528,077	491,487,792	915,015,869
2010	425,878,773	560,494,920	986,373,693
2011	441,562,154	602,257,296	1,043,819,450
2012	460,686,182	623,238,450	1,083,924,632
2013	481,517,971	560,070,547	1,041,588,518
2014	502,842,475	644,480,928	1,147,323,403
2015	520,149,847	635,549,216	1,155,699,063
2016	533,696,758	597,634,158	1,131,330,916
2017	558,205,126	594,910,567	1,153,115,693
Percent change, 2008-2017	**26.8%**	**-2.0%**	**10.1%**

[1]Net premiums written after reinsurance transactions, excludes state funds. [2]Premiums, annuity considerations (fees for annuity contracts) and deposit-type funds for Life/health insurance companies.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Property/Casualty And Life/Health Insurance Premiums, 2017[1] (US$ billions)

Life/health	51.6%	$594.9
Property/casualty	48.4	558.2
Total	**100.0%**	**$1,53.1**

[1]Property/casualty: net premiums written after reinsurance transactions, excludes state funds; Life/health: premiums, annuity considerations (fees for annuity contracts) and deposit-type funds.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Growth In Net Premiums Written, Property/Casualty And Life/Health Insurance, 2008-2017

(Percent change from prior year)

[1]Net premiums written after reinsurance transactions, excludes state funds. [2]Premiums and annuity considerations (fees for annuity contracts) for life/health insurance companies.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Direct Premiums Written, Property/Casualty And Life/Health

Property/Casualty And Life/Health Insurance Direct Premiums Written, 2008-2017 ($000)

Year	Property/casualty[1]	Life/health[2]	Total
2008	$498,690,753	$661,930,391	$1,160,621,144
2009	483,081,379	608,132,912	1,091,214,291
2010	484,404,467	612,939,920	1,097,344,387
2011	502,005,179	656,925,970	1,158,931,148
2012	523,881,547	684,847,397	1,208,728,944
2013	546,250,329	646,631,460	1,192,881,789
2014	570,782,893	662,283,299	1,233,066,193
2015	591,757,789	681,077,936	1,272,835,725
2016	613,362,479	683,352,546	1,296,715,025
2017	642,480,043	691,374,713	1,333,854,756
Percent change, 2008-2017	**28.8%**	**4.4%**	**14.9%**

[1]Direct premiums written before reinsurance transactions, excludes state funds. [2]Premiums, annuity considerations (fees for annuity contracts) and deposit-type funds for life/health insurance companies.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

LEADING COMPANIES

Top 10 Writers Of Property/Casualty Insurance By Direct Premiums Written, 2017 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	State Farm Mutual Automobile Insurance	$64,892,583	10.1%
2	Berkshire Hathaway Inc.	38,408,251	6.0
3	Liberty Mutual	33,831,726	5.3
4	Allstate Corp.	31,501,664	4.9
5	Progressive Corp.	27,862,882	4.3
6	Travelers Companies Inc.	24,875,076	3.9
7	Chubb Ltd.	21,266,737	3.3
8	USAA Insurance Group	20,151,368	3.1
9	Farmers Insurance Group of Companies[3]	19,855,517	3.1
10	Nationwide Mutual Group	19,218,907	3.0

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories. [3]Data for Farmers Insurance Group of Companies and Zurich Financial Group (which owns Farmers' management company) are reported separately by S&P Global Market Intelligence.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Top 10 Writers Of Life Insurance/Annuities By Direct Premiums Written, 2017 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	MetLife Inc.	$86,621,636	13.6%
2	Prudential Financial Inc.	47,465,693	7.4
3	New York Life Insurance Group	31,852,412	5.0
4	Principal Financial Group Inc.	28,153,239	4.4
5	Massachusetts Mutual Life Insurance Co.	24,735,091	3.9
6	Jackson National Life Group	22,439,071	3.5
7	American International Group	21,465,665	3.4
8	Transamerica	21,317,714	3.3
9	AXA	21,290,299	3.3
10	Lincoln National Corp.	20,397,394	3.2

[1]Includes life insurance, annuity considerations, deposit-type contract funds and other considerations; excludes accident and health insurance. Before reinsurance transactions. [2]Based on U.S. total, includes territories.

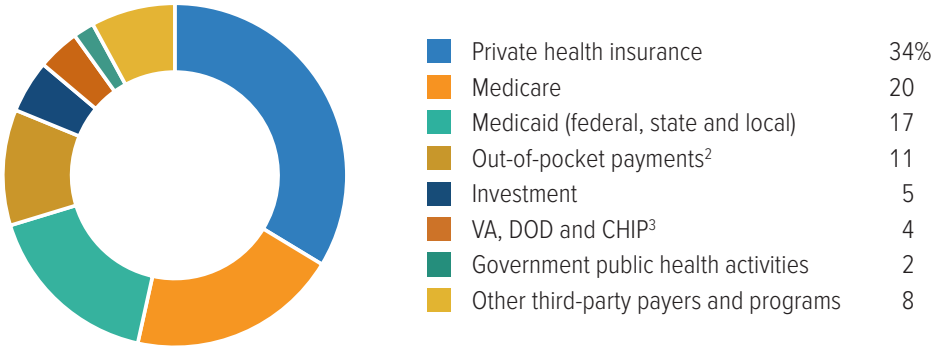
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

HEALTH

Healthcare Expenditures

Nearly half of the nation's healthcare costs are covered under Medicaid, Medicare and other public programs.

Where the Nation's Healthcare Dollar Came From, 2016[1]



[1]Sum of components may not add to 100 percent due to rounding. [2]Includes co-payments, deductibles, and any amounts not covered by health insurance. [3]Department of Veterans Affairs, Department of Defense and Children's Health Insurance Program.

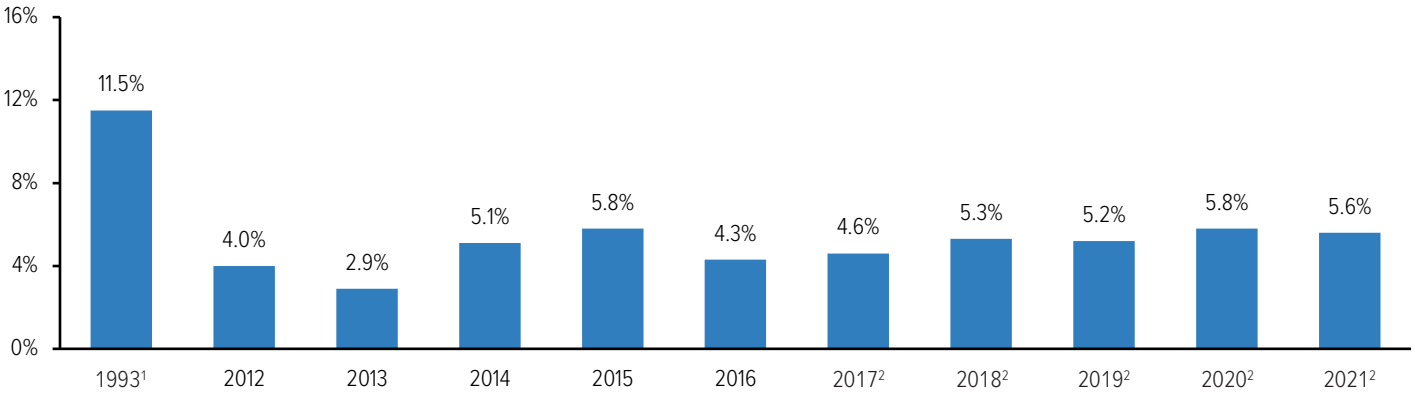
Source: Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group.

National healthcare expenditures rose 4.3 percent to $3.3 trillion in 2016, according to the U.S. Department of Health and Human Services Centers for Medicare and Medicaid Services (CMS). The 2016 increase was a deceleration from 2015's 5.8 percent increase following the initial impacts of the Affordable Care Act and the strong retail prescription drug spending growth in 2014 and 2015. Between 1970 and 1993, the beginning of the shift to managed care, healthcare expenditures rose 11.5 percent on an average annual basis.

The health spending share of the U.S. gross domestic product rose to 17.9 percent in 2016 from 17.7 percent in 2016, and was at the highest level on record. Healthcare spending rose to $10,348 per capita in 2016, up 5.0 percent from $9,994 in 2015.

CMS projected that annual health expenditures growth increased to 4.6 percent in 2017 and will average 5.5 percent a year through 2026, due to changes in projected income growth, increases in medical goods and services prices, and shifts from enrollment in private health insurance to Medicare as the population ages.

National Health Expenditures, Average Annual Percent Growth From Prior Year, 1993-2021



[1]Average annual growth from 1970 through 1993; marks the beginning of the shift to managed care. [2]Projected.

Source: Centers for Medicare and Medicaid Services, Office of the Actuary.

EMPLOYMENT AND OTHER ECONOMIC CONTRIBUTIONS

Property/casualty and life/health insurance companies contribute to our economy far beyond their core function of helping to manage risk.

Here is how insurers drive the economy of the U.S.:

- The insurance sector is a large employer, providing some 2.7 million jobs, or 2.1 percent of U.S. employment in 2017.
- Helping to fund the building of roads, schools and other public projects, insurance companies invested $780 billion in state and local municipal bonds and loans in 2017.
- Providing businesses with capital for research, expansions and other ventures, insurance companies held $4.5 trillion in stocks and bonds in 2017.
- Insurers contributed $602.7 billion or 3.1 percent to the nation's gross domestic product (GDP) in 2017, compared with 2.9 percent for the banking industry. The insurance industry's contribution has exceeded that of banks since 2015.
- The taxes insurers pay include special levies on insurance premiums, which amounted to $21 billion in 2017, or 2.2 percent of all taxes collected by states.
- The insurance industry is a major contributor to charitable causes. According to the Insurance Industry Charitable Foundation (IICF) the industry has contributed more than $31 million in local community grants and more than 300,000 volunteer hours to hundreds of community nonprofit organizations and raised more than $630,000 in disaster relief funds to benefit those affected by the devastating hurricanes and wildfires in 2017.

Employment In Insurance, 2008-2017 (Annual averages, 000)

Year	Insurance carriers				Insurance agencies, brokerages and related services			Total industry
	Direct insurers[1]		Reinsurers	Total	Insurance agencies and brokers	Other insurance-related activities[3]	Total	
	Life and health[2]	Property/ casualty						
2008	800.8	646.7	27.9	1,475.4	671.6	258.1	929.6	2,405.1
2009	802.8	632.9	27.5	1,463.2	653.3	254.2	907.4	2,370.6
2010	804.1	614.3	26.8	1,445.2	642.3	253.1	895.5	2,340.6
2011	788.9	611.6	25.6	1,426.1	649.2	261.1	910.3	2,336.4
2012	811.3	599.5	25.7	1,436.5	659.6	272.3	931.8	2,368.3
2013	813.2	593.7	26.2	1,433.1	672.3	283.5	955.8	2,388.9
2014	829.0	594.7	25.1	1,448.8	720.0	297.1	1,017.1	2,465.8
2015	829.8	611.6	25.1	1,466.5	762.8	309.1	1,071.8	2,538.3
2016	818.9	643.5	25.3	1,487.7	783.5	321.5	1,105.0	2,592.7
2017	847.6	646.4	25.9	1,519.9	804.9	330.9	1,135.7	2,655.7

[1]Establishments primarily engaged in initially underwriting insurance policies. [2]Includes establishments engaged in underwriting annuities, life insurance and health and medical insurance policies. [3]Includes claims adjusters, third-party administrators of insurance funds and other service personnel such as advisory and insurance ratemaking services.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Insurance Carriers And Related Activities Employment By State, 2017[1]

State	Number of employees	State	Number of employees
Alabama	39,524	Montana	8,902
Alaska	2,595	Nebraska	34,856
Arizona	71,743	Nevada	20,620
Arkansas	22,842	New Hampshire	15,924
California	331,913	New Jersey	105,307
Colorado	57,975	New Mexico	13,641
Connecticut	70,557	New York	199,310
Delaware	7,849	North Carolina	86,996
D.C.	4,243	North Dakota	10,628
Florida	232,002	Ohio	143,254
Georgia	111,809	Oklahoma	32,172
Hawaii	11,187	Oregon	34,305
Idaho	14,199	Pennsylvania	159,073
Illinois	155,757	Rhode Island	11,927
Indiana	64,769	South Carolina	44,113
Iowa	58,302	South Dakota	12,203
Kansas	38,463	Tennessee	67,463
Kentucky	44,356	Texas	291,601
Louisiana	38,011	Utah	28,893
Maine	13,831	Vermont	5,092
Maryland	49,504	Virginia	71,331
Massachusetts	83,889	Washington	56,958
Michigan	83,774	West Virginia	11,235
Minnesota	76,708	Wisconsin	81,952
Mississippi	19,513	Wyoming	3,681
Missouri	70,748	**United States**	**3,327,500**

[1]Total full-time and part-time employment. Note: Does not match data shown elsewhere due to the use of different surveys. Data as of September 2018.
Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System.

Gross Domestic Product

Insurance Sector's Share Of Gross Domestic Product (GDP), 2013-2017 ($ billions)

Year	Total GDP	Insurance carriers and related activities	
		GDP	Percent of total GDP
2013	$16,691.5	$406.2	2.4%
2014	17,427.6	473.1	2.7
2015	18,120.7	559.5	3.1
2016	18,624.5	585.9	3.1
2017	19,390.6	602.7[1]	3.1

[1]Preliminary.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

i

Gross domestic product (GDP) is the total value of all final goods and services produced in the economy. The GDP growth rate is the primary indicator of the state of the economy.

The insurance industry contributed $602.7 billion to the $19.4 trillion GDP in 2017.

Ownership Of Municipal Bonds

Insurance companies help fund the construction of schools, roads and healthcare facilities as well as a variety of other public sector projects through their investments in municipal bonds. The property/casualty insurance industry invested $327 billion in such bonds in 2017, and the life insurance industry invested $193 billion, according to the Federal Reserve. (See here and here for further information on insurance industry investments.)

Insurance Company Holdings Of U.S. Municipal Securities And Loans, 2013-2017

($ billions, end of year)

	2013	2014	2015	2016	2017
Property/casualty insurance companies	$335.6	$339.6	$345.8	$338.5	$327.0
Life insurance companies	146.0	164.4	171.2	179.0	192.7
Total	**$481.6**	**$504.0**	**$517.0**	**$517.5**	**$519.7**

Source: Board of Governors of the Federal Reserve System, June 8, 2018.

MERGERS AND ACQUISITIONS

The number of global insurance-related mergers and acquisitions (M&A) rose to 949 transactions in 2017 from 714 in 2016, up 33 percent, as activity in the underwriting sector was basically unchanged from a year ago, but rose significantly in the distribution and services sector, according to Conning Research. Moderate economic growth and the uncertainty regarding tax reform were the key drivers in the underwriting sector. Insurers left underperforming lines and moved to specialty areas that offered healthier growth and profit margins. In the health sector, activity stemmed from insurers and health care providers expanding from insurance to a broader range of services for client health improvement. The value of M&A nearly tripled in 2017, to $127 billion from the $43 billion total in 2016. The largest deal of the year, the CVS Health takeover of Aetna, Inc., at $69 billion, accounted for 54 percent of the total transaction values in 2017.

In 2017 the number of insurance-related deals in which a U.S. firm was either a buyer or a target rose 43 percent to 715 from 500 transactions in 2016. The value of properties acquired in 2017 U.S. deals soared 438 percent to $107 billion from $20 billion in 2016, according to Conning data, benefiting from the CVS/Aetna deal. The number of non-U.S. insurance M&A transactions (i.e., where a non-U.S. company was both buyer and seller) rose much slower,

8 percent to 234 in 2017 from 216 in 2016. The overall reported value of non-U.S. deals fell about 12 percent to $20 billion in 2017 from almost $23 billion in 2016.

Reported Global Insurance-Related Mergers And Acquisitions By Sector, U.S. And Non-U.S. Acquirers, 2017

	Number of transactions			Transaction values ($ millions)[1]		
Sector	**U.S.[2]**	**Non-U.S.[3]**	**Total**	**U.S.[2]**	**Non-U.S.[3]**	**Total**
Underwriting						
Property/casualty	38	53	91	$8,063	$8,343	$16,407
Life/annuity	21	29	50	5,796	10,411	16,207
Health/managed care	17	1	18	75,954	20	75,974
Total	**76**	**83**	**159**	**$89,813**	**$18,774**	**$108,588**
Distribution and services						
Distribution	565	129	694	$6,594	$1,048	$7,642
Services	74	22	96	10,645	111	10,756
Total	**639**	**151**	**790**	**$17,239**	**$1,159**	**$18,398**
Total, all sectors	**715**	**234**	**949**	**$107,052**	**$19,933**	**$126,986**

[1]Components may not add to total due to rounding. [2]Includes transactions where a U.S. company was the acquirer and/or the target. [3]Includes transactions where a non-U.S. company was the acquirer and the target.

Source: Conning Research & Consulting, Inc. analysis.

In 2017 three of the top 10 global transactions involved health and managed care companies, led by the CVS Health takeover of Aetna, Inc., valued at $69 billion. In total, health and managed care transactions accounted for 75 percent of the top 10 mergers and acquisitions that took place in 2017. The services sector, with three deals in the top 10, accounted for 13 percent of the total dollars involved in mergers and acquisitions in 2017, as all three deals were valued between $4 and $5 billion. Two life/annuity deals accounted for the about 5 percent of the value of mergers and acquisition, and distribution and property/casualty deals accounted for the remaining 7 percent.

Top 10 Global Insurance-Related Mergers And Acquisitions Announced, 2017 ($ millions)

Rank	Buyer (country)	Target (country)	Sector	Transaction value
1	CVS Health (U.S.)	Aetna, Inc. (U.S.)	Health/managed care	$68,712
2	Blackstone (U.S.)	Aon's benefit administration and human resources business (U.S.)	Services	4,800
3	Standard Life plc (U.K.)	Aberdeen Asset Management (U.K.)	Services	4,700
4	KKR/CDPQ (U.S./Canada)	USI/Onex Corp. (U.S./Canada)	Distribution	4,300
5	Centene Corp. (U.S.)	Fidelis Care (U.S.)	Health/managed care	3,750
6	Express Scripts (U.S.)	eviCore healthcare (U.S.)	Services	3,600
7	AIA Group Ltd. (Hong Kong)	Comminsure (Australia)	Life	3,100
8	United Healthcare, Inc. (U.S.)	Banmedica SA (Chile)	Health/managed care	2,800
9	Assurant, Inc. (U.S.)	The Warranty Group (U.S.)	Property/casualty	2,500
10	Zurich Insurance Group (Switzerland)	OnePath (Australia)	Life	2,100

Source: Conning Research & Consulting Inc. analysis.

2018 Outlook

Early 2018 announced mergers and acquisitions involved the AIG purchase of Validus for $5.6 billion in the property/casualty sector and Liberty Mutual's sale of its life and disability insurance holdings to Lincoln Financial Group for about $3.3 billion. In all sectors, the Tax Cut and Job Act of 2017 may provide benefits such as lower corporate taxes resulting in increased capital, cash flow and income that could be tempered by higher valuations. Technology may drive deals in 2018 as insurers seek to acquire insurtech companies rather than develop technologies themselves, according to Conning. Other factors Conning sees pointing to a favorable merger and acquisition environment in 2018 are growing consumer and business confidence as the economy improves, continued easing of federal regulations from the business-friendly administration, and low borrowing costs.

By the first half of 2018, there were 247 deals announced valued at $28.6 billion, compared with 302 deals in first half 2017 worth $10.1 billion, according to PricewaterhouseCoopers (PwC). There were five deals announced in the first half of 2018 that were valued higher than $1 billion, compared with seven in all of 2017. In addition to AIG's purchase of Validus and Liberty Mutual's Lincoln Financial Group deal, AXA announced its intended purchase of XL Group Ltd. for $15.4 billion, the largest transaction announced in 18 months. PwC says that 87 percent of first half 2018's deal value involved brokers and expects the Tax Cuts and Jobs Act of 2017 to keep spurring activity in the months ahead.

U.S. Insurance-Related Mergers And Acquisitions, 2008-2017[1] ($ millions)

	Underwriting mergers and acquisitions					
	Property/casualty		Life/annuity		Health/managed care	
Year	Number of transactions	Transaction values	Number of transactions	Transaction values	Number of transactions	Transaction values
2008	59	$16,294	14	$382	19	$1,691
2009	63	3,507	22	840	18	640
2010	63	6,452	20	23,848	15	692
2011	79	12,796	33	3,058	24	4,703
2012	46	4,826	21	6,057	26	18,520
2013	41	4,393	18	3,299	15	33
2014	53	6,723	11	7,978	15	864
2015	35	39,970	18	10,228	21	9,603
2016	38	10,665	13	2,700	12	1,078
2017	38	8,063	21	5,796	17	75,954

(table continues)

U.S. Insurance-Related Mergers And Acquisitions, 2008-2017[1] ($ millions) (Cont'd)

Year	Distribution and insurance services mergers and acquisitions				Total U.S. mergers and acquisitions	
	Distribution		Insurance services			
	Number of transactions	Transaction values	Number of transactions	Transaction values	Number of transactions	Transaction values
2008	284	$5,812	94	$7,256	470	$31,435
2009	176	615	41	8,771	320	14,373
2010	244	1,727	97	13,823	439	46,542
2011	350	2,271	104	31,892	590	54,720
2012	345	4,225	62	9,673	479	43,301
2013	323	8,246	57	3,349	447	19,320
2014	387	2,581	79	19,390	507	37,536
2015	472	18,695	88	22,905	634	101,401
2016	450	4,204	77	3,461	499	22,108
2017	565	6,594	74	10,645	597	107,052

[1]Components may not add to totals due to rounding. Includes transactions where a U.S. company was the acquirer and/or the target.

Source: Conning Research & Consulting Inc., proprietary database.

COMPANIES BY STATE

An insurance company is said to be *domiciled* in the state that issued its primary license; it is *domestic* in that state. Once it receives its primary license, it may seek licenses in other states as an out-of-state insurer. These out-of-state insurers are called *foreign* insurers. An insurer incorporated in a foreign country is called an *alien* insurer in states where it is licensed.

Domestic Insurance Companies By State, Property/Casualty And Life/Annuities, 2017

State	Property/ casualty	Life/ annuities
Alabama	18	7
Alaska	4	0
Arizona	40	25
Arkansas	12	23
California	99	14
Colorado	10	11
Connecticut	67	26
Delaware	101	28
D.C.	6	0
Florida	114	9
Georgia	23	13
Hawaii	17	3
Idaho	10	1
Illinois	191	52
Indiana	64	28
Iowa	73	40
Kansas	25	11
Kentucky	7	7
Louisiana	34	32
Maine	9	2
Maryland	32	4
Massachusetts	48	16
Michigan	65	22
Minnesota	39	8
Mississippi	15	15
Missouri	43	28
Montana	14	1
Nebraska	34	32
Nevada	9	3
New Hampshire	50	1
New Jersey	66	3
New Mexico	15	1
New York	173	82
North Carolina	56	10
North Dakota	12	3
Ohio	138	37
Oklahoma	31	24
Oregon	18	3
Pennsylvania	166	23
Rhode Island	22	2
South Carolina	19	7
South Dakota	16	2
Tennessee	15	12
Texas	199	120
Utah	9	17
Vermont	12	1
Virginia	19	3
Washington	7	6
West Virginia	19	1
Wisconsin	174	18
Wyoming	2	0
United States[1]	**2,461**	**837**

[1]Excludes territories. Excludes health insurers, risk retention groups, fraternals, title and other insurers.

Source: Insurance Department Resources Report, 2018, published by the National Association of Insurance Commissioners (NAIC). Reprinted with permission. Further reprint or redistribution strictly prohibited without written permission of NAIC.

According to the National Association of Insurance Commissioners, in the U.S. (including territories) there were 5,954 insurance companies in 2017, including property/ casualty (2,509), life/ annuities (852), health (907), fraternal (82), title (58), risk retention groups (240) and other companies (1,306).

Many insurance companies are part of larger organizations. According to AM Best, in 2017 the P/C insurance industry was comprised of about 1,158 organizations or groups (as opposed to 2,620 companies), including 688 stock (or public) organizations, 385 mutual organizations (firms owned by their policyholders), 66 reciprocals (a type of self-insurance) and eight Lloyd's organizations. The remainder consisted of state funds.

PREMIUM TAXES BY STATE

All insurance companies pay a state tax based on their premiums. Other payments are made to states for licenses and fees, income and property taxes, sales and use taxes, unemployment compensation taxes and franchise taxes.

Insurance companies, including life/health and property/casualty companies, paid $21 billion in premium taxes to the 50 states and the District of Columbia in 2017. On a per capita basis, this works out to $64 for every person living in the United States.

Premium taxes accounted for 2.2 percent of all taxes collected by the states and the District of Columbia in 2017.

Premium Taxes By State, Property/Casualty And Life/Health Insurance, 2017

($000)

State	Amount	State	Amount
Alabama	$339,719	Montana	$108,383
Alaska	62,500	Nebraska	54,350
Arizona	536,820	Nevada	359,741
Arkansas	213,212	New Hampshire	108,013
California	2,422,105	New Jersey	579,642
Colorado	256,212	New Mexico	163,453
Connecticut	199,497	New York	1,381,080
Delaware	100,144	North Carolina	517,095
D.C.	110,392	North Dakota	63,558
Florida	959,339	Ohio	629,684
Georgia	480,154	Oklahoma	304,448
Hawaii	170,118	Oregon	68,481
Idaho	91,985	Pennsylvania	808,250
Ilinois	418,582	Rhode Island	120,587
Indiana	235,171	South Carolina	228,259
Iowa	113,469	South Dakota	66,496
Kansas	310,420	Tennessee	912,324
Kentucky	153,728	Texas	2,325,941
Louisiana	813,975	Utah	130,122
Maine	95,943	Vermont	59,895
Maryland	516,533	Virginia	479,192
Massachusetts	397,519	Washington	603,963
Michigan	337,254	West Virginia	120,163
Minnesota	486,403	Wisconsin	202,387
Mississippi	327,778	Wyoming	24,762
Missouri	432,560	**United States**	**$21,001,801**

Source: U.S. Department of Commerce, Bureau of the Census.

Chapter 3

Distribution

PROPERTY/CASUALTY

Overview

Many insurance companies use a number of different channels to distribute their products. In the early days of the U.S. insurance industry, insurers hired agents, often on a part-time basis, to sign up applicants for insurance. Some agents, known now as *captive* or *exclusive* agents, represented a single company. Others, the equivalent of today's independent agents, worked for a number of companies. At the same time that the two agency systems were expanding, commercial insurance brokers, who were often underwriters, began to establish themselves in cities. While agents usually represented insurers, brokers represented clients who were buying insurance. These three distribution channels (captive agents, independent agents and brokers) exist in much the same form today. Also, with the development of information technology, alternative distribution channels sprang up, including direct sales by telephone, mail and the internet. Insurers also use other types of outlets, such as banks, workplaces, associations and car dealers, to access potential policyholders.

Online Property/Casualty Insurance Sales

Online insurance distribution systems have evolved to include any device consumers use to conduct business—mobile devices, tablets and PCs. However, there is ongoing evidence that insurer websites are not meeting customer expectations, according to the J.D. Power and Associates *2018 Insurance Digital Experience Study*. J.D. Power included customers of the 19 largest property/casualty insurance companies and used responses from over 11,000 people in February and March 2018. The study found that insurance customer expectations are being influenced by the user experience of all-digital brands such as Amazon and Netflix, and many insurers are falling short. Insurers have created attractive user interfaces but these lack functionality, for example when processing claims, servicing policies or shopping. Overall insurance shopping experience was measured on a 1,000-point scale. The industry average was 779, driven by strong performance in three key shopping factors—ease of navigation, availability of key information and the clarity of that information.

Consumer appetite for digital experiences seems to be growing, according to a survey from the Insurance Research Council (IRC), which polled 2,000 people online about their auto insurance preferences. Of the 69 percent of respondents who said they had communicated with their auto insurer in the previous year to perform various tasks, most said they had communicated by phone. Checking claim status and obtaining a certificate of insurance were the only tasks where 30 percent or more used a digital method, defined as email, website or mobile app. For almost every task covered by the survey there were more people who indicated a preference for using digital methods in the future than those who reported using digital methods in the previous year.

The Insurance Information Institute's *Pulse* poll found that among policyholders who compared prices for auto and homeowners insurance at renewal, talking to an agent in person was the preferred method of comparing prices. In November 2015, 69 percent of respondents who were auto insurance customers compared prices, and 50 percent said they talked to an agent in person. More than one-third (39 percent) went online to compare prices and about the same number (37 percent) telephoned. (Respondents could report more than one method.)

Of the 44 percent of homeowner policyholders who checked prices in May 2016, about a third of those (29 percent) talked to an agent in person, while 24 percent compared prices over the phone. Seventeen percent went online.

There were an estimated 36,500 independent agencies in the United States in 2018, down from 38,000 in 2016, according to the Independent Insurance Agents and Brokers of America's (IIABA) *2018 Agency Universe survey.*

The IIABA says the 2018 decrease primarily reflects a new data resource providing more accurate and insurance industry-focused data, along with increased mergers and acquisitions.

In 2018 the estimated percentage of small agencies (less than $150,000 in revenue) accounted for 35 percent of all agencies, while jumbo agencies (revenue of $10 million or more) accounted for 2 percent of agencies.

The proportion of agencies in small towns and rural areas returned to 19 percent in 2018, where it had been in 2014, after falling to 9 percent in 2016. About half (51 percent) of agencies are in large metropolitan areas.

In 2018, 12 percent of the agencies in the study were involved in acquisitions, 1 percent merged with another agency, and 3 percent converted from exclusive or captive agencies to independent agencies.

Property/Casualty Insurance Distribution

Agency writers, whose products are sold by independent agents or brokers representing several companies—and direct writers, which sell their own products through captive agents by mail, telephone, or via the internet and other means—each account for about half of the property/casualty (P/C) market. There is a degree of overlap as many insurers use multiple channels.

AM Best organizes insurance into two main distribution channels: agency writers and direct writers. Its agency writers category includes insurers that distribute through independent agencies, brokers, general agents and managing general agents. Its direct writers category includes insurers that distribute through the internet, exclusive/captive agents, direct response and affinity groups.

- In 2017 direct writers accounted for 52.9 percent of P/C insurance net premiums written and agency writers accounted for 44.2 percent, according to AM Best.*
- In the personal lines market, direct writers accounted for 70.9 percent of net premiums written in 2017 and agency writers accounted for 26.9 percent. Direct writers accounted for 68.6 percent of the homeowners market and agency writers accounted for 27.7 percent. Direct writers accounted for 71.9 percent of the personal auto market and agency writers accounted for 26.4 percent.*
- Agency writers accounted for 68.6 percent of commercial P/C net premiums written, and direct writers accounted for 27.7 percent.*

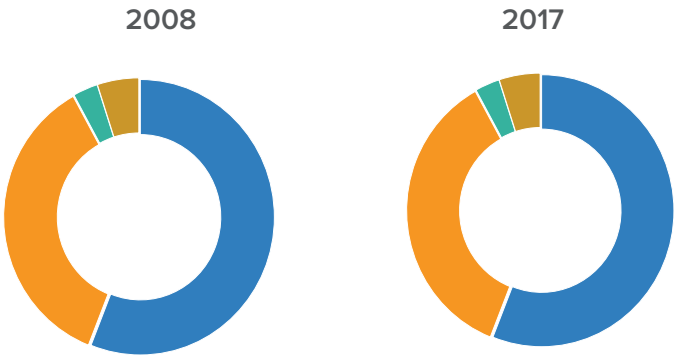
*Unspecified distribution channels accounted for the remainder.

LIFE

Life Insurance Distribution

Independent insurance agents have held over half of the individual life insurance market over the 10 years from 2008 to 2017, but have lost some ground to affiliated agents and direct response companies, as shown in the charts below.

Life Individual Market Share By Distribution Channel, 2008 And 2017



	2008	2017
Independent broker-dealers[1]	56%	51%
Affiliated agents[2]	36	38
Direct response[3]	3	6
Other[4]	5	5

[1]Includes brokers, stockbrokers and personal producing general agents. [2]Includes career, multiline exclusive and home service agents. [3]No producers are involved. Excludes direct marketing efforts involving agents. [4]Includes financial institutions, worksite and other channels.

Source: LIMRA's *U.S. Individual Life Insurance Sales* survey and LIMRA estimates.

Online Life Insurance Sales

Online life insurance purchase attempts leveled off in 2018 compared with 2017, according to the 2018 Insurance Barometer Study survey by the Life and Health Insurance Foundation for Education (LIFE) and LIMRA. In 2018, 31 percent of respondents to the Insurance Barometer study said they had purchased or attempted to purchase life insurance online, about the same proportion as in 2017. A year ago, the Insurance Barometer Study reported that purchase attempts had tripled between 2011 and 2017. However, fewer consumers visited life insurance websites in 2018, 49 percent compared with 55 percent in 2017, and 45 percent visited a website to obtain information about life insurance in 2018, down from 52 percent in 2017.

Millennials, between the ages of 19 and 37, and gen xers age 38 to 53 had the highest rates of visiting life insurance company websites, both at 52 percent. The proportion of older consumers, boomers and silents, age 54 and older, visited these websites at the lower rates of 45 and 40 percent. Forty-one percent of millennials said they had purchased, or attempted to purchase life insurance online in 2018, compared with 33 percent of gen xers. These proportions declined steadily among older respondents, to 22 percent and 13 percent for boomers and silents.

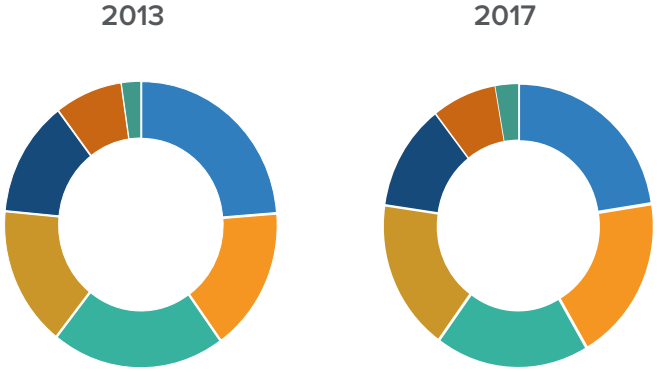
Despite the popularity of visiting life insurance company websites to research insurance most consumers still want personal contact when they buy insurance. Sixty-nine percent of all respondents say meeting with an insurance professional is important to them before they buy life insurance. Millennials rank highest in thinking that meeting a professional is important, at 73 percent followed by boomers at 69 percent.

ANNUITIES

Annuities Distribution

Total annuity sales were down in 2017 for the third consecutive year and fell 8.4 percent to $203.5 billion compared with $222.1 billion in 2016. Insurance agents, including career agents, who sell the products of a single life insurance company, and independent agents, who represent several insurers, accounted for 37 percent of annuity sales in 2017. Independent broker-dealers were the largest single distributor of annuities, with 23 percent of sales, about the same as in 2013. State and federal regulators require sellers of variable annuities to register with the Financial Industry Regulatory Authority (FINRA) and the Securities and Exchange Commission (SEC).

Sales Of Individual Annuities By Distribution Channels, 2013 and 2017



	2013	2017
Independent broker-dealers	24%	23%
Independent agents	16	19
Career agents	21	18
Banks	16	17
Full-service national broker-dealers	13	12
Direct response	8	8
Other	2	3

Source: *U.S. Individual Annuity Yearbook,* LIMRA, 2018.

Chapter 4

Retirement

OVERVIEW

In addition to Social Security and private savings, many Americans rely on investments in formal plans to prepare for retirement. Employer-sponsored retirement plans, individual retirement accounts (IRAs) and annuities play an important role in the U.S. retirement system. Such retirement assets totaled $28.2 trillion at the end of 2017, up from $25.4 trillion during the same period in 2016, according to the Investment Company Institute (ICI). The largest components of retirement assets were IRAs and employer-sponsored defined contribution plans, holding $9.2 trillion and $7.7 trillion, respectively, at the close of 2017. An ICI report found that 61 percent of U.S. households (77 million households) reported that they had employer-sponsored retirement plans, IRAs, or both in mid-2017.

U.S. Retirement Assets, 2013 And 2017 ($ trillions, year-end)

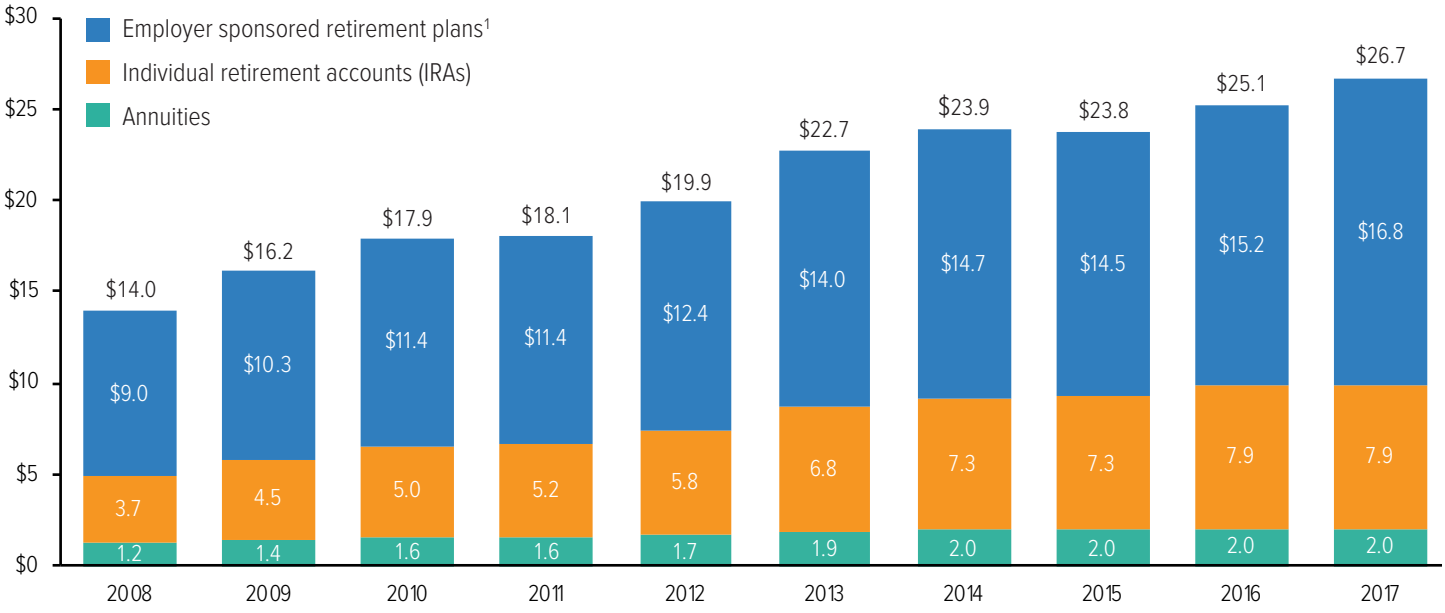
	2013		2017	
Individual retirement accounts	30%	$6.8	33%[1]	$9.2[1]
Defined contribution plans	27	6.1	27	7.7
State and local pension plans	16	3.6	15	4.3
Private defined benefit plans	13	2.9	11	3.1
Annuities	8	1.9	8	2.2
Federal pension plans	6	1.4	6	1.7
Total	**100%**	**$22.7**	**100%**	**$28.2**

[1]Estimated.

Source: Investment Company Institute, "*The U.S. Retirement Market, First Quarter 2018*." www.ici.org/research/stats.

In 2017, 61.0 percent of Americans' retirement assets were held in private or public employer-sponsored plans, according to the Investment Company Institute. These workplace plans include private pension plans, defined contribution plans such as 401(k) plans and state, local and federal pension plans. Almost one-third (32.6 percent) of all retirement assets were in individual retirement accounts (IRAs) and 7.8 percent were in annuities. By contrast in 2008, 64.8 percent of the nation's retirement assets were held in private or public employer-sponsored plans, 26.4 percent were held in IRAs, and 8.9 percent were held in annuities. In 2017, 55 percent of households had employer-sponsored benefit plans. Thirty-five percent had assets in IRAs, and 29 percent had both IRAs and employer-sponsored retirement plans.

U.S. Retirement Assets, By Type, 2008-2017 ($ trillions, end of year)



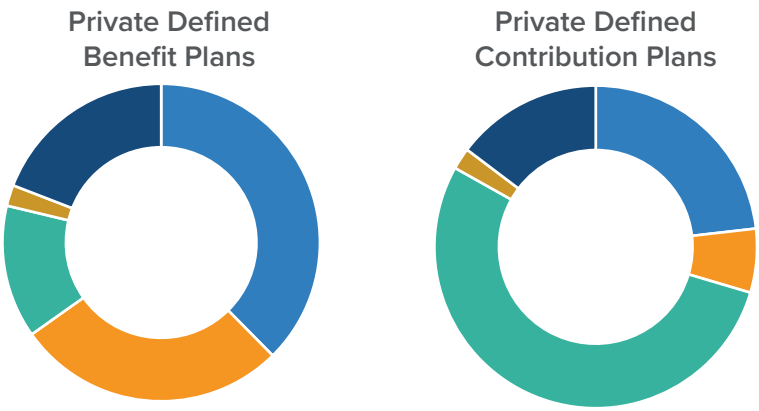
[1]Includes defined contribution plans, private defined benefits plans, and state and local and federal pension plans.

Source: Investment Company Institute. *2018 Investment Company Fact Book: A Review of Trends and Activities in the U.S. Investment Company Industry*. www.icifactbook.org.

Defined Benefit And Defined Contribution Retirement Plans

There are two basic types of workplace retirement plans: defined benefit and defined contribution plans. In a defined benefit plan, the income the employee receives in retirement is guaranteed, based on predetermined benefit formulas. In a defined contribution plan, a type of savings plan in which taxes on earnings are deferred until funds are withdrawn, the amount of retirement income depends on the contributions made and the earnings generated by the securities purchased. The employer generally matches the employee contribution up to a certain level, and the employee selects investments from among the options the employer's plan offers. 401(k) plans fall into this category, as do 403(b) plans for nonprofit organizations and 457 plans for government workers.

Retirement Funds Asset Mix, 2017



	Private Defined Benefit Plans	Private Defined Contribution Plans
Equities	38%	23%
Credit market instruments	28	6
Mutual funds	14	54
Cash, etc.	2	2
Other	19	15
Total	**100%**	**100%**

Source: Board of Governors of the Federal Reserve System, June 8, 2018.

In defined benefit plans, equities held the largest share by type of investment in 2017, with 38 percent, followed by credit market instruments, with 28 percent, mutual funds, with 14 percent, and other assets, such as guaranteed investment contracts, with 19 percent.

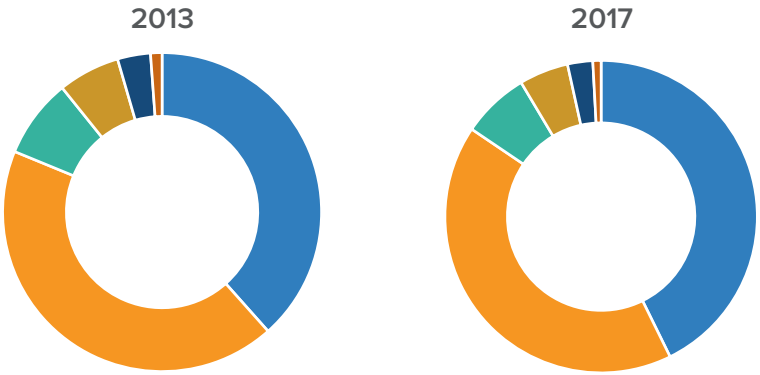
In defined contribution plans, mutual funds held the largest share, with 54 percent. Equities ranked second with 23 percent, and other assets with 15 percent ranked third.

IRAs

Traditional IRAs are defined as those first allowed under the Employee Retirement Income Security Act of 1974.

An individual retirement account (IRA) is a personal savings plan that allows individuals to set aside money for retirement, while offering tax advantages. Funds in a traditional IRA, including earnings, generally are not taxed until distributed to the holder. Unlike traditional IRAs, Roth IRAs do not allow holders to deduct contributions, but qualified distributions are tax-free. Other variations include Simplified Employee Pensions (SEP), which enable businesses to contribute to traditional IRAs set up for their workers, Savings Incentive Match Plans for Employees (SIMPLE) plans and Keogh plans for the self-employed. According to the Investment Company Institute, almost 44 million households had at least one type of IRA as of mid-2017. Of these, 35 million households had traditional IRAs, 25 million had Roth IRAs and nearly 8 million had a SEP, SIMPLE or other employer-sponsored IRA.

IRA Market Shares By Holder, 2013 And 2017 (Market value, end of year)



	2013	2017
Miscellaneous self-directed accounts	38.4%	42.7%
Mutual funds[1]	42.8	41.7
Life insurance companies[2]	8.0	7.0
U.S.-chartered depository institutions[3]	6.3	5.1
Money market mutual funds	3.3	2.6
Credit unions[2]	1.2	0.9
Total	**100.0%**	**100.0%**

[1]Excludes variable annuities. [2]Includes Keogh accounts. [3]Includes savings banks, commercial banks and Keogh accounts.
Source: Board of Governors of the Federal Reserve System, June 8, 2018.

401(k)s

A 401(k) plan is a retirement plan offered by an employer to its workers, allowing employees to set aside tax-deferred income for retirement purposes. It is a type of defined contribution plan. With $5.3 trillion in assets at year-end 2017, 401(k) plans held the largest share of employer-sponsored defined contribution plan assets, according to the Investment Company Institute (ICI). At the end of 2017 employer-sponsored defined contribution plans, including 401(k) plans and other defined contribution plans, held an estimated $7.7 trillion in assets, according to the ICI. The chart below shows the distribution of assets for 401(k)s in 2016, which is latest data available.

Average Asset Allocation For All 401(k) Plan Balances, 2016[1]

Equity funds	44%
Balanced funds	27
Bond funds	8
Company stock	6
Guaranteed investment contracts and other stable value funds	6
Money funds	3
Other and unknown	6
Total	**100%**

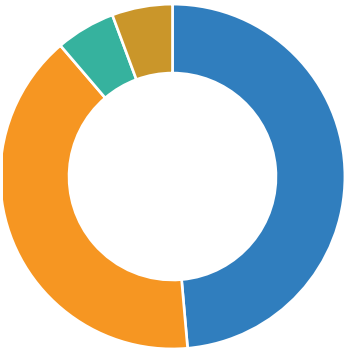
[1]Percentages are dollar-weighted averages.

Source: Investment Company Institute, Holden, Sarah, Jack VanDerhei, Luis Alonso, and Steven Bass. 2018. "401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2016." *ICI Research Perspective 24*, no. 6 (September). www.ici.org/pdf/per24-06.pdf.

MUTUAL FUNDS

Mutual funds held in employer-sponsored defined contribution plans and IRAs accounted for $8.8 trillion, or 31 percent, of the $28.2 trillion U.S. retirement market at the end of 2017, according to the Investment Company Institute.

Mutual Fund Retirement Assets By Type Of Plan, 2017[1] ($ billions, end of year)



IRAs	48.6%	$4,293
401(k) plans	40.1	3,545
403(b) plans	5.6	494
Other defined contribution plans	5.7	501
Total	**100.0%**	**$8,833**

At the end of 2017, 44 percent of mutual fund assets was invested in domestic equity funds, 15 percent in foreign equity funds, 24 percent in hybrid funds, 14 percent in bond funds and 4 percent in money market funds.

[1]Preliminary data. Excludes defined benefit plans.

Source: Investment Company Institute. *2018 Investment Company Fact Book: A Review of Trends and Activities in the U.S. Investment Company Industry.* www.icifactbook.org.

ANNUITIES

Sales Of Fixed And Variable Annuities

Annuities play an important role in retirement planning by helping individuals guard against outliving their assets. In the most general sense, an annuity is an agreement for an entity (generally a life insurance company) to pay another entity a series of payments. While there are many types of annuities, key features can include tax savings, protection from creditors, investment options, lifetime income and benefits to heirs.

Among the most common types of annuities are fixed and variable. Fixed annuities guarantee the principal and a minimum rate of interest. Generally, interest credited and payments made from a fixed annuity are based on rates declared by the company, which can change only yearly. In contrast, variable annuity account values and payments are based on the performance of a separate investment portfolio; thus their value may fluctuate daily.

There is a variety of fixed annuities and variable annuities. One type of fixed annuity, the equity indexed annuity, contains features of fixed and variable annuities. It provides a base return, just as other fixed annuities do, but its value is also based on the performance of a specified stock index. The return can go higher if the index rises. The 2010 Dodd-Frank Act included language keeping equity indexed annuities under state insurance regulation. Variable annuities are subject to both state insurance regulation and federal securities regulation. Fixed annuities are not considered securities and are only subject to state insurance regulation.

Annuities can be deferred or immediate. Deferred annuities generally accumulate assets over a long period of time, with withdrawals taken as a single sum or as an income payment beginning at retirement. Immediate annuities allow purchasers to convert a lump sum payment into a stream of income that begins right away. Annuities can be written on an individual or group basis. (See the Life/Health Premiums by Line table.)

Annuities can be used to fund structured settlements, arrangements in which an injury victim in a lawsuit receives compensation in a number of tax-free payments over time, rather than as a lump sum.

i

Individual variable annuity sales in the United States fell 6.2 percent in 2017, more slowly than the 21.3 percent drop the previous year. Fixed annuity sales fell faster at 10.3 percent in 2017, after rising 14.3 percent in 2016.

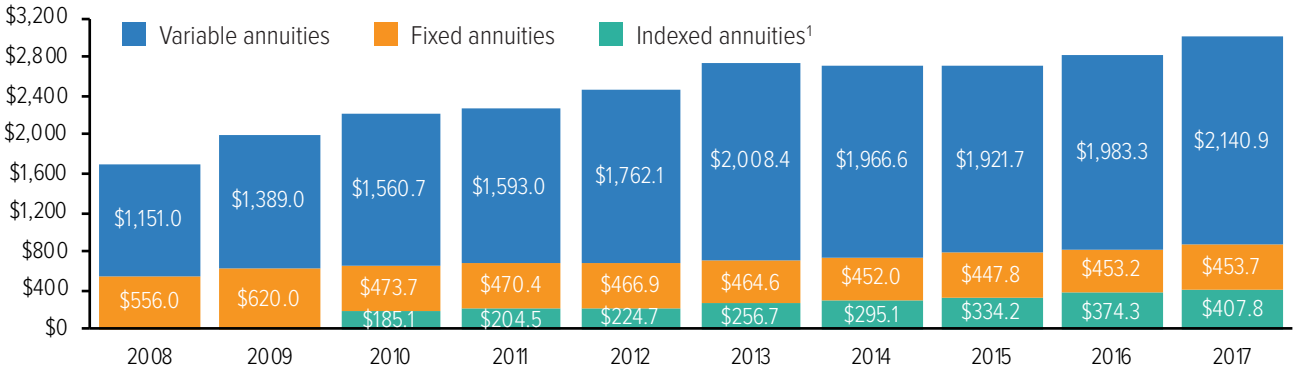
Individual Annuity Considerations, 2013-2017[1] ($ billions)

Year	Variable	Fixed	Total	
			Amount	Percent change from prior year
2013	$145.4	$84.4	$229.8	4.6%
2014	140.1	96.9	237.0	3.1
2015	133.0	102.7	235.7	-0.5
2016	104.7	117.4	222.1	-5.8
2017	98.2	105.3	203.5	-8.4

[1]Based on LIMRA's estimates of the total annuity sales market. Includes some considerations (i.e., premiums) that though bought in group settings involve individual buying decisions.

Source: *U.S. Individual Annuities, 1st Quarter 2018*, LIMRA, 2018.

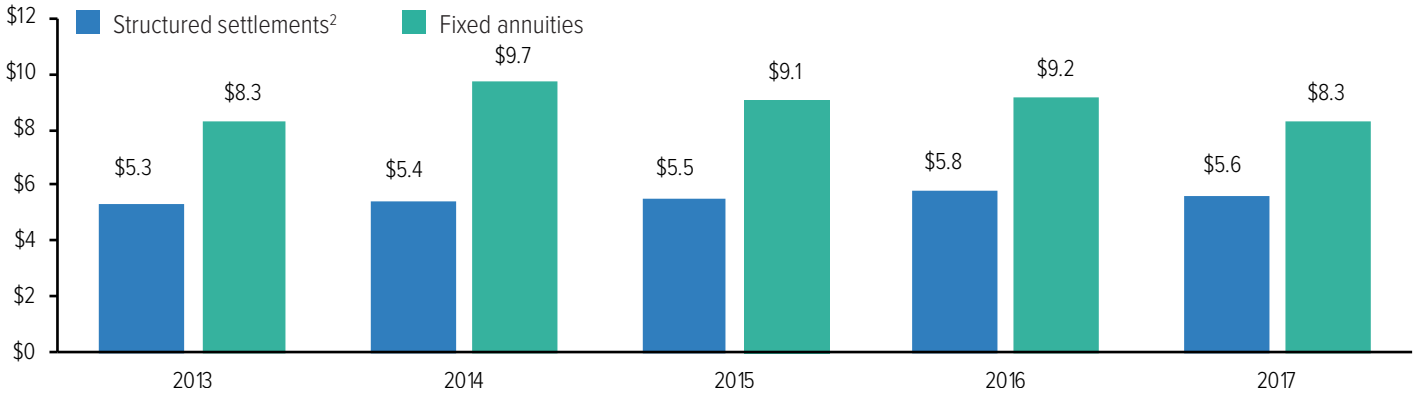
Deferred Annuity Assets, 2008-2017 ($ billions, end of year)



[1]Not reported before 2010.

Source: *U.S. Individual Annuities, 1st Quarter 2018*, LIMRA, 2018.

Individual Immediate Annuity Sales, 2013-2017[1] ($ billions)



[1]Includes variable individual annuities sales which were less than $0.1 billion. [2]Single premium contracts bought by property/casualty insurers to distribute awards in personal injury or wrongful death lawsuits over a period of time, rather than as lump sums.

Source: *U.S. Individual Annuities, 4th Quarter 2017*, LIMRA, 2018.

Top 10 Writers Of Annuities By Direct Premiums Written, 2017[1] ($000)

Rank	Group/company	Direct premiums written	Market share[2]
1	Voya Financial Inc.	$13,717,357	6.9%
2	Prudential Financial Inc.	12,592,804	6.4
3	Lincoln Financial	10,643,705	5.4
4	Northwestern Mutual Life Insurance Co.	10,488,214	5.3
5	MetLife Inc.	9,130,106	4.6
6	Massachusetts Mutual Life Insurance Co.	8,397,127	4.2
7	New York Life Insurance Group	8,280,846	4.2
8	TIAA	8,144,285	4.1
9	American International Group	7,180,410	3.6
10	AXA	6,269,256	3.2

[1]Includes individual and group annuities. [2]Based on U.S. total, includes territories.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Top 10 Writers Of Individual Annuities By Direct Premiums Written, 2017 ($000)

Rank	Group/company	Direct premiums written	Market share[1]
1	Jackson National Life Group	$16,193,937	9.4%
2	New York Life Insurance Group	11,808,993	6.9
3	American International Group	11,544,160	6.7
4	Allianz	9,952,705	5.8
5	Lincoln Financial	9,049,729	5.3
6	TIAA	7,909,491	4.6
7	AXA	7,293,465	4.3
8	Prudential Financial Inc.	5,972,285	3.5
9	Global Atlantic	5,871,350	3.4
10	Pacific Life	5,824,641	3.4

[1]Based on U.S. total, includes territories.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Top 10 Writers Of Group Annuities By Direct Premiums Written, 2017 ($000)

Rank	Group/company	Direct premiums written	Market share[1]
1	Voya Financial Inc.	$11,528,316	16.6%
2	TIAA	7,497,430	10.8
3	Prudential Financial Inc.	6,837,996	9.8
4	MetLife Inc.	5,401,231	7.8
5	American International Group	3,885,638	5.6
6	Great-West	3,847,504	5.5
7	Lincoln Financial	3,838,742	5.5
8	OneAmerica Financial Partners	3,601,007	5.2
9	AXA	3,160,276	4.5
10	Principal Financial Group Inc.	2,779,177	4.0

[1]Based on U.S. total, includes territories.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Chapter 5

Life/Health Financial Data

FINANCIAL RESULTS

Life/Health Sector

Whether measured by premium income or by assets, traditional life insurance is no longer the primary business of many companies in the life/health insurance industry. The emphasis has shifted to the underwriting of annuities. Annuities are contracts that accumulate funds and/or pay out a fixed or variable income stream. An income stream can be for a set period of time or over the lifetimes of the contract holder or his or her beneficiaries.

Nevertheless, traditional life insurance products such as universal life and term life for individuals as well as group life remain an important part of the business, as do disability income and health insurance. Besides annuities and life insurance products, life insurers may offer other types of financial services such as asset management.

2017 Financial Results

According to S&P Global Market Intelligence, in 2017 the life insurance industry posted a 6.8 percent increase in net income after taxes, following a 2.2 percent decrease in 2016. Net income before capital gains was just about flat compared with 2016, but a smaller capital gains loss resulted in a $2.7 billion increase in 2017 in net income compared with 2016. Premiums and annuity considerations were down slightly in 2017 compared with 2016 despite life insurance premiums rising by 19.2 percent. Expenses fell by 1.0 percent in 2017. Capital and surplus rose to $394.5 billion in 2017 from $380.7 billion in 2016, according to S&P Global Market Intelligence.

Investments

The life/health insurance industry's cash and invested assets totaled $4.1 trillion in 2017, according to S&P Global Market Intelligence. Almost three-quarters of these assets were invested in bonds (see chart, *Investments, Life/Health Insurers, 2015-2017*). About 12 percent of life insurers' assets were held in real estate loans.

Life/Health Insurance Industry Income Statement, 2013-2017 ($ billions, end of year)

	2013	2014	2015	2016	2017	Percent change 2016-2017[1]
Revenue						
Life insurance premiums	$126.0	$133.9	$151.4	$115.0	$137.1	-19.2%
Annuity premiums and deposits	279.4	352.8	324.0	318.5	287.2	-9.8
Accident and health premiums	153.3	156.6	158.8	162.8	169.3	4.0
Credit life and credit accident and health premiums	1.4	1.4	1.4	1.3	1.3	[2]
Other premiums and considerations	2.3	2.6	2.5	2.2	2.1	-4.3
Total premiums, consideration and deposits	**$562.6**	**$647.3**	**$638.2**	**$599.9**	**$597.1**	**-0.5%**
Net investment income	167.1	171.7	170.8	173.0	182.3	5.3
Reinsurance allowance	-21.2	-15.0	-86.4	-17.0	-25.1	NA
Separate accounts revenue	31.4	34.3	35.2	34.7	36.6	-5.5
Other income	42.8	39.7	90.5	61.3	49.0	-20.1
Total revenue	**$782.7**	**$878.0**	**$848.2**	**$851.9**	**$839.8**	**-1.4%**
Expense						
Benefits	250.6	251.8	263.9	271.4	281.4	3.7
Surrenders	248.7	281.5	273.0	265.1	308.9	16.5
Increase in reserves	86.2	108.7	80.5	133.1	106.4	-20.1
Transfers to separate accounts	-0.8	-16.5	36.9	-38.0	-65.8	NA
Commissions	53.0	52.1	55.5	64.6	58.0	-10.2
General and administrative expenses	58.5	59.0	60.1	62.4	65.9	5.6
Insurance taxes, licenses and fees	8.2	10.0	10.5	10.8	8.8	-18.6
Other expenses	-0.2	66.0	-4.9	-2.7	-4.3	NA
Total expenses	**$704.3**	**$812.5**	**$775.5**	**$766.6**	**$759.3**	**-1.0%**
Net income						
Policyholder dividends	15.7	16.4	18.3	18.2	17.5	-4.0
Net gain from operations before federal income tax	62.9	49.0	54.4	67.1	63.0	-6.1
Federal income tax	8.6	10.1	10.6	16.3	12.4	-24.1
Net income before capital gains	**$54.3**	**$38.9**	**$43.8**	**$50.8**	**$50.6**	**-0.3%**
Net realized capital gains (losses)	-12.0	-1.3	-3.5	-11.4	-8.6	NA
Net income	**$42.3**	**$37.6**	**$40.3**	**$39.4**	**$42.1**	**6.8%**
Pre-tax operating income	62.9	49.0	54.4	67.1	63.0	-6.1

[1]Calculated from unrounded data. [2]Less than 0.1 percent.

NA=Not applicable.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

INVESTMENTS

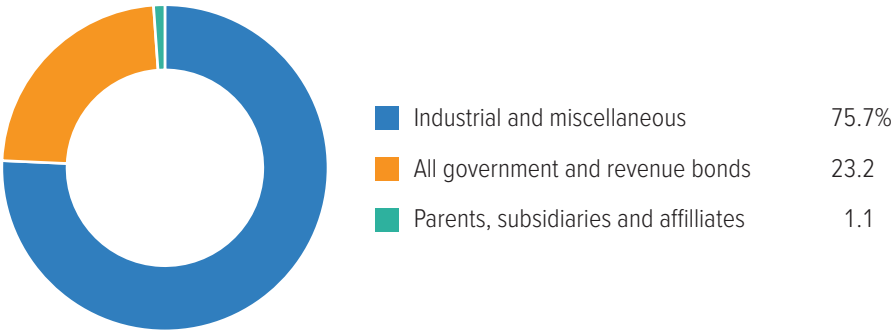
Investments, Life/Health Insurers, 2015-2017[1] ($ billions, end of year)

Investment type	Amount			Percent of total investments		
	2015	2016	2017	2015	2016	2017
Bonds	$2,734.0	$2,860.7	$2,973.5	73.82%	73.50%	72.98%
Stocks	**$84.9**	**$96.0**	**$104.9**	**2.29%**	**2.47%**	**2.57%**
Preferred stock	9.6	9.6	10.5	0.26	0.25	0.26
Common stock	75.3	86.4	94.4	2.03	2.22	2.32
Mortgage loans on real estate	**$404.2**	**$437.7**	**$477.0**	**10.91%**	**11.25%**	**11.71%**
First lien real estate mortgage loans	397.4	430.1	468.5	10.73	11.05	11.50
Real estate loans less first liens	6.8	7.6	8.6	0.18	0.20	0.21
Real estate	**$23.7**	**$24.5**	**$23.5**	**0.64%**	**0.63%**	**0.58%**
Occupied properties	5.5	6.0	6.0	0.15	0.15	0.15
Income generating properties	17.8	17.6	17.0	0.48	0.45	0.42
Properties for sale	0.4	0.9	0.5	0.01	0.02	0.01
Cash, cash equivalent and short term investments	103.3	101.4	104.6	2.79	2.61	2.57
Contract loans including premium notes	126.8	126.9	128.9	3.42	3.26	3.16
Derivatives	53.8	62.0	58.7	1.45	1.59	1.44
Other invested assets	154.9	158.3	174.7	4.18	4.07	4.29
Receivables for securities	2.3	3.9	5.3	0.06	0.10	0.13
Securities lending reinvested collateral assets	11.7	12.6	16.9	0.32	0.32	0.41
Write-ins for invested assets	4.1	8.0	6.4	0.11	0.20	0.16
Total cash and invested assets	**$3,703.9**	**$3,891.9**	**$4,074.4**	**100.00%**	**100.00%**	**100.00%**

[1]Data are net admitted assets of life/health insurers.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Investments, Life/Health Insurers, Bond Portfolio, 2017[1]



[1]Long-term bonds with maturity dates over one year, as of December 31, 2017.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

PAYOUTS

Life insurance benefits and claims totaled $697 billion in 2017. This includes life insurance death benefits, annuity benefits, disability benefits and other payouts, and compares with $670 billion in 2016. The largest payout, $309 billion, was for surrender benefits and withdrawals from life insurance contracts made to policyholders who terminated their policies early or withdrew cash from their policies.

Life Insurance Industry Benefits And Claims, 2013-2017 ($000)

	2013	2014	2015	2016	2017
Death benefits	$62,536,974	$65,961,305	$72,320,822	$73,996,171	$74,942,640
Matured endowments, excluding annual pure endowments	368,210	350,488	397,554	420,287	437,591
Annuity benefits	74,882,585	69,583,732	73,535,187	74,769,738	77,043,317
Disability, accident and health benefits[1]	110,789,199	113,572,825	115,468,861	120,056,048	126,787,233
Coupons, pure endowment and similar benefits	17,222	18,992	18,237	19,509	19,406
Surrender benefits, withdrawals for life contracts	248,702,088	281,532,892	272,998,652	265,095,216	308,928,847
Group conversions	52,893	28,088	48,382	30,872	25,719
Interest and adjustments on deposit type contracts	8,195,238	7,749,827	8,009,313	9,407,551	8,348,035
Payments on supplementary contracts with life contingencies	1,985,919	2,237,030	2,120,777	2,062,662	2,106,523
Increase in aggregate reserve	78,028,839	100,984,602	72,537,331	123,731,601	98,004,386
Total benefits and claims	**$585,558,162**	**$642,018,430**	**$617,451,481**	**$669,589,655**	**$696,643,698**

[1]Excludes benefits paid by health insurance companies and property/casualty insurance companies.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

PREMIUMS BY LINE

Annuities are the largest life/health product line, as measured by premiums written, followed by accident and health insurance and life insurance. Accident and health insurance includes medical expenses, disability income and long-term care. Life insurance policies can be sold on an individual, or *ordinary*, basis or to groups such as employees and associations. Other lines include credit life, which pays the balance of a loan if the borrower dies or becomes disabled, and industrial life, small policies whose premiums are generally collected by an agent on a weekly basis.

Direct Premiums Written By Line, Life/Health Insurance Industry, 2015-2017 ($000)

	2015		2016		2017	
Lines of insurance	Direct premiums written[1]	Percent of total	Direct premiums written[1]	Percent of total	Direct premiums written[1]	Percent of total
Annuities						
Ordinary individual annuities	$206,964,955	30.4%	$197,026,489	28.8%	$181,849,769	26.3%
Group annuities	127,014,242	18.6	129,332,100	18.9	134,348,059	19.4
Total	**$333,979,197**	**49.0%**	**$326,358,589**	**47.8%**	**$316,197,828**	**45.7%**
Life						
Ordinary life	136,272,087	20.0	139,782,420	20.5	143,537,902	20.8
Group life	37,822,798	5.6	36,427,380	5.3	39,856,057	5.8
Credit life (group and individual)	917,663	0.1	828,632	0.1	808,621	0.1
Industrial life	131,020	[2]	129,303	[2]	123,394	[2]
Total	**$175,143,569**	**25.7%**	**$177,167,735**	**25.9%**	**$184,325,974**	**26.7%**
Accident and health[3]						
Group	108,825,930	16.0	115,363,684	16.9	126,290,331	18.3
Other	62,218,089	9.1	63,637,078	9.3	63,725,795	9.2
Credit	907,768	0.1	822,146	0.1	830,946	0.1
Total	**$171,951,787**	**25.2%**	**$179,822,908**	**26.3%**	**$190,847,071**	**27.6%**
All other lines	3,383	[2]	3,315	[2]	3,839	[2]
Total, all lines[4]	**$681,077,936**	**100.0%**	**$683,352,546**	**100.0%**	**$691,374,713**	**100.0%**

[1]Before reinsurance transactions. [2]Less than 0.1 percent. [3]Excludes accident and health premiums reported on the property/casualty and health annual statements.
[4]Excludes deposit-type funds.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Private Health Insurance

Most private health insurance is written by companies that specialize in that line of business. However, life/health and property/casualty insurers also write this coverage, referred to as accident and health insurance on their annual statements. Total private health insurance direct written premiums were $867.5 billion in 2017, including: $670.1 billion from the health insurance segment; $190.8 billion from the life/health segment; and $6.5 billion from property/casualty annual statements, according to S&P Global Market Intelligence.

In 2017, 28.5 million Americans did not have health insurance, according to a U.S. Census Bureau report, basically unchanged from 28 million in 2016. The percentage of uninsured Americans in 2017 was 8.8 percent, unchanged from 2016. The rate of uninsured Americans had been falling since 2013 when 13.3 percent of Americans were uninsured, but the gains appear to be diminishing. According to the *Gallup-Sharecare-Well-Being Index*, which uses data that are not directly comparable to Census Bureau data, the percentage of U.S. adults without health insurance was essentially unchanged in the fourth quarter of 2017, at 12.2 percent, but it is up 1.3 percentage points from the record low of 10.9 percent recorded in the last quarter of 2016. Further, the 1.3-point increase in the uninsured rate during 2017 is the largest single-year increase Gallup and Sharecare have measured since they began tracking the rate in 2008, including the period before the Affordable Care Act (ACA) went into effect.

In 2017, 91.2 percent of Americans had private or government health insurance coverage, the same rate as in 2016.

Healthcare Coverage, 2017

	Number	Percent of total
Insured[1]	**294,613**	**91.2%**
Private health insurance	217,007	67.2
Government health insurance	121,965	37.7
Uninsured	**28,543**	**8.8%**
Total[2]	**323,156**	**100.0%**

[1]Includes individuals with some form of insurance, i.e., government, private and a combination of both and is not a total of people who have either private or government health insurance. [2]Differs from Census Bureau estimates of the total population because of different survey methods.

Source: U.S. Department of Commerce, Census Bureau.

Other findings from the Census Bureau:

- The percentage of Americans insured by private coverage fell to 67.2 percent in 2017 from 67.5 percent in 2016, down 0.3 percentage points.
- The rate insured by government plans grew to 37.7 percent in 2017 from 37.3 percent in 2016, up by 0.4 percentage points.
- Between 2016 and 2017, the percentage of people without health insurance coverage dropped for most people between the ages of 19 and 25.
- The percentage of uninsured children under age 19 was unchanged in 2017 at 5.4 percent.
- Between 2016 and 2017, the percentage of people without health insurance coverage decreased in 3 states, compared with a decrease in 39 states between 2015 and 2016. In 2017, the percentage of people without health insurance coverage increased in 14 states. Thirty-three states and the District of Columbia did not have a statistically significant change in their uninsured rate in 2017, according to the U.S. Census Bureau.

Top 10 Health Insurance Groups By Direct Premiums Written, 2017 ($000)

Rank	Group/company	Direct premiums written[1]	Market share
1	UnitedHealth Group Inc.	$86,431,430	12.9%
2	Anthem Inc.	65,696,295	9.8
3	Humana Inc.	53,224,860	7.9
4	HealthCare Service Corp.	34,304,533	5.1
5	Centene Corp.	28,260,282	4.2
6	Aetna Inc.	20,525,502	3.1
7	Kaiser Foundation Health Plan Inc.	17,406,943	2.6
8	Independence Health Group Inc.	17,014,038	2.5
9	Molina Healthcare Inc.	16,665,219	2.5
10	GuideWell Mutual Holding Corp.	15,253,562	2.3

[1]Based on health insurer annual statement data. Excludes health insurance data from the property/casualty and life/health annual statements. Excludes territories.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Disability Insurance

Disability insurance pays an insured person an income when he or she is unable to work because of an accident or illness.

Individual Disability Insurance, New Issues Sale, 2017[1] ($000)

	Annualized premiums	Percent change, 2016-2017	Number of policies	Percent change, 2016-2017
Guaranteed renewable	$266,690	17%	424,817	12%
Noncancellable	344,765	2	163,335	-2
Total	**$611,455**	**8%**	**588,152**	**8%**

[1]Short-term and long-term individual disability income insurance. Based on a LIMRA survey of 19 personal disability insurance companies. Excludes commercial disability income.
Source: *U.S. Individual Disability Income Insurance Sales, 2017 4th Quarter,* LIMRA, 2018.

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Annualized premiums for new disability income policies were up 8 percent in 2017, after being unchanged in 2016.

Individual Disability Insurance In Force, 2017[1]

	Number of policies	Percent change, 2016-2017	Annualized premiums	Percent change, 2016-2017
Noncancellable	2,364,276	-1%	$4,403,209,890	2%
Guaranteed renewable	1,681,405	[2]	1,218,850,095	3
Total	**4,045,681**	**[2]**	**$5,622,059,985**	**2%**

[1]Short-term and long-term individual disability income insurance. Based on a LIMRA survey of 21 personal disability insurance companies. Excludes commercial disability income.
[2]Less than 0.5 percent.
Source: *LIMRA's Quarterly and Annual Individual Disability Income Surveys*, LIMRA, 2017-2018.

Long-Term Care Insurance

Long-term care (LTC) insurance pays for services to help individuals who are unable to perform certain activities of daily living without assistance or who require supervision due to a cognitive impairment such as Alzheimer's disease. According to the U.S. Department of Health and Human Services, most people over age 65 will need LTC services at some point during their lives. There were 50.9 million people age 65 and older in 2017, accounting for 15.6 percent of the U.S. population, or about one in every six Americans, according to the U.S. Census Bureau. By 2030 the Census Bureau projects there will be about 73.1 million people age 65 and over and about 85.7 million in 2050.

Individual Long-Term Care Insurance, 2017[1]

	Lives	Percent change, 2016-2017	Premiums ($ millions)	Percent change, 2016-2017
New business	67,473	-27%	$176	-23%
In-force[2]	>4,600,000	-2	≈10,260	<1

[1]Based on LIMRA International's Individual LTC Sales survey. [2]Includes estimates for non-participants.

> =Greater than. <=Less than. ≈ =Approximately.

Source: *Individual Long-Term Care Insurance Sales and In Force Survey, 2017*, LIMRA, 2018.

Premiums By Line By State

Life/Health Insurers Direct Premiums Written And Annuity Considerations By State, 2017[1] ($ millions)

State	Life insurance	Annuities	Accident and health insurance[2]	Deposit-type contract funds	Other considerations	Total
Alabama	$2,191	$2,667	$1,723	$322	$514	$7,417
Alaska	429	394	336	26	270	1,455
Arizona	2,384	4,564	3,836	345	1,537	12,666
Arkansas	1,106	1,346	986	84	331	3,853
California	17,454	22,287	14,371	2,385	8,738	65,234
Colorado	2,678	4,982	3,770	1,070	999	13,499
Connecticut	2,599	4,409	2,781	9,978	2,092	21,860
Delaware	1,406	3,274	736	61,910	370	67,696
D.C.	430	680	828	1,275	550	3,764
Florida	9,867	16,959	13,702	1,456	4,076	46,061
Georgia	5,098	4,987	7,642	1,486	3,122	22,335
Hawaii	788	1,348	1,328	69	323	3,856
Idaho	576	895	721	66	277	2,534
Illinois	6,841	9,882	6,163	1,837	2,670	27,393
Indiana	2,835	4,965	4,280	3,132	1,026	16,238
Iowa	1,783	2,869	1,421	13,854	2,324	22,251
Kansas	1,369	2,126	3,381	2,751	419	10,046
Kentucky	1,582	2,660	1,701	236	724	6,903

(table continues)

Life/Health Insurers Direct Premiums Written And Annuity Considerations By State, 2017[1] ($ millions) (Cont'd)

State	Life insurance	Annuities	Accident and health insurance[2]	Deposit-type contract funds	Other considerations	Total
Louisiana	$2,336	$3,102	$2,047	$292	$631	$8,408
Maine	439	1,055	847	61	195	2,599
Maryland	3,047	4,773	3,625	653	1,218	13,316
Massachusetts	3,788	6,970	3,413	599	3,268	18,038
Michigan	4,626	9,804	3,467	1,072	1,761	20,730
Minnesota	4,889	4,516	1,640	849	1,861	13,755
Mississippi	1,246	1,368	1,474	141	191	4,419
Missouri	2,767	5,716	4,240	683	1,070	14,477
Montana	374	495	371	50	135	1,427
Nebraska	1,049	1,506	1,418	365	392	4,730
Nevada	1,200	1,402	1,210	174	384	4,371
New Hampshire	642	1,710	677	219	262	3,511
New Jersey	6,700	10,045	6,887	1,431	2,355	27,418
New Mexico	677	902	1,107	83	435	3,204
New York	12,698	17,402	9,703	31,667	8,234	79,703
North Carolina	5,469	6,939	5,731	893	2,915	21,945
North Dakota	437	543	302	65	178	1,525
Ohio	5,108	10,724	7,474	7,451	2,379	33,136
Oklahoma	1,411	1,750	1,700	289	581	5,730
Oregon	1,257	2,254	1,932	198	970	6,610
Pennsylvania	6,571	12,611	7,101	2,364	2,532	31,179
Rhode Island	451	1,131	480	70	249	2,382
South Carolina	2,268	3,457	3,642	216	653	10,237
South Dakota	1,153	528	390	235	124	2,430
Tennessee	3,152	4,328	3,469	888	1,164	13,001
Texas	11,891	14,898	17,366	3,294	3,610	51,058
Utah	1,482	1,983	1,322	319	466	5,571
Vermont	258	612	371	105	181	1,527
Virginia	4,544	5,755	4,529	750	1,580	17,157
Washington	2,593	4,336	3,561	403	1,606	12,500
West Virginia	640	1,046	758	93	146	2,683
Wisconsin	2,699	4,795	3,550	581	1,183	12,808
Wyoming	277	362	350	25	55	1,070
United States[3]	**$159,554**	**$240,111**	**$175,864**	**$158,860**	**$73,327**	**$807,717**

[1]Direct premiums written before reinsurance transactions, excludes state funds. [2]Excludes accident and health premiums reported on property/casualty and health annual statements. [3]Excludes territories, dividends and other nonstate specific data.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

LEADING COMPANIES

Top 20 Writers Of Life Insurance By Direct Premiums Written, 2017 ($000)

Rank	Group/company	Direct premiums written[1]	Market share
1	Northwestern Mutual Life Insurance Co.	$10,488,284	6.4%
2	MetLife Inc.	10,260,129	6.2
3	New York Life Insurance Group	9,426,915	5.7
4	Prudential Financial Inc.	9,015,155	5.5
5	Lincoln Financial Corp.	7,508,923	4.6
6	Massachusetts Mutual Life Insurance Co.	7,182,246	4.4
7	Transamerica	4,792,900	2.9
8	John Hancock Life Insurance Co.	4,598,437	2.8
9	State Farm Mutual Automobile Insurance	4,530,065	2.8
10	Securian Financial Group	4,141,352	2.5
11	Guardian Life Insurance Co. of America	3,986,667	2.4
12	American International Group	3,492,327	2.1
13	Pacific Life	3,410,513	2.1
14	Nationwide Mutual Group	3,396,414	2.1
15	AXA	3,125,160	1.9
16	Zurich Insurance Group[2]	2,955,465	1.8
17	Brighthouse Financial Inc.	2,722,197	1.7
18	Sammons Enterprises Inc.	2,717,592	1.7
19	Aflac Inc.	2,679,835	1.6
20	Voya Financial Inc.	2,662,576	1.6

[1]Before reinsurance transactions. Based on U.S. total, includes territories. Excludes annuities, accident and health, deposit-type contract funds and other considerations. [2]Data for Farmers Insurance Group of Companies and Zurich Financial Group (which owns Farmers' management company) are reported separately by S&P Global Market Intelligence.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Top 10 Writers Of Individual Life Insurance By Direct Premiums Written, 2017 ($000)

Rank	Group/company	Direct premiums written[1]	Market share
1	Northwestern Mutual Life Insurance Co.	$10,488,214	8.2%
2	New York Life Insurance Group	7,416,451	5.8
3	Lincoln Financial Corp.	6,804,963	5.3
4	Prudential Financial Inc.	5,754,809	4.5
5	Massachusetts Mutual Life Insurance Co.	5,741,452	4.5
6	John Hancock Life Insurance Co.	4,593,432	3.6
7	Transamerica	4,491,338	3.5
8	State Farm Mutual Automobile Insurance	4,488,036	3.5
9	MetLife Inc.	3,728,875	2.9
10	Guardian Life Insurance Co. of America	3,415,797	2.7

[1]Before reinsurance transactions. Based on U.S. total, includes territories. Excludes annuities, accident and health, deposit-type contract funds and other considerations.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Top 10 Writers Of Group Life Insurance By Direct Premiums Written, 2017 ($000)

Rank	Group/company	Direct premiums written[1]	Market share
1	MetLife Inc.	$6,508,634	18.3%
2	Prudential Financial Inc.	3,260,346	9.2
3	Securian Financial Group	2,373,913	6.7
4	New York Life Insurance Group	2,010,464	5.7
5	Zurich Insurance Group[2]	1,788,694	5.0
6	Cigna Corp.	1,782,938	5.0
7	Unum Group	1,519,175	4.3
8	Massachusetts Mutual Life Insurance Co.	1,440,794	4.1
9	Nationwide Mutual Group	1,397,769	3.9
10	Hartford Life & Accident Insurance Co.	1,330,721	3.7

[1]Before reinsurance transactions. Based on U.S. total, includes territories. Excludes annuities, accident and health, deposit-type contract funds and other considerations. [2]Data for Farmers Insurance Group of Companies and Zurich Financial Group (which owns Farmers' management company) are reported separately by S&P Global Market Intelligence.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Chapter 6

Property/Casualty Financial Data

FINANCIAL RESULTS

2017 Financial Results

In 2017 profits for the property/casualty insurance industry totaled $36.1 billion, down 15.9 percent from $42.9 billion in 2016. The industry's return on average surplus was 5.0 percent, down from 6.2 percent in 2016. Net premiums written in 2017 rose to $552.6 billion in 2017, up $24.3 billion, or 4.6 percent from 2016. The rate of increase in net premiums written had been trending down from 2014 to 2016 due mainly to soft markets in the commercial lines, but a stronger economy in 2017 accounted for a higher increase. The 2017 increase was the highest in the previous 10 years. Industry capacity (policyholder surplus) rose to a new peak as of December 31, 2017, to $752.5 billion, up 7.4 percent from the previous year, reflecting the strong stock market, according to data compiled by ISO®, a Verisk Analytics® business, and the American Property Casualty Insurers Association (APCIA). The combined ratio rose to 103.7 in 2017 from 100.6 in 2016. The 2017 combined ratio was the highest since 2011's 108.1 ratio. The industry had an underwriting loss of $23.2 billion, almost five times larger than the $4.7 billion underwriting loss in 2016, reflecting 2017's soaring catastrophe losses. The industry's net investment income for 2017 was $49.0 billion, up 5.2 percent compared with $46.6 billion in 2016. Most of this income came from the industry's bond investments, which are mainly high-quality corporates and municipals.

Property/Casualty Insurance Industry Income Analysis, 2013-2017[1] ($ billions)

	2013	2014	2015	2016	2017
Net premiums written	$477.0	$497.0	$514.4	$528.3	$552.6
Percent change	4.4%	4.2%	3.5%	2.7%	4.6%
Premiums earned	$467.4	$487.9	$506.0	$523.5	$540.6
Losses incurred	259.4	277.7	290.7	317.9	347.5
Loss adjustment expenses incurred	55.6	57.3	59.6	60.3	62.7
Other underwriting expenses	134.6	138.3	144.3	147.6	151.1
Policyholder dividends	2.5	2.4	2.5	2.3	2.6
Net underwriting gain/loss	15.2	12.2	8.9	-4.7	-23.2
Net investment income	47.3	46.4	47.2	46.6	49.0
Miscellaneous income/loss	1.5	-2.7	1.5	1.1	-5.4
Operating income	64.1	55.9	57.7	43.0	20.3
Realized capital gain	11.4	10.3	9.4	7.3	15.1
Federal and foreign income tax	12.0	10.3	10.2	7.4	-0.7
Net income after taxes	63.4	55.9	56.8	42.9	36.1

[1]Data in this chart exclude state funds and other residual market insurers and may not agree with similar data shown elsewhere from different sources.

Source: ISO®, a Verisk Analytics® business.

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The property/casualty insurance industry had an underwriting loss of $23.2 billion in 2017, compared with an underwriting loss of $4.7 billion in 2016, as catastrophe losses soared in 2017 from Hurricanes Harvey, Irma and Maria and wildfires in California. In 2017 ISO estimates total U.S. catastrophe losses to be $101.9 billion, compared to $21.7 billion in 2016.

Premiums, Expenses And Combined Ratio

Insurers use various measures to gauge financial performance. The combined ratio after dividends is a measure of underwriting profitability. It reflects the percentage of each premium dollar an insurer spends on claims and expenses. The combined ratio does not take investment income into account. A combined ratio above 100 indicates an underwriting loss.

Net Premiums Written And Combined Ratio, Property/Casualty Insurance, 2008-2017 ($ billions)

Year	Net premiums written[1]	Annual percent change	Combined ratio after dividends[2]	Annual point change[3]
2008	$440.3	-1.3%	105.2	9.5 pts.
2009	423.5	-3.8	100.4	-4.8
2010	425.9	0.6	102.5	2.1
2011	441.6	3.7	108.3	5.8
2012	460.7	4.3	103.2	-5.2
2013	$481.5	4.5%	96.4	-6.8 pts.
2014	502.8	4.4	97.2	0.8
2015	520.1	3.4	97.9	0.8
2016	533.7	2.6	100.7	2.8
2017	558.2	4.6	103.8	3.0

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded numbers.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Property/Casualty Insurance Industry Underwriting Expenses, 2017[1]

Expense	Percent of premiums
Losses and related expenses[2]	
Loss and loss adjustment expense (LAE) ratio	**75.9%**
Incurred losses	64.2
Defense and cost containment expenses incurred	4.3
Adjusting and other expenses incurred	7.4
Underwriting expenses[3]	
Expense ratio	**27.0%**
Net commissions and brokerage expenses incurred	10.5
Taxes, licenses and fees	2.4
Other acquisition and field supervision expenses incurred	7.1
General expenses incurred	7.0
Dividends to policyholders[2]	**0.6%**
Combined ratio after dividends[4]	**103.6%**

[1]After reinsurance transactions. [2]As a percent of net premiums earned ($546.0 billion in 2017). [3]As a percent of net premiums written ($558.2 billion in 2017). [4]Sum of loss and LAE, expense and dividends ratios.

Note: Totals may not add up due to rounding.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Profitability: Insurance And Other Selected Industries

Profitability of property/casualty (P/C) insurance companies using generally accepted accounting principles (GAAP) lags other industries. The median return on shareholders' equity for the Fortune 500 Combined Industrial and Service Businesses for the years 2008 to 2017 exceeded that of the P/C industry in every year. Insurers are required to use statutory accounting principles (SAP), which are more conservative than GAAP, when filing annual financial reports with state regulators and the Internal Revenue Service. Insurers outside the United States use standards that differ from SAP and GAAP. Some insurers support a move toward uniform global standards. The P/C industry's statutory accounting rate of return in 2017 was 5.0 percent, down from 6.2 percent in 2016.

Annual Rate Of Return: Net Income After Taxes As A Percent Of Equity, 2008-2017

	Property/casualty[1]		Life/health		Selected other industries[2]			Fortune 500 combined industrials and service[8]
Year	Statutory accounting[3]	GAAP accounting[4]	Life/health insurance[5]	Healthcare insurance[6]	Diversified financial[7]	Commercial banks	Electric and gas utilities	
2008	0.6%	0.1%	1.0%	11.0%	8.0%	3.0%	13.0%	13.1%
2009	5.9	5.0	4.0	14.0	9.0	4.0	9.0	10.5
2010	6.6	5.6	7.0	12.0	10.0	8.0	10.0	12.7
2011	3.5	3.0	8.0	15.0	12.0	8.0	10.0	14.5
2012	6.1	5.3	7.0	12.0	18.0	9.0	8.0	15.0
2013	10.2	8.9	7.0	13.0	18.0	9.0	9.0	13.7
2014	8.4	7.5	9.0	12.0	22.0	9.0	10.0	14.2
2015	8.4	7.4	8.0	12.0	22.0	8.0	9.0	13.3
2016	6.2	5.5	7.0	11.0	14.0	8.0	9.0	12.9
2017	5.0	[9]	9.0	15.0	14.0	9.0	10.0	14.1

[1]Excludes state funds for workers compensation and other residual market carriers. [2]Return on equity on a GAAP accounting basis, Fortune. [3]Statutory net income after taxes, divided by the average of current and prior year-end policyholders' surplus. Calculated by ISO. Statutory accounting is used by insurers when preparing the Annual Statements they submit to regulators. [4]Estimated from statutory data. Equals GAAP net income divided by the average of current and prior-year-end GAAP net worth. Calculated by ISO. [5]Return on equity on a GAAP accounting basis, Fortune. Combined stock and mutual companies, calculated by the Insurance Information Institute. [6]Healthcare insurance and managed care. [7]Companies whose major source of revenue comes from providing diversified financial services. These companies are not specifically chartered as insurance companies, banks or savings institutions, or brokerage or securities companies, but they may earn revenue from these sources. [8]Fortune 500 Combined Industrial and Service Businesses median return on shareholders' equity. [9]Data not available from ISO due to the uncertainties associated with the implementation of the Tax Cuts and Jobs Act of 2017.

Source: ISO®, a Verisk Analytics business®; Fortune.

Property/Casualty Insurance Cycle

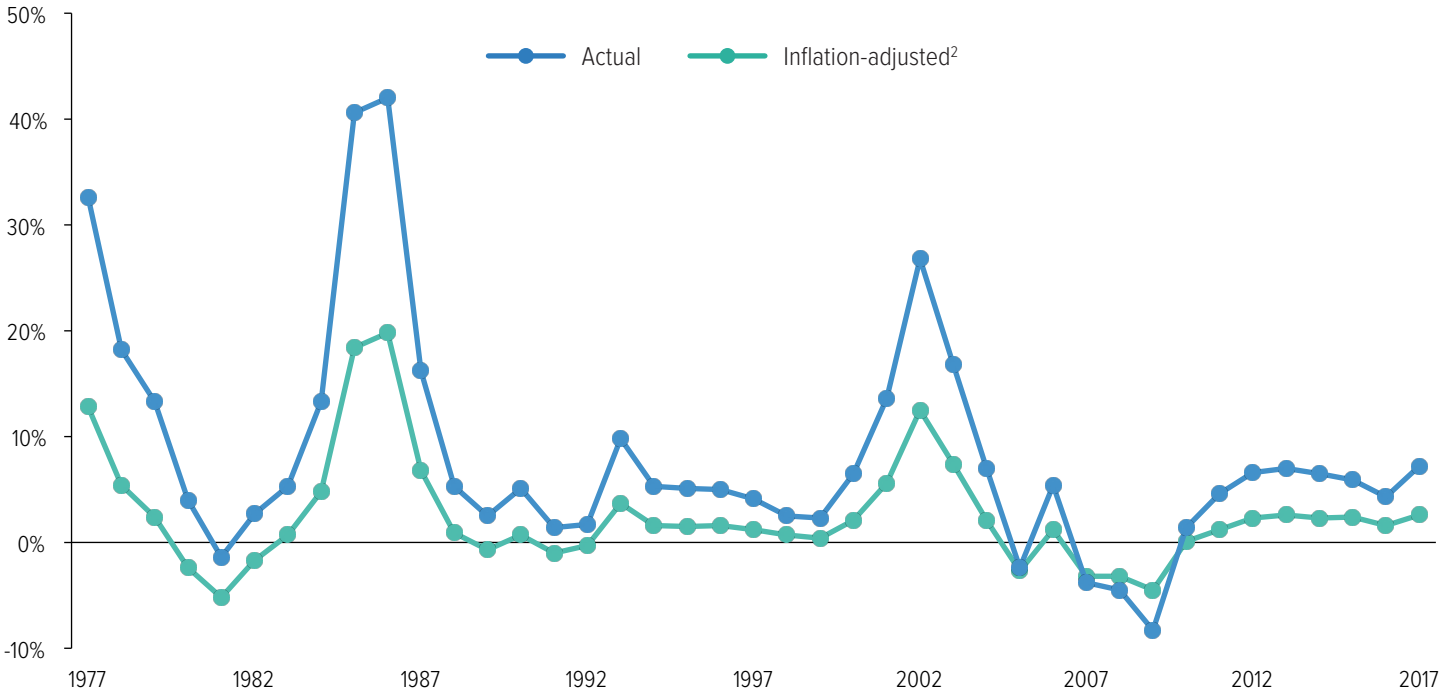
The property/casualty (P/C) insurance industry cycle is characterized by periods of soft market conditions, in which premium rates are stable or falling and insurance is readily available, and by periods of hard market conditions, where rates rise, coverage may be more difficult to find and insurers' profits increase.

A dominant factor in the P/C insurance cycle is intense competition within the industry. Premium rates drop as insurance companies compete vigorously to increase market share. As the market softens to the point that profits diminish or vanish completely, the capital needed to underwrite new business is depleted. In the up phase of the cycle, competition is less intense, underwriting standards become more stringent, the supply of insurance is limited due to the depletion of capital, and, as a result, premiums rise. The prospect of higher profits draws more capital into the marketplace, leading to more competition and the inevitable down phase of the cycle.

The chart below shows both nominal and inflation-adjusted growth of P/C net premiums written over four decades and three hard markets. Premiums can be accounted for in several ways. This chart uses net premiums written, which reflect premium amounts after deductions for reinsurance transactions.

During the last three hard markets, inflation-adjusted net premiums written grew 7.7 percent annually (1975 to 1978), 10.0 percent (1984 to 1987) and 6.3 percent (2001 to 2004).

Percent Change From Prior Year, Net Premiums Written, P/C Insurance, 1977-2017[1]



[1]Excludes state funds and other residual market insurers. [2]Adjusted for inflation by ISO using the GDP implicit price deflator.
Source: ISO®, a Verisk Analytics® business.

Operating Results

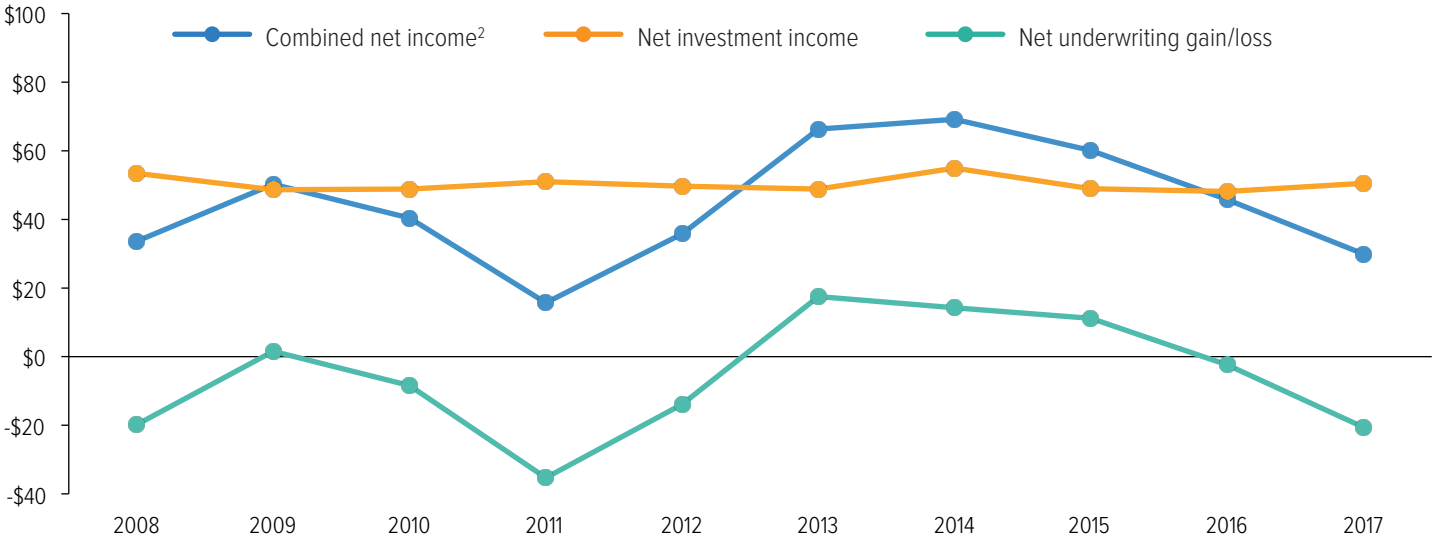
Generally, the insurance industry does not generate profits from its underwriting operations. Investment income from capital and surplus accounts, money set aside as loss reserves and unearned premium reserves offsets these losses. Underwriting results were favorable in 2006, 2007 and 2009, according to S&P Global Market Intelligence. The industry posted underwriting losses in 2010 through 2012, including 2011's $35.3 billion loss, the largest since 2001's $50.3 billion loss. The industry had three years of underwriting gains ending in 2015, followed by underwriting losses of $2.4 billion in 2016 and $20.6 billion in 2017. The 2017 underwriting loss was the largest since the $35.3 billion loss in 2011.

Operating Results, Property/Casualty Insurance, 2008-2017[1] ($ millions)

Year	Net underwriting gain/loss	Net investment income earned	Net realized capital gains/losses	Policyholder dividends	Taxes[2]	Net income after taxes[3]
2008	-$19,810	$53,430	-$19,609	$2,211	$7,730	$4,446
2009	1,579	48,640	-7,895	2,141	8,481	32,492
2010	-8,422	48,833	8,003	2,709	8,951	37,716
2011	-35,305	51,000	6,891	2,315	3,026	19,532
2012	-13,872	49,657	8,548	2,656	6,267	37,573
2013	17,500	48,830	17,212	3,018	11,948	70,061
2014	14,247	54,928	11,765	2,943	10,396	64,711
2015	11,163	48,924	9,580	3,017	10,199	58,012
2016	-2,396	48,144	8,058	2,944	7,321	44,555
2017	-20,590	50,520	19,058	3,309	-697	40,889

[1]Excludes state funds. [2]Includes federal and foreign taxes. [3]Does not equal the sum of the columns shown due to the omission of miscellaneous income.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Operating Results, Property/Casualty Insurance, 2008-2017[1] ($ billions)



[1]Excludes state funds. [2]Net underwriting gain/loss plus net investment income.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Policyholders' Surplus

A property/casualty insurer must maintain a certain level of surplus to underwrite risks. This financial cushion is known as *capacity.* When the industry is hit by high losses, such as a major hurricane, capacity is diminished. It can be restored by increases in net income, favorable investment returns, reinsuring more risk and/or raising additional capital.

Consolidated Assets And Policyholders' Surplus, P/C Insurance, 2008-2017 ($ millions)

Year	Net admitted assets	Annual percent change	Statutory liabilities	Annual percent change	Policy-holders' surplus	Annual percent change	Total net premiums written[1]	Annual percent change[1]
2008	$1,405,742	-4.3%	$943,732	0.3%	$462,006	-12.5%	$440,681	-1.3%
2009	1,456,852	3.6	936,261	-0.8	520,591	12.7	423,545	-3.9
2010	1,514,190	3.9	947,390	1.2	566,800	8.9	426,380	0.7
2011	1,537,222	1.5	974,699	2.9	562,522	-0.8	441,925	3.6
2012	1,596,263	3.8	998,029	2.4	598,233	6.3	461,130	4.3
2013	1,684,070	5.5	1,016,275	1.8	667,795	11.6	481,757	4.5
2014	1,737,141	3.2	1,046,792	3.0	690,349	3.4	503,090	4.4
2015	1,749,491	0.7	1,057,843	1.1	691,648	0.2	520,613	3.5
2016	1,811,793	3.6	1,096,758	3.7	715,036	3.4	534,003	2.6
2017	1,923,086	6.1	1,155,693	5.4	767,390	7.3	558,442	4.6

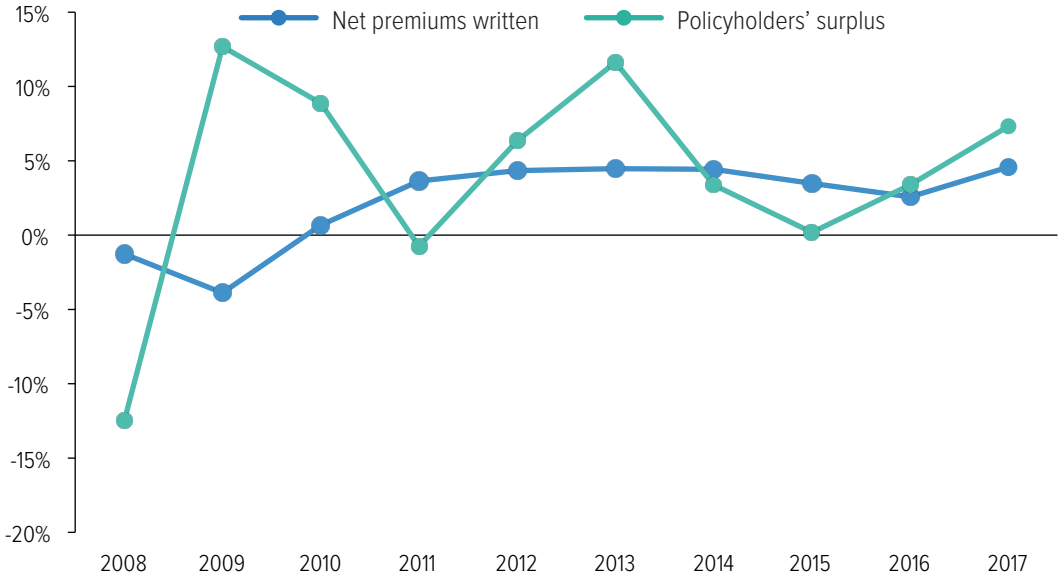
[1]After reinsurance transactions, excludes state funds. May not match total premiums written shown elsewhere in this book because of the use of different exhibits from S&P Global Market Intelligence.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance information Institute.

Policyholders' surplus dropped substantially in 2008, reflecting the deterioration in global financial markets.

Policyholders' surplus reached a record $767.4 billion in 2017, rising 7.3 percent from 2016.

Percent Change From Prior Year, Net Premiums Written And Policyholders' Surplus, P/C Insurance, 2008-2017[1]



[1]After reinsurance transactions, excludes state funds.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

The Combined Ratio

The combined ratio represents the percentage of each premium dollar an insurer spends on claims and expenses. The following chart shows the components of the combined ratio, a measure of the industry's underwriting performance.

The combined ratio is the sum of the loss ratio and the expense ratio. The loss ratio expresses the relationship between losses and premiums in percentage terms. The expense ratio expresses the relationship between underwriting expenses and premiums.

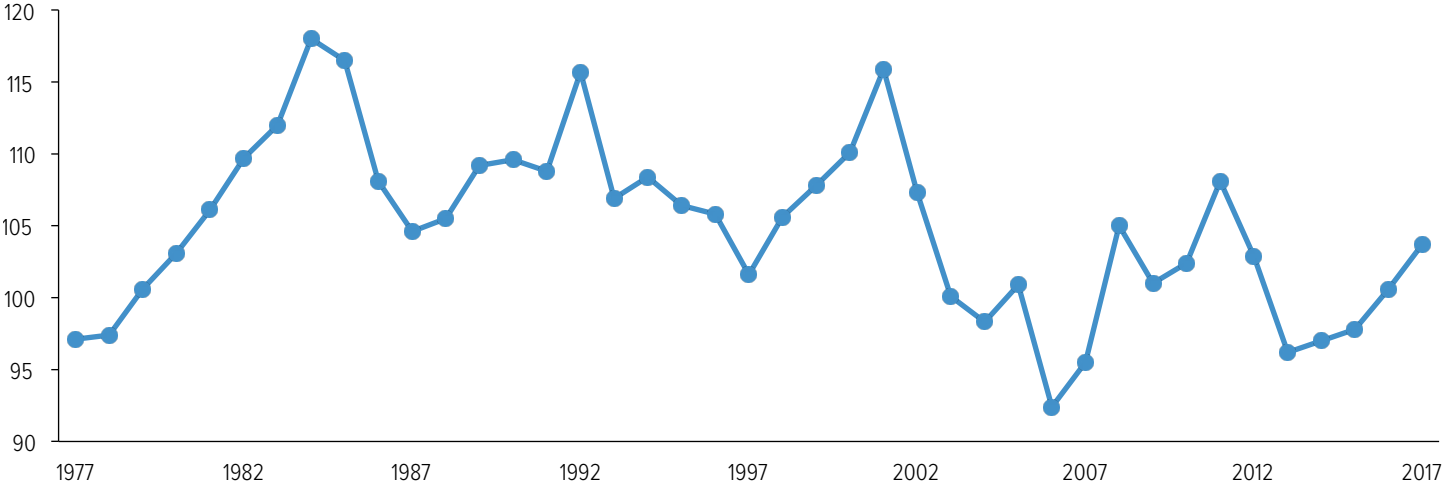
Components Of The Combined Ratio, Property/Casualty Insurance, 2008-2017[1]

Year	Loss ratio[2]	Expense ratio[3]	Combined ratio	Dividends to policyholders[4]	Combined ratio after dividends
2008	77.1	27.5	104.6	0.4	105.0
2009	72.5	28.0	100.5	0.5	101.0
2010	73.6	28.3	101.8	0.5	102.4
2011	79.3	28.4	107.7	0.4	108.1
2012	74.2	28.2	102.5	0.5	102.9
2013	67.4	28.2	95.6	0.5	96.2
2014	68.7	27.8	96.5	0.5	97.0
2015	69.2	28.0	97.3	0.5	97.8
2016	72.3	27.9	100.2	0.4	100.6
2017	75.9	27.3	103.2	0.5	103.7

[1]Excludes state funds and other residual market insurers. [2]Incurred loss and loss adjustment expenses as a percent of earned premiums. [3]Other underwriting expenses as a percent of written premiums. [4]Dividends to policyholders as a percent of earned premiums.

Source: ISO®, a Verisk Analytics® business.

Property/Casualty Insurance Combined Ratio, 1977-2017[1]



[1]Excludes state funds and other residual insurers.

Source: ISO®, a Verisk Analytics® business.

INVESTMENTS

Cash and invested assets of property/casualty insurance companies totaled $1.69 trillion in 2017. This represents 88 percent of total net admitted assets, which were $1.92 trillion. Most of these assets were invested in highly liquid securities (high-quality stocks and bonds, for example, rather than real estate), which can be sold quickly to pay claims in the event of a major catastrophe.

Investments, Property/Casualty Insurers, 2015-2017[1] ($ millions, end of year)

	Amount			Percent of total investments		
Investment type	**2015**	**2016**	**2017**	**2015**	**2016**	**2017**
Bonds	$949,702	$973,140	$979,509	62.01%	61.25%	57.91%
Stocks	**$340,252**	**$359,165**	**$417,448**	**22.22%**	**22.61%**	**24.68%**
Preferred	14,025	10,849	5,448	0.92	0.68	0.32
Common	326,227	348,316	412,000	21.30	21.92	24.36
Mortgage loans on real estate	**$12,441**	**$15,032**	**$17,324**	**0.81%**	**0.95%**	**1.02%**
First liens	12,209	14,407	16,644	0.80	0.91	0.98
Other than first liens	232	625	681	0.02	0.04	0.04
Real estate	**$11,685**	**$12,272**	**$12,888**	**0.76%**	**0.77%**	**0.76%**
Properties occupied by company	8,716	8,933	9,122	0.57	0.56	0.54
Properties held for income production	2,693	3,061	3,543	0.18	0.19	0.21
Properties held for sale	276	278	223	0.02	0.02	0.01
Cash, cash equivalent and short-term investments	87,516	92,338	115,059	5.71	5.81	6.80
Derivatives	652	531	233	0.04	0.03	0.01
Other invested assets	121,291	128,704	137,878	7.92	8.10	8.15
Receivable for securities	2,530	1,679	2,102	0.17	0.11	0.12
Securities lending reinvested collateral assets	2,618	2,582	4,440	0.17	0.16	0.26
Aggregate write-in for invested assets	2,860	3,319	4,673	0.19	0.21	0.28
Total cash and invested assets	**$1,531,547**	**$1,588,760**	**$1,691,553**	**100.00%**	**100.00%**	**100.00%**

[1]Includes cash and net admitted assets of property/casualty insurers.

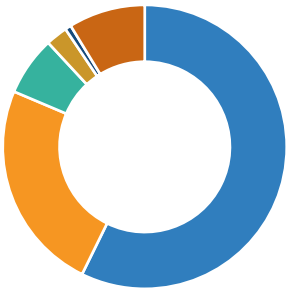
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Bonds

Property/casualty insurers invest primarily in safe, liquid securities, mainly bonds. These provide stability against underwriting results, which can vary considerably from year to year. The vast majority of bonds are government issued or are high-grade corporates. Bonds in or near default accounted for less than 1 percent (0.13 percent) of all short- and long-term bonds owned by insurers at the end of 2017, according to S&P Global Market Intelligence.

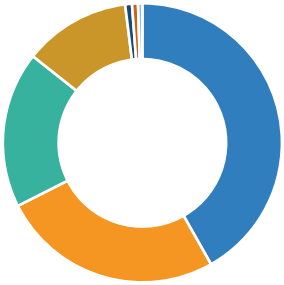
Investments, Property/Casualty Insurers, 2017

Investments by type[1]



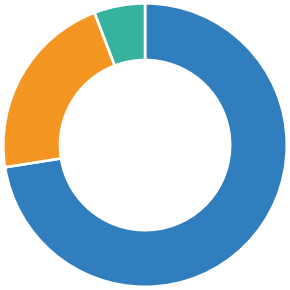
Bonds	57.91%
Common stock	24.36
Cash and short-term investments	6.80
Real estate[2]	1.78
Preferred stock	0.32
Other	8.83

Bond portfolio
(Represents 57.9% of total investments)



Industrial and miscellaneous	42.3%
Special revenue	26.0
Governments	18.3
States, territories and others	12.5
Parent, subsidiaries and affilates	0.4
Hybrid securities	0.3
Other	0.2

Common stock portfolio
(Represents 24.4% of total investments)



Industrial and miscellaneous	72.5%
Parent, subsidiaries and affililates	21.7
Mutual funds	5.8

[1]Cash and invested net admitted assets, as of December 31, 2017. [2]Includes mortgage loans on real estate.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

SURPLUS LINES

The surplus lines market, a group of highly specialized insurers that includes Lloyd's of London, exists to assume risks that licensed companies decline to insure or will only insure at a very high price, with many exclusions or with a very high deductible. To be eligible to seek coverage in the surplus lines market, a diligent effort must have been made to place insurance with an admitted company, usually defined by a certain number of *declinations*, or rejections, by licensed insurers, typically three to five. Many states provide an *export list* of risks that can be insured in the surplus lines market. This obviates the diligent search requirement.

The terms applied to the surplus lines market—nonadmitted, unlicensed and unauthorized—do not mean that surplus lines companies are barred from selling insurance in a state or are unregulated. They are just less regulated. Each state has surplus lines regulations, and each surplus lines company is overseen for solvency by its home state. More than half of all states maintain a list of eligible surplus lines companies, and some maintain a list of those that are not eligible to do business in that state.

Lloyd's of London is a significant writer of surplus lines insurance, both for corporations and individuals. Lloyd's members conduct their insurance business in syndicates, each of which is run by a managing agent. According to AM Best, in 2017 the Lloyd's market represented 23 percent of the total surplus lines market share and wrote $10.3 billion in surplus lines premiums. The largest surplus lines for Lloyd's are commercial property, general liability, cyber and professional indemnity.

Top 25 U.S. Surplus Lines Groups By Direct Premiums Written, 2017 ($000)

Rank	Group	Direct premiums written	Percent of total U.S. surplus lines market
1	Lloyd's	$10,325,000	23.0%
2	American International Group[1]	3,239,996	7.2
3	Markel Corporation Group	2,167,568	4.8
4	Nationwide Group	1,737,150	3.9
5	W. R. Berkley Insurance Group	1,698,541	3.8
6	Berkshire Hathaway Ins. Group	1,503,234	3.3
7	Chubb INA Group	1,445,248	3.2
8	Fairfax Financial (USA) Group	1,305,476	2.9
9	Liberty Mutual Insurance Companies	1,288,834	2.9
10	XL Catlin America Group	1,142,292	2.5
11	Zurich Financial Services Group NA	1,135,953	2.5
12	Alleghany Insurance Holdings Group	790,305	1.8
13	Argo Group	723,869	1.6
14	Tokio Marine U.S. PC Group	688,481	1.5
15	AXIS U.S. Operations	681,015	1.5

(table continues)

Top 25 U.S. Surplus Lines Groups By Direct Premiums Written, 2017 ($000) (Cont'd)

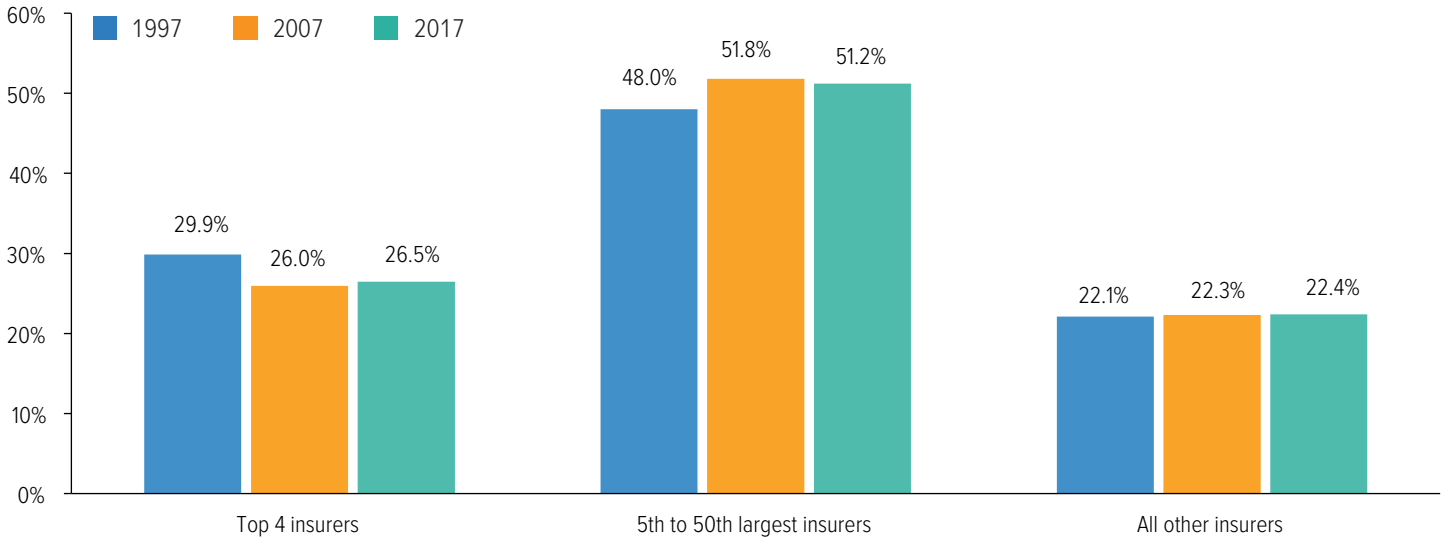
Rank	Group	Direct premiums written	Percent of total U.S. surplus lines market
16	Sompo Holdings U.S. Group	$671,194	1.5%
17	QBE Americas Group	642,289	1.4
18	Great American P & C Group	600,356	1.3
19	CNA Insurance Companies	568,441	1.3
20	Aspen U.S. Insurance Group	539,155	1.2
21	James River Group	530,077	1.2
22	Swiss Reinsurance Group	485,098	1.1
23	Arch Insurance Group	469,965	1.0
24	Starr International Group	425,901	0.9
25	Navigators Insurance Group	411,553	0.9
	Total, top 25	**$35,216,991**	**78.5%**
	Total U.S. surplus lines market	**$44,878,931**	**100.0%**

[1]Does not include direct surplus lines premium moved to offshore affiliate AIG Europe, Ltd.
Source: AM Best data and research.

CONCENTRATION

According to S&P Global Market Intelligence, concentration in the property/casualty insurance sector as measured by the Herfindahl-Hirschman Index (HHI) decreased from 354 in 1997 to 297 in 2007. By 2017, the index increased very slightly to 301. The U.S. Department of Justice classifies any market with an HHI under 1,500 as unconcentrated and any market with an HHI over 2,500 as highly concentrated.

Market Share Trends By Size Of Insurer, 1997-2017[1]



[1]Based on direct premiums written. Excludes state funds and other residual market carriers.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

REINSURANCE

Reinsurance is essentially insurance for insurance companies. It is a way for primary insurers to protect against unforeseen or extraordinary losses. Reinsurance also serves to limit liability on specific risks, to increase individual insurers' capacity to write business and to help insurers stabilize their business in the face of the wide swings in profit and loss margins which are inherent in the insurance business.

Net Premiums Written, U.S. Property/Casualty Reinsurers, 2008-2017 ($000)

Year	Net premiums written	Annual percent change	Combined ratio[1]	Annual point change
2008	$26,440,426	7.7%	100.4	6.9 pts.
2009	25,548,851	-3.4	92.3	-8.1
2010	25,722,426	0.7	94.5	2.2
2011	27,897,553	8.5	107.1	12.6
2012	31,649,616	13.4	96.2	-10.9
2013	29,144,853	-7.9	86.8	-9.4
2014	50,012,241[2]	71.6	91.0	4.2
2015	41,466,073	-17.1	92.3	1.3
2016	42,507,830	2.5	95.1	2.8
2017	48,967,222	15.2	108.4	13.3

[1]After dividends to policyholders. [2]Includes National Indemnity Co.'s loss portfolio and quota share agreements with affiliated GEICO companies.
Source: Reinsurance Association of America.

Top 10 U.S. Property/Casualty Reinsurers Of U.S. Business By Gross Premiums Written, 2017 ($000)

Rank	Company[1]	Country of parent company	Gross premiums written
1	National Indemnity Co. (Berkshire Hathaway)[2]	U.S.	$22,014,636
2	Everest Reinsurance Co.	Bermuda	5,822,435
3	Munich Re America	Germany	5,783,056
4	XL Reinsurance America Inc.	Ireland	4,819,013
5	Swiss Reinsurance America Corp.	Switzerland	4,789,540
6	QBE Re America	U.S.	4,615,963
7	Transatlantic Re	U.S.	3,768,913
8	Odyssey Re	Canada	2,627,329
9	General Reinsurance Corp.	U.S.	1,730,021
10	Partner Re Co. of the U.S.	Bermuda	1,719,790

[1]See Reinsurance Underwriting Review 2017 notes posted at www.reinsurance.org for a list of affiliated companies included. [2]Underwriting results exclude assumptions from affiliated General Re Group.
Source: Reinsurance Association of America.

PREMIUMS BY STATE

Direct Premiums Written by State

Direct premiums written represent premium amounts before reinsurance transactions. This contrasts with charts based on net premiums written, i.e., premium amounts after reinsurance transactions.

Direct Premiums Written, P/C Insurance By State, 2017[1] ($000)

State	Total, all lines	State	Total, all lines
Alabama	$8,491,699	Montana	$2,402,694
Alaska	1,574,803	Nebraska	4,841,812
Arizona	10,961,095	Nevada	5,145,462
Arkansas	5,178,776	New Hampshire	2,440,724
California	76,393,885	New Jersey	21,222,342
Colorado	12,296,996	New Mexico	3,295,212
Connecticut	8,646,320	New York	46,322,771
Delaware	2,662,277	North Carolina	15,682,515
D.C.	1,860,455	North Dakota	2,521,294
Florida	50,424,532	Ohio	16,490,563
Georgia	19,951,564	Oklahoma	7,948,641
Hawaii	2,497,126	Oregon	6,950,266
Idaho	2,776,622	Pennsylvania	24,316,458
Illinois	24,907,084	Rhode Island	2,396,937
Indiana	11,158,585	South Carolina	9,549,900
Iowa	6,535,925	South Dakota	2,420,646
Kansas	6,428,177	Tennessee	11,366,424
Kentucky	7,473,092	Texas	54,449,415
Louisiana	11,474,861	Utah	4,690,590
Maine	2,277,018	Vermont	1,263,641
Maryland	11,755,106	Virginia	13,653,410
Massachusetts	14,926,239	Washington	11,892,722
Michigan	19,173,049	West Virginia	3,007,835
Minnesota	11,585,779	Wisconsin	10,574,269
Mississippi	5,178,851	Wyoming	1,154,807
Missouri	11,581,131	**United States[2]**	**$634,172,398**

[1]Before reinsurance transactions, includes state funds, excludes territories. [2]Data for the total United States may differ from similar data shown elsewhere due to the use of different exhibits from S&P Global Market Intelligence.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

In 2017 California accounted for the largest amount of direct premiums written, followed by Texas, Florida, New York and Illinois, according to S&P Global Market Intelligence.

Nationally, direct premiums written rose 4.8 percent in 2017.

INCURRED LOSSES BY STATE

Property/casualty (P/C) insurers pay out billions of dollars each year to settle claims. Many of the payments go to businesses, such as auto repair companies, that help claimants get their lives back together after an accident, fire, windstorm or other incident that caused the injury or property damage. Insurance claim payments support local businesses, enabling them to provide jobs and pay taxes that support the local economy. When P/C insurance claims are paid, funds flow to the industries that supply claimants with the goods and services necessary for their recovery. The chart below shows incurred losses, i.e., losses occurring during a fixed period, whether or not adjusted or paid during the same period.

Incurred Losses By State, Property/Casualty Insurance, 2017[1] ($000)

State	Incurred losses	State	Incurred losses	State	Incurred losses
Alabama	$5,104,264	Louisiana	$6,050,866	Oklahoma	$4,049,679
Alaska	844,581	Maine	1,129,225	Oregon	4,082,394
Arizona	6,493,981	Maryland	6,883,026	Pennsylvania	12,774,124
Arkansas	2,780,295	Massachusetts	6,951,177	Rhode Island	1,214,987
California	58,112,010	Michigan	12,262,443	South Carolina	5,707,526
Colorado	9,156,574	Minnesota	6,980,515	South Dakota	1,391,812
Connecticut	4,494,046	Mississippi	2,862,769	Tennessee	6,624,668
Delaware	1,407,646	Missouri	7,301,468	Texas	50,725,857
D.C.	1,036,446	Montana	1,410,271	Utah	2,428,259
Florida	39,271,790	Nebraska	3,340,270	Vermont	564,504
Georgia	13,114,682	Nevada	3,247,454	Virginia	7,784,985
Hawaii	1,367,157	New Hampshire	1,243,508	Washington	6,920,169
Idaho	1,820,678	New Jersey	11,656,812	West Virginia	1,531,462
Illinois	14,162,621	New Mexico	2,084,079	Wisconsin	5,727,526
Indiana	6,190,454	New York	25,970,886	Wyoming	644,350
Iowa	3,690,528	North Carolina	8,496,319		
Kansas	3,470,295	North Dakota	1,324,201		
Kentucky	4,372,113	Ohio	8,251,531	**United States**	**$406,509,281**

[1]Losses occurring within a fixed period whether or not adjusted or paid during the same period, on a direct basis before reinsurance.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

GUARANTY FUNDS

All 50 states, Washington, D.C., Puerto Rico and the Virgin Islands have procedures under which solvent property/casualty (P/C) insurance companies cover claims against insolvent insurers. New York has a pre-assessment system, under which estimates are made annually of how much will be needed in the coming year to fulfill the system's obligations to pay the claims of insolvent insurers. Some states—including New Jersey, New York and Pennsylvania—have separate pre-assessment funds for workers compensation. Florida has a post-assessment fund, which covers the claims of insolvent workers compensation insurers and self-insurers.

The P/C lines of insurance covered by guaranty funds and the maximum amount paid on any claim vary from state to state. Assessments are used to pay claims against companies that became insolvent in the past as well as for current insolvencies. A similar system for life and health insurers is coordinated by the National Organization of Life and Health Insurance Guaranty Associations.

Property/Casualty Guaranty Fund Net Assessments, 2008-2017

Year	Net assessments[1]	Year	Net assessments[1]
2008	$385,096,899	2014	483,844,426
2009	554,061,688	2015	458,510,638
2010	219,349,059	2016	392,031,219
2011	138,898,346	2017	461,524,794
2012	450,429,770		
2013	456,953,717	**Total, inception-2017[2]**	**$17,560,657,832**

[1]Assessments less refunds and abatements (cancellations of uncalled portions of assessments when funds on hand are sufficient to pay claims). [2]Includes pre-1978 net assessments.

Source: National Conference of Insurance Guaranty Funds.

Guaranty fund net assessments rose to $462 million in 2017, up 17.7 percent from $392 million in 2016.

Net assessments in 2017 were the highest since 2014 when they reached $483 million.

Property/Casualty Guaranty Fund Net Assessments By State, 2017

State	Net assessments[1]	State	Net assessments[1]
Alabama	0	Montana	0
Alaska	$5,259,495	Nebraska	$4,046,399
Arizona	0	Nevada	5,000,000
Arkansas	0	New Hampshire	0
California	259,248,988	New Jersey	120,073,190
Colorado	0	New Mexico	0
Connecticut	2,672,359	New York	NA
Delaware	0	North Carolina	3,500,000
D.C.	0	North Dakota	0
Florida	0	Ohio	0
Georgia	0	Oklahoma	0
Hawaii	41,497,947	Oregon	0
Idaho	0	Pennsylvania	-11,696,000
Illinois	34,620,116	Rhode Island	1,883,131
Indiana	0	South Carolina	0
Iowa	6,000,000	South Dakota	0
Kansas	0	Tennessee	0
Kentucky	0	Texas	0
Louisiana	0	Utah	0
Maine	0	Vermont	0
Maryland	9,000,000	Virginia	0
Massachusetts	0	Washington	419,169
Michigan	-20,000,000	West Virginia	0
Minnesota	0	Wisconsin	0
Mississippi	0	Wyoming	0
Missouri	0	**United States**	**$461,524,794**

[1]Assessments less refunds and abatements (cancellations of uncalled portions of assessments when funds on hand are sufficient to pay claims). Negative numbers represent net refunds. NA=Data not available.

Source: National Conference of Insurance Guaranty Funds.

Chapter 7

Property/Casualty Insurance By Line

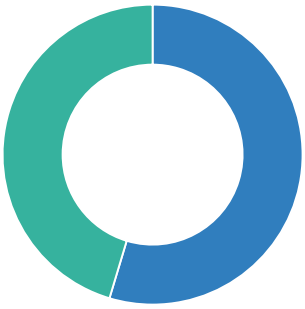
PREMIUMS BY LINE

Premiums can be accounted for in two major ways: net premiums written, which reflect premium amounts after deductions for reinsurance, and direct premiums written, which are calculated before reinsurance transactions.

Personal vs. Commercial

The property/casualty (P/C) insurance industry is divided into two main segments: personal lines and commercial lines. Personal lines include coverage for individuals, mainly auto and homeowners. Commercial lines include the many kinds of insurance products designed for businesses. In 2017 private passenger auto insurance was the largest line of insurance, based on net premiums written, making up 40 percent of all P/C insurance (commercial and personal combined) and 73 percent of personal insurance. Homeowners multiple peril insurance is the second largest line, accounting for 15 percent of total P/C insurance and 27 percent of personal lines. Other liability (coverages that protect against legal liability resulting from negligence, carelessness or failure to act) is the largest commercial line and third-largest P/C line. It represented 8 percent of all P/C net premiums and 18 percent of all commercial premiums.

Net Premiums Written, Personal And Commercial Lines, 2017 **($ billions)**



Personal lines	54.6%	$305.0
Commerical lines	45.4	253.2
Total	**100.0%**	**$558.2**

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Net Premiums Written By Line, Property/Casualty Insurance 2015-2017[1] ($ millions)

Lines of insurance	2015	2016	2017	Percent change from prior year 2015	2016	2017	Percent of total, 2017
Private passenger auto	$192,792.2	$207,371.5	$222,234.9	5.1%	7.6%	7.2%	39.8%
Liability	116,305.8	124,439.7	133,745.2	3.5	7.0	7.5	24.0
Collision and comprehensive	76,486.4	82,931.8	88,489.7	7.6	8.4	6.7	15.9
Homeowners multiple peril	79,931.3	81,191.5	82,811.3	2.6	1.6	2.0	14.8
Other liability[2]	45,585.8	44,591.9	46,675.2	3.2	-2.2	4.7	8.4
Workers compensation	45,355.1	45,619.8	45,047.4	3.7	0.6	-1.3	8.1
Commercial multiple peril	34,741.7	34,099.7	34,190.7	1.1	-1.8	0.3	6.1
Commercial auto	27,640.1	28,264.4	30,638.4	7.6	2.3	8.4	5.5
Liability	20,915.0	21,315.2	22,881.2	6.9	1.9	7.3	4.1
Collision and comprehensive	6,725.1	6,949.2	7,757.3	9.8	3.3	11.6	1.4
Reinsurance[3]	12,411.4	11,600.0	12,259.1	7.6	-6.5	5.7	2.2
Inland marine	11,417.3	11,407.5	11,973.6	3.9	-0.1	5.0	2.1
Fire	11,417.8	11,005.9	10,688.2	-0.7	-3.6	-2.9	1.9
Accident and health[4]	7,819.2	8,325.0	9,992.5	1.1	6.5	20.0	1.8
Allied lines	9,119.7	9,758.6	8,711.2	-1.0	7.0	-10.7	1.6
Medical malpractice	8,201.4	8,194.9	8,062.0	-3.2	-0.1	-1.6	1.4
Surety	5,139.9	5,138.5	5,368.8	2.8	[5]	4.5	1.0
Multiple peril crop	3,680.8	3,321.3	4,742.0	-12.1	-9.8	42.8	0.8
Mortgage guaranty	4,681.9	4,410.8	4,376.8	12.0	-5.8	-0.8	0.8
Farmowners multiple peril	3,762.5	3,802.2	3,925.3	3.7	1.1	3.2	0.7
Product liability	2,796.8	2,422.7	2,689.1	4.6	-13.4	11.0	0.5
Ocean marine	2,831.6	2,549.4	2,370.5	-2.7	-10.0	-7.0	0.4
Boiler and machinery	1,682.1	1,892.2	2,043.2	-15.9	12.5	8.0	0.4
Earthquake	1,649.8	1,535.1	1,511.5	0.5	-6.9	-1.5	0.3
Credit	1,070.0	1,118.6	1,221.0	-10.2	4.5	9.2	0.2
Warranty	1,017.8	930.2	1,090.6	-0.2	-8.6	17.2	0.2
Other lines[6]	1,064.7	914.8	1,080.4	-0.8	-14.1	18.1	0.2
Fidelity	1,161.4	1,093.9	986.4	-0.3	-5.8	-9.8	0.2
Aircraft	929.0	871.9	861.0	-7.6	-6.1	-1.2	0.2
Excess workers compensation	929.4	889.2	796.6	1.0	-4.3	-10.4	0.1
Private crop	584.6	455.4	498.8	0.3	-22.1	9.5	0.1
Private flood	NA	277.8	471.0	NA	NA	69.5	0.1
Financial guaranty	418.8	364.5	420.8	-14.3	-13.0	15.4	0.1
International	82.0	82.6	265.2	-34.4	0.8	220.9	[5]
Burglary and theft	230.8	255.5	222.9	2.0	10.7	-12.7	[5]
Federal flood[7]	3.0	4.3	12.8	-64.8	43.3	197.8	[5]
Total, all lines[8]	**$520,149.8**	**$533,762.0**	**$558,239.4**	**3.4%**	**2.6%**	**4.6%**	**100.0%**

[1]After reinsurance transactions, excludes state funds. [2]Coverages protecting against legal liability resulting from negligence, carelessness or failure to act. [3]Only includes nonproportional reinsurance, an arrangement in which a reinsurer makes payments to an insurer whose losses exceed a predetermined amount. [4]Premiums from certain insurers that write health insurance but file financial statements with state regulators on a property/casualty basis. [5]Less than 0.1 percent. [6]Includes miscellaneous coverages. [7]Provided by FEMA through participating private insurers. [8]May not match total premiums shown elsewhere because of the use of different exhibits from S&P Global Market Intelligence.
NA=Not applicable.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Direct Premiums Written, Property/Casualty Insurance, By State By Line, 2017[1] ($000)

State	Private passenger auto		Commercial auto		Homeowners multiple peril	Farmowners multiple peril	Commercial multiple peril
	Liability	Coll./Comp.	Liability	Coll./Comp.			
Alabama	$1,834,303	$1,489,225	$368,293	$131,250	$1,692,355	$77,225	$581,809
Alaska	275,028	193,653	54,945	15,465	164,219	642	101,018
Arizona	2,926,906	1,926,572	417,120	113,853	1,610,131	16,771	620,115
Arkansas	1,048,385	898,794	254,749	115,002	907,329	29,832	332,781
California	15,504,867	11,755,463	3,058,631	844,140	7,837,021	208,031	4,739,824
Colorado	2,757,069	1,819,961	425,643	160,819	2,282,303	80,759	786,050
Connecticut	1,846,752	1,088,877	336,584	87,607	1,484,031	6,545	634,198
Delaware	586,182	268,179	102,671	24,651	266,177	7,059	322,736
D.C.	194,434	152,926	43,472	8,303	160,116	0	161,382
Florida	13,687,728	5,456,184	2,194,951	400,570	9,174,761	23,568	2,126,595
Georgia	5,571,762	3,043,219	917,307	250,709	3,130,124	120,955	1,038,074
Hawaii	434,941	317,495	94,803	25,968	383,567	4	179,656
Idaho	546,290	402,630	118,715	62,594	354,279	62,034	209,689
Illinois	4,180,114	3,242,824	1,100,573	353,655	3,558,367	179,484	1,726,567
Indiana	2,169,060	1,605,226	478,302	210,158	1,903,996	195,940	840,832
Iowa	868,467	888,463	237,806	165,384	782,927	212,753	382,314
Kansas	956,327	892,429	197,998	135,582	1,160,955	240,816	382,708
Kentucky	1,966,600	1,063,863	320,398	111,378	1,168,524	161,995	522,440
Louisiana	2,891,114	1,615,069	586,898	107,124	1,857,768	13,991	494,649
Maine	393,253	340,809	102,087	46,629	418,611	5,167	239,932
Maryland	3,008,202	1,963,533	474,216	134,682	1,756,475	29,070	654,489
Massachusetts	2,905,824	2,282,625	650,464	224,068	2,366,634	3,638	1,155,658
Michigan	5,661,725	3,308,940	665,169	331,271	2,768,344	145,206	1,086,763
Minnesota	2,035,639	1,567,290	378,320	204,891	2,101,828	151,629	718,714
Mississippi	1,018,630	859,624	279,625	99,778	967,593	24,719	317,779
Missouri	2,167,285	1,730,666	432,701	194,673	2,032,669	181,336	781,626
Montana	374,729	350,479	103,049	65,079	330,134	73,150	179,871
Nebraska	674,825	577,940	152,054	120,093	728,567	237,939	273,172
Nevada	1,637,065	731,251	260,272	42,951	580,642	8,459	325,617
New Hampshire	430,387	415,362	100,601	36,905	406,606	3,219	241,972
New Jersey	5,285,651	2,396,445	1,173,148	221,074	2,687,462	2,986	1,489,700
New Mexico	861,239	525,282	150,692	50,345	513,480	25,323	224,003
New York	8,457,326	4,803,390	2,269,395	381,396	5,313,487	43,898	4,014,166
North Carolina	3,082,337	2,904,023	673,210	224,401	2,564,886	63,054	959,931
North Dakota	210,590	260,543	90,198	68,996	209,710	121,472	134,990
Ohio	3,734,918	2,949,756	726,492	281,717	2,877,584	173,564	1,272,141
Oklahoma	1,459,684	1,205,719	334,075	144,670	1,642,579	157,139	536,058
Oregon	2,007,097	908,266	286,014	94,352	811,744	67,015	489,750
Pennsylvania	4,869,580	3,875,806	1,065,489	422,994	3,331,205	107,663	1,757,717
Rhode Island	612,872	309,114	92,264	24,628	398,970	361	155,191
South Carolina	2,491,099	1,485,497	350,336	110,301	1,692,929	14,574	492,756
South Dakota	247,727	294,907	74,800	57,076	245,454	124,417	133,836
Tennessee	2,242,302	1,841,609	448,012	215,901	2,004,678	149,552	730,914
Texas	11,934,451	9,237,933	2,676,281	822,580	8,850,102	321,413	2,691,249
Utah	1,212,335	721,014	220,149	80,106	529,896	14,948	276,248
Vermont	183,681	192,341	45,637	25,918	199,515	15,362	138,188
Virginia	3,093,521	2,354,213	526,852	180,609	2,220,272	74,859	802,923
Washington	3,424,220	1,751,495	487,956	162,277	1,723,255	75,780	837,558
West Virginia	689,623	548,671	139,100	47,437	442,383	15,624	202,395
Wisconsin	1,738,998	1,374,698	402,453	190,300	1,419,783	185,257	711,820
Wyoming	180,063	211,747	55,326	32,823	200,631	30,136	101,587
United States	**$138,573,207**	**$92,402,040**	**$27,196,291**	**$8,665,132**	**$94,217,060**	**$4,286,334**	**$40,312,151**

[1]Includes some state funds.

(table continues)

Direct Premiums Written, Property/Casualty Insurance, By State By Line, 2017[1] ($000) (Cont'd)

State	Workers compensation	Excess workers compensation	Medical malpractice	Product liability	Other liability	Fire	Allied lines
Alabama	$351,958	$22,000	$122,394	$31,376	$615,931	$179,924	$181,316
Alaska	251,110	3,525	23,631	4,875	140,527	46,910	27,776
Arizona	843,349	11,622	205,261	43,827	880,344	126,495	119,177
Arkansas	253,996	7,562	62,516	19,342	344,475	144,575	115,699
California	12,765,758	190,714	760,296	518,970	7,969,152	1,163,652	765,223
Colorado	1,076,683	13,924	149,671	76,160	1,203,702	154,142	176,642
Connecticut	818,459	24,468	181,836	48,792	1,031,122	131,246	116,194
Delaware	221,793	1,559	30,033	10,986	375,264	30,071	26,351
D.C.	176,152	2,419	27,049	6,664	385,134	32,928	25,653
Florida	3,215,804	61,171	594,878	219,191	5,197,773	1,193,788	2,129,125
Georgia	1,604,174	32,899	254,148	85,869	1,613,293	311,170	263,009
Hawaii	279,954	7,356	31,779	11,835	290,625	66,680	93,359
Idaho	417,103	3,127	31,499	12,826	203,165	28,691	24,344
Illinois	2,565,459	59,027	442,131	157,204	3,552,043	346,710	289,508
Indiana	825,803	13,697	121,584	84,895	899,958	231,848	147,907
Iowa	747,161	9,898	61,304	42,573	574,380	111,197	117,043
Kansas	413,069	10,676	62,237	34,393	428,527	91,369	143,147
Kentucky	503,949	17,607	105,474	27,354	468,572	111,660	94,013
Louisiana	798,344	46,019	94,037	40,524	869,923	339,721	415,109
Maine	228,129	3,268	45,095	7,929	166,374	39,660	36,533
Maryland	963,264	14,271	291,155	44,871	1,094,092	143,646	119,383
Massachusetts	1,255,837	21,313	313,511	111,825	1,822,625	307,561	205,428
Michigan	1,096,866	30,635	185,699	91,144	1,257,112	288,843	162,093
Minnesota	969,909	1,814	78,082	86,782	1,104,431	185,723	286,769
Mississippi	353,740	9,427	43,519	17,970	320,920	121,298	124,097
Missouri	920,594	36,933	141,194	57,781	1,079,451	186,846	174,853
Montana	287,584	5,888	47,973	10,357	165,504	29,603	30,961
Nebraska	375,556	5,790	32,097	22,746	336,482	58,285	77,880
Nevada	363,075	22,162	64,882	33,760	464,498	77,723	63,468
New Hampshire	243,026	4,190	39,959	11,354	221,686	33,578	27,278
New Jersey	2,442,538	35,796	403,033	178,516	2,448,432	335,691	289,526
New Mexico	269,122	7,483	58,340	9,279	219,503	35,868	38,206
New York	5,942,539	56,931	1,549,177	294,462	7,602,219	725,936	583,080
North Carolina	1,448,416	27,718	165,563	84,721	1,251,513	256,410	288,797
North Dakota	4,635	4	9,424	11,987	158,899	34,356	37,626
Ohio	16,984	68,006	228,849	103,156	1,592,581	353,974	225,076
Oklahoma	662,056	12,758	95,894	35,354	575,036	151,094	181,669
Oregon	707,914	10,996	91,263	44,101	537,017	81,603	60,687
Pennsylvania	2,615,365	45,427	646,116	141,097	2,601,768	419,608	285,108
Rhode Island	220,355	1,504	28,145	11,687	231,458	42,672	38,664
South Carolina	826,703	11,026	73,062	49,535	566,541	221,000	167,248
South Dakota	176,409	1,931	15,305	11,694	125,095	28,180	29,694
Tennessee	866,772	20,311	212,981	52,358	980,234	238,565	178,769
Texas	2,343,930	31,693	314,747	306,953	5,030,365	1,617,629	1,736,073
Utah	444,664	4,176	57,584	35,712	417,401	80,333	44,641
Vermont	189,991	1,769	15,694	6,255	104,012	20,271	14,047
Virginia	1,044,897	25,802	184,847	50,106	1,328,228	207,584	176,861
Washington	20,267	26,912	163,187	65,680	1,169,678	182,767	125,593
West Virginia	258,901	6,450	59,221	9,349	265,221	56,702	35,391
Wisconsin	1,959,628	8,747	83,794	81,441	1,000,918	168,491	143,678
Wyoming	5,377	269	22,620	4,992	97,006	18,550	18,553
United States	**$57,655,123**	**$1,100,668**	**$9,123,770**	**$3,562,613**	**$63,380,213**	**$11,592,828**	**$11,278,325**

[1]Includes some state funds.

(table continues)

Direct Premiums Written, Property/Casualty Insurance, By State By Line, 2017[1] ($000) (Cont'd)

State	Inland marine	Ocean marine	Surety	Fidelity	Burglary and theft	Boiler and machinery	Financial guaranty
Alabama	$316,735	$36,805	$72,764	$13,559	$3,953	$23,924	$4,556
Alaska	90,491	35,659	28,601	2,336	816	7,632	219
Arizona	356,375	20,135	131,669	12,449	4,601	23,937	1,029
Arkansas	223,496	16,403	34,736	9,255	2,191	15,335	485
California	2,922,588	281,890	841,406	127,383	39,477	126,065	41,544
Colorado	408,215	13,289	130,241	24,206	6,394	21,399	5,251
Connecticut	334,711	91,848	66,450	25,951	5,098	15,876	1,088
Delaware	99,057	7,619	20,016	4,110	1,437	3,899	29,524
D.C.	129,376	4,073	162,028	13,975	3,131	5,973	117
Florida	1,373,316	318,793	364,729	62,313	20,457	65,968	8,391
Georgia	669,971	63,848	157,381	32,698	10,062	43,503	1,373
Hawaii	97,103	17,117	38,576	4,444	812	4,670	4,823
Idaho	95,450	5,455	23,688	2,940	1,022	7,799	46
Illinois	830,369	89,890	210,188	63,221	16,538	67,143	23,244
Indiana	364,291	24,402	78,401	18,090	5,754	39,547	1,043
Iowa	234,279	7,624	51,404	13,461	2,651	23,608	3,372
Kansas	193,026	8,404	43,088	11,350	2,572	18,136	1,024
Kentucky	280,636	24,983	78,258	10,244	2,741	24,574	20,121
Louisiana	412,283	138,281	118,832	12,432	4,515	29,323	4,749
Maine	76,621	28,408	16,646	4,201	849	7,252	297
Maryland	375,087	97,972	167,371	28,324	5,840	24,130	3,005
Massachusetts	529,745	92,898	151,563	45,525	9,060	36,120	3,249
Michigan	542,690	56,848	94,836	31,331	8,777	58,214	1,535
Minnesota	374,788	26,417	84,147	26,372	6,865	35,618	3,418
Mississippi	201,103	15,416	43,091	8,182	2,076	13,405	524
Missouri	389,209	32,870	71,940	24,671	6,365	28,452	7,967
Montana	74,435	2,443	30,169	3,065	914	5,635	62
Nebraska	163,310	4,800	36,557	6,991	1,798	13,428	1,840
Nevada	174,647	6,709	71,721	7,449	2,236	20,366	424
New Hampshire	89,845	11,896	16,996	4,107	1,132	5,709	112
New Jersey	679,771	143,317	162,288	45,070	10,995	44,144	15,578
New Mexico	106,685	2,255	48,430	4,229	817	6,597	477
New York	1,648,179	382,405	417,545	140,472	34,591	111,163	161,441
North Carolina	635,604	64,444	146,328	38,349	7,176	39,371	4,171
North Dakota	73,777	1,530	19,355	2,800	488	13,616	161
Ohio	638,951	49,732	146,017	40,849	13,762	57,989	1,674
Oklahoma	251,295	19,265	61,849	10,948	2,545	19,607	284
Oregon	268,320	32,076	67,533	10,630	2,911	16,639	231
Pennsylvania	778,609	58,226	230,066	51,648	13,739	68,548	15,373
Rhode Island	82,911	35,342	15,020	4,454	1,258	4,777	1,277
South Carolina	348,789	31,741	86,264	10,328	3,279	21,004	435
South Dakota	67,888	1,454	21,103	3,262	565	6,367	0
Tennessee	431,142	51,287	89,256	19,594	6,576	30,925	88
Texas	2,124,696	259,058	591,255	78,518	26,146	122,288	16,867
Utah	163,317	10,735	55,230	7,436	2,307	10,530	1,054
Vermont	43,703	3,767	9,337	2,153	478	5,226	769
Virginia	479,716	69,598	191,479	34,304	8,294	30,255	631
Washington	530,877	118,903	174,026	18,819	5,474	29,439	931
West Virginia	81,352	3,431	42,864	4,114	830	6,745	71
Wisconsin	306,111	37,830	60,777	23,170	5,816	40,153	779
Wyoming	46,906	1,133	49,150	1,518	329	6,223	390
United States	**$22,211,847**	**$2,960,724**	**$6,122,666**	**$1,207,303**	**$328,508**	**$1,508,247**	**$397,115**

[1]Includes some state funds.

(table continues)

Direct Premiums Written, Property/Casualty Insurance, By State By Line, 2017[1] ($000) (Cont'd)

State	Aircraft	Earthquake	Federal flood	Credit	Warranty	Accident and health
Alabama	$14,486	$6,663	$27,065	$30,759	$11,483	$76,399
Alaska	39,800	25,121	1,560	3,294	743	15,257
Arizona	49,419	7,291	16,295	22,048	33,030	111,571
Arkansas	21,491	32,767	10,335	16,386	6,976	60,650
California	147,417	1,729,209	149,940	127,840	198,400	522,178
Colorado	45,496	10,131	13,792	22,346	14,990	86,682
Connecticut	29,696	6,660	46,494	37,170	11,299	51,830
Delaware	12,716	1,421	14,981	10,568	28,307	118,365
D.C.	1,725	2,837	1,115	7,952	31	115,913
Florida	106,227	20,112	812,583	119,069	556,870	252,853
Georgia	52,963	13,461	52,426	47,340	30,015	170,589
Hawaii	13,931	10,260	34,945	6,975	3,358	13,334
Idaho	11,488	3,567	4,151	4,044	3,634	21,938
Illinois	65,599	64,832	27,753	78,695	227,241	335,089
Indiana	18,374	36,885	15,484	31,603	36,906	255,422
Iowa	11,796	3,745	10,309	13,871	6,631	76,462
Kansas	18,880	6,742	5,602	15,288	161,653	68,981
Kentucky	7,507	44,414	12,482	40,446	12,256	57,200
Louisiana	42,937	6,283	253,136	29,990	4,260	63,213
Maine	3,910	1,947	7,608	6,804	3,467	14,759
Maryland	16,801	9,502	28,774	20,230	23,069	81,331
Massachusetts	17,838	22,336	67,208	42,438	16,726	89,987
Michigan	25,038	6,368	15,040	53,793	567,780	225,264
Minnesota	28,545	4,456	5,941	13,081	29,532	123,032
Mississippi	10,886	16,501	32,260	18,749	4,237	68,236
Missouri	24,735	94,412	15,803	29,189	44,124	176,514
Montana	9,235	4,989	2,559	1,992	1,718	35,818
Nebraska	13,005	2,077	6,982	5,872	4,511	130,303
Nevada	24,184	22,551	6,453	5,588	10,763	35,033
New Hampshire	5,931	2,731	7,378	9,066	4,921	29,171
New Jersey	16,964	19,905	188,278	85,025	24,778	187,586
New Mexico	6,190	2,472	8,111	8,689	3,857	20,954
New York	52,499	50,388	171,444	193,142	52,951	486,986
North Carolina	32,873	11,004	91,313	42,139	40,341	145,779
North Dakota	7,072	593	5,502	563	502	9,783
Ohio	53,995	31,603	25,382	60,767	42,535	219,810
Oklahoma	18,447	21,832	8,071	6,281	15,987	66,879
Oregon	23,371	84,658	19,183	13,493	7,904	66,197
Pennsylvania	32,918	14,942	51,588	63,390	81,617	395,750
Rhode Island	10,236	2,139	16,486	6,003	2,516	23,829
South Carolina	11,540	42,737	113,542	23,326	8,612	105,223
South Dakota	6,976	378	2,330	1,945	1,964	22,056
Tennessee	26,899	80,437	19,441	38,187	18,647	147,952
Texas	176,618	26,633	311,010	270,331	390,951	584,506
Utah	20,216	49,083	2,007	11,062	37,442	74,733
Vermont	1,978	910	4,657	2,499	6,337	14,052
Virginia	40,772	16,334	59,741	24,818	20,250	149,547
Washington	41,302	174,645	26,671	31,469	64,001	85,292
West Virginia	2,804	1,244	12,348	6,484	2,890	45,477
Wisconsin	20,111	4,068	9,182	20,574	33,104	175,267
Wyoming	4,956	3,197	1,344	679	657	27,122
United States	**$1,500,792**	**$2,859,475**	**$2,854,088**	**$1,783,352**	**$2,916,773**	**$6,538,152**

[1]Includes some state funds.

(table continues)

Direct Premiums Written, Property/Casualty Insurance, By State By Line, 2017[1] ($000) (Cont'd)

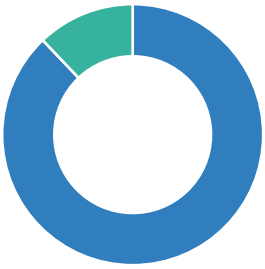
State	Multiple peril crop	Private crop	Mortgage guaranty	Miscellaneous	Private flood
Alabama	$70,783	$612	$60,889	$36,106	$4,800
Alaska	69	0	17,650	1,275	957
Arizona	129,159	3,639	143,772	22,066	11,069
Arkansas	127,510	18,813	31,891	12,192	2,826
California	397,005	20,878	466,078	100,893	71,952
Colorado	174,947	12,673	119,207	18,113	6,098
Connecticut	5,082	0	65,660	4,886	9,811
Delaware	10,043	127	20,247	4,457	1,669
D.C.	0	0	26,457	6,283	2,839
Florida	91,166	423	319,893	170,791	84,491
Georgia	140,675	1,695	171,525	43,174	12,155
Hawaii	1,208	0	20,082	2,759	4,707
Idaho	59,805	13,013	37,765	2,584	1,246
Illinois	674,877	98,823	225,430	40,462	14,023
Indiana	349,666	29,172	102,621	12,357	9,359
Iowa	688,249	122,570	48,482	7,770	7,973
Kansas	611,979	56,351	43,923	5,760	5,187
Kentucky	153,801	8,280	40,819	5,318	5,185
Louisiana	84,070	3,707	60,685	17,991	17,883
Maine	10,817	0	17,452	1,109	1,393
Maryland	32,242	104	129,266	15,828	4,881
Massachusetts	2,940	0	119,538	36,801	15,256
Michigan	177,457	7,572	168,946	45,968	5,784
Minnesota	621,845	113,456	182,549	27,863	6,034
Mississippi	128,661	3,860	25,455	22,535	4,954
Missouri	382,389	25,505	84,935	14,862	8,580
Montana	152,146	3,644	16,478	2,066	965
Nebraska	538,845	198,310	29,587	7,435	2,734
Nevada	15,114	29	58,474	3,321	4,575
New Hampshire	369	0	29,744	3,719	1,773
New Jersey	4,847	18	142,777	32,139	28,862
New Mexico	46,548	2,848	27,461	8,692	1,735
New York	51,617	20	171,528	111,324	47,674
North Carolina	182,999	7,812	159,823	28,625	9,385
North Dakota	933,442	83,554	12,513	1,093	1,518
Ohio	257,094	19,001	160,172	52,229	14,203
Oklahoma	177,974	10,176	43,963	15,945	3,507
Oregon	39,285	2,704	74,780	17,803	4,730
Pennsylvania	53,439	121	180,288	22,421	18,833
Rhode Island	105	0	17,367	2,709	2,624
South Carolina	85,565	68	80,553	11,561	12,727
South Dakota	657,314	46,605	11,741	1,402	770
Tennessee	104,678	3,295	89,765	16,709	8,585
Texas	920,378	63,272	393,826	124,152	53,513
Utah	8,168	93	86,407	9,602	1,959
Vermont	2,705	0	10,761	1,106	520
Virginia	66,584	2,783	157,794	20,409	8,527
Washington	156,133	18,022	160,252	28,273	11,566
West Virginia	1,970	4	13,580	3,171	1,986
Wisconsin	225,037	16,360	110,294	11,486	4,140
Wyoming	15,977	1,649	11,801	1,137	960
United States	**$9,824,777**	**$1,021,662**	**$5,002,944**	**$1,218,732**	**$569,487**

[1]Includes some state funds.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

AUTO: PREMIUMS

Total Auto Net Premiums Written By Sector, 2017 ($ billions)

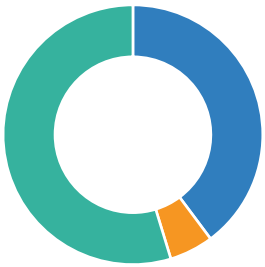


Private passenger auto	87.9%	$222.2
Commercial auto	12.1	30.6

Liability	61.9%	$156.6
Collision/ comprehensive	38.1	96.2

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Auto Share Of P/C Industry Net Premiums Written, 2017 ($ billions)



Private passenger auto	39.8%	$222.2
Commercial auto	5.5	30.6
All other P/C	54.7	305.6

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

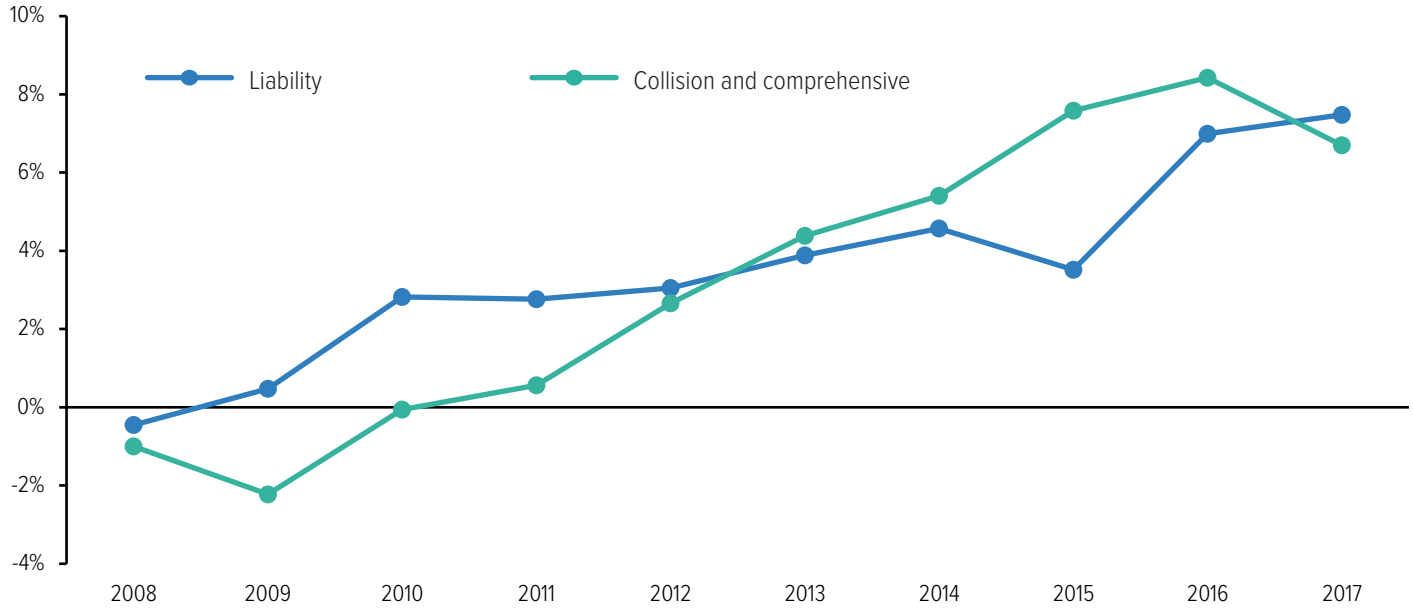
Private Passenger Automobile Insurance, 2008-2017 ($000)

	Liability				Collision/comprehensive			
Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$94,545,647	-0.5%	103.5	1.7 pts.	$64,054,581	-1.0%	95.8	2.4 pts.
2009	94,990,682	0.5	106.2	2.7	62,630,693	-2.2	93.0	-2.8
2010	97,672,826	2.8	105.9	-0.3	62,595,851	-0.1	93.4	0.4
2011	100,369,441	2.8	103.8	-2.1	62,948,280	0.6	99.6	6.3
2012	103,429,677	3.0	103.2	-0.6	64,619,667	2.7	100.2	0.6
2013	107,446,382	3.9	103.6	0.4	67,452,663	4.4	98.7	-1.5
2014	112,354,903	4.6	103.8	0.2	71,096,640	5.4	100.2	1.5
2015	116,305,809	3.5	107.9	4.2	76,486,433	7.6	99.4	-0.8
2016	124,427,571	7.0	109.4	1.5	82,930,260	8.4	101.5	2.1
2017	133,745,174	7.5	105.5	-3.9	88,489,745	6.7	98.3	-3.2

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Percent Change From Prior Year, Net Premiums Written, Private Passenger Auto Insurance, 2008-2017



Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Top 10 Writers Of Private Passenger Auto Insurance By Direct Premiums Written, 2017 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	State Farm Mutual Automobile Insurance	$41,817,416	18.1%
2	Berkshire Hathaway Inc.	29,596,404	12.8
3	Progressive Corp.	22,786,034	9.8
4	Allstate Corp.	21,430,405	9.3
5	USAA Insurance Group	13,154,939	5.7
6	Liberty Mutual	11,585,976	5.0
7	Farmers Insurance Group of Companies[3]	10,357,497	4.5
8	Nationwide Mutual Group	7,341,476	3.2
9	Travelers Companies Inc.	4,396,705	1.9
10	American Family Insurance Group	4,381,962	1.9

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories. [3]Data for Farmers Insurance Group of Companies and Zurich Financial Group (which owns Farmers' management company) are reported separately by S&P Global Market Intelligence.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Commercial Automobile Insurance, 2008-2017 ($000)

Year	Liability				Collision/comprehensive			
	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$17,833,085	-5.2%	97.4	2.0 pts.	$5,989,108	-9.7%	94.7	3.7 pts.
2009	16,581,981	-7.0	100.6	3.1	5,347,981	-10.7	96.9	2.3
2010	16,249,433	-2.0	97.1	-3.5	4,870,380	-8.9	101.6	4.7
2011	16,382,082	0.8	101.1	4.0	4,647,376	-4.6	112.0	10.4
2012	16,984,612	3.7	106.6	5.5	5,099,427	9.7	109.2	-2.9
2013	18,355,088	8.1	107.2	0.7	5,536,307	8.6	105.2	-3.9
2014	19,570,622	6.6	103.8	-3.4	6,123,604	10.6	103.2	-2.0
2015	20,914,990	6.9	111.4	7.6	6,725,088	9.8	100.9	-2.3
2016	21,315,245	1.9	113.5	2.1	6,949,192	3.3	102.1	1.2
2017	22,865,085	7.3	113.4	-0.1	7,757,275	11.6	104.2	2.1

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Top 10 Writers Of Commercial Auto Insurance By Direct Premiums Written, 2017 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	Progressive Corp.	$3,178,656	8.8%
2	Travelers Companies Inc.	2,263,886	6.3
3	Liberty Mutual	1,733,726	4.8
4	Zurich Insurance Group[3]	1,690,000	4.7
5	Nationwide Mutual Group	1,678,785	4.7
6	Old Republic International Corp.	1,278,020	3.5
7	Berkshire Hathaway Inc.	1,184,554	3.3
8	Auto-Owners Insurance Co.	852,601	2.4
9	Chubb Ltd.	826,718	2.3
10	AmTrust Financial Services	720,774	2.0

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories. [3]Data for Farmers Insurance Group of Companies and Zurich Financial Group (which owns Farmers' management company) are reported separately by S&P Global Market Intelligence.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

AUTO: COSTS/EXPENDITURES

AAA's 2018 Your Driving Costs study found that the average cost to own and operate a 2018 model vehicle was $8,849 in 2018. The average insurance cost for medium sedans was $1,232. AAA insurance cost estimates are based on a full coverage policy for a driver who is under 65 years of age, has more than six years of driving experience, no accidents and lives in a suburban/urban location for a policy with $100,000/$300,000 personal liability, $25,000 medical, $100,000 property and $25,000/$50,000 uninsured/underinsured motorist coverage, with a $500 deductible for collision and comprehensive claims. These figures are not comparable with the National Association of Insurance Commissioners' Auto Expenditures data below.

77 percent of insured drivers purchase comprehensive coverage in addition to liability insurance, and 73 percent buy collision coverage, based on an I.I.I. analysis of 2016 NAIC data.

Average Expenditures For Auto Insurance, 2007-2016

Year	Average expenditure	Percent change
2007	$798.54	-2.4%
2008	790.66	-1.0
2009	786.65	-0.5
2010	789.29	0.3
2011	795.01	0.7
2012	812.40	2.2
2013	838.61	3.2
2014	865.46	3.2
2015	889.09	2.7
2016	935.80	5.3

Source: © 2018 National Association of Insurance Commissioners (NAIC).

Auto Insurance Expenditures, By State

The tables below shown on the next page estimated average expenditures for private passenger automobile insurance by state from 2012 to 2016 and provide approximate measures of the relative cost of automobile insurance to consumers in each state. To calculate average expenditures, the National Association of Insurance Commissioners (NAIC) assumes that all insured vehicles carry liability coverage but not necessarily collision or comprehensive coverage. The average expenditure measures what consumers actually spend for insurance.

Expenditures are affected by the coverages purchased as well as other factors. In states with a healthy economy, people are more likely to purchase new cars. Since new car owners are more likely to purchase physical damage coverages, these states will have a higher average expenditure. The NAIC notes that three variables—urban population, miles driven per number of highway miles, and disposable income per capita—are correlated with the state auto insurance premiums. It also notes that high-premium states tend to also be highly urban, with higher wage and price levels, and greater traffic density. Other factors can also affect auto insurance prices.

Top 10 Most Expensive And Least Expensive States For Auto Insurance, 2016[1]

Rank	Most expensive states	Average expenditure
1	New Jersey	$1,309.29
2	Louisiana	1,302.11
3	New York	1,301.64
4	Michigan	1,270.70
5	Florida	1,259.55
6	D.C.	1,246.80
7	Rhode Island	1,193.58
8	Delaware	1,159.86
9	Massachusetts	1,096.53
10	Connecticut	1,086.17

Rank	Least expensive states	Average expenditure
1	Idaho	$599.77
2	Iowa	628.10
3	North Dakota	639.10
4	South Dakota	648.01
5	Maine	650.38
6	Wyoming	677.53
7	Wisconsin	688.32
8	Vermont	691.56
9	Indiana	692.29
10	North Carolina	699.91

[1]Based on average automobile insurance expenditures.

Average Expenditures For Auto Insurance By State, 2012-2016

State	2016					2015		Average expenditure percent change, 2015-2016
	Liability	Collision	Comprehensive	Average expenditure	Rank[1]	Average expenditure	Rank[1]	
Alabama	$423.98	$337.50	$163.16	$769.20	36	$722.89	37	6.4%
Alaska	525.35	356.45	138.67	859.15	23	872.39	17	-1.5
Arizona	539.68	290.88	191.86	890.74	20	843.89	21	5.6
Arkansas	413.17	340.33	196.58	771.55	35	736.43	36	4.8
California	520.81	423.75	99.73	892.55	19	841.45	22	6.1
Colorado	570.10	307.27	194.65	935.39	15	857.52	18	9.1
Connecticut	678.41	383.38	131.25	1,086.17	10	1,048.56	10	3.6
Delaware	800.20	330.90	128.01	1,159.86	8	1,145.66	8	1.2
D.C.	674.79	477.17	228.59	1,246.80	6	1,202.16	5	3.7
Florida	903.30	312.33	123.10	1,259.55	5	1,185.31	6	6.3
Georgia	612.41	351.95	164.71	966.00	14	896.50	14	7.8
Hawaii	459.78	327.79	103.02	781.90	33	762.75	31	2.5
Idaho	358.45	229.83	122.90	599.77	51	573.83	51	4.5
Illinois	467.99	322.33	131.89	836.67	27	803.64	26	4.1
Indiana	399.15	264.22	126.48	692.29	43	666.74	43	3.8
Iowa	311.99	231.81	193.99	628.10	50	599.03	50	4.9
Kansas	366.67	269.98	246.23	713.50	39	698.45	39	2.2
Kentucky	548.90	280.74	147.32	838.89	26	801.97	27	4.6
Louisiana	835.28	438.37	222.45	1,302.11	2	1,231.77	3	5.7
Maine	354.95	273.79	105.29	650.38	47	617.73	48	5.3
Maryland	646.54	375.51	158.50	1,076.56	11	1,016.73	11	5.9
Massachusetts	623.01	408.17	139.30	1,096.53	9	1,058.50	9	3.6
Michigan	812.16	436.72	158.69	1,270.70	4	1,231.39	4	3.2
Minnesota	466.75	244.98	188.95	808.00	29	787.74	28	2.6
Mississippi	471.70	344.01	220.01	858.64	24	827.31	24	3.8
Missouri	444.65	291.35	189.68	791.03	31	745.04	34	6.2
Montana	388.16	270.43	232.81	706.88	41	692.48	40	2.1
Nebraska	381.80	248.74	234.45	708.36	40	681.54	41	3.9
Nevada	713.15	318.36	116.39	1,026.22	12	990.17	12	3.6
New Hampshire	410.61	319.85	114.86	801.52	30	775.03	30	3.4
New Jersey	902.97	390.94	131.04	1,309.29	1	1,265.58	1	3.5
New Mexico	495.33	290.17	178.38	780.79	34	762.37	32	2.4
New York	840.00	414.27	178.10	1,301.64	3	1,234.87	2	5.4
North Carolina	370.54	321.05	145.12	699.91	42	655.37	46	6.8
North Dakota	296.56	248.18	228.79	639.10	49	637.54	47	0.2
Ohio	407.68	284.94	124.30	726.95	38	702.63	38	3.5
Oklahoma	476.10	331.07	233.14	850.62	25	825.92	25	3.0
Oregon	622.14	238.91	96.94	877.09	21	828.03	23	5.9
Pennsylvania	515.38	346.32	155.47	918.11	18	878.20	16	4.5
Rhode Island	790.13	438.86	135.57	1,193.58	7	1,146.97	7	4.1
South Carolina	571.62	284.41	190.67	922.66	17	853.53	20	8.1
South Dakota	310.82	219.21	277.34	648.01	48	615.78	49	5.2
Tennessee	423.47	322.28	153.22	759.99	37	737.28	35	3.1
Texas	575.17	403.29	215.84	1,008.91	13	934.22	13	8.0
Utah	523.73	276.41	113.49	824.46	28	784.10	29	5.1
Vermont	344.81	310.77	134.78	691.56	44	680.18	42	1.7
Virginia	446.10	295.50	142.30	785.82	32	750.81	33	4.7
Washington	621.27	281.24	108.87	924.47	16	884.23	15	4.6
West Virginia	493.72	339.00	208.95	870.23	22	855.25	19	1.8
Wisconsin	385.51	238.26	143.62	688.32	45	664.81	44	3.5
Wyoming	329.06	284.65	263.98	677.53	46	656.64	45	3.2
United States	**$566.51**	**$342.40**	**$153.32**	**$935.80**		**$889.09**		**5.3%**

(table continues)

Average Expenditures For Auto Insurance By State, 2012-2016 (Cont'd)

State	Average expenditure		
	2014	2013	2012
Alabama	$695.06	$673.51	$659.06
Alaska	883.60	889.29	873.15
Arizona	837.24	811.45	781.71
Arkansas	728.65	703.04	679.46
California	807.58	782.57	752.78
Colorado	821.19	777.95	737.95
Connecticut	1,031.70	1,011.28	986.73
Delaware	1,125.74	1,101.12	1,065.37
D.C.	1,191.47	1,187.54	1,154.91
Florida	1,140.85	1,143.98	1,128.54
Georgia	839.94	800.58	768.34
Hawaii	751.61	739.26	735.17
Idaho	571.74	553.38	534.56
Illinois	775.24	744.75	731.31
Indiana	642.27	621.77	637.46
Iowa	585.71	572.14	561.26
Kansas	688.82	660.29	632.07
Kentucky	783.06	772.80	759.70
Louisiana	1,192.92	1,146.29	1,112.53
Maine	606.90	592.82	582.71
Maryland	1,001.16	979.15	966.29
Massachusetts	1,035.52	1,007.98	976.65
Michigan	1,227.36	1,131.46	1,048.87
Minnesota	772.51	744.53	718.61
Mississippi	796.99	768.20	748.44
Missouri	724.15	704.22	683.82
Montana	694.67	677.83	658.42
Nebraska	658.79	638.67	616.78
Nevada	969.66	935.90	905.82
New Hampshire	751.28	733.02	717.15
New Jersey	1,263.69	1,254.39	1,220.00
New Mexico	749.43	722.66	695.09
New York	1,208.89	1,181.91	1,151.78
North Carolina	643.84	624.76	611.18
North Dakota	630.24	606.56	576.08
Ohio	682.71	659.37	634.91
Oklahoma	807.81	768.25	740.11
Oregon	818.84	783.46	741.51
Pennsylvania	858.10	841.42	827.75
Rhode Island	1,106.09	1,066.27	1,034.52
South Carolina	824.59	794.40	772.14
South Dakota	601.33	579.37	556.51
Tennessee	724.80	704.20	673.90
Texas	905.64	864.24	823.80
Utah	766.27	733.51	713.20
Vermont	665.17	655.66	643.47
Virginia	743.15	718.73	691.80
Washington	871.82	838.30	809.56
West Virginia	870.84	858.85	846.74
Wisconsin	646.47	621.07	598.84
Wyoming	668.81	639.51	623.70
United States	**$865.46**	**$838.61**	**$812.40**

[1]Ranked highest to lowest by average expenditure. Note: Average expenditure=Total written premium/liability car years. A car year is equal to 365 days of insured coverage for a single vehicle. The NAIC does not rank state average expenditures and does not endorse any conclusion drawn from these data.

Source: © 2018 National Association of Insurance Commissioners (NAIC).

Auto Insurance Claims And Expenses

The combined ratio after dividends is a measure of underwriting profitability. It reflects the percentage of each premium dollar an insurer spends on claims (the claims ratio) and percentage of each premium dollar that goes toward expenses (the expense ratio). The combined ratio does not take investment income into account. The private passenger auto insurance industry combined ratio after dividends was 102.7 in 2017, reflecting a claims ratio of 79.5 percent and an expense ratio 22.8 percent. Dividends to policyholders accounts for the remainder. A combined ratio above 100 indicates an underwriting loss.

Private Passenger Auto Insurance Industry Underwriting Expenses, 2017[1]

Expense	Percent of premiums
Losses and related expenses[2]	
Loss and loss adjustment expense (LAE) ratio	**79.5%**
Incurred losses	67.9
Defense and cost containment expenses incurred	2.6
Adjusting and other expenses incurred	9.0
Operating expenses[3]	
Expense ratio	**22.8%**
Net commissions and brokerage expenses incurred	8.5
Taxes, licenses and fees	2.1
Other acquisition and field supervision expenses incurred	7.2
General expenses incurred	5.0
Dividends to policyholders[2]	**0.4%**
Combined ratio after dividends[4]	**102.7%**

[1]After reinsurance transactions. [2]As a percent of net premiums earned ($217.4 billion in 2017). [3]As a percent of net premiums written ($222.2 billion in 2017). [4]Sum of loss and LAE, expense and dividends ratios.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

AUTO: CLAIMS

Liability insurance pays for the policyholder's legal responsibility to others for bodily injury or property damage. Collision and comprehensive insurance cover property damage and theft to the policyholder's car.

Private Passenger Auto Insurance Losses, 2008-2017[1]

	Liability			
	Bodily injury[2]		Property damage[3]	
Year	Claim frequency[4]	Claim severity[5,6]	Claim frequency[4]	Claim severity[5,6]
2008	0.91	$14,067	3.42	$2,903
2009	0.89	13,891	3.49	2,869
2010	0.91	14,406	3.53	2,881
2011	0.92	14,848	3.56	2,958
2012	0.95	14,690	3.50	3,073
2013	0.95	15,441	3.55	3,231
2014	0.87	16,642	3.65	3,289
2015	0.91	16,745	3.72	3,484
2016	1.00	16,141	3.85	3,687
2017	1.10	15,270	4.00	3,638
	Physical damage[7]			
	Collision		Comprehensive[8]	
Year	Claim frequency[4]	Claim severity[5]	Claim frequency[4,9]	Claim severity[5,9]
2008	5.35	$3,005	2.57	$1,551
2009	5.48	2,869	2.75	1,389
2010	5.69	2,778	2.62	1,476
2011	5.75	2,861	2.79	1,490
2012	5.57	2,950	2.62	1,585
2013	5.71	3,144	2.57	1,621
2014	5.93	3,169	2.79	1,572
2015	6.01	3,377	2.72	1,679
2016	6.12	3,444	2.76	1,750
2017	6.15	3,425	2.85	1,817

[1]For all limits combined. Data are for paid claims. [2]Excludes Massachusetts and most states with no-fault automobile insurance laws. [3]Excludes Massachusetts, Michigan and New Jersey. [4]Claim frequency is claims per 100 car years. A car year is equal to 365 days of insured coverage for one vehicle. [5]Claim severity is the size of the loss. [6]Includes loss adjustment expenses. [7]Excludes Massachusetts, Michigan and Puerto Rico. Based on coverage with a $500 deductible. [8]Excludes wind and water losses. [9]Includes glass losses.

Source: ISO®, a Verisk Analytics® business.

In 2017, 1.1 percent of people with liability insurance had a bodily injury liability claim, while 4.0 percent of those with liability insurance had a property damage liability claim, according to ISO.

In 2017, 6.2 percent of collision insurance policyholders had a claim, while 2.9 percent of people with comprehensive coverage had a claim.

In 2017 the average auto liability claim for property damage was $3,638; the average auto liability claim for bodily injury was $15,270.

The average collision claim was $3,425 in 2017; the average comprehensive claim was $1,817.

Incurred Losses For Auto Insurance, 2013-2017[1] ($000)

	2013	2014	2015	2016	2017
Private passenger auto					
Liability	$67,879,783	$72,008,280	$79,098,617	$88,249,238	$90,495,283
Physical damage	41,754,861	45,301,757	48,564,511	55,738,221	57,052,411
Commercial auto					
Liability	11,305,714	11,957,182	13,587,152	14,987,073	15,519,716
Physical damage	3,255,570	3,645,335	3,902,124	4,279,414	4,874,748
Total	**$124,195,928**	**$132,912,554**	**$145,152,404**	**$163,253,946**	**$167,942,158**

[1]Losses occurring within a fixed period, whether or not adjusted or paid during the same period, on a direct basis before reinsurance.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

AUTO: HIGH-RISK MARKETS

The Shared/Residual Market

All states and the District of Columbia use special systems to guarantee that auto insurance is available to those who cannot obtain it in the private market. These systems are commonly known as assigned risk plans. The assigned risk and other plans are known in the insurance industry as the shared, or residual, market. In assigned risk plans, high-risk policyholders are proportionally assigned to insurance companies doing business in the state. In the voluntary, or regular, market, auto insurers are free to select policyholders.

The percentage of vehicles insured in the shared market is dropping, in part because of the evolution of the nonstandard sector of the voluntary market. The nonstandard market is a niche market for drivers who have a worse than average driving record or drive specialized cars such as high-powered sports cars or custom-built cars. It is made up of both small specialty companies, whose only business is the nonstandard market, and well-known auto insurance companies with nonstandard divisions.

Insured Vehicles

In 2015, 203 million private passenger vehicles were insured in the United States excluding Texas, up from 198 million in 2014, according to latest data from AIPSO. The figures include cars insured by private auto insurers in the voluntary market as well as those insured in the so-called shared or residual markets set up by states to cover hard-to-insure risks. In 2015 California had the most insured private passenger cars (26.3 million), followed by Florida (12.7 million) and New York (9.6 million), including vehicles in the voluntary and residual markets.

Private Passenger Cars Insured In The Shared And Voluntary Markets, 2015

State	Voluntary market	Shared market	Total	Shared market as a percent of total
Alabama	3,807,469	1	3,807,470	[1]
Alaska	509,494	18	509,512	0.004%
Arizona	4,671,918	0	4,671,918	[1]
Arkansas	2,250,787	2	2,250,789	[1]
California	26,312,194	239	26,312,433	0.001
Colorado	4,187,782	0	4,187,782	[1]
Connecticut	2,532,825	81	2,532,906	0.003
Delaware	665,075	4	665,079	0.001
D.C.	256,184	65	256,249	0.025
Florida	12,740,030	90	12,740,120	0.001
Georgia	7,541,982	0	7,541,982	[1]
Hawaii	887,514	2,767	890,281	0.311
Idaho	1,358,875	1	1,358,876	[1]
Illinois	8,267,931	263	8,268,194	0.003
Indiana	4,881,984	3	4,881,987	[1]
Iowa	2,544,511	7	2,544,518	[1]
Kansas	2,344,275	1,644	2,345,919	0.070
Kentucky	3,256,990	352	3,257,342	0.011
Louisiana	3,029,199	5	3,029,204	[1]
Maine	1,050,156	5	1,050,161	[1]
Maryland	4,103,099	45,276	4,148,375	1.091
Massachusetts	4,382,442	59,907	4,442,349	1.349
Michigan	6,483,696	3,964	6,487,660	0.061
Minnesota	4,042,588	1	4,042,589	[1]
Mississippi	1,968,741	7	1,968,748	[1]
Missouri	4,411,371	3	4,411,374	[1]
Montana	891,195	7	891,202	0.001
Nebraska	1,594,471	1	1,594,472	[1]
Nevada	1,959,151	5	1,959,156	[1]
New Hampshire	952,617	134	952,751	0.014
New Jersey	5,562,788	17,096	5,579,884	0.306
New Mexico	1,589,949	0	1,589,949	[1]
New York	9,603,497	37,988	9,641,485	0.394

(table continues)

From 2011 to 2015, 1.1 percent of vehicles were insured in the shared market annually, compared with 3.6 percent in 1995, 1.4 percent in 2000 and 1.3 percent in 2005 (excluding Texas).

In 2015 the number of vehicles in the shared market nationwide rose by about 80,000 vehicles, or 3.0 percent compared with 2014.

In 2015 North Carolina had the highest percentage of cars in the shared market, 30.3 percent, about the same as in 2014 when the shared market accounted for 30.1 percent.

Rhode Island ranked second by percentage of cars in the shared market with 2.1 percent, followed by Massachusetts with 1.3 percent.

Among the five states with the largest number of cars in the shared market in 2015 the number of cars in shared market plans rose 3.7 percent in North Carolina and 5.6 percent in Maryland. The number of cars in shared market plans fell 4.0 percent in Massachusetts, 9.3 percent in New York and 26.3 percent in New Jersey.

Private Passenger Cars Insured In The Shared And Voluntary Markets, 2015 (Cont'd)

State	Voluntary market	Shared market	Total	Shared market as a percent of total
North Carolina	5,801,945	2,527,547	8,329,492	30.345%
North Dakota	683,291	3	683,294	[1]
Ohio	8,451,516	0	8,451,516	[1]
Oklahoma	2,958,973	9	2,958,982	[1]
Oregon	2,835,071	3	2,835,074	[1]
Pennsylvania	8,875,394	6,171	8,881,565	0.069
Rhode Island	686,338	14,908	701,246	2.126
South Carolina	3,788,647	0	3,788,647	[1]
South Dakota	761,533	0	761,533	[1]
Tennessee	4,686,626	6	4,686,632	[1]
Texas[2]	NA	NA	NA	NA
Utah	2,022,667	1	2,022,668	[1]
Vermont	506,275	35	506,310	0.007
Virginia	6,324,114	398	6,324,512	0.006
Washington	4,838,049	5	4,838,054	[1]
West Virginia	1,364,829	9	1,364,838	0.001
Wisconsin	4,167,640	2	4,167,642	[1]
Wyoming	566,581	0	566,581	[1]
United States	**199,962,269**	**2,719,033**	**202,681,302**	**1.342%**

[1]Less than 0.001 percent. [2]Texas information is no longer available. NA=Data not available.
Source: AIPSO.

Uninsured Motorists

Uninsured and underinsured motorist coverage reimburses policyholders in an accident involving an uninsured, underinsured or hit-and-run driver. Twenty states and the District of Columbia have mandatory requirements for uninsured or underinsured motorist coverage. More than half of the states have passed laws and begun to develop and implement online auto insurance verification systems to identify uninsured motorists.

In 2015, 13.0 percent of motorists, or about one in eight drivers, were uninsured, according to a 2017 study (latest data available) by the Insurance Research Council (IRC). The percentage has been rising since it hit a record low of 12.2 percent in 2011. Florida had the highest percentage of uninsured motorists, 26.7 percent, and Maine had the lowest, 4.5 percent. IRC measures the number of uninsured motorists based on insurance claims, using a ratio of insurance claims made by people who were injured by uninsured drivers relative to the claims made by people who were injured by insured drivers.

Estimated Percentage Of Uninsured Motorists, 1992-2015[1]

Year	Percent	Year	Percent	Year	Percent
1992	15.6%	2000	13.4%	2008	14.3%
1993	16.0	2001	14.2	2009	13.8
1994	15.1	2002	14.5	2010	12.3
1995	14.2	2003	14.9	2011	12.2
1996	13.8	2004	14.6	2012	12.6
1997	13.2	2005	14.6	2013	12.7
1998	13.0	2006	14.3	2014	13.0
1999	12.8	2007	13.8	2015	13.0

[1]Percentage of uninsured drivers, as measured by the ratio of uninsured motorists (UM) claims to bodily injury (BI) claim frequencies.
Source: Insurance Research Council.

Top 10 Highest And Lowest States By Estimated Percentage Of Uninsured Motorists, 2015[1]

Highest			Lowest		
Rank	State	Percent uninsured	Rank	State	Percent uninsured
1	Florida	26.7%	1	Maine	4.5%
2	Mississippi	23.7	2	New York	6.1
3	New Mexico	20.8	3	Massachusetts	6.2
4	Michigan	20.3	4	North Carolina	6.5
5	Tennessee	20.0	5	Vermont	6.8
6	Alabama	18.4	6	Nebraska	6.8
7	Washington	17.4	7	North Dakota	6.8
8	Indiana	16.7	8	Kansas	7.2
9	Arkansas	16.6	9	Pennsylvania	7.6
10	D.C.	15.6	10	South Dakota	7.7

[1]Percentage of uninsured drivers, as measured by the ratio of uninsured motorists (UM) claims to bodily injury (BI) claim frequencies.
Source: Insurance Research Council.

Estimated Percentage Of Uninsured Motorists By State, 2015[1]

State	Uninsured	Rank[2]	State	Uninsured	Rank[2]	State	Uninsured	Rank[2]
Alabama	18.4%	6	Kentucky	11.5%	26	North Dakota	6.8%	45
Alaska	15.4	11	Louisiana	13.0	20	Ohio	12.4	22
Arizona	12.0	24	Maine	4.5	51	Oklahoma	10.5	31
Arkansas	16.6	9	Maryland	12.4	23	Oregon	12.7	21
California	15.2	12	Massachusetts	6.2	49	Pennsylvania	7.6	43
Colorado	13.3	19	Michigan	20.3	4	Rhode Island	15.2	13
Connecticut	9.4	36	Minnesota	11.5	27	South Carolina	9.4	37
Delaware	11.4	28	Mississippi	23.7	2	South Dakota	7.7	42
D.C.	15.6	10	Missouri	14.0	17	Tennessee	20.0	5
Florida[3]	26.7	1	Montana	9.9	33	Texas	14.1	16
Georgia	12.0	25	Nebraska	6.8	46	Utah	8.2	39
Hawaii	10.6	30	Nevada	10.6	29	Vermont	6.8	47
Idaho	8.2	40	New Hampshire	9.9	35	Virginia	9.9	34
Illinois	13.7	18	New Jersey	14.9	14	Washington	17.4	7
Indiana	16.7	8	New Mexico	20.8	3	West Virginia	10.1	32
Iowa	8.7	38	New York	6.1	50	Wisconsin	14.3	15
Kansas	7.2	44	North Carolina	6.5	48	Wyoming	7.8	41

[1]Percentage of uninsured drivers, as measured by the ratio of uninsured motorists (UM) claims to bodily injury (BI) claim frequencies. [2]Rank calculated from unrounded data.
[3]In Florida, compulsory auto laws apply to personal injury protection (PIP) and physical damage, but not to third-party bodily injury coverage.
Source: Insurance Research Council.

AUTO: LAWS

Automobile Financial Responsibility Laws

Most states require motor vehicle owners to buy a minimum amount of bodily injury and property damage liability insurance before they can legally drive their vehicles. All states have financial responsibility laws, which means that people involved in an accident will be required to furnish proof of financial responsibility up to a certain amount. To comply with these laws, most drivers purchase liability insurance. Despite these laws a significant percentage of drivers are uninsured.

Motorcycle insurance is compulsory in every state except Hawaii, Michigan, Montana and Washington, according to the American Property Casualty Insurers Association. Minimum automobile liability limits and the insurance required by state law are the same for motorcycles as for autos and other motor vehicles.

The chart that follows shows mandatory requirements for bodily injury (BI), property damage (PD) liability, no-fault personal injury protection (PIP), and uninsured (UM) and underinsured (UIM) motorists coverage. It also indicates which states have only financial responsibility (FR) laws.

Automobile Financial Responsibility Limits By State

State	Insurance required	Minimum liability limits[1]
Alabama	BI & PD liability	25/50/25
Alaska	BI & PD liability	50/100/25
Arizona	BI & PD liability	15/30/10
Arkansas	BI & PD liability, PIP	25/50/25
California	BI & PD liability	15/30/5[2]
Colorado	BI & PD liability	25/50/15
Connecticut	BI & PD liability, UM, UIM	25/50/20
Delaware	BI & PD liability, PIP	25/50/10
D.C.	BI & PD liability, UM	25/50/10
Florida	PD liability, PIP	10/20/10[3]
Georgia	BI & PD liability	25/50/25
Hawaii	BI & PD liability, PIP	20/40/10
Idaho	BI & PD liability	25/50/15
Illinois	BI & PD liability, UM, UIM	25/50/20
Indiana	BI & PD liability	25/50/25
Iowa	BI & PD liability	20/40/15
Kansas	BI & PD liability, PIP	25/50/25
Kentucky	BI & PD liability, PIP, UM, UIM	25/50/10[3]
Louisiana	BI & PD liability	15/30/25
Maine	BI & PD liability, UM, UIM, Medpay	50/100/25[4]
Maryland	BI & PD Liability, PIP, UM, UIM	30/60/15
Massachusetts	BI & PD liability, PIP	20/40/5
Michigan	BI & PD liability, PIP	20/40/10
Minnesota	BI & PD liability, PIP, UM, UIM	30/60/10
Mississippi	BI & PD liability	25/50/25
Missouri	BI & PD liability, UM	25/50/10
Montana	BI & PD liability	25/50/20
Nebraska	BI & PD liability, UM, UIM	25/50/25
Nevada	BI & PD liability	25/50/20
New Hampshire	FR only	25/50/25
New Jersey	BI & PD liability, PIP, UM, UIM	15/30/5[5]

(table continues)

Automobile Financial Responsibility Limits By State (Cont'd)

State	Insurance required	Minimum liability limits[1]
New Mexico	BI & PD liability	25/50/10
New York	BI & PD liability, PIP, UM, UIM	25/50/10[6]
North Carolina	BI & PD liability, UM, UIM	30/60/25
North Dakota	BI & PD liability, PIP, UM, UIM	25/50/25
Ohio	BI & PD liability	25/50/25
Oklahoma	BI & PD liability	25/50/25
Oregon	BI & PD liability, PIP, UM, UIM	25/50/20
Pennsylvania	BI & PD liability, PIP	15/30/5
Rhode Island	BI & PD liability	25/50/25
South Carolina	BI & PD liability, UM	25/50/25
South Dakota	BI & PD liability, UM, UIM	25/50/25
Tennessee	BI & PD liability	25/50/15[3]
Texas	BI & PD liability, PIP	30/60/25
Utah	BI & PD liability, PIP	25/65/15[3]
Vermont	BI & PD liability, UM, UIM	25/50/10
Virginia	BI & PD liability[7], UM, UIM	25/50/20
Washington	BI & PD liability	25/50/10
West Virginia	BI & PD liability, UM, UIM	25/50/25
Wisconsin	BI & PD liability, UM, Medpay	25/50/10
Wyoming	BI & PD liability	25/50/20

[1]The first two numbers refer to bodily injury (BI) liability limits and the third number to property damage (PD) liability. For example, 20/40/10 means coverage up to $40,000 for all persons injured in an accident, subject to a limit of $20,000 for one individual, and $10,000 coverage for property damage. [2]Low-cost policy limits for low-income drivers in the California Automobile Assigned Risk Plan are 10/20/3. [3]Instead of policy limits, policyholders can satisfy the requirement with a combined single limit policy. Amounts vary by state. [4]In addition, policyholders must carry coverage for medical payments. Amounts vary by state. [5]Basic policy (optional) limits are 10/10/5. Uninsured and underinsured motorist coverage not available under the basic policy but uninsured and underinsured motorist coverage is required under the standard policy. Special Automobile Insurance Policy available for certain drivers which only covers emergency treatment and a $10,000 death benefit. [6]In addition, policyholders must have 50/100 for wrongful death coverage. [7]Compulsory to buy insurance or pay an uninsured motorists vehicle (UMV) fee to the state department of motor vehicles.

Note: State laws regarding mandatory requirements for uninsured and underinsured motorists vary. State departments of insurance should be consulted to determine whether these coverages are compulsory.

Source: American Property Casualty Insurers Association; state departments of insurance.

State Auto Insurance Laws Governing Liability Coverage

State auto insurance laws governing liability coverage fall into four broad categories: no-fault, choice no-fault, tort liability and add-on. The major differences are whether there are restrictions on the right to sue and whether the policyholder's own insurer pays first-party (i.e., the insured's) benefits, up to the state maximum amount, regardless of who is at fault in the accident.

No-fault: The no-fault system is intended to lower the cost of auto insurance by taking small claims out of the courts. Each insurance company compensates its own policyholders for the cost of minor injuries regardless of who was at fault in the accident. These first-party benefits, known as personal injury protection (PIP), are a mandatory coverage in no-fault states but benefits vary by state. In states with the most extensive benefits, a policyholder receives compensation for medical fees, lost wages, funeral costs and other out-of-pocket expenses. The term *no-fault* can be confusing because it is often used to denote any auto insurance system in which each driver's own insurance company pays for certain losses, regardless of fault. In its strict form, the term *no-fault* applies only to states where insurance companies pay first-party benefits and where there are restrictions on the right to sue.

Victims in no-fault states may sue for severe injuries if the case meets certain conditions. These conditions are known as the tort liability threshold, and may be expressed in verbal terms such as death or significant disfigurement (verbal threshold) or in dollar amounts of medical bills (monetary threshold).

Choice no-fault: In choice no-fault states, drivers may select one of two options: a no-fault auto insurance policy, usually with a verbal threshold, or a traditional tort liability policy.

Tort liability: In traditional tort liability states, there are no restrictions on lawsuits. A policyholder at fault in a car crash can be sued by the other driver and by the other driver's passengers for the pain and suffering the accident caused as well as for out-of-pocket expenses such as medical costs.

Add-on: In add-on states, drivers can purchase medical coverage and other first-party benefits from their own insurance company as they do in no-fault states but there are no restrictions on lawsuits. The term add-on is used because in these states first-party benefits have been added on to the traditional tort liability system. In add-on states, first-party coverage may not be mandatory and the benefits may be lower than in true no-fault states.

In the following 28 states auto liability is based on the traditional tort liability system. In these states, there are no restrictions on lawsuits:

Alabama

Alaska

Arizona

California

Colorado

Connecticut

Georgia

Idaho

Illinois

Indiana

Iowa

Louisiana

Maine

Mississippi

Missouri

Montana

Nebraska

Nevada

New Mexico

North Carolina

Ohio

Oklahoma

Rhode Island

South Carolina

Tennessee

Vermont

West Virginia

Wyoming

State Auto Insurance Laws Governing Liability Coverage

	First-party benefits (PIP)[1]		Restrictions on lawsuits		Thresholds for lawsuits	
True no-fault	**Compulsory**	**Optional**	**Yes**	**No**	**Monetary**	**Verbal**
Florida	X		X			X
Hawaii	X		X		X	
Kansas	X		X		X	
Kentucky	X		X	X[2]	X[2]	
Massachusetts	X		X		X	
Michigan	X		X			X
Minnesota	X		X		X	
New Jersey	X		X	X[2]		X[2,3]
New York	X		X			X
North Dakota	X		X		X	
Pennsylvania	X		X	X[2]		X[2]
Puerto Rico	X		X		X	
Utah	X		X		X	
Add-On						
Arkansas	X			X		
Delaware	X			X		
D.C.		X	X[4]	X[4]		
Maryland	X			X		
New Hampshire		X		X		
Oregon	X			X		
South Dakota		X		X		
Texas	X			X		
Virginia		X		X		
Washington		X		X		
Wisconsin		X		X		

[1]Personal injury protection. [2]Choice no-fault state. Policyholder can choose a policy based on the no-fault system or traditional tort liability. [3]Verbal threshold for the Basic Liability Policy, the Special Policy and the Standard Policy where the policyholder chooses no-fault. The Basic and Special Policies contain lower amounts of coverage. [4]The District of Columbia is neither a true no-fault nor add-on state. Drivers are offered the option of no-fault or fault-based coverage, but in the event of an accident a driver who originally chose no-fault benefits has 60 days to decide whether to receive those benefits or file a claim against the other party.

Source: American Property Casualty Insurers Association.

Seatbelt Laws

Thirty-four states and the District of Columbia have a primary seatbelt enforcement law, which allows law enforcement officers to stop a car for noncompliance with seatbelt laws. The other states have secondary laws; officials can only issue seatbelt violations if they stop motorists for other infractions. New Hampshire, the only state that does not have a seatbelt law that applies to adults, has a child restraint law. Seatbelts were in use 89.7 percent of the time nationwide in 2017, not significantly different from 90.1 percent in 2016, according to the National Highway Traffic Safety Administration. Generally, states with stronger seatbelt enforcement laws achieve higher rates than states with weaker laws.

State Seatbelt Use Laws

State	2017 usage rate	Primary/secondary enforcement[1]	Age requirements	Maximum fine, first offense	Damages reduced[2]
Alabama	92.9%	P	15+ yrs. in front seat	$25	
Alaska	90.1	P	16+ yrs. in all seats	15	X
Arizona	86.1	S	8+ yrs. in front seat; 8-15 yrs. in all seats	10	X
Arkansas	81.0	P	15+ yrs. in front seat	25	
California	96.2	P	16+ yrs. in all seats	20	X
Colorado	83.8	S	16+ yrs. in front seat	71	X
Connecticut	90.3	P	8+ yrs. in front seat	50	
Delaware	91.4	P	16+ yrs. in all seats	25	
D.C.	93.6	P	16+ yrs. in all seats	50	
Florida	90.2	P	6+ yrs. in front seat; 6-17 yrs. in all seats	30	X
Georgia	97.1	P	8-17 yrs. in all seats; 18+ yrs. in front seat	15-25	
Hawaii	96.9	P	8+ yrs. in all seats	45	
Idaho	81.2	S	7+ yrs. in all seats	10	
Illinois	93.8	P	16+ yrs. in all seats	25	
Indiana	93.0	P	16+ yrs. in all seats	25	
Iowa	91.4	P	18+ yrs. in front seat	25	X
Kansas	82.0	P[3]	14+ yrs. in all seats	60	
Kentucky	86.8	P	7 and younger and more than 57 inches tall in all seats; 8+ yrs in all seats	25	
Louisiana	87.1	P	13+ yrs. in all seats	50	
Maine	88.9	P	18+ yrs. in all seats	50	
Maryland	92.1	P[3]	16+ yrs. in all seats	50	
Massachusetts	73.7	S	13+ yrs. in all seats	25[4]	
Michigan	94.1	P	16+ yrs. in front seat	25	X
Minnesota	92.0	P	7 and younger and more than 57 inches tall in all seats; 8+ yrs in all seats	25	

(table continues)

State Seatbelt Use Laws (Cont'd)

State	2017 usage rate	Primary/secondary enforcement[1]	Age requirements	Maximum fine, first offense	Damages reduced[2]
Mississippi	78.8%	P	7+ yrs. in all seats	25	
Missouri	84.0	S[5]	16+ yrs. in front seat	10	X
Montana	78.0	S	6+ yrs. in all seats	20	
Nebraska	85.9	S	18+ yrs. in front seat	25	X
Nevada	90.6	S	6+ yrs. in all seats	25	
New Hampshire	67.6	No law for adults			
New Jersey	94.1	P[3]	7 yrs. and younger and more than 57 inches; 8+ yrs. in all seats	20	X
New Mexico	91.5	P	18+ yrs. in all seats	25	
New York	93.4	P	16+ yrs. in front seat	50	X
North Carolina	91.4	P[3]	16+ yrs. in all seats	25	
North Dakota	79.3	S	18+ yrs. in front seat	20	X
Ohio	82.8	S	8-14 yrs. in all seats; 15+ yrs. in front seat	30 driver/ 20 passenger	X
Oklahoma	86.9	P	9+ yrs. in front seat	20	
Oregon	96.8	P	16+ yrs. in all seats	115	X
Pennsylvania	85.6	S[5]	18+ yrs. in front seat	10	
Rhode Island	88.3	P	18+ yrs. in all seats	40	
South Carolina	92.3	P	8+ yrs. in all seats	25	
South Dakota	74.8	S	18+ yrs. in front seat	20	
Tennessee	88.5	P	16+ yrs. in front seat	30	
Texas	91.9	P	7 yrs. and younger who are 57 inches or taller; 8+ yrs. in all seats	200	
Utah	88.8	P	16+ yrs. in all seats	45	
Vermont	84.5	S	18+ yrs. in all seats	25	
Virginia	85.3	S	18+ yrs. in front seat	25	
Washington	94.8	P	16+ yrs. in all seats	124	
West Virginia	89.7	P	8+ yrs. in front seat; 8-17 yrs. in all seats	25	X
Wisconsin	89.4	P	8+ yrs. in all seats	10	X
Wyoming	84.8	S	9+ yrs. in all seats	25 driver/ 10 passenger	
United States	**89.7%**				

[1]Primary enforcement means police may stop a vehicle and issue a fine for noncompliance with seatbelt laws. Secondary enforcement means that police may issue a fine for not wearing a seatbelt only if the vehicle has been stopped for other traffic violations. [2]Court awards for compensation for injury may be reduced if seatbelt laws were violated. [3]Secondary for rear seat occupants, ages vary. [4]Drivers fined additional $25 for every unrestrained passenger age 12 to under 16 years old. [5]Primary enforcement for children; ages vary.

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration (NHTSA); Insurance Institute for Highway Safety.

Impaired Driving Laws

In 2017, 10,874 people died in the United States in alcohol-impaired crashes, down 1.1 percent from 10,996 in 2016, according to the National Highway Traffic Safety Administration (NHTSA). In 2017 alcohol-impaired crash fatalities accounted for 29 percent of all crash fatalities, the same proportion as in 2016. NHTSA notes that this percentage is the lowest since 1982, when the Administration began recording alcohol data. Despite this improvement, the Insurance Institute for Highway Safety says that progress on alcohol-impaired driving has stalled, citing the fact that more than a quarter of all drivers who die in crashes in the United States have blood alcohol concentrations of 0.08 percent or higher. More than 7,000 deaths could have been prevented in 2016 if all drivers were below the legal limit. Enforcement of existing laws and enacting laws such as mandating ignition interlocks and administrative license suspension are the most effective measures against impaired driving.

State Laws Curbing Alcohol-Impaired Driving

State	Interlocks[1] required					ALS[2] mandatory 90-day license suspension[3]	Open container law[4]
	To drive during ALS[2] (first offense)	To drive during post-conviction license suspension		To reinstate license after conviction			
		First offender	Repeat offender	First offender	Repeat offender		
Alabama	[5]	X	X		X	X	X
Alaska	X	X	X	X	X	X	
Arizona			X	X	X	X	X
Arkansas	X	X	X			X	X
California		X[6]	X	X[6]	X[6]	X	X
Colorado	X	X	X		X	X	X
Connecticut	[5]	[5]	[5]	X	X	X	
Delaware	[5]	X	X	X	X	X	
D.C.		X	X				X
Florida		[7]	X	[7]	X	X	X
Georgia			X		X	X	X
Hawaii	X	X	X	X	X	X	X
Idaho		[7]	[5]	X	X	X	X
Illinois	X		X		X	X	X
Indiana						X	X
Iowa	X	X	X		X	X	X
Kansas	[5]	[5]	X	X	X		X
Kentucky	[8]	[7]	X	[7]	X		X
Louisiana		X	X			X	
Maine			X			X	X
Maryland		X	X	X	X	X	X
Massachusetts	[5]		X		X		X

(table continues)

State Laws Curbing Alcohol-Impaired Driving (Cont'd)

State	Interlocks[1] required					ALS[2] mandatory 90-day license suspension[3]	Open container law[4]
	To drive during ALS[2] (first offense)	To drive during post-conviction license suspension		To reinstate license after conviction			
		First offender	Repeat offender	First offender	Repeat offender		
Michigan	[8]	[7]	X		X		X
Minnesota	[7]	[7]	X			X	X
Mississippi	X	X	X			X	
Missouri			X		X	X	
Montana	[8]						X
Nebraska	X	X	X	X	X	X	X
Nevada	X	X	X	X	X	X	X
New Hampshire	[5]	X	[5]		X	X	X
New Jersey	[8]	[5]	[5]	[7]	X		X
New Mexico	X	X	X	X	X	X	X
New York	[8]	X	X	X	X		X
North Carolina		[7]	[5]	[7]	X		X
North Dakota						X	X
Ohio			X			X	X
Oklahoma	X	X	X		X	X	X
Oregon		X	X	X	X	X	X
Pennsylvania	[8]	[7]	X	[7]	X		X
Rhode Island	[8]	X	X		X		X
South Carolina	[8]	[7]	[5]	[7]	X		X
South Dakota	[8]						X
Tennessee	[8]	X	X		X	X	X
Texas		X	X		X	X	X
Utah		[5]	[5]	X	X	X	X
Vermont	X	X	X			X	X
Virginia	[5]	X	X		X		X
Washington	X	X	X	X	X	X	X
West Virginia	X	X	X		X	X	X
Wisconsin						X	X
Wyoming			X	[7]	X	X	

[1]Ignition interlock devices analyze a driver's breath for alcohol and disable the ignition if a driver has been drinking. States identified mandate the devices on offenders' vehicles. [2]Administrative license suspension, on-the-spot drivers license suspension or revocation if blood alcohol concentration (BAC) is over the legal limit or the driver refuses to take a BAC test. [3]Mandatory penalty for violation of the implied consent law, which means that drivers who refuse to take a breath alcohol test when stopped or are arrested for alcohol-impaired driving or if BAC is over the legal limit will have their license revoked or suspended. [4]Prohibits unsealed alcohol containers and alcohol consumption in motor vehicle passenger compartments for all occupants. Counts only laws meeting federal requirements. [5]No option for driving during suspension. [6]In four counties. [7]State does not require interlocks except under certain conditions; see IIHS website. [8]State has no administrative license suspension for first test failure.

Source: Insurance Institute for Highway Safety; Governors Highway Safety Administration.

Alcohol Server Liability Laws

Most states have enacted liquor liability laws which hold businesses and/or people who serve liquor liable for the damage a drunk driver causes. Forty-two states and the District of Columbia have laws or case law (law that comes about through a court ruling rather than an act of the legislature) that hold commercial servers of alcohol liable for the harm caused by their intoxicated patrons. Some of the laws have limitations. Thirty-nine states have enacted laws or have case law that permit social hosts who serve liquor to people who subsequently are involved in crashes to be held liable for any injury or death. These laws may have limited application, for example, many laws specify that the drinker must be obviously intoxicated. In some cases, the laws are only targeted at minors.

Statutes Or Court Cases Holding Alcoholic Beverage Servers Liable

	Commercial servers		Social hosts	
State	Statute[1]	Court[2]	Statute[3]	Court
Alabama	X		X	X
Alaska	X		X	
Arizona	X	X	X	X
Arkansas	X	X		
California	X		X	
Colorado	X	X	X	
Connecticut	X	X		X[4,5]
Delaware				
D.C.		X[4]		
Florida	X		X	X
Georgia	X		X	
Hawaii		X	X	
Idaho	X	X	X	
Illinois	X		X	X
Indiana	X	X	X	X
Iowa	X	X	X	X[4]
Kansas				
Kentucky	X	X		X[4]
Louisiana	X	X	X	X
Maine	X		X	
Maryland				
Massachusetts	X	X	X	X
Michigan	X		X	X[4]
Minnesota	X		X	X
Mississippi	X	X	X	X
Missouri	X			

	Commercial servers		Social hosts	
State	Statute[1]	Court[2]	Statute[3]	Court
Montana	X	X	X	
Nebraska			X	
Nevada			X[4]	
New Hampshire	X		X	X
New Jersey	X		X	X
New Mexico	X		X	X
New York	X		X	
North Carolina	X	X	X	X[4]
North Dakota	X		X	
Ohio	X	X	X	X[4]
Oklahoma	X	X		
Oregon	X		X	
Pennsylvania	X	X		X[4]
Rhode Island	X			
South Carolina	X	X	X	X[4]
South Dakota				
Tennessee	X			
Texas	X	X	X	X
Utah	X		X	X
Vermont	X		X	X
Virginia				
Washington	X	X	X	X[4]
West Virginia	X	X[4]		
Wisconsin	X	X	X	X
Wyoming	X		X	X[4]

[1]Indicates some form of liability is permitted by statute. [2]States where common-law liability has not been specifically overruled by statute or where common-law actions are specifically recognized in addition to statutory liability. [3]Indicates that language is capable of being read broadly enough to include noncommercial servers. [4]For guests under the age of 21. [5]Only if host either purveyed or supplied alcohol.

Source: American Property Casualty Insurers Association.

Older Drivers

In 2016 about 15.2 percent of the total U.S. resident population (49.2 million people) were 65 years old and older. In 2016, 6,764 people age 65 and older were killed in traffic crashes, accounting for 18 percent of all traffic fatalities that year. Recognizing the need for older drivers to retain their mobility and independence, some states issue restricted licenses. Depending on ability, older drivers may be limited to driving during daylight hours or on non-freeway types of roads. In most states restrictions such as these can be placed on anyone's drivers license regardless of age, if his or her medical condition warrants it.

State Drivers License Renewal Laws Including Requirements For Older Drivers

State	Length of regular renewal cycle (years)	Renewal for older drivers		Proof of adequate vision required at renewal[1]	Age limits on mail or online renewal
		Length (years)	Age	Older drivers, age	
Alabama	4				
Alaska	5			69	69
Arizona	12	5	65		
Arkansas	8	4 or 8, personal option	70		
California[2]	5			70	70
Colorado	5				66
Connecticut	6	2 or 6, personal option	65		
Delaware	8				
D.C.	8				70
Florida	8	6	80	80	
Georgia	8				64
Hawaii	8	2	72		
Idaho	4 or 8, personal option	4	63		70
Illinois	4	2	81[3]	75	75
Indiana	6	3	75[3]	75	75
Iowa	8	2	72	70	70
Kansas	6	4	65		
Kentucky	8				
Louisiana	6			70	70
Maine	6	4	65	40 and 62	62
Maryland	8			40	
Massachusetts	5			75	75
Michigan	4				
Minnesota	4				

(table continues)

State Drivers License Renewal Laws Including Requirements For Older Drivers (Cont'd)

State	Length of regular renewal cycle (years)	Renewal for older drivers		Proof of adequate vision required at renewal[1]	Age limits on mail or online renewal
		Length (years)	Age	Older drivers, age	
Mississippi	4 or 8, personal option				
Missouri	6	3	70		
Montana	8	4	75		
Nebraska	5			72	72
Nevada	8	4	65	71	65
New Hampshire	5				
New Jersey	4	2 or 4, personal option	70		
New Mexico	4 or 8, personal option	4	67[3]	75	75
New York	8				
North Carolina	8	5	66		
North Dakota	6	4	78		65
Ohio	4				
Oklahoma	4				
Oregon	8			50	
Pennsylvania	4	2 or 4, personal option	65		
Rhode Island	5	2	75		
South Carolina	8				
South Dakota	5			65	
Tennessee	8				
Texas	6	2	85	79	79
Utah	5			65	
Vermont	2 or 4				
Virginia	8	5	75	75	75
Washington	6				70
West Virginia	8				
Wisconsin	8				
Wyoming	4				

[1]States noted in this column require proof of adequate vision for older drivers at the age shown at every renewal. Most states require all drivers to show proof at every renewal or every in-person renewal. Eight states (Alabama, Connecticut, Kentucky, Mississippi, Oklahoma, Pennsylvania, Tennessee and Vermont) do not require drivers to show proof of adequate vision at any age. [2]Specifically requires doctors to report a diagnosis of dementia. [3]These states have special renewal requirements for other age groups: Illinois (1 year for drivers 87 and older); Indiana (2 years for drivers 85 and older); and New Mexico (1 year for drivers 75 and older).

Note: Specific requirements vary by state; contact state department of motor vehicles for more information.

Source: Insurance Institute for Highway Safety; Governors Highway Safety Administration.

State Young Driver Laws[1]

State	Graduated licensing			Driver may not operate a cellphone in learner and/or intermediate stages[4]
	Learners permit required for a minimum period	Intermediate phase		
		Restrictions on night driving[2]	Passenger restrictions[3]	
Alabama	6 months	X	X	Talk
Alaska	6 months	X	X	
Arizona	6 months	X	X	Talk, text
Arkansas	6 months	X	X	Talk
California	6 months	X	X	Talk
Colorado	12 months	X	X	Talk
Connecticut	6 months	X	X	Talk
Delaware	6 months	X	X	Talk
D.C.	6 months	X	X	Talk
Florida	12 months	X		
Georgia	12 months	X	X	Talk
Hawaii	6 months	X	X	Talk
Idaho	6 months	X	X	
Illinois	9 months	X	X	Talk
Indiana	6 months	X	X	Talk
Iowa	12 months	X		Talk
Kansas	12 months	X	X	Talk
Kentucky	6 months	X	X	Talk
Louisiana	6 months	X	X	Talk
Maine	6 months	X	X	Talk
Maryland	9 months	X	X	Talk
Massachusetts	6 months	X	X	Talk
Michigan	6 months	X	X	Talk
Minnesota	6 months	X	X	Talk
Mississippi	12 months	X		
Missouri	6 months	X	X	Text
Montana	6 months	X	X	
Nebraska	6 months	X	X	Talk
Nevada	6 months	X	X	
New Hampshire	none[5]	X	X	Talk

(table continues)

State Young Driver Laws[1] (Cont'd)

State	Graduated licensing			Driver may not operate a cellphone in learner and/or intermediate stages[4]
	Learners permit required for a minimum period	Intermediate phase		
		Restrictions on night driving[2]	Passenger restrictions[3]	
New Jersey	6 months	X	X	Talk
New Mexico	6 months	X	X	Talk
New York	6 months	X	X	
North Carolina	12 months	X	X	Talk
North Dakota	6-12 months[6]	X		Talk
Ohio	6 months	X	X	Talk
Oklahoma	6 months	X	X	Talk[7]
Oregon	6 months	X	X	Talk
Pennsylvania	6 months	X	X	
Rhode Island	6 months	X	X	Talk
South Carolina	6 months	X	X	
South Dakota	6 months	X		Talk
Tennessee	6 months	X	X	Talk
Texas	6 months	X	X	Talk
Utah	6 months	X	X	Talk
Vermont	12 months		X	Talk
Virginia	9 months	X	X	Talk
Washington	6 months	X	X	Talk
West Virginia	6 months	X	X	Talk
Wisconsin	6 months	X	X	Talk
Wyoming	10 days	X	X	

[1]Designed to aid young novice drivers between the ages of 15 and 18 gain driving experience. To date they apply only to drivers under the age of 18. All states have lower blood alcohol content laws for under-21 drivers which range from none to 0.02 grams per deciliter, in contrast with 0.08 grams per deciliter for drivers over the age of 21 in all states. Includes graduated licensing as defined by the National Highway Traffic Safety Administration. Every state has a graduated licensing law. [2]Intermediate stage; varies by state with regard to age of driver, night hours that driving is restricted, who must accompany driver during night hours and how long and what stage the restrictions are lifted. Exceptions may be made for work, school or religious activities and emergencies. [3]Intermediate stage; limits the number of teenage passengers a young driver may have in the vehicle. [4]Only includes states with restrictions on the use of cellphones for talking or texting by young drivers. Does not reference cellphone laws such as bans on handheld cellphones that apply to all drivers in some states. [5]New Hampshire does not issue learners permits. [6]Under age 16: 12 months; 16-18: 6 months. [7]Banned for non-life threatening purposes.

Source: Insurance Institute for Highway Safety.

HOMEOWNERS: PREMIUMS

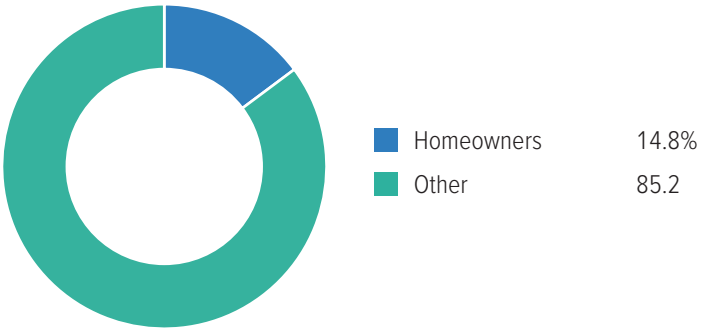
Homeowners Insurance

Homeowners insurance accounted for 14.8 percent of all property/casualty (P/C) insurance premiums and 27.1 percent of personal property/casualty lines insurance in 2017.

According to the Insurance Information Institute, the vast majority (93 percent) of homeowners have basic homeowners insurance, as it is generally a requirement of mortgage lenders. Homeowners insurance is a package policy, providing both property and personal liability insurance. The typical policy covers the house, garage and other structures on the property—as well as personal property inside the house—against a wide variety of perils, such as fire, windstorm, vandalism and accidental water damage. The typical homeowners policy includes theft coverage on personal property anywhere in the world and liability coverage for accidental harm caused to others. It also reimburses the policyholder for the additional cost of living elsewhere while his or her house is being repaired or rebuilt after a fire or other disaster.

Earthquake damage and flood damage caused by external flooding are not covered by standard homeowners policies, however special policies can be purchased separately. Flood coverage is provided by the federal government's National Flood Insurance Program and some private insurers.

Homeowners Premiums As A Percent Of All P/C Premiums, 2017



Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Homeowners Multiple Peril Insurance, 2008-2017 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$57,375,139	0.6%	115.4	21.5 pts.
2009	58,478,195	1.9	105.7	-9.7
2010	61,659,466	5.4	106.0	0.3
2011	64,131,058	4.0	121.0	15.0
2012	67,847,033	5.8	103.0	-18.1
2013	72,773,216	7.3	89.6	-13.4
2014	77,914,406	7.1	91.5	2.0
2015	79,931,345	2.6	91.3	-0.3
2016	81,191,458	1.6	93.1	1.9
2017	82,811,254	2.0	108.1	15.0

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded numbers.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute

Top 10 Writers Of Homeowners Insurance By Direct Premiums Written, 2017 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	State Farm Mutual Automobile Insurance	$17,552,323	18.6%
2	Allstate Corp.	7,957,403	8.4
3	Liberty Mutual	6,471,114	6.9
4	USAA Insurance Group	5,703,741	6.1
5	Farmers Insurance Group of Companies[3]	5,617,990	6.0
6	Travelers Companies Inc.	3,547,478	3.8
7	Nationwide Mutual Group	3,290,890	3.5
8	American Family Insurance Group	3,045,589	3.2
9	Chubb Ltd.	2,776,827	2.9
10	Erie Insurance Group	1,596,490	1.7

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories. [3]Data for Farmers Insurance Group of Companies and Zurich Financial Group (which owns Farmers' management company) are reported separately by S&P Global Market Intelligence.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

HOMEOWNERS: HIGH-RISK MARKETS

According to Census Bureau estimates, the population in the Atlantic and Gulf Coast counties of the United States has increased 9.4 percent in 10 years, from 54.5 million on July 1, 2006, to 59.6 million on July 1, 2016. An estimated 44.8 percent of the nation's population live in coastal states from Maine to Texas along a coastline that stretches over 46,510 miles.

The population of most counties along the Pacific, Atlantic and Gulf Coasts grew between 2000 and 2010, creating an almost unbroken chain of coastal counties with population densities of 319 people per square mile or more running from New Hampshire through northern Virginia, according to the U.S. Census Bureau. These counties were home to about 94 million people in 2016 and accounted for about 29 percent of the total U.S. population.

The Atlantic Coast, the Gulf of Mexico and the Hawaiian Islands are home to the U.S. counties most vulnerable to hurricanes, accounting for nearly two-thirds of the nation's coastline population in 2008, according to the U.S. Census Bureau. From 1960 to 2008, five of the 11 most hurricane-prone counties were in Louisiana. Three were in Florida and three were in North Carolina.

Between 1960-2010, California had the largest growth in population in the United States, some 13 million people. By percent change, Florida had the most growth, 270 percent.

Top 10 States, By Population Change In Coastal Counties, 1960-2010

	By number change	
Rank	State	Number change
1	California	13,130,000
2	Florida	10,360,000
3	Texas	3,732,000
4	Washington	2,578,000
5	Virginia	1,903,000
6	New York	1,400,000
7	New Jersey	1,275,000
8	Maryland	938,000
9	Massachusetts	826,000
10	Hawaii	728,000

	By percent change	
Rank	State	Percent change
1	Florida	270.1%
2	Alaska	239.8
3	New Hampshire	198.0
4	Texas	161.9
5	Virginia	150.8
6	Washington	144.4
7	South Carolina	125.1
8	Hawaii	115.2
9	North Carolina	114.4
10	California	107.2

Source: U.S. Department of Commerce, Census Bureau (www.census.gov/dataviz/visualizations/039/508.php).

Coastal State Storm Surge Risk

About 6.9 million coastal homes along the Gulf and Atlantic Coasts, worth more than $1.6 trillion, are at risk for storm surge damage, according to a CoreLogic report. The report found that reconstruction costs for homes in 2018 increased 6.6 percent from a year ago, mirroring increased regional construction, equipment, and labor costs. The Atlantic Coast has more than 3.9 million homes at risk of storm surge with reconstruction cost values of more than $1 trillion, up by about $30 billion from 2017. Three million Gulf Coast homes with the same risk have more than $609 billion in potential exposure to storm surge damage, representing a $16 billion increase compared to 2017. The reconstruction cost is based on the 100 percent destruction of the residential structure, using a combined cost of construction materials, equipment and labor costs by geographic location. In the following charts, the low-risk category reflects a low probability of a Category 5 hurricane striking the area.

Storm Surge Risk By State By Number Of Homes and Reconstruction Value, 2018[1]

Rank	State	By number of single-family homes				
		Extreme	Very High	High	Moderate	Low[2]
1	Florida	351,093	1,064,674	1,752,603	2,292,791	2,774,175
2	Louisiana	72,256	207,442	624,521	747,111	817,480
3	Texas	39,109	17,558	253,947	384,944	543,847
4	New Jersey	95,659	278,539	382,065	471,353	[3]
5	New York	75,238	224,558	347,236	462,380	[3]
6	Virginia	26,960	94,378	246,824	366,478	409,129
7	South Carolina	35,934	126,997	209,026	294,239	347,030
8	North Carolina	32,282	95,286	160,831	210,233	259,718
9	Massachusetts	11,048	46,558	102,189	157,898	[3]
10	Georgia	8,887	50,409	105,735	141,518	152,559
11	Maryland	17,824	60,553	99,056	125,417	[3]
12	Mississippi	9,261	30,353	60,620	90,010	101,720
13	Pennsylvania	932	20,815	56,830	83,808	[3]
14	Connecticut	7,167	28,497	46,618	67,207	[3]
15	Alabama	6,379	17,306	32,331	44,744	57,973
16	Delaware	8,901	4,649	40,048	56,418	[3]
17	Rhode Island	1,876	8,153	17,312	26,484	[3]
18	Maine	5,645	7,960	11,851	18,150	[3]
19	New Hampshire	284	4,551	7,446	9,753	[3]
	Total homes potentially affected	**806,735**	**2,509,236**	**4,557,089**	**6,050,936**	**6,942,499**
Rank	**State**	**By reconstruction value[4] ($ millions)**				
		Extreme	**Very High**	**High**	**Moderate**	**Low[2]**
1	Florida	$68,993	$214,615	$353,434	$458,546	$552,418
2	New York	29,069	92,193	142,654	190,524	[3]
3	Louisiana	15,058	44,362	141,431	169,398	186,089
4	New Jersey	27,211	83,141	116,379	146,074	[3]
5	Texas	6,545	20,281	46,590	73,690	103,258
6	Virginia	6,889	23,533	57,148	84,231	95,057
7	South Carolina	10,366	33,690	52,352	70,363	80,775
8	North Carolina	6,503	19,557	33,348	43,888	54,356
9	Massachusetts	2,980	13,364	29,309	46,443	[3]
10	Georgia	2,740	13,213	24,703	31,745	33,764

(table continues)

Storm Surge Risk By State By Number Of Homes and Reconstruction Value, 2018[1] (Cont'd)

Rank	State	By reconstruction value[4] ($ millions)				
		Extreme	Very High	High	Moderate	Low[2]
11	Maryland	$4,349	$14,484	$23,474	$29,807	[3]
12	Connecticut	2,559	9,609	15,453	22,112	[3]
13	Mississippi	1,977	6,157	11,914	17,373	$19,558
14	Pennsylvania	216	4,664	13,121	19,445	[3]
15	Delaware	2,636	7,021	11,464	16,078	[3]
16	Alabama	1,204	3,124	5,790	7,962	10,140
17	Rhode Island	529	2,408	5,094	7,809	[3]
18	Maine	1,281	1,914	2,960	4,634	[3]
19	New Hampshire	64	933	1,721	2,312	[3]
	Total homes potentially affected	**$191,171**	**$608,264**	**$1,088,339**	**$1,442,436**	**$1,620,653**

[1]The risk categories are cumulative and increase in value from extreme to low. Extreme risk signals the higher risk of damage from a weak hurricane, while low risk includes up to Category 5 hurricanes that are the least likely to occur but will cause more storm surge damage inland. [2]The low-risk category refers to Category 5 hurricanes, which are not common along the northeastern Atlantic Coast. [3]Storm surge risk in the low category for homes on the northeastern Atlantic Coast is not shown due to the extremely low probability of a Category 5 storm affecting these areas. [4]Represents the cost to completely rebuild including labor and materials by geographic location.

Source: CoreLogic, Inc., a data and analytics company.

Top 15 Metropolitan Areas By Storm Surge Risk, 2018[1]

Rank	Metropolitan area	Number of homes at risk of storm surge	Reconstruction value[2] ($ millions)
1	Miami, FL	788,679	$156,109.6
2	New York, NY	726,048	277,316.5
3	Tampa, FL	459,082	79,154.9
4	New Orleans, LA	395,975	95,278.1
5	Virginia Beach, VA	389,938	90,904.8
6	Fort Myers, FL	318,950	63,465.1
7	Houston, TX	284,622	57,652.7
8	Bradenton, FL	254,535	49,231.4
9	Naples, FL	186,100	39,684.0
10	Jacksonville, FL	171,332	38,495.4
11	Philadelphia, PA	165,300	41,317.6
12	Charleston, SC	149,900	37,938.3
13	Myrtle Beach, SC	128,155	22,792.7
14	Boston, MA	126,263	34,937.3
15	Beaumont, TX	121,379	21,026.7
	Total, 15 metropolitan areas	**4,666,258**	**$1,105,305.0**

[1]Includes homes at risk from extreme to low storm surge. [2]Represents the cost to completely rebuild including labor and materials by geographic location.

Source: CoreLogic, Inc., a data and analytics company.

Residual Market Property Plans

A myriad of different programs in place across the United States provide insurance to high-risk policyholders who may have difficulty obtaining coverage from the standard market. Residual, shared or involuntary market programs make basic insurance coverage more readily available. Today, property insurance for the residual market is provided by Fair Access to Insurance Requirements (FAIR) plans, beach and windstorm plans, and two state-run insurance companies in Florida and Louisiana: Florida's Citizens Property Insurance Corp. and Louisiana's Citizens Property Insurance Corp. Established in the late 1960s to ensure the continued provision of insurance in urban areas, FAIR plans often provide property insurance in both urban and coastal areas. Beach and windstorm plans cover predominantly wind-only risks in designated coastal areas. Over the past four decades FAIR and beach and windstorm plans experienced explosive growth both in the number of policies and in exposure value. However, the number of policies in FAIR plans peaked in 2011 and has been falling steadily. The total number of policies fell 45.4 percent from 2011 to 2017, while exposure dropped by 54.3 percent.

Insurance Provided By FAIR Plans, Fiscal Years 2008-2017[1]

Year	Number of policies			Exposure[2] ($000)	Direct premiums written ($000)
	Habitational	Commercial	Total		
2008	2,190,189	90,876	2,281,065	$612,749,753	$3,727,311
2009	2,043,969	86,575	2,130,544	614,905,551	3,038,712
2010	2,378,736	83,243	2,461,979	662,633,180	3,448,576
2011	2,658,662	51,657	2,710,319	715,289,876	3,942,021
2012	2,518,808	71,776	2,590,584	635,705,150	4,059,446
2013	2,484,816	64,359	2,549,175	445,635,335	3,685,283
2014	2,015,536	61,285	2,076,821	424,732,706	3,029,772
2015	1,728,423	51,443	1,779,866	373,829,442	2,198,182
2016	1,498,430	37,522	1,535,952	343,141,990	1,865,744
2017	1,449,312	29,641	1,478,953	327,209,703	1,747,336

[1]Includes the Texas FAIR Plan; Florida's Citizens Property Insurance Corp., which includes FAIR and beach plans; the Louisiana Citizens Property Insurance Corp., which includes FAIR and beach plans and premiums written after 2007; and North Carolina after 2010. [2]Exposure is the estimate of the aggregate value of all insurance in force in all FAIR Plans in all lines (except liability, where applicable, and crime) for 12 months ending September through December.

Source: Property Insurance Plans Service Office (PIPSO).

Insurance Provided By FAIR Plans By State, Fiscal Year 2017[1]

State	Number of policies			Exposure[2] ($000)	Direct premiums written ($000)
	Habitational	Commercial	Total		
California	120,520	3,995	124,515	$47,547,419	$82,387
Connecticut	2,065	69	2,134	404,154	2,993
Delaware	1,603	46	1,649	274,134	556
D.C.	217	31	248	71,955	210
Florida[3]	471,036	11,729	482,765	112,309,525	893,990
Georgia	19,276	672	19,948	2,599,265	22,054
Illinois	5,108	69	5,177	440,000	5,032
Indiana	1,405	36	1,441	169,973	1,544
Iowa	1,420	36	1,456	86,263	928
Kansas	15,955	144	16,099	1,001,116	8,622
Kentucky	9,229	387	9,616	497,000	5,715

(table continues)

Insurance Provided By FAIR Plans By State, Fiscal Year 2017[1] (Cont'd)

State	Number of policies			Exposure[2] ($000)	Direct premiums written ($000)
	Habitational	Commercial	Total		
Louisiana[3]	59,009	2,540	61,549	$7,630,727	$75,918
Maryland	1,511	58	1,569	407,738	996
Massachusetts	237,438	279	237,717	85,861,810	303,345
Michigan	18,300	271	18,571	2,299,527	15,442
Minnesota	5,584	38	5,622	754,500	3,985
Mississippi[4]	7,104	0	7,104	321,480	4,822
Missouri	2,833	75	2,908	181,280	1,742
New Jersey	13,245	336	13,581	1,876,469	8,646
New Mexico	11,202	283	11,485	82,518	5,046
New York	39,012	2,411	41,423	11,077,462	33,254
North Carolina	188,786	3,916	192,702	18,669,325	86,381
Ohio	19,616	409	20,025	4,806,000	17,042
Oregon	2,080	60	2,140	283,482	804
Pennsylvania	14,383	960	15,343	1,426,393	7,010
Rhode Island	16,702	126	16,828	4,362,173	23,994
Texas[4]	127,643	0	127,643	18,029,369	112,316
Virginia	30,838	501	31,339	4,361,224	19,100
Washington	67	11	78	21,487	121
West Virginia	421	48	469	34,050	286
Wisconsin	5,704	105	5,809	322,000	3,055
Total	**1,449,312**	**29,641**	**1,478,953**	**$327,209,703**	**$1,747,336**

[1]Excludes the FAIR Plans of Arkansas and Hawaii. [2]Exposure is the estimate of the aggregate value of all insurance in force in all FAIR plans in all lines (except liability, where applicable, and crime) for 12 months ending September through December. [3]Citizens Property Insurance Corp., which combined the FAIR and beach plans. [4]The Mississippi and Texas FAIR Plans do not offer a commercial policy.

Source: Property Insurance Plans Service Office (PIPSO).

Insurance Provided By Beach And Windstorm Plans

Beach and windstorm plans ensure that insurance is available against damage from hurricanes and other windstorms. In Georgia, Massachusetts and New York, FAIR plans provide wind and hail coverage for certain coastal communities. These states do not have beach and windstorm plans.

Insurance Provided By Beach And Windstorm Plans, Fiscal Year 2017[1]

State	Number of policies			Exposure[2] ($000)	Direct premiums written ($000)
	Habitational	Commercial	Total		
Alabama	24,335	68	24,403	$5,800,047	$28,304
Mississippi	26,133	483	26,616	3,959,890	42,457
North Carolina	229,801	11,008	240,809	76,697,787	345,027
South Carolina	30,421	495	30,916	7,844,971	48,829
Texas	231,633	11,010	242,643	65,023,810	423,075
Total	**542,323**	**23,064**	**565,387**	**$159,326,505**	**$887,692**

[1]The Florida and Louisiana Beach Plans merged with their FAIR Plans, see chart, Insurance Provided By FAIR Plans By State. [2]Exposure is the estimate of the aggregate value of all insurance in force in each state's beach and windstorm plan in all lines (except liability, where applicable, and crime) for 12 months ending September through December.

Source: Property Insurance Plans Service Office (PIPSO).

HOMEOWNERS: COSTS/EXPENDITURES

The average homeowners insurance premium rose by 1.6 percent in 2016, following a 3.6 percent increase in 2015, according to a January 2019 study by the National Association of Insurance Commissioners, the latest data available. The average renters insurance premium fell 1.6 percent in 2016 after falling 1.1 percent in 2015.

The Insurance Information Institute's 2018 *Pulse* survey found that 91 percent of homeowners had homeowners insurance, but only 46 percent of renters had renters insurance.

The U.S. homeownership rate was 64.4 percent in third quarter 2018, up from 63.9 percent a year ago, according to the U.S. Census Bureau. The 2010 Census showed that in some of the largest cities renters outnumbered owners, including New York, where 69.0 percent of households were occupied by renters, followed by Los Angeles (61.8 percent), Chicago (55.1 percent) and Houston (54.6 percent).

Average Premiums For Homeowners And Renters Insurance, United States, 2007-2016

Year	Homeowners[1]	Percent change	Renters[2]	Percent change
2007	$822	2.2%	$182	-3.7%
2008	830	1.0	182	[3]
2009	880	6.0	184	1.1
2010	909	3.3	185	0.5
2011	979	7.7	187	1.1
2012	1,034	5.6	187	[3]
2013	1,096	6.0	188	0.5
2014	1,132	3.3	190	1.1
2015	1,173	3.6	188	-1.1
2016	1,192	1.6	185	-1.6

[1]Based on the HO-3 homeowner package policy for owner-occupied dwellings, 1 to 4 family units. Provides all risks coverage (except those specifically excluded in the policy) on buildings and broad named-peril coverage on personal property, and is the most common package written. [2]Based on the HO-4 renters insurance policy for tenants. Includes broad named-peril coverage for the personal property of tenants. [3]Less than 0.1 percent.

Homeowners and Renters Insurance Expenditures, By State

The table below shows average premiums for homeowners and renters insurance by state for 2016. The National Association of Insurance Commissioners (NAIC) collects state and countrywide data for total written premiums and written exposures expressed as house years. One house-year represents coverage for a home or apartment for 12 months. The NAIC calculates average premiums by dividing total written premiums by exposures to represent the cost of a year of coverage.

According to the NAIC, average premiums are affected by many factors: Real estate values; building and construction costs; vulnerability to catastrophes; degree of urbanization; and the legal, regulatory and economic climate. These factors result in wide variations in premiums on regional, state and local levels.

Average Premiums For Homeowners And Renters Insurance By State, 2016[1]

State	Homeowners		Renters	
	Average premium[2]	Rank[3]	Average premium[4]	Rank[3]
Alabama	$1,386	12	$245	4
Alaska	974	34	148	43
Arizona	803	46	181	19
Arkansas	1,348	13	223	7
California[5]	1,000	32	200	9
Colorado	1,446	10	156	36
Connecticut	1,455	8	196	14
Delaware	816	45	159	30
D.C.	1,225	19	163	27
Florida	1,918	3	181	19
Georgia	1,200	20	230	6
Hawaii	1,026	29	154	37
Idaho	703	49	150	41
Illinois	1,042	28	167	26
Indiana	1,003	31	179	23
Iowa	945	38	141	46
Kansas	1,548	5	177	24
Kentucky	1,085	27	169	25
Louisiana	1,967	1	252	2
Maine	866	42	151	39
Maryland	1,022	30	161	29
Massachusetts	1,451	9	198	10
Michigan	952	37	197	13
Minnesota	1,340	14	142	45
Mississippi	1,525	6	275	1
Missouri	1,280	17	181	19
Montana	$1,130	23	$145	44
Nebraska	1,402	11	141	46
Nevada	742	48	182	17
New Hampshire	965	36	154	37
New Jersey	1,174	22	163	27
New Mexico	996	33	198	10
New York	1,309	15	198	10
North Carolina	1,098	26	157	33
North Dakota	1,239	18	113	51
Ohio	850	43	182	17
Oklahoma	1,875	4	247	3
Oregon	659	51	159	31
Pennsylvania	927	39	157	33
Rhode Island	1,496	7	180	22
South Carolina	1,285	16	188	16
South Dakota	1,125	24	114	50
Tennessee	1,185	21	207	8
Texas[6]	1,937	2	241	5
Utah	664	50	141	46
Vermont	898	41	158	31
Virginia	966	35	151	39
Washington	822	44	157	33
West Virginia	917	40	196	14
Wisconsin	762	47	132	49
Wyoming	1,120	25	150	41
United States	**$1,192**		**$185**	

[1]Includes state funds, residual markets and some wind pools. [2]Based on the HO-3 homeowner package policy for owner-occupied dwellings, 1 to 4 family units. Provides all risks coverage (except those specifically excluded in the policy) on buildings and broad named-peril coverage on personal property, and is the most common package written. [3]Ranked from highest to lowest. States with the same premium receive the same rank. [4]Based on the HO-4 renters insurance policy for tenants. Includes broad named-peril coverage for the personal property of tenants. [5]Data provided by the California Department of Insurance. [6]The Texas Department of Insurance developed home insurance policy forms that are similar but not identical to the standard forms. In addition, due to the Texas Windstorm Association (which writes wind-only policies) classifying HO-1, 2 and 5 premiums as HO-3, the average premium for homeowners insurance is artificially high.

Note: Average premium=Premiums/exposure per house years. A house year is equal to 365 days of insured coverage for a single dwelling. The NAIC does not rank state average expenditures and does not endorse any conclusions drawn from this data.

Top 10 Most Expensive And Least Expensive States For Homeowners Premiums, 2015[1]

Rank	Most expensive states	Average expenditure
1	Louisiana	$1,967
2	Texas[2]	1,937
3	Florida	1,918
4	Oklahoma	1,875
5	Kansas	1,548
6	Mississippi	1,525
7	Rhode Island	1,496
8	Connecticut	1,455
9	Massachusetts	1,451
10	Colorado	1,446

Rank	Least expensive states	Average expenditure
1	Oregon	$659
2	Utah	664
3	Idaho	703
4	Nevada	742
5	Wisconsin	762
6	Arizona	803
7	Delaware	816
8	Washington	822
9	Ohio	850
10	Maine	866

[1]Based on the HO-3 homeowner package policy for owner-occupied dwellings, 1 to 4 family units. Provides all risks coverage (except those specifically excluded in the policy) on buildings and broad named-peril coverage on personal property, and is the most common package written. [2]The Texas Department of Insurance developed home insurance policy forms that are similar but not identical to the standard forms. In addition, due to the Texas Windstorm Association (which writes wind-only policies) classifying HO-1, 2 and 5 premiums as HO-3, the average premium for homeowners insurance is artificially high.

Homeowners Insurance Industry Underwriting Expenses, 2017[1]

Expense	Percent of premiums
Losses and related expenses[2]	
Loss and loss adjustment expense (LAE) ratio	**78.8%**
Incurred losses	69.0
Defense and cost containment expenses incurred	1.7
Adjusting and other expenses incurred	8.1
Operating expenses[3]	
Expense ratio	**28.9%**
Net commissions and brokerage expenses incurred	12.3
Taxes, licenses and fees	2.6
Other acquisition and field supervision expenses incurred	8.5
General expenses incurred	5.5
Dividends to policyholders[2]	**0.4%**
Combined ratio after dividends[4]	**108.1%**

[1]After reinsurance transactions. [2]As a percent of net premiums earned ($81.8 billion in 2017). [3]As a percent of net premiums written ($82.8 billion in 2017). [4]Sum of loss and LAE, expense and dividends ratios.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

HOMEOWNERS: CLAIMS

In 2016, 5.3 percent of insured homes experienced a claim, according to ISO.

Homeowners insurance losses, net of reinsurance, rose to $44.4 billion in 2016 from $41.2 billion in 2015, according to S&P Global Market Intelligence.

Homeowners Insurance Losses, 2012-2016[1]

Year	Total homeowners losses	
	Claim frequency[2]	Claim severity[3]
2012	7.68	$8,842
2013	5.03	10,512
2014	5.46	11,105
2015	6.13	$11,520
2016	5.28	11,666
Average[4]	**5.92**	**$10,592**

[1]For homeowners multiple peril policies (HO-2, HO-3, HO-5 and HE-7 for North Carolina). Excludes tenants and condominium policies. Excludes Alaska, Texas and Puerto Rico. [2]Claims per 100 house years (policies). [3]Average amount paid per claim; based on accident year incurred losses, excluding loss adjustment expenses, i.e., indemnity costs per accident year incurred claims. [4]Weighted average, 2012-2016.

Source: ISO®, a Verisk Analytics® business.

Causes Of Homeowners Insurance Losses

Property damage, including theft, accounted for 97.1 percent of homeowners insurance claims in 2016. Changes in the type of homeowners loss from one year to another are partially influenced by fluctuations in the number and severity of weather-related events such as hurricanes and winter storms. There are two ways of looking at losses: by the average number of claims filed per 100 policies (frequency) and by the average amount paid for each claim (severity). The loss category "water damage and freezing" includes damage caused by mold, if covered.

Homeowners Insurance Losses By Cause, 2012-2016[1] (Percent of losses incurred)

Cause of loss	2012	2013	2014	2015	2016
Property damage[2]	**96.5%**	**95.5%**	**95.9%**	**96.6%**	**97.1%**
Fire and lightning	22.8	28.3	23.8	22.5	26.8
Wind and hail	48.8	30.6	28.8	21.6	33.1
Water damage and freezing	17.5	26.7	33.4	44.7	29.5
Theft	3.0	3.4	2.4	1.8	1.9
All other property damage[3]	4.4	6.4	7.4	6.0	5.7
Liability[4]	**3.5**	**4.6**	**4.1**	**3.4**	**2.9**
Bodily injury and property damage	3.3	4.3	3.9	3.3	2.7
Medical payments and other	0.1	0.2	0.2	0.2	0.2
Credit card and other[5]	[6]	[6]	[6]	[6]	[6]
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

[1]For homeowners multiple peril policies (HO-2, HO-3, HO-5). Excludes tenants and condominium owners policies. Excludes Alaska, Texas and Puerto Rico. [2]First party, i.e., covers damage to policyholder's own property. [3]Includes vandalism and malicious mischief. [4]Payments to others for which policyholder is responsible. [5]Includes coverage for unauthorized use of various cards, forgery, counterfeit money and losses not otherwise classified. [6]Less than 0.1 percent.

Source: ISO®, a Verisk Analytics® business.

In the five-year period, 2012-2016, almost 6.0 percent of insured homes had a claim. Wind and hail accounted for the largest share of claims, with 2.4 percent of insured homes having such a loss.

Average Homeowners Losses, 2012-2016[1] (Weighted average, 2012-2016)

Cause of loss	Claim frequency[2]	Claim severity[3]
Property damage[4]	**5.79**	**$10,440**
Fire and lightning	0.31	50,315
Wind and hail	2.38	8,625
Water damage and freezing	1.99	9,633
Theft	0.37	4,146
All other property damage[5]	0.74	5,052
Liability[6]	**0.13**	**17,228**
Bodily injury and property damage	0.09	23,010
Medical payments and other	0.04	2,864
Credit card and other[7]	[8]	**441**
Average (property damage and liability), 2012-2016	**5.92**	**$10,592**

[1]For homeowners multiple peril policies (HO-2, HO-3, HO-5 and HE-7 for North Carolina). Excludes tenants and condominium owners policies. Excludes Alaska, Texas and Puerto Rico. [2]Claims per 100 house years (policies). [3]Accident year incurred losses, excluding loss adjustment expenses, i.e., indemnity costs per accident year incurred claims. [4]First party, i.e., covers damage to policyholder's property. [5]Includes vandalism and malicious mischief. [6]Payments to others for which policyholder is responsible. [7]Includes coverage for unauthorized use of various cards, forgery, counterfeit money and losses not otherwise classified. [8]Less than 0.01.

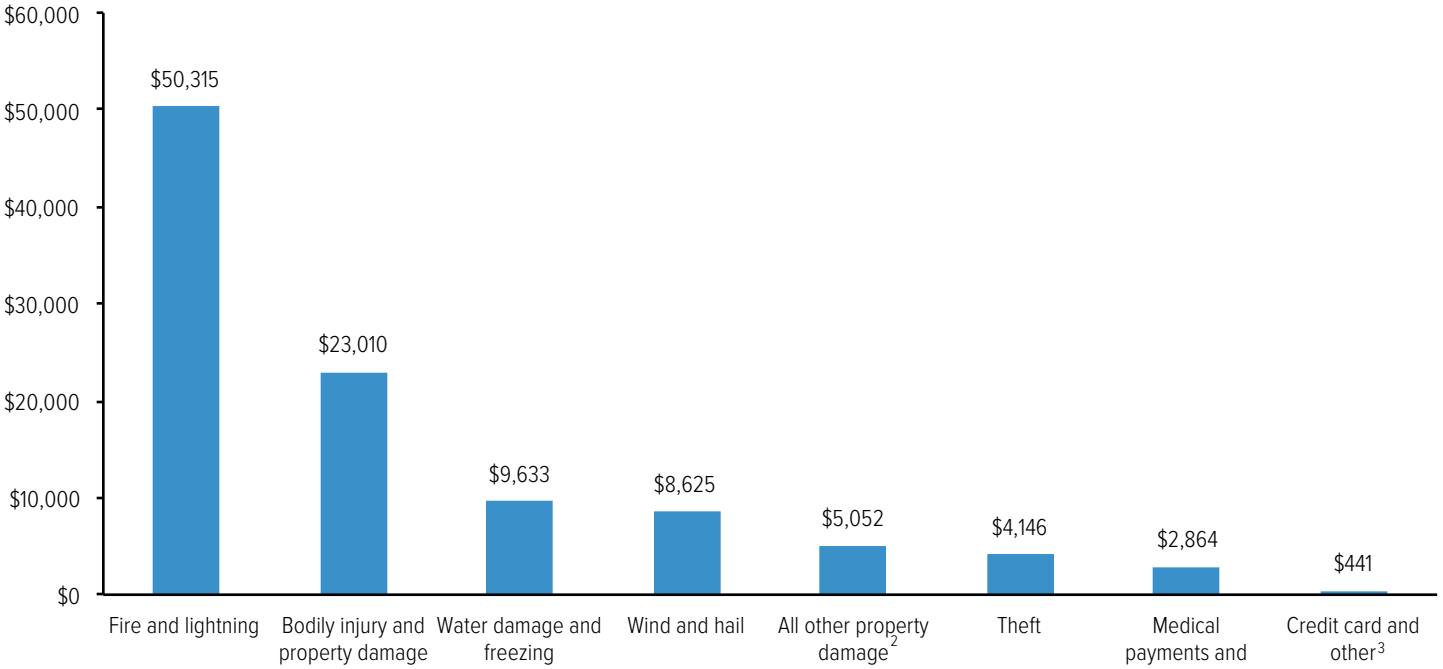
Source: ISO®, a Verisk Analytics® business.

Homeowners Insurance Claims Frequency*

- Homeowners claims related to wind or hail are the most frequent; the costliest are related to fire and lightning.
- About one in 15 insured homes has a claim each year.
- About one in 40 insured homes has a property damage claim related to wind or hail each year.
- About one in 50 insured homes has a property damage claim caused by water damage or freezing each year.
- About one in 250 insured homes has a property damage claim due to theft each year.
- About one in 325 insured homes has a property damage claim related to fire and lightning.
- About one in 750 homeowners policies has a liability claim related to the cost of lawsuits for bodily injury or property damage that the policyholder or family members cause to others.

*Insurance Information Institute calculations, based on ISO®, a Verisk Analytics® business, data for homeowners insurance claims from 2012-2016 (see table above).

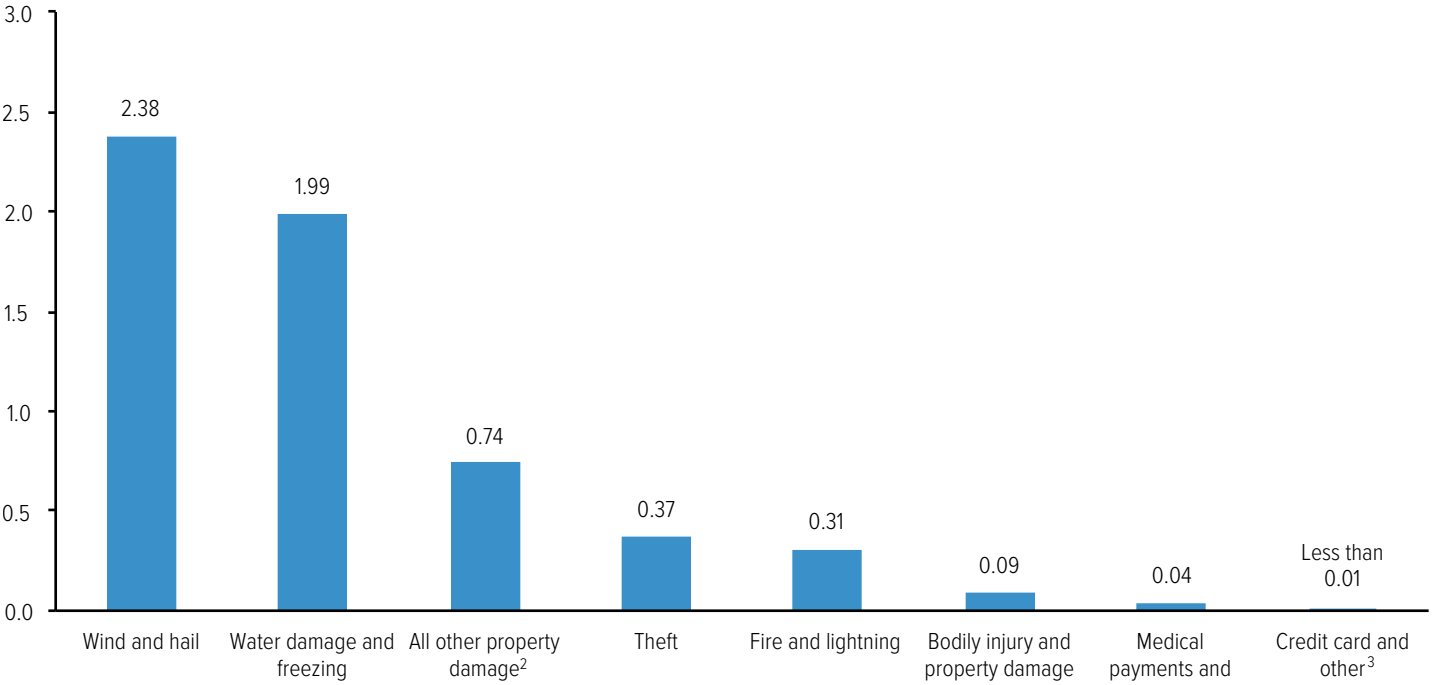
Homeowners Losses Ranked By Claims Severity (Average Claim), 2012-2016[1] (Weighted average, 2012-2016)



[1]For homeowners multiple peril policies (HO-2, HO-3, HO-5 and HE-7 for North Carolina). Excludes tenants and condominium owners policies. Accident year incurred losses, excluding loss adjustment expenses, i.e., indemnity costs per accident year incurred claims. Excludes Alaska, Texas and Puerto Rico. [2]Includes vandalism and malicious mischief. [3]Includes coverage for unauthorized use of various cards, forgery, counterfeit money and losses not otherwise classified.

Source: ISO®, a Verisk Analytics® business.

Homeowners Losses Ranked By Claims Frequency, 2012-2016[1] (Weighted average, 2012-2016)



[1]Claims per 100 house years (policies). For homeowners multiple peril policies (HO-2, HO-3, HO-5 and HE-7 for North Carolina). Excludes tenants and condominium owners policies. Excludes Alaska, Texas and Puerto Rico. [2]Includes vandalism and malicious mischief. [3]Includes coverage for unauthorized use of various cards, forgery, counterfeit money and losses not otherwise classified.

Source: ISO®, a Verisk Analytics® business.

Water Damage

An online survey of 1,200 homeowners conducted for Chubb Ltd. in July 2017 found that only 19 percent of respondents thought that water damage from internal leaks was the most concerning home threat, despite ISO data that show water damage and freezing as the second most common cause of homeowners losses from 2012 to 2016, and the second most expensive. August is the month when most water leaks occur, according to Chubb. Only 8 percent of survey respondents identified the month correctly. The majority of respondents believed the risk of water damage is greatest during the winter months of January and February. Eighty-eight percent of the homeowners knew where their water main was located, but just 22 percent shut off their water before embarking on summer vacation. Only 18 percent have installed a water leak detection device, although almost half (45 percent) have had or know someone who has had a water leak in the past two years.

The 2018 Chubb Water Risk Survey found virtually no improvement in homeowners installing water leak shut-off devices, with only 19 percent saying they installed a device compared to 18 percent in 2017. This is despite the finding that 73 percent of homeowners are very or somewhat concerned about property damage from environmental or maintenance issues, and 9 out of 10 saying they are "vigilant" or do an "okay job" for preventive home maintenance. Chubb claims data show that homeowners are 40 percent more likely to report a water loss during the winter, but only 21 percent of homeowners participating in the 2018 survey said they installed pipe insulation to protect against water damage. In 2017, 28 percent of homeowners said they took this precaution.

Lightning

In 2017 there were 16 direct lightning fatalities, down from 38 in 2016 and the lowest since record-keeping began in 1941. From 2008 to 2017 on average 27 people died each year from lightning strikes in the United States, according to the National Weather Service.

Homeowners Insurance Claims And Payout For Lightning Losses, 2012-2016

						Percent change	
	2012	2013	2014	2015	2016	2015-2016	2012-2016
Number of paid claims	151,000	114,740	99,871	99,423	109,049	9.7%	-27.8%
Insured losses ($ millions)	$969.0	$673.5	$739.0	$790.1	$825.7	4.5	-14.8
Average cost per claim	6,400.0	5,869.0	7,400.0	7,947.0	7,571.9	-4.7	18.3

Source: Insurance Information Institute, State Farm®.

Top 10 States For Homeowners Insurance Lightning Losses By Number Of Claims, 2016

Rank	State	Number of paid claims	Insured losses ($ millions)	Average cost per claim
1	Florida	10,385	$67.8	$6,526
2	Texas	9,098	87.2	9,580
3	Georgia	8,037	66.3	8,250
4	Louisiana	5,956	31.5	5,291
5	North Carolina	5,889	42.2	7,162
6	California	4,764	47.4	9,951
8	Illinois	3,870	28.7	7,424
9	Arkansas	3,422	20.1	5,882
10	Virginia	3,331	26.8	8,036
	Total, top 10	**59,046**	**$446.3**	**$7,559**

Source: Insurance Information Institute, State Farm®.

FLOOD INSURANCE

As of November 2018, 59 insurance companies participated in the Write Your Own (WYO) program, started in 1983, in which insurers issue policies and adjust flood claims on behalf of the federal government under their own names.

In 2017, 87 percent of NFIP policies were held in the WYO program.

As of July 2018, 69 percent of policies covered single family homes, 20 percent covered condominiums, and 5 percent covered businesses and other non-residential properties. Two-to-four-family units and other residential policies accounted for the remainder.

As of July 31, 2018, Hurricane Katrina in 2005 had the highest amount in NFIP payouts, at $16.3 billion. Hurricane Harvey of 2017 ranked second with $8.8 billion in NFIP payouts. Superstorm Sandy, which occurred in October 2012, ranked third, resulting in $8.8 billion in NFIP payouts. Hurricane Irma, also in 2017, ranked ninth with $1 billion in payouts. 2017 data are still preliminary.

National Flood Insurance Program

Flood damage is excluded under standard homeowners and renters insurance policies. However, flood coverage is available in the form of a separate policy both from the National Flood Insurance Program (NFIP) and from some private insurers. Congress created the NFIP in 1968 in response to the rising cost of taxpayer-funded disaster relief for flood victims and the increasing amount of damage caused by floods. The NFIP makes federally backed flood insurance available in communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage. The NFIP is self-supporting for the average historical loss year. This means that unless there is a widespread disaster, operating expenses and flood insurance claims are financed through premiums collected.

In 2016 the National Flood Insurance Program (NFIP) put a reinsurance program in place to better manage the losses it incurred from major events by transferring exposure to reinsurers. In January 2017 FEMA transferred $1.02 billion of the NFIP's financial risk to 25 reinsurers. The NFIP recovered the entire $1.02 billion based on Hurricane Harvey flood losses. The NFIP returned to the private reinsurance market in 2018, paying $235 million for $1.458 billion in coverage from a single flood event from 28 reinsurers. The structure of 2018's reinsurance changed from 2017, when reinsurers covered 26 percent of the $4 billion in losses after NFIP retained the first $4 billion in losses. For 2018 losses reinsurers will pay 18.6 percent of the first $2 billion of losses in excess of $4 billion and 54.3 percent of the next $2 billion in excess of $6 billion, up to a maximum of $1.46 billion. In both 2017 and 2018 the NFIP got no protection for the first $4 billion of any flood event. FEMA is expected to obtain reinsurance for 2019 in the beginning of the year.

In August 2018 FEMA launched its first catastrophe bond to transfer risk from the NFIP to the capital markets. It was the first catastrophe bond to provide reinsurance coverage solely for flood risks. FEMA obtained $500 million of reinsurance protection from the FloodSmart Re Ltd. (Series 2018-1 issuance). The transaction, from FloodSmart Re, which is a Bermuda domiciled special purpose insurance vehicle, will cover NFIP losses from flood events that are directly or indirectly caused by a named storm event impacting the United States including Puerto Rico, the U.S. Virgin Islands and the District of Columbia.

Congress must periodically renew the NFIP's statutory authority to operate. In the unlikely event the NFIP's authorization lapses, claims would still be paid but the NFIP would stop selling and renewing policies (more details here).

The 2018 Insurance Information Institute *Pulse* survey found that 15 percent of American homeowners had a flood insurance policy, up from 12 percent who had the coverage in 2016, as shown in the following chart.

Homeowners Who Have Flood Insurance, 2013-2018

	2013	2014	2015	2016	2018
By region					
South	15%	20%	21%	14%	21%
Northeast	10	11	11	13	16
Midwest	12	7	10	8	12
West	11	8	9	10	10
Total	**14%**	**14%**	**14%**	**12%**	**15%**

Source: Insurance Information Institute *Pulse* surveys.

As of July 31 , 2018, there were about 76,000 paid losses from Hurricane Harvey and the average paid loss was $115,430. This compares with Hurricane Katrina which had 167,000 paid losses, at an average of $97,500 per loss.

In 2017 the average amount of flood coverage was $252,261, and the average premium was $707.

The average flood claim in 2017, the year of Hurricanes Harvey, Irma and Maria, was $91,735, up from $62,247 in 2016.

NFIP earned premiums rose 7.0 percent to $3.57 billion in 2017 from $3.33 billion in 2016.

Flood Insurance Losses

National Flood Insurance Program (NFIP) payouts vary widely from year to year. Flood loss payments totaled $8.7 billion in 2017, higher than the 2016 losses of $3.7 billion and less than the $9.5 billion in 2012, the year of superstorm Sandy. In 2005 loss payments totaled $17.8 billion, the highest amount on record, including losses from Hurricanes Katrina, Rita and Wilma. See chart, Top 10 Most Significant Events by National Flood Insurance Program Payouts for information on flood insurance losses.

National Flood Insurance Program, 1980-2017

Year	Policies in force at year-end	Losses paid		Average paid flood claim
		Number	Amount ($000)	
1980	2,103,851	41,918	$230,414	$5,497
1985	2,016,785	38,676	368,239	9,521
1990	2,477,861	14,766	167,897	11,371
1995	3,476,829	62,441	1,295,578	20,749
2000	4,369,087	16,362	251,721	15,384
2005	4,962,011	213,593	17,770,443	83,198
2009	5,700,235	31,034	779,974	25,133
2010	5,645,436	29,164	773,706	26,529
2011	5,646,144	78,236	2,429,440	31,053
2012	5,620,017	151,849	9,516,995	62,674
2013	5,568,642	18,118	492,542	27,185
2014	5,406,725	12,907	380,222	29,459
2015	5,205,094	25,798	1,028,338	39,861
2016	5,081,470	59,332	3,693,244	62,247
2017	5,047,602	95,235	8,736,386	91,735

Source: U.S. Department of Homeland Security, Federal Emergency Management Agency.

National Flood Insurance Plan Policies By State, 2017[1]

State	Direct NFIP business		WYO business		Total NFIP/WYO	
	Number of policies	Insurance in force[2] ($ millions)	Number of policies	Insurance in force[2] ($ millions)	Number of policies	Insurance in force[2] ($ millions)
Alabama	9,925	$2,132.6	45,213	$10,711.2	55,138	$12,843.8
Alaska	601	146.9	1,856	514.9	2,457	661.9
Arizona	5,503	1,316.8	26,742	6,731.7	32,245	8,048.5
Arkansas	3,174	506.4	13,503	2,530.3	16,677	3,036.7
California	38,581	10,746.0	201,324	58,044.6	239,905	68,790.6
Colorado	3,697	911.9	17,360	4,504.2	21,057	5,416.1
Connecticut	2,158	529.4	36,334	9,269.0	38,492	9,798.5
Delaware	4,363	1,176.5	22,400	5,850.4	26,763	7,026.9
D.C.	138	37.7	1,898	453.1	2,036	490.9
Florida	125,291	33,159.6	1,633,761	401,289.3	1,759,052	434,448.9
Georgia	16,201	4,037.3	72,602	19,308.2	88,803	23,345.5
Hawaii	2,473	584.1	58,156	13,301.8	60,629	13,886.0
Idaho	1,325	342.2	6,616	1,740.2	7,941	2,082.4
Illinois	10,819	1,930.4	30,193	6,110.7	41,012	8,041.1
Indiana	4,966	826.5	17,955	3,708.2	22,921	4,534.8
Iowa	2,441	390.4	10,335	2,231.4	12,776	2,621.9
Kansas	2,111	356.9	7,562	1,530.3	9,673	1,887.3
Kentucky	3,526	507.8	17,490	3,088.6	21,016	3,596.4
Louisiana	125,014	30,552.2	373,257	98,142.0	498,271	128,694.1
Maine	596	123.9	7,799	1,883.6	8,395	2,007.5
Maryland	6,064	1,553.3	60,773	14,364.4	66,837	15,917.7
Massachusetts	4,425	1,001.8	58,994	15,215.6	63,419	16,217.3
Michigan	3,962	601.8	16,768	3,280.6	20,730	3,882.4
Minnesota	1,589	353.8	7,600	1,856.1	9,189	2,209.9
Mississippi	13,675	3,253.9	50,697	12,437.3	64,372	15,691.2
Missouri	4,082	642.0	17,236	3,496.4	21,318	4,138.3
Montana	786	161.9	4,088	855.4	4,874	1,017.2
Nebraska	2,054	338.5	7,359	1,473.3	9,413	1,811.8
Nevada	2,354	569.6	9,949	2,653.1	12,303	3,222.7
New Hampshire	574	122.6	7,674	1,712.2	8,248	1,834.8
New Jersey	16,190	3,634.3	210,398	52,875.8	226,588	56,510.1
New Mexico	2,075	398.5	10,774	2,282.5	12,849	2,681.0

(table continues)

National Flood Insurance Plan Policies By State, 2017[1] (Cont'd)

State	Direct NFIP business		WYO business		Total NFIP/WYO	
	Number of policies	Insurance in force[2] ($ millions)	Number of policies	Insurance in force[2] ($ millions)	Number of policies	Insurance in force[2] ($ millions)
New York	18,100	$4,606.9	163,209	$44,899.8	181,309	$49,506.8
North Carolina	15,807	3,746.4	118,139	29,615.3	133,946	33,361.7
North Dakota	1,724	468.1	8,806	2,413.4	10,530	2,881.5
Ohio	6,225	936.8	27,070	5,250.5	33,295	6,187.3
Oklahoma	3,219	601.8	10,485	2,275.8	13,704	2,877.6
Oregon	5,795	1,412.6	22,566	5,727.2	28,361	7,139.8
Pennsylvania	8,698	1,460.7	49,837	10,774.9	58,535	12,235.6
Rhode Island	492	125.9	13,317	3,490.3	13,809	3,616.2
South Carolina	24,247	6,534.6	179,111	46,589.9	203,358	53,124.5
South Dakota	615	131.9	2,981	667.2	3,596	799.2
Tennessee	5,123	1,214.7	24,327	5,925.8	29,450	7,140.5
Texas	115,625	30,893.2	548,553	152,233.6	664,178	183,126.8
Utah	564	135.2	3,393	888.8	3,957	1,023.9
Vermont	320	59.0	3,400	771.3	3,720	830.2
Virginia	16,856	4,290.1	89,602	23,450.6	106,458	27,740.6
Washington	5,375	1,256.2	31,456	8,179.3	36,831	9,435.4
West Virginia	4,325	502.7	11,238	1,835.3	15,563	2,338.0
Wisconsin	1,743	293.6	10,742	2,153.2	12,485	2,446.9
Wyoming	403	99.6	1,681	439.3	2,084	538.8
Guam	114	22.4	83	17.6	197	40.0
Puerto Rico	99	13.7	4,985	784.7	5,084	798.3
Virgin Islands	271	53.2	1,128	223.4	1,399	**276.6**
United States[3]	**656,473**	**$161,806.8**	**4,390,778**	**$1,112,054.3**	**5,047,251**	**$1,273,861.1**

[1]Direct and Write-Your-Own (WYO) business may not add to total due to rounding. [2]Total limits of liability for all policies in force. [3]Includes WYO policies written in unknown areas.
Source: U.S. Department of Homeland Security, Federal Emergency Management Agency.

Private Flood Insurance

Flood insurance had long been considered an untouchable risk by private insurers because they did not have a reliable way of measuring flood risk. In recent years insurers have become increasingly comfortable with using sophisticated models to underwrite insurance risk, and modeling firms are getting better at predicting flood risk.

In 2017 direct premiums written for private flood insurance totaled $589 million, up 57 percent from $376 million in 2016, according to S&P Global Market Intelligence. The number of private companies writing flood insurance increased to 33 in 2017 from 20 in 2016.

Top 10 Writers of Private Flood Insurance By Direct Premiums Written, 2017[1] ($000)

Rank	Group/company	Direct premiums written[2]	Market share[3]
1	FM Global	$237,334	40.3%
2	Assurant Inc.	89,901	15.3
3	Zurich Insurance Group[4]	62,749	10.7
4	American International Group (AIG)	58,233	9.9
5	Swiss Re AG	26,336	4.5
6	Berkshire Hathaway Inc.	17,120	2.9
7	Liberty Mutual	15,460	2.6
8	Alleghany Corp.	13,197	2.2
9	MAPFRE SA	13,103	2.2
10	Allianz	11,705	2.0
	Total, all insurers	**$589,147**	**100.0%**

[1]Private flood includes both commercial and private residential coverage, primarily first-dollar standalone policies that cover the flood peril and excess flood. Excludes sewer/water backup and the crop flood peril. [2]Before reinsurance transactions. [3]Based on U.S. total, includes territories. [4]Data for Farmers Insurance Group of Companies and Zurich Financial Group (which owns Farmers' management company) are reported separately by S&P Global Market Intelligence.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

EARTHQUAKE INSURANCE

Standard homeowners, renters and business insurance policies do not cover damage from earthquakes. Coverage is available either in the form of an endorsement or as a separate policy. Earthquake insurance provides protection from the shaking and cracking that can destroy buildings and personal possessions. Coverage for other kinds of damage that may result from earthquakes, such as fire and water damage due to burst gas and water pipes, is provided by standard home and business insurance policies. Earthquake coverage is available mostly from private insurance companies. In California homeowners, renters, mobile home owners and condo-unit owners can also get coverage from the California Earthquake Authority (CEA), a not-for-profit, privately funded, publicly managed organization. Only about 13.3 percent of California residents who have homeowners, renters, mobile home owners and condo-unit owners insurance currently have earthquake coverage, up from 10.8 percent in 2016.

Eleven percent of homeowners responding to a November 2018 poll by the Insurance Information Institute said they had earthquake insurance. Homeowners in the West were most likely to have earthquake insurance, with 17 percent saying they had the coverage, followed by the Midwest at 11 percent; the Northeast at 9 percent; and the South at 7 percent. See this section for information on earthquake insurance losses.

Earthquake Insurance, 2008-2017 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$1,259,872	1.1%	33.5	3.5 pts.
2009	1,288,353	2.3	36.3	2.8
2010	1,443,598	12.0	41.4	5.1
2011	1,467,372	1.6	55.8	14.4
2012	1,593,451	8.6	36.3	-19.5
2013	1,586,985	-0.4	30.3	-6.0
2014	1,641,847	3.5	34.0	3.7
2015	1,649,753	0.5	28.1	-5.8
2016	1,535,142	-6.9	34.4	6.2
2017	1,511,543	-1.5	42.3	8.0

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Leading Writers Of Earthquake Insurance

The California Earthquake Authority (CEA), a not-for-profit, publicly managed, privately funded organization that sells its policies through participating private insurance companies, was the leading writer of residential earthquake insurance in the United States, based on direct premiums written in 2017, according to data from S&P Global Market Intelligence. The CEA had $690 million in direct premiums written in 2017, all of which covered residential California properties. It accounted for 23.3 percent of the total U.S. earthquake insurance market in 2017. The nine other largest earthquake insurers in 2017 were all private insurance companies.

Top 10 Writers Of Earthquake Insurance By Direct Premiums Written, 2017 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	California Earthquake Authority	$690,222	23.3%
2	State Farm Mutual Automobile Insurance	255,072	8.6
3	Zurich Insurance Group[3]	189,766	6.4
4	Chubb Ltd.	158,672	5.4
5	American International Group (AIG)	134,236	4.5
6	Travelers Companies Inc.	127,169	4.3
7	GeoVera Holdings	108,179	3.7
8	Palomar Specialty Insurance Co.	73,386	2.5
9	Liberty Mutual	73,195	2.5
10	Swiss Re	71,811	2.4

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories. [3]Data for Farmers Insurance Group of Companies and Zurich Financial Group (which owns Farmers' management company) are reported separately by S&P Global Market Intelligence.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

COMMERCIAL LINES

The commercial lines sector of the property/casualty insurance industry generally provides insurance products for businesses as opposed to the personal lines sector, which offers products for individuals. However, the division between commercial and personal coverages is not precise. For example, inland marine insurance, which is included in the commercial lines sector, may cover some personal property such as expensive jewelry and fine art.

Leading Companies

Top 10 Writers Of Commercial Lines Insurance By Direct Premiums Written, 2017 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	Chubb Ltd.	$16,850,450	5.5%
2	Travelers Companies Inc.	16,737,743	5.5
3	Liberty Mutual	15,606,473	5.1
4	American International Group (AIG)	12,779,666	4.2
5	Zurich Insurance Group[3]	12,748,657	4.2
6	CNA Financial Corp.	9,969,788	3.3
7	Berkshire Hathaway Inc.	8,555,760	2.8
8	Nationwide Mutual Group	8,072,052	2.7
9	Hartford Financial Services	7,786,169	2.6
10	Tokio Marine Group	6,467,663	2.1

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories. [3]Data for Farmers Insurance Group of Companies and Zurich Financial Group (which owns Farmers' management company) are reported separately by S&P Global Market Intelligence.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Top 10 Commercial Insurance Brokers Of U.S. Business By Revenue, 2017[1] ($ millions)

Rank	Company	Brokerage revenues
1	Marsh & McLennan Cos. Inc.[2]	$6,877.2
2	Aon P.L.C.[2]	4,411.0
3	Willis Towers Watson P.L.C.	3,814.5
4	Arthur J. Gallagher & Co[2]	3,132.2
5	BB&T Insurance Holdings Inc.[2]	1,918.3
6	Brown & Brown Inc.[2]	1,857.3
7	USI Insurance Services L.L.C.[2]	1,635.0
8	Hub International Ltd.[2]	1,459.4
9	Lockton Cos. L.L.C.[2,3]	1,157.6
10	Alliant Insurance Services Inc.[2]	1,123.6

[1]Companies that derive more than 49 percent of revenues from personal lines are not ranked. [2]Reported U.S. acquisitions in 2017. [3]Fiscal year ending April 30.

Source: Business Insurance (www.businessinsurance.com), July 2018.

Workers Compensation Insurance And Excess Workers Compensation

Workers compensation insurance provides for the cost of medical care and rehabilitation for injured workers and lost wages and death benefits for the dependents of persons killed in work-related accidents. Workers compensation systems vary from state to state. Workers compensation combined ratios are expressed in two ways: calendar year results reflect claim payments and changes in reserves for accidents that happened in that year or earlier; and accident year results only include losses from a particular year. Excess workers compensation, a coverage geared to employers that self-insure for workers compensation, comes into play when claims exceed a designated dollar amount.

Workers Compensation Insurance, 2008-2017 ($000)

Year	Net premiums written[2]	Annual percent change	Combined ratio[1]			
			Calendar year[3]	Annual point change[4]	Accident year[5]	Annual point change
2008	$36,939,016	-9.0%	101.5	-0.2 pts.	104	6 pts.
2009	32,247,870	-12.7	107.9	6.4	107	3
2010	31,643,087	-1.9	116.1	8.2	115	8
2011	35,664,230	12.7	117.6	1.5	111	-4
2012	38,947,491	9.2	110.4	-7.2	103	-8
2013	41,147,216	5.6	103.0	-7.4	97	-6
2014	43,753,885	6.3	101.9	-1.2	93	-4
2015	45,355,102	3.7	95.5	-6.4	94	1
2016	45,619,831	0.6	95.6	0.1	95	1
2017	45,047,380	-1.3	92.2	-3.4	99[6]	4

[1]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [2]After reinsurance transactions, excludes state funds. [3]Calendar year data are from S&P Global Market Intelligence. [4]Calculated from unrounded data. [5]Accident year data are from the National Council on Compensation Insurance (NCCI). [6]Estimated by NCCI.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute; © National Council on Compensation Insurance.

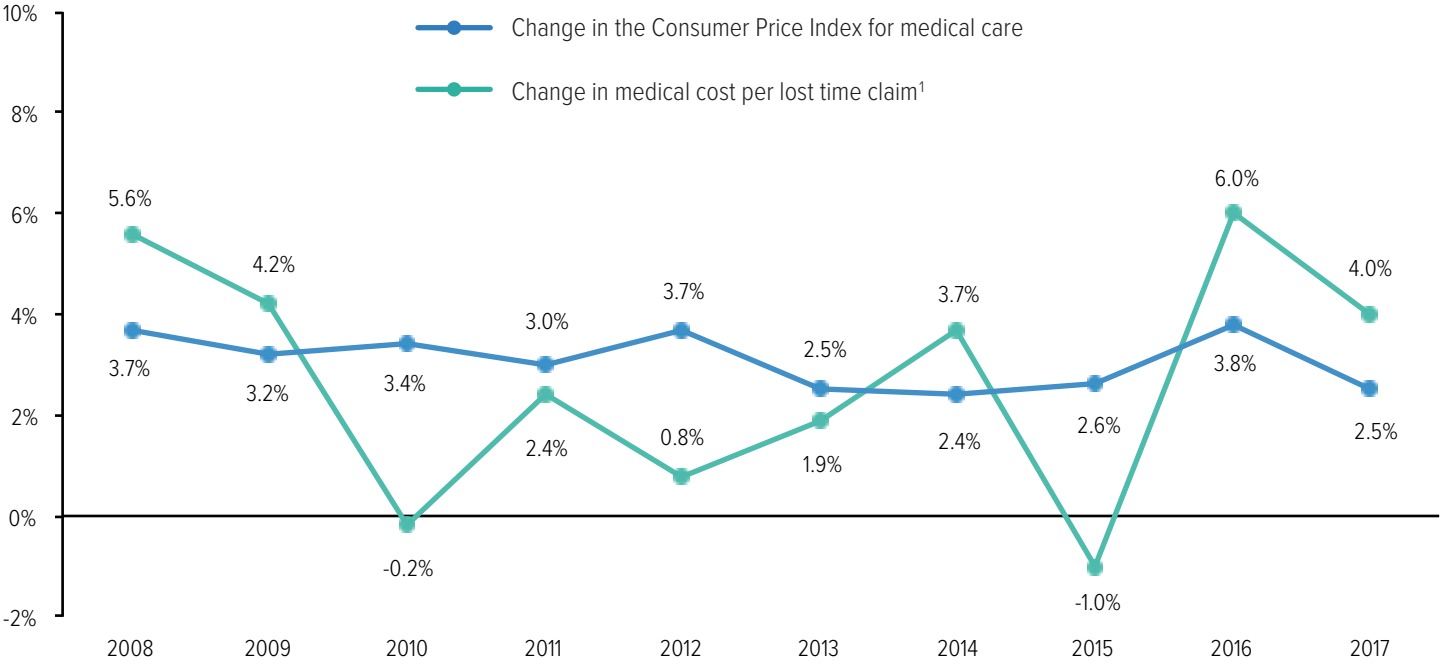
Excess Workers Compensation Insurance, 2008-2017 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$926,487	NA	148.3	NA
2009	941,117	1.6%	34.8	-113.5 pts.
2010	799,733	-15.0	50.9	16.0
2011	816,435	2.1	134.7	83.8
2012	815,770	-0.1	153.6	18.9
2013	844,098	3.5	69.3	-84.3
2014	920,223	9.0	108.2	39.0
2015	929,393	1.0	113.6	5.4
2016	889,191	-4.3	111.6	-2.0
2017	796,587	-10.4	101.0	-10.6

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data. NA=Data not available.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Workers Compensation Medical Costs, 2008-2017



[1]Based on states where the National Council on Compensation Insurance provides ratemaking services. Represents costs for injuries that resulted in time off from work. Data for 2017 are preliminary.

Source: U.S. Bureau of Labor Statistics; © National Council on Compensation Insurance.

Workers Compensation Benefits, Coverage And Costs, 2015-2016

	2015	2016	Percent change, 2015-2016
Covered workers (000)	135,850	138,251	1.8%
Covered wages ($ billions)	$7,198	$7,422	3.1
Workers compensation benefits paid ($ billions)	$62.0	$61.9	-0.2
Medical benefits	31.2	31.1	-0.3
Cash benefits	30.8	30.8	[1]
Employer costs for workers compensation ($ billions)	$95.5	$96.5	1.1

[1]Less than -0.1 percent.

Source: *Workers Compensation: Benefits, Coverage, and Costs, October 2018*, National Academy of Social Insurance.

Other Liability Insurance

Other liability insurance protects the policyholder from legal liability arising from negligence, carelessness or a failure to act that causes property damage or personal injury to others. It includes errors and omissions, umbrella liability and liquor liability. Product liability, a separate line of insurance, protects the manufacturer, distributor or seller of a product from legal liability resulting from a defective condition that caused personal injury or damage associated with the use of the product.

Other Liability Insurance, 2008-2017 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$38,602,734	-5.8%	93.8	-5.2 pts.
2009	36,184,065	-6.3	105.5	11.7
2010	35,802,772	-1.1	108.1	2.6
2011	36,511,575	2.0	96.1	-12.0
2012	38,307,679	4.9	103.2	7.0
2013	42,075,315	9.8	96.8	-6.4
2014	44,181,272	5.0	96.6	-0.2
2015	45,585,794	3.2	101.6	5.0
2016	44,591,885	-2.2	110.8	9.2
2017	46,675,206	4.7	100.8	-9.9

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Product Liability Insurance, 2008-2017 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$2,777,587	-14.9%	124.0	24.2 pts.
2009	2,365,681	-14.8	124.0	[4]
2010	2,050,619	-13.3	157.1	33.1
2011	2,320,540	13.2	160.0	2.9
2012	2,575,225	11.0	102.7	-57.3
2013	2,718,879	5.6	155.3	52.6
2014	2,674,183	-1.6	134.4	-20.9
2015	2,796,761	4.6	130.6	-3.7
2016	2,422,721	-13.4	124.1	-6.5
2017	2,689,115	11.0	102.1	-22.0

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data. [4]Less than 0.1 point.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Commercial And Farmowners Multiple Peril Insurance

Commercial multiple peril insurance is a package policy that includes property, boiler and machinery, crime and general liability coverages. Farmowners multiple peril insurance, similar to homeowners insurance, provides coverage to farmowners and ranchowners against a number of named perils and liabilities. It covers a dwelling and its contents, as well as barns, stables and other structures.

Commercial Multiple Peril Insurance, 2008-2017

Total ($000)					
Year	Net premiums written[1]	Annual percent change	Year	Net premiums written[1]	Annual percent change
2008	$30,306,109	3.1%	2013	$33,245,146	5.5%
2009	28,926,363	-4.6	2014	34,375,127	3.4
2010	28,913,516	[2]	2015	34,741,695	1.1
2011	29,995,201	3.7	2016	34,099,664	-1.8
2012	31,502,689	5.0	2017	34,190,669	0.3

Nonliability portion ($000)									
Year	Net premiums written[1]	Annual percent change	Combined ratio[3]	Annual point change[4]	Year	Net premiums written[1]	Annual percent change	Combined ratio[3]	Annual point change[4]
2008	$18,235,095	-1.5%	107.7	16.9 pts.	2013	$21,058,709	7.9%	93.3	-20.6 pts.
2009	17,927,074	-1.7	98.3	-9.4	2014	21,983,697	4.4	96.8	3.5
2010	18,210,612	1.6	102.9	4.5	2015	21,478,010	-2.3	91.6	-5.2
2011	18,657,799	2.5	119.1	16.2	2016	20,840,849	-3.0	98.2	6.6
2012	19,513,568	4.6	113.9	-5.1	2017	20,673,258	-0.8	111.8	13.6

Liability portion ($000)									
Year	Net premiums written[1]	Annual percent change	Combined ratio[3]	Annual point change[4]	Year	Net premiums written[1]	Annual percent change	Combined ratio[3]	Annual point change[4]
2008	$12,071,014	-5.3%	97.5	3.7 pts.	2013	$12,186,437	1.6%	103.8	9.7 pts.
2009	10,999,289	-8.9	94.2	-3.2	2014	12,391,430	1.7	103.6	-0.2
2010	10,702,904	-2.7	96.0	1.8	2015	13,263,685	7.0	99.2	-4.4
2011	11,337,402	5.9	101.8	5.8	2016	13,258,815	[2]	105.5	6.4
2012	11,989,121	5.7	94.1	-7.7	2017	13,517,411	2.0	101.4	-4.1

[1]After reinsurance transactions, excludes state funds. [2]Less than 0.1 percent. [3]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [4]Calculated from unrounded data.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Farmowners Multiple Peril Insurance, 2008-2017 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$2,586,861	7.2%	119.5	21.3 pts.
2009	2,612,262	1.0	107.9	-11.6
2010	2,754,955	5.5	108.2	0.3
2011	2,932,576	6.4	117.4	9.2
2012	3,277,423	11.8	99.5	-17.9
2013	3,511,651	7.1	93.9	-5.6
2014	3,628,084	3.3	95.4	1.5
2015	3,762,451	3.7	89.9	-5.6
2016	3,802,197	1.1	93.6	3.8
2017	3,925,285	3.2	105.7	12.1

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Medical Malpractice Insurance

Medical malpractice insurance covers facilities, doctors and other professionals in the medical field for liability claims arising from the treatment of patients.

Medical Malpractice Insurance, 2008-2017 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$9,521,113	-4.4%	79.2	-5.5 pts.
2009	9,206,794	-3.3	85.5	6.3
2010	9,096,345	-1.2	88.9	3.4
2011	8,833,365	-2.9	88.0	-1.0
2012	8,713,595	-1.4	93.1	5.2
2013	8,531,233	-2.1	89.4	-3.8
2014	8,475,474	-0.7	104.8	15.4
2015	8,201,438	-3.2	102.3	-2.5
2016	8,194,935	-0.1	106.4	4.1
2017	8,062,046	-1.6	101.6	-4.8

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Fire And Allied Lines Insurance

Fire insurance provides coverage against losses caused by fire and lightning. It is usually sold as part of a package policy such as commercial multiple peril. Allied lines insurance includes property insurance that is usually bought in conjunction with a fire insurance policy. It includes coverage for wind and water damage and vandalism.

Fire Insurance, 2008-2017 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$9,906,059	2.5%	92.3	6.7 pts.
2009	10,109,161	2.1	78.6	-13.7
2010	10,199,101	0.9	80.2	1.7
2011	10,317,968	1.2	94.1	13.9
2012	10,795,612	4.6	87.4	-6.7
2013	11,229,431	4.0	79.1	-8.3
2014	11,501,516	2.4	86.0	6.9
2015	11,417,751	-0.7	84.9	-1.1
2016	11,005,907	-3.6	92.0	7.2
2017	10,688,228	-2.9	118.6	26.6

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Allied Lines Insurance, 2008-2017 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$7,691,004	11.6%	128.1	74.6 pts.
2009	7,744,256	0.7	93.6	-34.5
2010	7,494,281	-3.2	98.9	5.3
2011	7,800,211	4.1	132.7	33.8
2012	8,161,346	4.6	138.0	5.3
2013	9,251,852	13.4	90.2	-47.7
2014	9,209,843	-0.5	89.5	-0.7
2015	9,119,738	-1.0	88.1	-1.4
2016	9,758,591	7.0	98.5	10.4
2017	8,711,204	-10.7	166.3	67.8

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Inland Marine And Ocean Marine Insurance

Inland marine insurance covers bridges and tunnels, goods in transit, movable equipment, unusual property and communications-related structures as well as expensive personal property. Ocean marine insurance provides coverage on all types of vessels, for property damage to the vessels and cargo, as well as associated liabilities.

Inland Marine Insurance, 2008-2017 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$9,408,463	-3.8%	92.7	13.5 pts.
2009	8,686,660	-7.7	89.2	-3.5
2010	8,527,512	-1.8	86.0	-3.2
2011	8,768,829	2.8	97.6	11.6
2012	9,603,749	9.5	95.9	-1.7
2013	10,147,908	5.7	83.6	-12.4
2014	10,990,045	8.3	83.3	-0.2
2015	11,417,332	3.9	83.8	0.4
2016	11,407,517	-0.1	83.4	-0.3
2017	11,973,636	5.0	90.0	6.5

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Ocean Marine Insurance, 2008-2017 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$3,098,438	-5.0%	103.2	-10.5 pts.
2009	2,941,486	-5.1	91.8	-11.3
2010	2,740,956	-6.8	96.1	4.3
2011	2,760,853	0.7	100.9	4.8
2012	2,704,665	-2.0	109.1	8.2
2013	2,863,507	5.9	98.1	-11.0
2014	2,910,377	1.6	91.2	-7.0
2015	2,831,564	-2.7	94.3	3.1
2016	2,549,417	-10.0	97.0	2.7
2017	2,370,488	-7.0	110.3	13.2

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Surety And Fidelity

Surety bonds provide monetary compensation in the event that a policyholder fails to perform certain acts such as the proper fulfillment of a construction contract within a stated period. Surety bonds are usually purchased by the party that has contracted to complete a project. They are required for public projects in order to protect taxpayers. Fidelity bonds, which are usually purchased by an employer, protect against losses caused by employee fraud or dishonesty.

Surety Bonds, 2008-2017 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$4,960,250	3.8%	67.0	-3.2 pts.
2009	4,835,409	-2.5	79.5	12.6
2010	4,851,328	0.3	70.7	-8.8
2011	4,849,480	[4]	72.9	2.2
2012	4,695,782	-3.2	76.8	3.9
2013	4,868,847	3.7	72.7	-4.0
2014	5,000,382	2.7	69.5	-3.3
2015	5,139,873	2.8	73.8	4.3
2016	5,138,543	[4]	72.0	-1.8
2017	5,368,773	4.5	72.1	0.2

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data. [4]Less than 0.1 percent.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Fidelity Bonds, 2008-2017 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$1,140,617	-8.0%	84.2	7.7 pts.
2009	1,098,372	-3.7	105.4	21.2
2010	1,082,534	-1.4	95.8	-9.6
2011	1,098,225	1.4	102.0	6.2
2012	1,096,406	-0.2	99.4	-2.6
2013	1,124,199	2.5	92.9	-6.5
2014	1,165,280	3.7	92.7	-0.2
2015	1,161,375	-0.3	77.3	-15.4
2016	1,093,925	-5.8	80.1	2.8
2017	986,403	-9.8	73.9	-6.1

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Mortgage Guaranty Insurance

Private mortgage insurance (PMI), also known as mortgage guaranty insurance, guarantees that in the event of a default, the insurer will pay the mortgage lender for any loss resulting from a property foreclosure, up to a specific amount. PMI, which is purchased by the borrower but protects the lender, is sometimes confused with mortgage life insurance, a life insurance product that pays off the mortgage if the borrower dies before the loan is repaid. Banks generally require PMI for all borrowers with down payments of less than 20 percent of the home price. The industry's combined ratio, a measure of profitability, deteriorated (i.e., rose) significantly in 2007 and 2008, reflecting the economic downturn and the subsequent rise in mortgage defaults, and remained at high levels through 2012. In 2017 the combined ratio fell to 40.4, the lowest since S&P Global Market Intelligence began collecting data on mortgage guaranty insurance in 1996.

Mortgage Guaranty Insurance, 2008-2017 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$5,371,878	3.5%	219.8	90.8 pts.
2009	4,564,406	-15.0	201.9	-17.9
2010	4,248,798	-6.9	198.4	-3.6
2011	4,242,340	-0.2	219.0	20.7
2012	3,965,896	-6.5	189.7	-29.4
2013	4,329,947	9.2	98.0	-91.7
2014	4,180,006	-3.5	70.2	-27.7
2015	4,681,917	12.0	58.1	-12.1
2016	4,410,832	-5.8	49.9	-8.1
2017	4,376,797	-0.8	40.4	-9.5

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Top 10 Writers Of Mortgage Guaranty Insurance By Direct Premiums Written, 2017 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	MGIC Investment Corp.	$1,121,116	22.4%
2	Arch Capital Group Ltd.	1,078,923	21.5
3	Radian Group Inc.	1,032,006	20.6
4	Genworth Financial Inc.	778,577	15.5
5	Essent Group Ltd.	549,344	11.0
6	NMI Holdings Inc.	202,586	4.0
7	PMI Group Inc.	140,589	2.8
8	Old Republic International Corp.	107,007	2.1
9	Southern Pioneer P&C Insurance Co.	104	[3]
10	Chubb Ltd.	59	[3]

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories. [3]Less than 0.1 percent.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Financial Guaranty Insurance

Financial guaranty insurance, also known as bond insurance, helps expand financial markets by increasing borrower and lender leverage. It guarantees the principal and interest payments on municipal obligations.

Financial guaranty insurers are specialized, highly capitalized companies that traditionally had the highest rating. The insurer's high rating attaches to the bonds thus lowering the risk of the bonds to investors. With their credit rating thus enhanced, municipalities can issue bonds that pay a lower interest rate, enabling them to borrow more for the same outlay of funds. The combined ratio climbed to 421.4 in 2008 at the height of the economic downturn. In 2013 the combined ratio fell below zero as several companies reduced loss reserves by more than $2 billion combined as a result of strains created by the financial crisis. Over the years financial guaranty insurers have expanded their reach beyond municipal bonds and now insure a wide array of products, including mortgage-backed securities, pools of credit default swaps and other structured transactions.

Financial Guaranty Insurance, 2008-2017[1] ($000)

Year	Net premiums written[2]	Annual percent change	Combined ratio[3]	Annual point change[4]
2008	$3,171,560	4.4%	421.4	268.9 pts.
2009	1,793,410	-43.5	100.6	-320.7
2010	1,371,908	-23.5	228.4	127.8
2011	968,898	-29.4	219.0	-9.4
2012	692,541	-28.5	181.6	-37.4
2013	710,480	2.6	-3.4	-184.9
2014	488,482	-31.2	91.3	94.7
2015	418,792	-14.3	99.0	7.8
2016	364,531	-13.0	177.6	78.6
2017	420,844	15.4	318.7	141.1

[1]Based on Insurance Expense Exhibit (IEE) data. Financial Guaranty Insurance Co. did not file an IEE in 2012. Several companies in 2013 reduced loss reserves as a result of strains from the financial crisis, creating a negative combined ratio. [2]After reinsurance transactions, excludes state funds. [3]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [4]Calculated from unrounded data.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Top 10 Writers Of Financial Guaranty Insurance By Direct Premiums Written, 2017 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	Assured Guaranty Ltd.	$262,820	58.3%
2	Build America Mutual Assurance Co.	60,328	13.4
3	MBIA Inc.	54,918	12.2
4	Ambac Financial Group Inc.	39,922	8.9
5	Syncora Guarantee Inc.	13,172	2.9
6	Berkshire Hathaway Inc.	8,748	1.9
7	Financial Guaranty Insurance Co.	7,107	1.6
8	Transamerica Casualty Insurance Co.	3,000	0.7
9	Radian Group Inc.	729	0.2
10	ACA Financial Guaranty Corp.	11	[3]

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories. [3]Less than 0.1 percent.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Burglary And Theft Insurance And Boiler And Machinery Insurance

Burglary and theft insurance covers the loss of property, money and securities due to burglary, robbery or larceny. Boiler and machinery insurance is also known as mechanical breakdown, equipment breakdown or systems breakdown coverage. Among the types of equipment covered by this insurance are heating, cooling, electrical, telephone/communications and computer equipment.

Burglary And Theft Insurance, 2008-2017 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$160,434	-0.2%	48.2	-8.3 pts.
2009	152,197	-5.1	59.6	11.5
2010	167,152	9.8	69.4	9.8
2011	194,661	16.5	61.6	-7.8
2012	220,831	13.4	58.6	-3.0
2013	207,225	-6.2	42.2	-16.4
2014	226,247	9.2	59.9	17.7
2015	230,777	2.0	61.4	1.5
2016	255,466	10.7	46.5	-14.9
2017	222,936	-12.7	48.9	2.4

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Boiler And Machinery Insurance, 2008-2017 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$1,728,595	-0.7%	87.7	14.6 pts.
2009	1,803,376	4.3	71.7	-16.1
2010	1,721,764	-4.5	71.5	-0.2
2011	1,810,941	5.2	75.0	3.5
2012	1,887,625	4.2	80.8	5.8
2013	1,979,514	4.9	72.2	-8.6
2014	1,998,967	1.0	76.3	4.1
2015	1,682,090	-15.9	69.3	-6.9
2016	1,892,160	12.5	78.6	9.3
2017	2,043,204	8.0	76.4	-2.2

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Crop Insurance

Federally sponsored multiple peril crop insurance provides coverage for growing crops against miscellaneous perils such as wind, hail and vandalism. Multiple peril crop insurance is serviced by the private market but subsidized and reinsured by the federal government by the Federal Crop Insurance Corp. Private crop insurance provides the same coverage but is not reinsured by the Federal Crop Insurance Corp.

Private Crop Insurance, 2014-2017 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2014	$582,817	NA	138.8	NA
2015	584,600	0.3%	146.2	7.3 pts.
2016	455,410	-22.1	122.3	-23.9
2017	498,804	9.5	66.6	-55.7

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data. NA=Data not available.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Multiple Peril Crop Insurance, 2008-2017[1] ($000)

Year	Net premiums written[2]	Annual percent change	Combined ratio[3]	Annual point change[4]
2008	$5,077,625	39.2%	90.1	15.3 pts.
2009	3,964,690	-21.9	79.7	-10.4
2010	3,501,631	-11.7	73.9	-5.8
2011	5,456,991	55.8	90.6	16.8
2012	5,321,811	-2.5	104.0	13.3
2013	4,942,547	-7.1	103.3	-0.7
2014	4,189,765	-15.2	104.9	1.6
2015	3,680,768	-12.1	99.9	-5.1
2016	3,321,281	-9.8	81.7	-18.2
2017	4,742,005	42.8	95.8	14.1

[1]Includes private crop insurance in 2013 and prior years. [2]After reinsurance transactions, excludes state funds. [3]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [4]Calculated from unrounded data.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Top 10 Writers Of Multiple Peril Crop Insurance By Direct Premiums Written, 2017 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	Chubb Ltd.	$1,829,163	18.1%
2	Zurich Insurance Group[3]	1,573,733	15.5
3	QBE Insurance Group Ltd.	1,292,552	12.8
4	American Financial Group Inc.	1,014,186	10.0
5	CGB Insurance Co.	879,608	8.7
6	Sompo Holdings Inc.	761,296	7.5
7	Farmers Mutual Hail Insurance Co. of Iowa	631,956	6.2
8	Tokio Marine Group	551,255	5.4
9	American International Group (AIG)	474,404	4.7
10	Fairfax Financial Holdings	301,484	3.0

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories. [3]Data for Farmers Insurance Group of Companies and Zurich Financial Group (which owns Farmers' management company) are reported separately by S&P Global Market Intelligence.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Warranty Insurance

Warranty insurance coverage compensates for the cost of repairing or replacing defective products past the normal warranty period provided by manufacturers.

Warranty Insurance, 2008-2017 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2008	$2,086,935	NA	94.3	NA
2009	1,757,247	-15.8%	97.9	3.6pts.
2010	1,864,139	6.1	106.4	8.5
2011	1,695,799	-9.0	97.1	-9.3
2012	1,386,404	-18.2	99.5	2.5
2013	1,155,338	-16.7	104.2	4.7
2014	1,020,188	-11.7	93.5	-10.8
2015	1,017,790	-0.2	107.9	14.4
2016	930,240	-8.6	88.8	-19.1
2017	1,090,590	17.2	90.6	1.8

[1]After reinsurance transactions, excludes state funds. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded data. NA=Data not available.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Chapter 8

Losses

MAJOR CATASTROPHIES: WORLD

World Insurance Losses

Global natural catastrophes and man-made disasters resulted in $144 billion in insured losses in 2017, the highest annual insured losses since Swiss Re began keeping records. The top three events in terms of insured losses were from three hurricanes, Maria, Irma and Harvey, which accounted for a total of $92 billion, followed by two wildfires that resulted in almost $10.5 billion in insured losses. There were 301 disaster events in 2017, of which 183 were natural disasters, accounting for $136 billion in insured losses. Man-made disasters and earthquakes and tsunamis accounted for the remaining $8 billion in losses. In the previous year, in 2016, total insured losses were $56 billion, close to the inflation-adjusted previous 10-year average of $53 billion. By region, North America accounted for the majority of insured losses in 2017, with about $119 billion and almost 83 percent of world insured losses. Most of those losses resulted from hurricanes—Maria, Irma and Harvey—as well as wildfires and flooding. More than 11,000 people worldwide perished in natural and man-made disasters in 2017. In terms of human loss, flooding in Sierra Leone was the worst disaster, claiming 1,141 lives. An earthquake on the Iran-Iraq border was the second worst, with a death toll of 630.

Top 20 Costliest World Insurance Losses, 2017[1] (US$ millions)

Rank	Date	Country/region	Event	Insured loss in U.S. dollars
1	Sep. 19	U.S., Caribbean	Hurricane Maria	$32,000
2	Sep. 6	U.S., Caribbean	Hurricane Irma	30,000
3	Aug. 25	U.S.	Hurricane Harvey (Category 4), severe inland flood in Houston	30,000
4	Oct. 8	U.S.	Wildland fire “Tubbs Fire“	7,710
5	Oct. 8	U.S.	Wildland fire “Atlas Fire“	2,666
6	May 8	U.S.	Hailstorm, thunderstorms, tornadoes, severe hail damage in Denver, CO	2,507
7	Mar. 26	U.S.	Hailstorm, thunderstorms, tornadoes	1,967
8	Dec. 4	U.S.	Wildland fire “Thomas Fire“	1,787
9	Mar. 6	U.S.	Thunderstorms, tornadoes, hail	1,600
10	Jun. 11	U.S.	Hailstorm in Minnesota	1,549

(table continues)

Top 20 Costliest Insurance Losses, 2017[1] (US$ millions) (Cont'd)

Rank	Date	Country/region	Event	Insured loss in U.S. dollars
11	Feb. 28	U.S.	Thunderstorms, tornadoes, large hail	$1,370
12	Mar. 28	Australia	Cyclone Debbie, storm surge	1,306
13	Sep. 19	Mexico	Earthquake Mw 7.1	1,200
14	Jun. 27	U.S.	Thunderstorms, large hail, tornadoes	1,131
15	Aug. 23	China, Vietnam, Hong Kong	Typhoon Hato	1,107
16	Apr. 19	Europe	Cold spell brings frost damage	930
17	Jan. 11	United Arab Emirates	Fire at a refinery	[2]
18	Oct. 18	Philippines, Japan	Typhoon Lan (Paolo)	888
19	Jan. 18	U.S.	Major tornado outbreak, 1 EF3 tornado in Hattiesburg, MS	853
20	Mar. 14	Canada	Fire at a refinery	[2]

[1]Property and business interruption losses, excludes life and liability losses. Includes flood losses in the U.S. insured via the National Flood Insurance Program. Loss data shown here may differ from figures shown elsewhere for the same event due to differences in the date of publication, the geographical area covered and other criteria used by organizations collecting the data. [2]Data not released by Swiss Re.

Source: Swiss Re, *sigma*, No. 1/2018; Property Claim Services (PCS®), a Verisk Analytics® business, insured losses for natural catastrophes in the United States.

World Insured Catastrophe Losses, 2008-2017[1] (2017 $ millions)

Year	Weather-related natural catastrophes	Man-made	Earthquakes/tsunami	Total
2008	$49,890	$9,547	$480	$59,917
2009	24,447	4,486	696	29,630
2010	32,869	5,364	18,211	56,443
2011	72,253	7,377	59,327	138,958
2012	68,714	6,275	1,825	76,815
2013	37,633	8,135	47	45,815
2014	30,094	7,286	324	37,704
2015	28,134	9,813	527	38,474
2016	38,695	8,377	8,863	55,935
2017	136,442	6,246	1,615	144,303

[1]In order to maintain comparability of the data over the course of time, the minimum threshold for losses was adjusted annually to compensate for inflation in the United States. Adjusted to 2017 dollars by Swiss Re.

Source: Swiss Re Institute.

Top 10 Costliest World Insurance Losses, 1970-2017[1] (2017 $ millions)

Rank	Date	Country	Event	Insured loss
1	Aug. 25, 2005	U.S., Gulf of Mexico	Hurricane Katrina, storm surge, damage to oil rigs	$82,394
2	Mar. 3, 2011	Japan	Earthquake (Mw 9.0) triggers tsunami	38,128
3	Sep. 19, 2017	U.S., Puerto Rico, U.S. Virgin Islands, Caribbean	Hurricane Maria	32,000
4	Oct. 24, 2012	U.S., Caribbean, Canada	Hurricane Sandy, storm surge	30,774
5	Sep. 6, 2017	U.S., Puerto Rico, U.S. Virgin Islands, Caribbean	Hurricane Irma	30,000
6	Aug. 25, 2017	U.S.	Hurricane Harvey	30,000
7	Aug. 23, 1992	U.S., Bahamas	Hurricane Andrew, storm surge	27,943
8	Sep. 11, 2001	U.S.	Terror attacks on WTC, Pentagon and other buildings	25,991
9	Jan. 1, 1994	U.S.	Northridge earthquake (Mw 6.7)	25,293
10	Sep. 6, 2008	U.S., Caribbean, Gulf of Mexico	Hurricane Ike, floods, damage to oil rigs	23,051

[1]Property and business interruption losses, excludes life and liability losses. Includes flood losses in the United States insured via the National Flood Insurance Program. U.S. natural catastrophe figures based on Property Claim Services data. Adjusted to 2017 dollars by Swiss Re.

Note: Loss data shown here may differ from figures shown elsewhere for the same event due to differences in the date of publication, the geographical area covered and other criteria used by organizations collecting the data.

Source: Swiss Re, *sigma*, No. 1/2018.

Top 10 Deadliest World Catastrophes, 2017

Rank	Date	Country	Event	Victims[1]
1	Aug. 14	Sierra Leone	Heavy rains trigger flood and massive landslide and debris flow in Babadorie River Valley	1,141
2	Nov. 12	Iran, Iraq	Earthquake Mw 7.3 on the Iran-Iraq border	630
3	Aug. 12	India	Floods caused by heavy monsoon rains in Bihar; River Gandak burst its banks in 8 points	514
4	Sep. 19	Mexico	Earthquake Mw 7.1	369
5	Mar. 31	Colombia	Torrential rains caused Mocoa, Sangoyaco and Mulato to overflow and trigger massive landslide	336
6	Dec. 22	Philippines	Tropical storm Tembin (Vinta) triggers flooding	331
7	Nov. 24	Egypt	Bomb explosion at a mosque	311
8	May 24	Sri Lanka	Torrential rains trigger floods along the Kalu River Basin, landslides	293
9	Apr. 12	India	Heat wave	264
10	Jan. 14	Zimbabwe	Heavy rains exacerbated by remnants of Cyclone Dineo trigger floods	251

[1]Dead and missing.

Source: Swiss Re, *sigma*, No. 1/2018.

Top 10 Deadliest World Catastrophes, 1970-2017

Rank	Date	Country	Event	Victims[1]
1	Nov. 11, 1970	Bangladesh	Storm and flood catastrophe	300,000
2	Jul. 28, 1976	China	Earthquake (Mw 7.6)	255,000
3	Jan. 12, 2010	Haiti	Earthquake (Mw 7.0), aftershocks	222,570
4	Dec. 26, 2004	Indonesia, Thailand et al.	Earthquake (Mw 9), tsunami in Indian Ocean	220,000
5	May 2, 2008	Myanmar (Burma), Bay of Bengal	Tropical cyclone Nargis, Irrawaddy Delta flooded	138,373
6	Apr. 29, 1991	Bangladesh	Tropical cyclone Gorky	138,000
7	May 12, 2008	China	Earthquake (Mw 7.9) in Sichuan, aftershocks	87,449
8	Oct. 8, 2005	Pakistan, India, Afghanistan	Earthquake (Mw 7.6), aftershocks, landslides	74,310
9	May 31, 1970	Peru	Earthquake (Mw 7.9) triggers rock slide and floods	66,000
10	Jun. 15, 2010	Russia, Czech Republic	Heat wave with temperatures up to 40° Celsius	55,630

[1]Dead and missing.

Source: Swiss Re, *sigma*, No. 1/2018.

Top 10 Costliest World Earthquakes And Tsunamis By Insured Losses, 1980-2017[1] ($ millions)

Rank	Date	Location	Losses when occurred		Fatalities
			Overall	Insured[2]	
1	Mar. 11, 2011	Japan: Aomori, Chiba, Fukushima, Ibaraki, Iwate, Miyagi, Tochigi, Tokyo, Yamagata. Includes tsunami.	$210,000	$40,000	15,880
2	Feb. 22, 2011	New Zealand: Canterbury, Christchurch, Lyttelton	24,000	16,500	185
3	Jan. 17, 1994	USA (CA): Northridge, Los Angeles, San Fernando Valley, Ventura, Orange	44,000	15,300	61
4	Feb. 27, 2010	Chile: Concepcion, Metropolitana, Rancagua, Talca, Temuco, Valparaiso. Includes tsunami.	30,000	8,000	520
5	Sep. 4, 2010	New Zealand: Canterbury, Christchurch, Avonside, Omihi, Timaru, Kaiapoi, Lyttelton	10,000	7,400	0
6	Apr. 14-16, 2016	Japan: Kumamoto, Aso, Chuo Ward, Mashiki, Minamiaso, Oita, Miyazaki, Fukuoka, Yamaguchi	32,000	6,200	205
7	Jan. 17, 1995	Japan: Hyogo, Kobe, Osaka, Kyoto	100,000	3,000	6,430
8	Nov. 13, 2016	New Zealand: Canterbury, Kaikoura, Waiau, Wellington, Marlborough, Picton	3,900	2,100	2
9	Jun. 13, 2011	New Zealand: Canterbury, Christchurch, Lyttelton	2,700	2,100	1
10	Sep. 19, 2017	Mexico: Puebla, Morelos, Greater Mexico City	6,000	2,000	369

[1]As of January 2018. Ranked on insured losses when occurred. [2]Based on property losses including, if applicable, agricultural, offshore, marine, aviation and National Flood Insurance Program losses in the United States and may differ from data shown elsewhere.

Source: © 2018 Munich Re, Geo Risks Research, NatCatSERVICE; Wikipedia.

MAJOR CATASTROPHES: UNITED STATES

Property Claim Services (PCS®), a Verisk Analytics® business, defines a catastrophe as an event that causes $25 million or more in insured property losses and affects a significant number of property/casualty (P/C) policyholders and insurers. PCS estimates represent anticipated insured losses from natural and man-made catastrophes on an industrywide basis, reflecting the total net insurance payment for personal and commercial property lines of insurance covering fixed property; vehicles, boats; related-property items; business interruption; and additional living expenses. They exclude loss adjustment expenses. P/C insurance industry catastrophes losses in the United States soared 370 percent to $101.9 billion from $21.7 billion in 2016, according to PCS. Insured losses in 2017 were the highest since PCS began collecting insured loss data in 1949. The number of catastrophes rose to 46 in 2017 from 42 in 2016 which was the highest number of catastrophes for years with an industry loss event threshold of $25 million. Munich Re estimates shown below are for natural catastrophes only.

Natural Catastrophe Losses In The United States, 2017[1] ($ millions)

Event	Number of events[2]	Fatalities	Overall losses	Insured losses[3]
Severe thunderstorm	50	85	$25.4	$18.2
Winter storms and cold waves	13	24	2.2	1.2
Flood, flash flood	12	14	0.4	0.1
Earthquake and geophysical	2	1	minor	minor
Tropical cyclone	5	170	123.0	49.1
Wildfire, heat waves and drought	21	62	14.3	9.5
Total	**103**	**356**	**$165.3**	**$78.0**

[1]As of January 2018. [2]Events that have caused at least one fatality or losses of $3 million or more. [3]Based on property losses including, if applicable, agricultural, offshore, marine, aviation and National Flood Insurance Program losses and may differ from data shown elsewhere.

Source: Property Claim Services®,a unit of ISO®, a Verisk Analytics® business, © 2018 Munich Re, NatCatSERVICE.

Catastrophes By Quarter, 2017[1] ($ millions)

Quarter	Estimated insured losses	Number of catastrophes	Number of claims
1	$7,857	13	1,047,250
2	10,194	16	1,213,450
3	68,434	6	2,726,810
4	15,443	11	207,750
Full year	**$101,928**	**46**	**5,195,260**

[1]Includes catastrophes causing insured property losses of at least $25 million in 1997 dollars and affecting a significant number of policyholders and insurers. Excludes losses covered by the federally administered National Flood Insurance Program.

Source: The Property Claim Services® (PCS®) unit of ISO®, a Verisk Analytics® company.

Top Seven States and Territories By Insured Catastrophe Losses, 2017[1] ($ millions)

Rank	State/territory	Estimated insured loss	Number of claims
1	Puerto Rico	$26,894.3	560,900
2	Texas	22,229.9	1,136,750
3	Florida	16,469.5	1,177,050
4	California	15,209.2	173,650
5	U.S. Virgin Islands	5,009.8	47,300
6	Colorado	2,274.7	236,800
7	Minnesota	1,652.7	145,600

[1]Includes catastrophes causing insured property losses of at least $25 million in 1997 dollars and affecting a significant number of policyholders and insurers. Excludes losses covered by the federally administered National Flood Insurance Program.

Source: The Property Claim Services® (PCS®) unit of ISO®, a Verisk Analytics® company.

Estimated Insured Property Losses, U.S. Catastrophes, 2008-2017[1]

Year	Number of catastrophes	Number of claims (millions)	Dollars when occurred ($ billions)	In 2017 dollars[2] ($ billions)
2008	36	4.1	$27.0	$31.0
2009	27	2.2	10.5	12.0
2010	33	2.4	14.3	16.1
2011	30	4.9	33.6	37.0
2012	26	4.0	35.0	37.7
2013	28	1.8	12.9	13.6
2014	31	2.1	15.5	16.1
2015	39	2.0	15.2	15.7
2016	42	3.0	21.7	22.1
2017	46	5.2	101.9	101.9

[1]Includes catastrophes causing insured property losses of at least $25 million in 1997 dollars and affecting a significant number of policyholders and insurers. Excludes losses covered by the federally administered National Flood Insurance Program. [2]Adjusted for inflation through 2017 by the Insurance Information Institute using the GDP implicit price deflator.

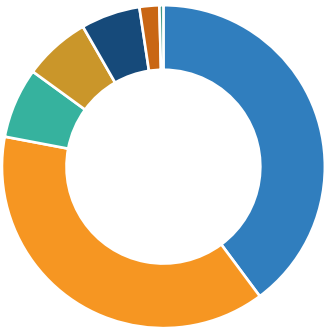
Source: Property Claim Services® (PCS®), a unit of ISO®, a Verisk Analytics® company; U.S. Bureau of Economic Analysis.

Top 10 Costliest Catastrophes, United States[1] ($ millions)

Rank	Date	Peril	Estimated insured property loss	
			Dollars when occurred	In 2017 dollars[2]
1	Aug. 2005	Hurricane Katrina	$41,100	$50,751
2	Sep. 2017	Hurricane Maria	[3]	[3]
3	Sep. 2017	Hurricane Irma	[3]	[3]
4	Sep. 2001	September 11: Fire, Explosion: World Trade Center, Pentagon terrorist attacks	18,779	25,405
5	Oct. 2012	Hurricane Sandy	18,750	20,240
6	Aug. 2017	Hurricane Harvey	[3]	[3]
7	Aug. 1992	Hurricane Andrew	15,500	24,852
8	Jan. 1994	Northridge, CA earthquake	12,500	19,169
9	Sep. 2008	Hurricane Ike	12,500	14,311
10	Oct. 2005	Hurricane Wilma	10,300	12,719

[1]Property losses only. Excludes flood damage covered by the federally administered National Flood Insurance Program. Ranked on dollars when occurred. As of December 11, 2018.
[2]Adjusted for inflation through 2017 by the Insurance Information Institute using the GDP implicit price deflator. [3]Loss estimate not yet available from PCS, but a relative ranking is provided.
Source: The Property Claim Services® (PCS®) unit of ISO®, a Verisk Analytics® company, U.S. Bureau of Economic Analysis.

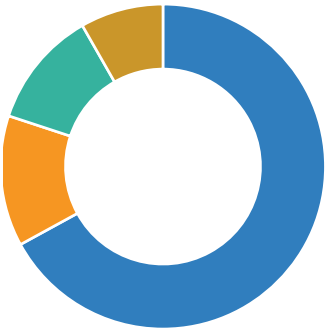
Inflation-Adjusted U.S. Insured Catastrophe Losses By Cause Of Loss, 1997-2016[1] (2016 $ billions)



Events including tornadoes[2]	$168.1	39.9%
Hurricanes and tropical storms	161.1	38.2
Other wind/hail/flood	29.7	7.1
Winter storms	28.2	6.7
Terrorism	25.0	5.9
Fires[3]	8.4	2.0
Other[4]	0.8	0.2
Total	**$421.2**	**100.0%**

[1]Adjusted for inflation through 2016 by ISO using the GDP implicit price deflator. Excludes catastrophes causing direct losses less than $25 million in 1997 dollars. Excludes flood damage covered by the federally administered National Flood Insurance Program. [2]Includes other wind, hail, and/or flood losses associated with catastrophes involving tornadoes. [3]Includes wildland fires. [4]Includes losses from civil disorders, water damage, utility service disruptions, and any workers compensation catastrophes generating losses in excess of PCS's threshold after adjusting for inflation.
Source: The Property Claim Services® (PCS®) unit of ISO®, a Verisk Analytics® company.

Top Three States By Inflation-Adjusted Insured Catastrophe Losses, 1987-2016[1] (2016 $ billions)



Rest of the U.S.[2]	$364.3	67.0%
Florida	70.8	13.0
Texas	63.5	11.7
New York	44.9	8.3
Total	**$543.4**	**100.0%**

[1]Adjusted for inflation through 2016 by ISO using the GDP implicit price deflator. Excludes catastrophes causing direct losses less than $25 million in 1997 dollars. Excludes flood damage covered by the federally administered National Flood Insurance Program. [2]Includes the other 47 states plus Washington, D.C., Puerto Rico and the U.S. Virgin Islands.
Source: The Property Claim Services® (PCS®) unit of ISO®, a Verisk Analytics® company.

HURRICANES

Hurricanes are tropical cyclones. A hurricane's winds revolve around a center of low pressure, expressed in millibars (mb) or inches of mercury. Hurricanes are categorized on the Saffir-Simpson Hurricane Wind Scale, which has a range of 1 to 5, based on the hurricane's intensity at the time of landfall at the location experiencing the strongest winds. The scale provides examples of the type of damage and impacts in the United States associated with winds of the indicated intensity. It does not address the potential for other hurricane-related phenomena such as storm surge, rainfall-induced floods and tornadoes.

Insured losses from hurricanes rose in the past 14 years as hurricane activity has intensified. When adjusted for inflation and after losses are tallied for the 2017 hurricanes, nine of the 10 costliest hurricanes in U.S. history through 2017 have struck since 2004. In addition to the increase in storm activity, construction along both the Gulf Coast and East Coast has continued to develop, and property values have increased, resulting in higher loss exposure.

The Saffir-Simpson Hurricane Wind Scale

Category[1]	Sustained wind speed (mph)	Wind damage	Historical example
1	74-95	Very dangerous winds will produce some damage	Hurricane Dolly, 2008, South Padre Island, Texas
2	96-110	Extremely dangerous winds will cause extensive damage	Hurricane Frances, 2004, Port St. Lucie, Florida
3	111-129	Devastating damage will occur	Hurricane Ivan, 2004, Gulf Shores, Alabama
4	130-156	Catastrophic damage will occur	Hurricane Charley, 2004, Punta Gorda, Florida
5	157 or higher	Catastrophic damage will occur	Hurricane Andrew, 1992, Cutler Ridge, Florida

[1]Category 3 or higher storms are classified as "major."

Source: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center.

2018 and 2017 Hurricane Seasons

2018: During the 2018 Atlantic hurricane season 14 tropical strorms formed in the region. Eight of those storms became hurricanes and two of those, Florence and Michael, became major storms, Category 3 and above. Florence became the third hurricane of the season and reached Category 4 status. It became a slow-moving storm that brought hurricane-force winds, life-threatening storm surge, and freshwater flooding and at least 30 inches of rain in parts of North Carolina and claimed at least 42 lives in the Carolinas and Virginia. The storm set a record in North Carolina for rain from a hurricane. The previous record was 24 inches caused by Hurricane Floyd in 1999. Catastrophe modelers have estimated that insured losses from Hurricane Florence would range from $2.5 billion to $5.0 billion, excluding National Flood Insurance Program losses. In addition, between 70 percent and 85 percent of flood losses are estimated to be uninsured.

Hurricane Michael became a strong Category 4 storm on October 10 and made landfall near Mexico Beach, Florida, in the Florida Panhandle. Hurricane Michael, which struck Florida with wind speeds just under a Category 5 storm, may be the strongest hurricane to ever hit the Florida Panhandle and could be the strongest hurricane to make landfall in that region since Hurricane Dennis in 2005. Unofficial reports put the death toll from Michael at about 40. According to CoreLogic there were 57,000 homes at risk of coastal storm surge, totaling more than $13 billion in reconstruction cost value (RCV) across Florida alone. Other catastrophe modelers estimated that insured losses from Hurricane Michael could range from $6 billion to $8 billion. As of January 11, 2019, the Florida Office of Insurance Regulation reported that insured losses from Michael had reached $5.0 billion, comprised of residential and commercial property, private flood and business interruption insurance, and miscellaneous coverages. There were about 141,000 claims made through January 11, 2019 with about 73 percent of those claims closed.

2017: The hurricane season of 2017 broke several records, as 17 tropical storms formed in the Atlantic Basin, with 10 of these becoming hurricanes. Six hurricanes became major storms, Category 3 and above—Harvey, Irma, Jose, Lee, Maria and Ophelia. Two hurricanes, Irma and Maria, reached Category 5 strength. The 2017 Atlantic hurricane season was the first time three Category 4 hurricanes—Harvey, Irma and Maria—made landfall in the United States and its territories in one year, according to the Insurance Information Institute (I.I.I.).

On August 25 Hurricane Harvey made landfall in Texas as a Category 4 storm. Harvey was the first major hurricane to hit the U.S. mainland since Hurricane Wilma in 2005, and the first Category 4 hurricane to affect Texas since Hurricane Carla in 1961. The last time a hurricane made landfall in Texas was in 2008 when Hurricane Ike, a Category 2 storm, struck the state. Harvey brought unprecedented flooding from rainfall to Texas and Louisiana. About 50 inches of rain fell in portions of the Greater Houston area and the upper Texas coast, breaking records. On August 30 Harvey made landfall west of Cameron, Louisiana, as a tropical storm, continuing to bring rain to Texas and Louisiana. Tens of thousands of people were displaced due to floods, with thousands of homes and businesses destroyed. At least 68 direct deaths related to Hurricane Harvey have been reported in Texas. Harvey was the deadliest U.S. hurricane in terms of direct deaths since superstorm Sandy in 2012, and the deadliest to hit Texas since 1919, according to the National Oceanic and Atmospheric Administration (NOAA). Loss estimates are not yet available from the Property Claims Services (PCS) unit of ISO, but it has provided a relative ranking for Harvey as the fifth costliest hurricane to hit the United States, excluding flood damage covered by the federally administered National Flood Insurance Program. PCS estimates that insured losses from Hurricane Harvey will top $15 billion.

Hurricane Irma made landfall at Cudjoe Key in the Lower Florida Keys as a Category 4 hurricane on September 10, and a second landfall in Florida on Marco Island in Southwest Florida as a Category 3 hurricane. The storm brought high storm surge to Naples and widespread, damaging winds across most of Florida. Hurricane Irma was one of the most powerful and costliest hurricanes in the Atlantic Basin, and the first major hurricane to make landfall in Florida since Hurricane Wilma in 2005. At its peak it was a Category 5 storm, and was the strongest hurricane to make landfall in the U.S. since Katrina in 2005. Complete devastation was reported in the Northern Leeward Islands and Virgin Islands. According to NOAA, the Florida Keys were heavily impacted, with 25 percent of buildings destroyed, and 65 percent significantly damaged. Irma brought record storm surge to parts of the Southeast coast, including Jacksonville, Florida, with significant coastal flooding extending into the Carolinas. Irma caused 10 direct deaths in the United States, three in the U.S. Virgin Islands, and the remainder on mainland United States, according to NOAA. The Florida Office of Insurance Regulation reported that as of November 14, 2018 about 1,002,800 claims were filed in the state from Irma, resulting in $11.1 billion in insured losses. To date, 92 percent of claims have been closed, either paid or unpaid. Loss estimates are not yet available from the Property Claims Services (PCS) unit of ISO, but it has provided a relative ranking for Irma as the third costliest hurricane to hit the United States, excluding flood damage covered by the federally administered National Flood Insurance Program. PCS estimates that insured losses from Hurricane Irma will be more than $20 billion.

Hurricane Maria became a Category 5 hurricane on September 18, passing over St. Croix in the Virgin Islands and later made landfall as a Category 4 hurricane in Puerto Rico. Maria was the strongest hurricane to make landfall in Puerto Rico since a Category 5 hurricane hit the island in 1928. Maria caused 65 official direct deaths and catastrophic damage to much of the island. Maria brought up to 37 inches of rain, with widespread flooding and mudslides, according to NOAA. The government of Puerto Rico later estimated that the number of deaths was 1,427 due to delayed or interrupted health care, and raised that tally to 2,975 after a study was conducted by George Washington University. Loss estimates are not yet available from the Property Claims Services (PCS) unit of ISO, but it has provided a relative ranking for Maria as the second costliest hurricane to hit the United States, surpassed in losses only by Hurricane Katrina, which caused about $50 billion in insured losses in 2017 dollars. PCS estimates that insured losses from Hurricane Irma will be more than $25 billion.

Hurricane Nate made a first landfall as a Category 1 hurricane on October 7 near the mouth of the Mississippi River, and a second landfall near Biloxi, Mississippi, on October 8. Nate was the fourth hurricane to make landfall in the United States in 2017, the first year the United States has had four landfalls since 2005.

Catastrophic Hurricane Losses In The United States, 2007-2016 ($ billions)

Year	Number of catastrophic hurricanes[1]	Estimated insured loss	
		Dollars when occurred	In 2016 dollars[2]
2007	0[3]	NA	NA
2008	3	$15.2	$17.0
2009	0[3]	NA	NA
2010	0[3]	NA	NA
2011	1	4.3	4.6
2012	2	$19.7	$20.8
2013	0[3]	NA	NA
2014	0[3]	NA	NA
2015	0[3]	NA	NA
2016	2	2.9	2.9

[1]Hurricanes causing insured property losses of at least $25 million in 1997 dollars and affecting a significant number of policyholders and insurers. Exclude losses covered by the federally administered National Flood Insurance Program. [2]Adjusted for inflation through 2016 by ISO using the GDP implicit price deflator. [3]No hurricane met the PCS definition of a catastrophe.

Source: The Property Claim Services® (PCS®) unit of ISO®, a Verisk Analytics® company.

The following chart from PCS ranks historic hurricanes based on their insured losses, adjusted for inflation.

Top 10 Costliest Hurricanes In The United States[1] ($ millions)

Rank	Date	Location	Hurricane	Estimated insured losses[2]	
				Dollars when occurred	In 2017 dollars[3]
1	Aug. 25-30, 2005	AL, FL, GA, LA, MS, TN	Hurricane Katrina	$41,100	$50,750
2	Sep.19-22, 2017	PR, UV	Hurricane Maria	[3]	[3]
3	Sep. 6-12, 2017	AL, FL, GA, NC, PR, SC, UV	Hurricane Irma	[3]	[3]
4	Oct. 28-31, 2012	CT, DC, DE, MA, MD, ME, NC, NH, NJ, NY, OH, PA, RI, VA, VT, WV	Hurricane Sandy	18,750	20,240
5	Aug. 25-Sep. 1, 2017	AL, LA, MS, NC, TN, TX	Hurricane Harvey	[3]	[3]
6	Aug. 24-26, 1992	FL, LA	Hurricane Andrew	15,500	24,852
7	Sep. 12-14, 2008	AR, IL, IN, KY, LA, MO, OH, PA, TX	Hurricane Ike	12,500	14,311
8	Oct. 24, 2005	FL	Hurricane Wilma	10,300	12,719
9	Aug. 13-14, 2004	FL, NC, SC	Hurricane Charley	7,475	9,518
10	Sep. 15-21, 2004	AL, DE, FL, GA, LA, MD, MS, NC, NJ, NY, OH, PA, TN, VA, WV	Hurricane Ivan	7,110	9,053

[1]Property coverage only. Excludes flood damage covered by the federally administered National Flood Insurance Program. Ranked on dollars when occurred. As of December 11, 2018. [2]Adjusted for inflation through 2017 by the Insurance Information Institute using the GDP implicit price deflator. [3]Loss estimate not yet available from PCS, but a relative ranking is provided.

Source: The Property Claim Services® (PCS®) unit of ISO®, a Verisk Analytics® company, U.S. Bureau of Economic Analysis.

The following chart from AIR Worldwide estimates insured property losses from the top 10 historical hurricanes, if they were to hit the nation again today with the same meteorological parameters.

Estimated Insured Losses For The Top 10 Historical Hurricanes Based On Current Exposures[1] ($ billions)

Rank	Date	Event	Category	2017 Insured loss
1	Sep. 18, 1926	Great Miami Hurricane	4	$128
2	Sep. 17, 1928	Okeechobee Hurricane	4	78
3	Aug. 29, 2005	Hurricane Katrina	3[2]	64
4	Sep. 17, 1947	1947 Fort Lauderdale Hurricane	4	62
5	Sep. 9, 1965	Hurricane Betsy	4[2]	57
6	Aug. 24, 1992	Hurricane Andrew	5	56
7	Sep. 10, 1960	Hurricane Donna	4	50
8	Sep. 21, 1938	The Great New England Hurricane	3	50
9	Sep. 9, 1900	1900 Galveston Hurricane	4	49
10	Aug. 17, 1915	1915 Galveston Hurricane	3	25

[1]Modeled loss to property, contents and business interruption and additional living expenses for residential, mobile home, commercial and auto exposures as of end-2016. Losses include demand surge and account for storm surge. [2]Strength at second landfall in Louisiana.

Source: AIR Worldwide Corporation.

Hurricanes And Related Deaths In The United States, 1998-2017

Year	Total hurricanes[1]	Made landfall as hurricane in the U.S.	Deaths[2]
1998	10	3	23
1999	8	2	60
2000	8	0	4
2001	9	0	42
2002	4	1	5
2003	7	2	24
2004	9	6[3]	59
2005	15	7	1,518
2006	5	0	0
2007	6	1	1
2008	8	4[4]	41
2009	3	1[5]	6
2010	12	0	11
2011	7	1	44
2012	10	1[6]	83
2013	2	0	1
2014	6	1	2
2015	4	0	3
2016	7	3	36
2017	10	4	147

[1]Atlantic Basin. [2]Includes fatalities from high winds of less than hurricane force from tropical storms. [3]One hurricane (Alex) is considered a strike but not technically a landfall. [4]Includes one hurricane (Hanna) which made landfall as a tropical storm. [5]Hurricane Ida, which made landfall as a tropical storm. [6]Excludes Hurricane Sandy which made landfall as a post-tropical storm.

Source: Insurance Information Institute from data supplied by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center.

Top 10 Deadliest Mainland U.S. Hurricanes[1]

Rank	Year	Hurricane/location	Category	Deaths
1	1900	Texas (Galveston)	4	8,000[2]
2	1928	Florida (Southeast; Lake Okeechobee)	4	2,500[3]
3	2005	Hurricane Katrina (Southeast Louisiana; Mississippi)	3	1,200
4	1893	Louisiana (Cheniere Caminanda)	4	1,100-1,400[4]
5	1893	South Carolina; Georgia (Sea Islands)	3	1,000-2,000
6	1881	Georgia; South Carolina	2	700
7	1957	Hurricane Audrey (Southwest Louisiana; North Texas)	4	416
8	1935	Florida (Keys)	5	408
9	1856	Louisiana (Last Island)	4	400
10	1926	Florida (Miami, Pensacola); Mississippi; Alabama	4	372

[1]Based on a National Hurricane Center analysis of mainland tropical cyclones from 1851-2010. [2]Could be as high as 12,000. [3]Could be as high as 3,000. [4]Total including offshore deaths is near 2,000.

Source: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center.

WINTER STORMS

Top 15 Costliest U.S. Winter Events By Insured Losses, 1980-2017[1] ($ millions)

Rank	Date	Event	Location	Losses when occurred		Deaths
				Overall	Insured[2]	
1	Feb. 16-25, 2015	Winter storm, winter damage	CT, DC, DE, IL, KY, MA, MD, ME, MI, NC, NH, NJ, NY, OH, PA, RI, SC, TN, VA, VT	$2,800	$2,100	39
2	Mar. 11-14, 1993	Blizzard	AL, CT, DE, FL, GA, KY, LA, MA, MD, ME, MS, NC, NH, NJ, NY, OH, PA, RI, SC, TN, TX, VA, VT, WV	5,000	2,000	270
3	Jan. 5-8, 2014	Winter damage, cold wave	AL, CT, GA, IL, IN, KY, MA, MD, ME, MI, MN, MO, MS, NC, NE, NJ, NY, OH, PA, SC, TN, VA, WI	2,500	1,700	NA
4	Apr. 13-17, 2007	Winter storm, tornadoes, floods	CT, DE, DC, GA, LA, MA, MD, ME, MS, NC, NH, NJ, NY, PA, RI, SC, TX, VA, VT, WV	2,000	1,600	19
5	Mar. 13-15, 2010	Winter storm, floods	CT, MA, NH, NJ, NY, PA, RI	1,700	1,200	11
6	Apr. 7-11, 2013	Winter storm	CA, IN, KS, MO, NE, SD, WI	1,500	1,200	NA
7	Dec. 10-13, 1992	Winter storm	CT, DE, NJ, NY, MA, MD, NE, PA, RI, VA	3,000	1,000	19
8	Jan. 31-Feb. 3, 2011	Winter storm, snowstorms, winter damage	CT, IA, IL, IN, KS, MA, ME, MO, NY, OH, PA, RI, TX, WI	1,300	980	36
9	Dec. 17-30, 1983	Winter damage, cold wave	FL, GA, ID, IL, IN, IA, KS, KY, LA, MD, MA, MI, MN, MS, MO, MT, NE, NJ, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VA, WA, WV, WI, WY	1,000	880	500
10	Jan. 17-20, 1994	Winter damage, cold wave	CT, DE, IN, IL, KY, MA, ME, MD, NC, NH, NJ, NY, OH, PA, RI, SC, TN, VA, VT, WV	1,000	800	70
11	Feb. 10-12, 1994	Winter damage	AL, AR, GA, LA, MS, NC, OK, SC, TN, TX, VA	3,000	800	9
12	Jan. 1-4, 1999	Winter storm	AL, AR, CT, DE, FL, GA, IL, IN, LA, MO, MA, MD, ME, MS, NC, NJ, NY,OH, OK, PA, RI, SC, TN, TX, VA, WV	1,000	780	25
13	Jan. 4-9, 2008	Winter storm	AR, CA, CO, IL, IN, KS, MI, MO, NV, NY, OH, OK, OR, WA, WI	1,000	750	12
14	Jan. 31-Feb. 6, 1996	Winter damage	AL, AR, CT, DE, FL, GA, IA, IL, IN, KS, KY, LA, MA, MD, MI, MO, MS, NC, NE, NJ, NY, OH, OK, PA, SC, TN, TX, VA, WV, WI	1,500	740	16
15	Feb. 24-25, 2013	Blizzard, winter damage	LA, OK, TX	1,000	690	1

[1]Costliest U.S. blizzards and winter storms/damages based on insured losses when occurred. [2]Based on property losses including, if applicable, agricultural, offshore, marine, aviation and National Flood Insurance Program losses in the United States and may differ from data shown elsewhere.

NA=Data not available.

Source: © 2018 Munich Re, NatCatSERVICE.

FLOODS

Two events that occurred in 2017 gained places in the chart below showing the 10 most significant floods based on National Flood Insurance Program (NFIP) payouts as of July 31, 2018. Hurricane Harvey ranks as the second most significant U.S. flood event, with about 76,000 NFIP policyholders filing claims. FEMA has paid $8.8 billion to those policyholders. Flooding from Hurricane Irma ranks at number 9, with about 22,000 policyholders filing claims, and $1 billion in payments. The figures below are preliminary, as claims are still being processed, and do not include payouts from Hurricane Florence in September 2018 or Hurricane Michael in October.

Top 10 Most Significant Flood Events By National Flood Insurance Program Payouts[1]

Rank	Date	Event	Location	Number of paid losses	Amount paid ($ millions)	Average paid loss
1	Aug. 2005	Hurricane Katrina	AL, FL, GA, LA, MS, TN	166,789	$16,258	$97,475
2	Sep. 2017	Hurricane Harvey	AL, AR, FL, GA, KY, LA, MS, NC, TX	75,865	8,757	115,430
3	Oct. 2012	Superstorm Sandy	CT, DC, DE, MA, MD, ME, NC, NH, NJ, NY, OH, PA, RI, VA, VT, WV	132,058	8,753	66,280
4	Sep. 2008	Hurricane Ike	AR, IL, IN, KY, LA, MO, OH, PA, TX	46,684	2,700	57,837
5	Aug. 2016	Louisiana severe storms and flooding	LA	26,909	2,456	91,260
6	Sep. 2004	Hurricane Ivan	AL, DE, FL, GA, LA, MD, MS, NJ, NY, NC, OH, PA, TN, VA, WV	28,153	1,607	57,098
7	Aug. 2011	Hurricane Irene	CT, DC, DE, MA, MD, ME, NC, NH, NJ, NY, PA, RI, VA, VT	44,306	1,345	30,366
8	Jun. 2001	Tropical Storm Allison	FL, LA, MS, NJ, PA, TX	30,671	1,105	36,028
9	Sep. 2017	Hurricane Irma	FL, GA, SC	21,824	1,030	47,202
10	Oct. 2016	Hurricane Matthew	FL, GA, NC, SC, VA	16,547	649	39,249

[1]Includes events from 1978 to July 31, 2018, as of October 5, 2018. Defined by the National Flood Insurance Program as an event that produces at least 1,500 paid losses. Stated in dollar value at time of event.

Source: U.S. Department of Homeland Security, Federal Emergency Management Agency; U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center.

TORNADOES

A tornado is a violently rotating column of air that extends from a thunderstorm and comes into contact with the ground, according to the National Oceanic and Atmospheric Administration (NOAA). In an average year about 1,000 tornadoes are reported nationwide, according to NOAA. Tornado intensity is measured by the Enhanced Fujita (EF) scale. The scale rates tornadoes on a scale of 0 through 5, based on the amount and type of wind damage. It incorporates 28 different damage indicators, based on damage to a wide variety of structures ranging from trees to shopping malls.

The Fujita Scale For Tornadoes

Category	Damage	Original F scale[1] Wind speed (mph)	Enhanced F scale[2] 3-second gust (mph)
F-0	Light	40-72	65-85
F-1	Moderate	73-112	86-110
F-2	Considerable	113-157	111-135
F-3	Severe	158-207	136-165
F-4	Devastating	208-260	166-200
F-5	Incredible	261-318	Over 200

[1]Original scale: wind speeds represent fastest estimated speeds over one quarter of a mile. [2]Enhanced scale: wind speeds represent maximum 3-second gusts.
Source: U.S. Department of Commerce, National Oceanic and Atmospheric Administration.

Tornado Losses

Tornadoes accounted for 40 percent of inflation-adjusted insured catastrophe losses from 1997 to 2016, according to Property Claim Services (PCS®), a Verisk Analytics® business. In 2017 insured losses from U.S. tornadoes/thunderstorms totaled $18 billion, up from $14 billion in 2016, according to Munich Re. The number of tornadoes rose to 1,406 in 2017 from 971 in 2016, according to the National Oceanic and Atmospheric Administration (NOAA). The 2017 total was the highest since 2011, when there were 1,691 tornadoes, including two spring events that resulted in more than $14 billion in losses when they occurred. There were 35 direct fatalities from tornadoes in 2017, up from 18 in 2016, according to NOAA. May was the top month for tornadoes in 2017, with 287 twisters. The United States experiences more tornadoes than any other country, according to a 2013 report by Lloyd's of London.

Preliminary NOAA reports show that there were 739 tornadoes from January to October 2018 compared to 1,375 during the same months of 2017 and the three-year average of 1,093 during 2015-2017. Tornadoes killed 3 people in the first 10 months of 2018, compared with 35 in the same 10 months in 2017.

Top 10 Costliest U.S. Catastrophes Involving Tornadoes[1] ($millions)

Rank	Date	Location	Estimated insured loss[2]	
			Dollars when occurred	In 2017 dollars[3]
1	Apr. 22-28, 2011	AL, AR, GA, IL, KY, LA, MO, MS, OH, OK, TN, TX, VA	$7,300	$7,880
2	May 20-27, 2011	AR, GA, IA, IL, IN, KS, KY, MI, MN, MO, NC, NE, NY, OH, OK, PA, TN, TX, VA, WI	6,900	7,591
3	May 2-11, 2003	AL, AR, CO, GA, IA, IL, IN, KS, KY, MO, MS, NC, NE, OH, OK, SC, SD, TN	3,205	4,191
4	Oct. 4-6, 2010	AZ	2,700	3,033
5	Apr 6-12, 2001	AR, CO, IA, IL, IN, KS, MI, MN, MO, NE, OH, OK, PA, TX	2,200	2,976
6	Mar 2-3, 2012	AL, GA, IN, KY, OH, TN	2,500	2,699
7	Apr 28-29, 2012	IL, IN, KY, MO, TX	2,500	2,699
8	May 8-11, 2017	CO, MO, NM, OK, TX	2,507	2,507
9	May 12-16, 2010	IL, MD, OK, PA, TX	2,000	2,246
10	Apr 3-5, 2011	GA, IA, IL, KS, KY, MO, NC, SC, TN, WI	2,000	2,200

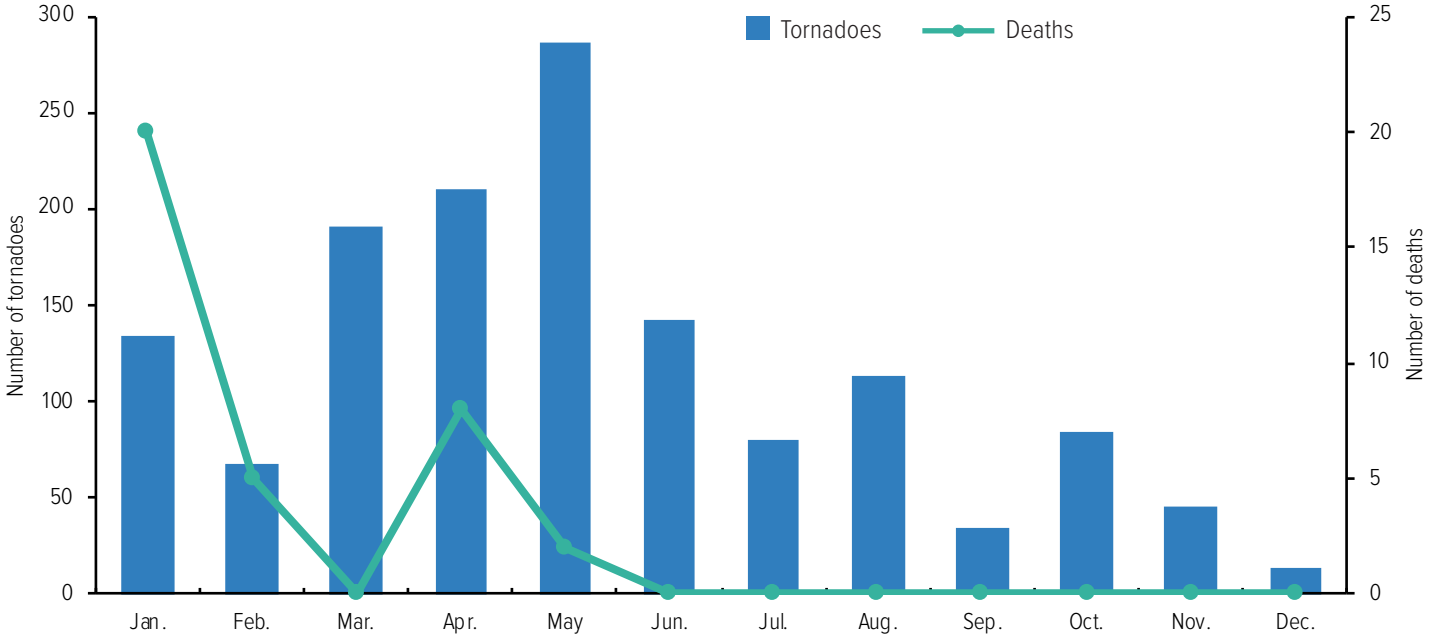
[1]Based on data through June 6, 2018. [2]Property coverage only. In addition to losses due to tornadoes themselves, amounts may include losses due to hail, wind and flooding during the same event. [3]Adjusted for inflation through 2017 by the Insurance Information Institute using the GDP implicit price deflator.

Source: The Property Claim Services® (PCS®) unit of ISO®, a Verisk Analytics® company; U.S. Bureau of Economic Analysis.

The costliest U.S. catastrophe involving tornadoes occurred in April 2011, when a spate of twisters hit Tuscaloosa, Alabama, and other areas, causing $7.9 billion in insured losses in 2017 dollars.

The second costliest were the tornadoes that struck Joplin, Missouri, and other locations in May 2011, resulting in $7.6 billion in insured losses in 2017 dollars.

Number Of Tornadoes And Related Deaths Per Month, 2017[1]



[1]Excludes Puerto Rico. A tornado that crosses state lines is counted as a single event in this chart.

Source: U.S. Department of Commerce, Storm Prediction Center, National Weather Service.

Tornadoes And Related Deaths In The United States, 1998-2017[1]

Year	Tornadoes	Deaths
1998	1,424	130
1999	1,345	94
2000	1,071	40
2001	1,216	40
2002	941	55
2003	1,376	54
2004	1,819	36
2005	1,264	38
2006	1,103	67
2007	1,098	81
2008	1,692	126
2009	1,156	21
2010	1,282	45
2011	1,691	553
2012	938	70
2013	906	55
2014	886	47
2015	1,177	36
2016	971	18
2017	1,406	35

[1]Excludes Puerto Rico. A tornado that crosses state lines counts as a single event.
Source: U.S. Department of Commerce, Storm Prediction Center, National Weather Service.

Top 10 States By Number Of Tornadoes, 2017[1]

Rank	State	Number of tornadoes	Deaths
1	Texas	176	4
2	Georgia	131	16
3	Missouri	102	1
4	Louisiana	88	3
5	Mississippi	81	5
6	Kansas	74	0
7	Alabama	65	0
8	Illinois	65	3
9	Oklahoma	62	1
10	Iowa	57	0

[1]Tornadoes that cross state lines are counted in every state in which they touch down.
Source: U.S. Department of Commerce, Storm Prediction Center, National Weather Service.

Tornadoes And Related Deaths By State, 2017[1]

State	Tornadoes	Fatalities	Rank[2]
Alabama	65	0	7
Alaska	0	0	[3]
Arizona	3	0	34
Arkansas	26	0	22
California	2	0	37
Colorado	20	0	26
Connecticut	0	0	[3]
Delaware	1	0	41
D.C.	1	0	41
Florida	41	0	13
Georgia	131	16	2
Hawaii	0	0	[3]
Idaho	1	0	41
Illinois	65	3	7
Indiana	36	0	17
Iowa	57	0	10
Kansas	74	0	6
Kentucky	29	0	20
Louisiana	88	3	4
Maine	10	0	31
Maryland	4	0	33
Massachusetts	2	0	37
Michigan	11	0	29
Minnesota	41	0	13
Mississippi	81	5	5
Missouri	102	1	3
Montana	2	0	37
Nebraska	38	0	16
Nevada	0	0	[3]
New Hampshire	0	0	[3]
New Jersey	2	0	37
New Mexico	11	0	29
New York	12	0	28
North Carolina	34	0	19
North Dakota	41	0	15
Ohio	43	0	12
Oklahoma	62	1	9
Oregon	3	0	34
Pennsylvania	26	0	22
Rhode Island	0	0	[3]
South Carolina	51	1	11
South Dakota	21	0	25
Tennessee	35	0	18
Texas	176	4	1
Utah	0	0	[3]
Vermont	0	0	[3]
Virginia	23	0	24
Washington	3	0	34
West Virginia	5	0	32
Wisconsin	28	1	21
Wyoming	15	0	27
United States[4]	**1,522**	**35**	

[1]Ranked by total number of tornadoes. [2]States with the same number of tornadoes receive the same ranking. [3]State had no tornadoes in 2017. [4]The U.S. total will not match data used in other charts because it counts tornadoes that cross state lines.

Source: U.S. Department of Commerce, Storm Prediction Center, National Weather Service.

EARTHQUAKES

The 1994 Northridge quake was the costliest U.S. earthquake on record, causing $15.3 billion in insured damages when it occurred ($25.6 billion in 2017 dollars). It ranks as the eighth costliest U.S. disaster, based on insured property losses (in 2017 dollars). Eight of the costliest U.S. quakes, based on inflation-adjusted insured losses, were in California, according to Munich Re.

In 2018 a large 7.9 magnitude earthquake hit Kodiak Island, Alaska on January 23. No significant damage was reported from the quake or the insignificant tsunami that was observed in a handful of Alaska cities, according to the United States National Tsunami Warning Center. On May 4 a 6.9 magnitude quake struck the Big Island of Hawaii, caused by the eruption of Mount Kilauea. No significant damage was reported. As the eruption continued, a 5.5 magnitude earthquake was recorded on June 3. The eruption caused about 500 quakes in one day, and many aftershocks. On November 30 a 7.0 magnitude quake struck about 8 miles north of Anchorage, Alaska. It damaged roads and buildings and buckled bridges but no fatalities were reported. There were about 2,000 aftershocks in the state in the days following the quake. The city's major seismic improvements put into place after the 1964 magnitude 9.2 quake are credited for the limited damage from the November quake. The 1964 quake was the largest in the nation.

In 2017 the biggest earthquake in the United States was a magnitude 6.2 quake that occurred on May 1 in Skagway, Alaska. No significant damage was reported.

Top 10 Costliest U.S. Earthquakes By Inflation-Adjusted Insured Losses[1] ($ millions)

Rank	Date	Location	Overall losses when occurred	Insured losses[2]		Fatalities
				Dollars when occurred	In 2017 dollars[3]	
1	Jan. 17, 1994	California: Northridge, Los Angeles, San Fernando Valley, Ventura, Orange	$44,000	$15,300	$25,635	61
2	Apr. 18, 1906	California: San Francisco, Santa Rosa, San Jose	525	180	4,499[4]	3,000
3	Oct. 17, 1989	California: Loma Prieta, Santa Cruz, San Francisco, Oakland, Berkeley, Silicon Valley	10,000	960	1,872	68
4	Feb. 28, 2001	Washington: Olympia, Seattle, Tacoma; Oregon	2,000	300	418	1
5	Mar. 27-28, 1964	Alaska: Anchorage, Kodiak Island, Seward, Valdez, Portage, Whittier, Cordova, Homer, Seldovia	540	45	357	131
6	Feb. 9, 1971	California: San Fernando Valley, Los Angeles	550	35	215	65
7	Oct. 1, 1987	California: Los Angeles, Whittier	360	75	159	8
8	Aug. 24, 2014	California: Napa, Vallejo, Solano, Sonoma, American Canyon	700	150	154	1
9	Apr. 4, 2010	California: San Diego, Calexico, El Centro, Los Angeles, Imperial; Arizona: Phoenix, Yuma	150	100	112	0
10	Sep. 3, 2000	California: Napa	80	50	71	0

[1]Costliest U.S. earthquakes occurring from 1950 to 2017, based on insured losses when occurred. Includes the 1906 San Francisco, California, earthquake, for which reliable insured losses are available. [2]Based on property losses including, if applicable, agricultural, offshore, marine, aviation and National Flood Insurance Program losses in the United States and may differ from data shown elsewhere. [3]Inflation-adjusted to 2017 dollars by the Insurance Information Institute using the U.S. Bureau of Labor Statistics' Inflation Calculator. [4]Inflation-adjusted to 2017 dollars based on 1913 U.S. Bureau of Labor Statistics data (earliest year available).

Source: © 2018 Munich Re, NatCatSERVICE; Insurance Information Institute.

The preceding chart ranks historic earthquakes based on their total insured property losses, adjusted for inflation. The chart below uses a computer model to measure the estimated impact of historical quakes according to current exposures. The 2016 analysis is based on AIR Worldwide's U.S. earthquake model. It makes use of the firm's property exposure database and takes into account latest updates to seismic and ground motion information as well as updated building characteristics of insured properties.

Estimated Insured Losses For The Top 10 Historical Earthquakes Based On Current Exposures[1] ($ billions)

Rank	Date	Location	Magnitude	2017 insured loss (current exposures)
1	1906	San Francisco, CA	7.8	$71
2	1811-1812	New Madrid, MO	7.7	59
3	1700	Cascadia Subduction Zone, WA, OR, CA	9.0	47
4	1838	San Francisco, CA	7.4	31
5	1886	Charleston, SC	7.3	30
6	1994	Northridge, CA	6.7	15
7	1868	Hayward, CA	7.0	15
8	1812	Wrightwood, CA	7.5	12
9	1857	Fort Tejon, CA	7.9	8
10	1989	Loma Prieta, CA	6.9	4

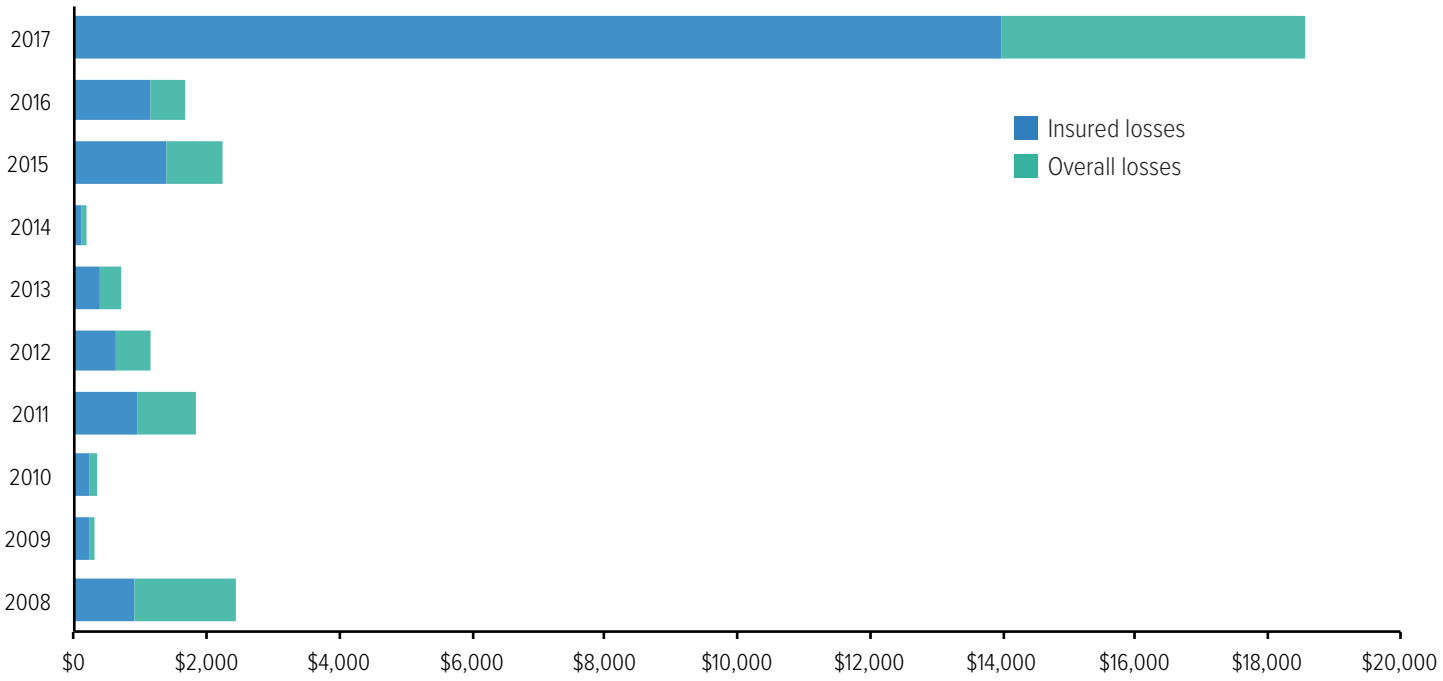
[1]Modeled loss to property, contents, business interruption and additional living expenses for residential, mobile home, commercial and auto exposures as of December 31, 2016. Losses include demand surge and fire following earthquake and account for tsunami, liquefaction and landslide. Policy conditions and earthquake insurance take-up rates are based on estimates by state insurance departments and client claims data. The model reflects recent updates to seismic and ground motion information as well as updated building characteristics of insured properties.

Source: AIR Worldwide Corporation.

WILDFIRES

Fire plays an important role in the life of a forest, clearing away dead wood and undergrowth to make way for younger trees. But for much of the last century, fire-suppression policies have sought to extinguish wildfires as quickly as possible to preserve timber and real estate. This approach has led to the accumulation of brush and other vegetation that is easily ignited and serves as fuel for wildfires. Most of the large fires with significant property damage have occurred in California, where some of the fastest developing counties are in forest areas that were once largely uninhabited. These areas, known as the Wildland-Urban Interface (WUI), contain about 44 million houses in the lower 48 states, according to the U.S. Forest Service. Rising temperatures are also believed to contribute to large, destructive blazes. Warmer weather contributes to wildfire conditions in several ways: dryer and more combustible vegetation, more frequent lightning strikes, an extended fire season; and more intense winds. Harvard School of Engineering and Applied Sciences researchers have concluded that by 2050 the number of wildfires in the West could rise by 50 percent, and across the U.S. the number would double.

Wildfire Losses In The United States, 2008-2017[1] (2017 $ millions)



[1]Adjusted for inflation by Munich Re based on the Consumer Price Index.
Source: © 2018 Munich Re, NatCatSERVICE.

2018 Wildfires

From January 1 to December 21, 2018, there were 55,911 wildfires in the Unites States, compared to 64,610 wildfires in the same period in 2017, according to the National Interagency Fire Center. About 8.6 million acres were burned in the 2018 period, compared with 9.6 million in 2017.

The Mendocino Complex Fire broke out on July 27 in Northern California and grew to be the largest fire in state history with 459,123 acres burned.

The Carr Fire, which broke out on July 23 in Northern California, is the eigth most destructive fire in the state's history. Eight fatalities are attributed to the fire, and 1,614 structures have been destroyed.

Insured residential, commercial and auto losses from the Mendocino Complex and Carr Fires topped $845 million, according to the California Department of Insurance. The two fires resulted in 8,900 homes, 329 businesses, and 800 private autos, commercial vehicles, and other types of property damaged or destroyed. More than 10,000 claims have been filed.

The Camp Fire broke out in Butte County, Northern California on November 8 and became the deadliest and most destructive fire on record in the state. At least 88 people perished. About 153,000 acres were burned and 18,800 structures have been destroyed, according to Cal Fire statistics. The fire burned almost 14,000 residences and about 530 commercial structures. The remainder were minor structures.

Further south two other major fires, the Hill and Woolsey Fires, also caused considerable damage. Both fires started on November 8. The Woolsey Fire burned about 97,000 acres according to Cal Fire.It destroyed about 1,600 structures and killed three people. The Hill Fire burned about 4,500 acres and destroyed four structures.

Although insured losses from the Camp and Woolsey Fires have not been released, they are likely to be among the costliest wildfires on record.

2017 Wildfires

In 2017, there were 71,499 wildfires, compared to 65,575 wildfires in the same period in 2016, according to the National Interagency Fire Center. About 10 million acres were burned in the 2017 period, compared with 5.4 million in 2016. The number of acres burned in 2017 was higher than the 10-year average.

Beginning October 6 and continuing until October 25, eight counties in Northern California were hit by a devastating outbreak of wildfires which led to at least 23 fatalities, burned 245,000 acres and destroyed more than 8,700 structures.

In December five major fires in Southern California destroyed more than a thousand homes and buildings. One of the fires, the Thomas Fire, became the largest wildfire ever recorded in California up to 2017. In 2018 the Mendocino Complex Fire grew to surpass the acreage burned in the Thomas Fire. Loss estimates are not yet available from the Property Claims Services (PCS) unit of ISO, but it has provided relative rankings for the Atlas, Tubbs and Thomas Fires, placing the blazes as the costliest wildfires in the United States up to 2017. All three are estimated to have caused more than $2.8 billion in insured losses. The California Department of Insurance reported that insurance claims payouts from the October to December fires add up to almost $12 billion, which made the 2017 fire season the costliest on record. Preliminary estimates for 2018 indicate that it most likely will surpass the 2017 record. The 2018 Camp and Woolsey Fires are likely to become the most costly fires in U.S. history when insured loss data are compiled.

Top 10 States For Wildfires Ranked By Number Of Fires And By Number Of Acres Burned, 2017

Rank	State	Number of fires
1	Texas	9,827
2	California	9,560
3	North Carolina	5,125
4	Georgia	3,929
5	Missouri	3,398
6	Florida	3,280
7	Mississippi	2,775
8	Montana	2,422
9	Arizona	2,321
10	Oregon	2,049

Rank	State	Number of acres burned
1	Montana	1,366,498
2	Nevada	1,329,289
3	California	1,266,224
4	Texas	734,682
5	Oregon	714,520
6	Idaho	686,262
7	Alaska	653,023
8	Oklahoma	502,625
9	Kansas	476,306
10	Arizona	429,564

Source: National Interagency Fire Center.

Top 10 Costliest Wildland Fires In The United States[1] ($ millions)

Rank	Date	Name, Location	Estimated insured loss	
			Dollars when occurred	In 2017 dollars[2]
1	Nov. 8-25, 2018	Camp Fire, CA	[3]	[3]
2	Oct. 8-20, 2017	Tubbs Fire, CA	[3]	[3]
3	Nov. 8-22, 2018	Woolsey Fire, CA	[3]	[3]
4	Oct. 8-20, 2017	Atlas Fire, CA	[3]	[3]
5	Dec. 4-23, 2017	Thomas Fire, CA	[3]	[3]
6	Oct. 20-21, 1991	Oakland Hills Fire, CA	$1,700	$2,788
7	Oct. 21-24, 2007	Witch Fire, CA	1,300	1,517
8	Jul. 23-Aug. 30, 2018	Carr Fire, CA	[3]	[3]
9	Oct. 25-Nov. 4, 2003	Cedar Fire, CA	1,060	1,386
10	Oct. 25-Nov. 3, 2003	Old Fire, CA	975	1,275

[1]Property coverage only for catastrophic fires. Effective January 1, 1997, ISO's Property Claim Services (PCS) unit defines catastrophes as events that cause more than $25 million in insured property damage and that affect a significant number of insureds and insurers. From 1982 to 1996, PCS used a $5 million threshold in defining catastrophes. Before 1982, PCS used a $1 million threshold. As of December 11, 2018. [2]Adjusted for inflation through 2017 by the Insurance Information Institute using the GDP implicit price deflator.
[3]Loss estimate not yet available from PCS, but a relative ranking is provided.

Source: The Property Claim Services® (PCS®) unit of ISO®, a Verisk Analytics® company, U.S. Bureau of Labor Statistics.

Wildfire Exposure

A 2015 study by CoreLogic identifies almost 900,000 residential properties across 13 states in the western United States currently at high or very high risk of wildfire damage. They represent a combined total property value estimated at more than $237 billion. Of the total properties identified, 192,000 homes fall into the very high risk category, with total residential exposure valued at more than $49 billion. Another analysis, conducted by Verisk Analytics in 2017, identified the 10 states most prone to wildfire, based on the number and percentage of homes at high or extreme wildfire risk. California had the most households at risk (about 2 million), while Montana had the highest percentage of households at risk (28 percent).

Total Potential Exposure To Wildfire Damage By Risk Category, 2014[1] ($ billions)

State	Low	Moderate	High	Very high
Arizona	$9.64	$0.98	$1.76	$1.57
California	75.84	61.92	89.35	16.10
Colorado	18.63	11.53	14.58	13.91
Idaho	9.20	5.56	3.71	2.62
Montana	14.63	4.43	2.29	2.40
Nevada	4.24	5.19	4.57	0.16
New Mexico	11.65	4.62	7.07	2.46
Oklahoma	31.92	16.77	0.03	0.00
Oregon	8.24	9.49	11.91	3.20
Texas	59.53	147.68	48.26	6.33
Utah	2.85	3.93	0.77	0.01
Washington	84.07	18.08	2.88	0.51
Wyoming	3.68	2.62	0.49	0.33
Total, states shown	**$331.27**	**$292.81**	**$187.66**	**$49.61**

[1]Reconstruction value of single-family residences at risk.
Source: CoreLogic, Inc., a data and analytics company.

Top 10 Most Wildfire-Prone States, 2017

By households		
Rank	State	Households at high or extreme risk from wildfires[1]
1	California	2,044,800
2	Texas	715,300
3	Colorado	366,200
4	Arizona	234,600
5	Idaho	171,200
6	Washington	154,900
7	Oklahoma	152,900
8	Oregon	148,800
9	Utah	133,100
10	Montana	133,000

By percent of households		
Rank	State	Percent of households at high or extreme risk from wildfires
1	Montana	28%
2	Idaho	26
3	Colorado	17
4	California	15
5	New Mexico	14
6	Utah	14
7	Wyoming	14
8	Oklahoma	9
9	Oregon	9
10	Arizona	8

[1]Number of households is based on data from the 2010 U.S. Census.

Source: Verisk Wildfire Risk Analysis using data from FireLine®, Verisk's wildfire risk management tool.

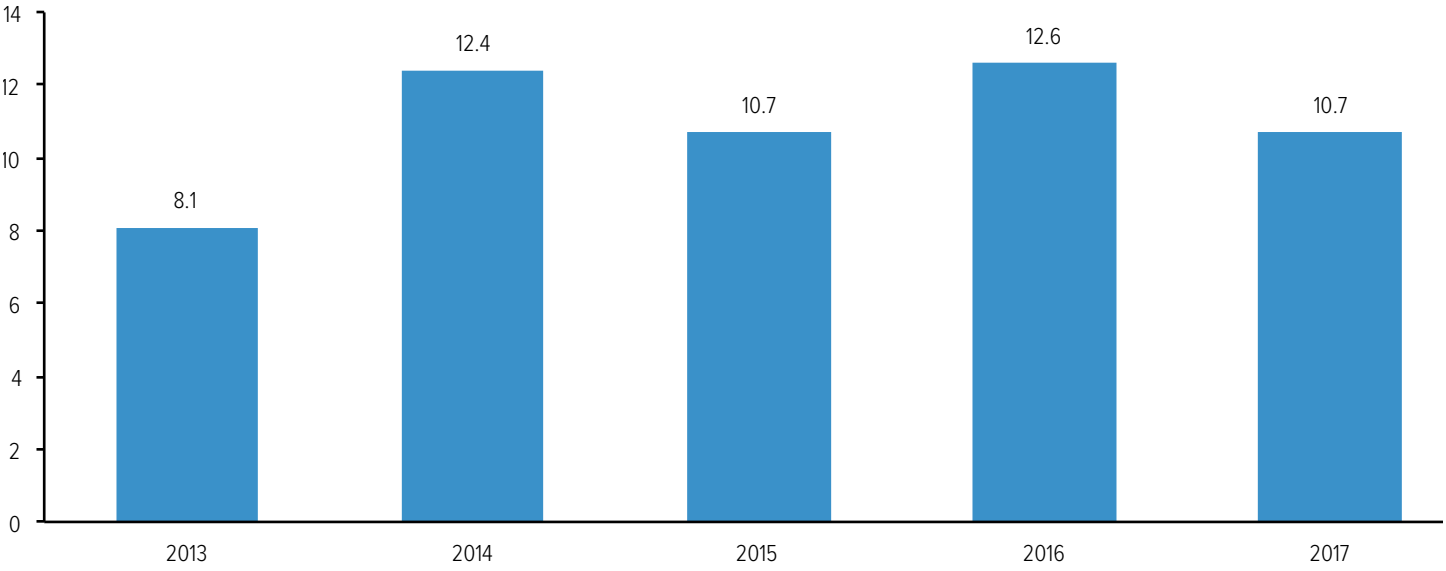
HAIL

Hail causes about $1 billion in damage to crops and property each year, according to the National Oceanic Atmospheric Administration (NOAA). Events involving wind, hail or flood accounted for $29.7 billion in insured catastrophe losses in 2016 dollars from 1996 to 2016 (not including payouts from the National Flood Insurance Program), according to Property Claim Services (PCS®), a Verisk Analytics® business. There were 6,045 major hail storms in 2017, according to the NOAA's Severe Storms database, resulting in $1.8 billion in property and crop damage.

An August 2014 report issued by Verisk Insurance Solutions showed that in the 14 years from 2000 to 2013 U.S. insurers paid almost 9 million claims for hail losses, totaling more than $54 billion. Most of those losses—70 percent—occurred during the last six years of that period. In addition to the higher number of claims, the average claim severity during those six years was 65 percent higher than the period 2000 through 2007.

Verisk's latest report, *Hail: The Hidden Risk*, says that more than 10.7 million properties in the United States were affected by one or more damaging hail events in 2017. Verisk describes hail as damaging when the hailstones are greater than an inch in diameter. The number of properties affected in 2017 was lower than the 12.6 million properties affected in 2016 and 12.4 million in 2014, and the same as in 2015, as shown in the chart below.

Estimated U.S. Properties Affected By Hail, 2013-2017[1] (millions)



[1]Defined as affected when hailstones are greater than one inch in diameter.

Verisk's research found that about 30 percent of hail claims have an error in the date of loss, and about half of those hail claims were made a year or more after the event took place, because the damage most often strikes roofs which are not inspected by homeowners often.

Texas had the largest number of properties that experienced one or more damaging hail events in 2017, with 1.3 million properties, followed by Illinois with 872,000 and Missouri with 833,000.

Top 10 States By Number Of Properties Experiencing Damaging Hail Events, 2017[1]

Rank	State	Estimated number of properties affected	Percentage of properties affected
1	Texas	1,349,374	18%
2	Illinois	872,087	24
3	Missouri	832,525	46
4	Minnesota	737,375	44
5	Oklahoma	644,803	55
6	Kansas	513,941	57
7	Indiana	456,215	18
8	Virginia	400,529	16
9	North Carolina	400,248	10
10	Colorado	374,435	22

[1]Verisk considers hail to be damaging when the hailstones are greater than 1 inch in diameter.

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Hail Fatalities, Injuries And Damage, 2013-2017[1]

Year	Fatalities	Injuries	Property damage ($ millions)	Crop damage ($ millions)	Total damage ($ millions)
2013	0	4	$1,245.5	$75.0	$1,320.5
2014	0	23	1,416.9	293.2	1,710.1
2015	0	0	586.0	133.0	719.0
2016	0	21	3,512.7	23.7	3,536.4
2017	0	14	1,722.2	59.5	1,781.8

[1]Includes the 50 states, Puerto Rico, Guam and the U.S. Virgin Islands.

Source: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service.

Top Five States By Number Of Major Hail Events, 2017[1]

Rank	State	Number of hail events
1	Texas	747
2	Kansas	590
3	Nebraska	420
4	Missouri	386
5	Oklahoma	386
	United States	**6,045**

[1]One inch in diameter or larger.

Source: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service.

TERRORISM

Nearly 3,000 people perished in the September 11, 2001, terrorist attacks in New York, Washington and Pennsylvania, excluding the 19 hijackers. Total insured losses from the terrorist attacks on the World Trade Center in New York City and the Pentagon were about $45.0 billion in 2017 dollars, including property, life, and liability insurance claim costs. Loss estimates may differ from estimates calculated by other organizations. It is the worst terrorist attack on record in terms of fatalities and insured property losses, which totaled about $25.7 billion in 2017 dollars, according to Swiss Re.

Top 20 Costliest Terrorist Acts By Insured Property Losses (2017 $ millions)

Rank	Date	Country	Location	Event	Insured property loss[1]	Fatalities
1	Sep. 11, 2001	U.S.	New York, Washington, DC, Pennsylvania	Hijacked airliners crash into World Trade Center and Pentagon	$25,674[2]	2,982
2	Apr. 24, 1993	U.K.	London	Bomb explodes near NatWest tower in the financial district	1,266	1
3	Jun. 15, 1996	U.K.	Manchester	Irish Republican Army (IRA) car bomb explodes near shopping mall	1,038	0
4	Apr. 10, 1992	U.K.	London	Bomb explodes in financial district	937	3
5	Feb. 26, 1993	U.S.	New York	Bomb explodes in garage of World Trade Center	872	6
6	Jul. 24, 2001	Sri Lanka	Colombo	Rebels destroy 3 airliners, 8 military aircraft and heavily damage 3 civilian aircraft	555	20
7	Feb. 9, 1996	U.K.	London	IRA bomb explodes in South Key Docklands	361	2
8	Jun. 23, 1985	North Atlantic	Irish Sea	Bomb explodes on board of an Air India Boeing 747	227	329
9	Apr. 19, 1995	U.S.	Oklahoma City, OK	Truck bomb crashes into government building	203	166
10	Sep. 12, 1970	Jordan	Zerqa, Dawson's Field (disused RAF airstrip in desert)	Hijacked Swissair DC-8, TWA Boeing 707, BOAC VC-10 dynamited on ground	178	0
11	Sep. 6, 1970	Egypt	Cairo	Hijacked PanAm B-747 dynamited on ground	154	0
12	Apr. 11, 1992	U.K.	London	Bomb explodes in financial district	134	0
13	Nov. 26, 2008	India	Mumbai	Attack on two hotels; Jewish center	117	172
14	Mar. 27, 1993	Germany	Weiterstadt	Bomb attack on a newly built, still unoccupied prison	99	0
15	Dec. 30, 2006	Spain	Madrid	Bomb explodes in car garage at Barajas Airport	82	2
16	Dec. 21, 1988	U.K.	Lockerbie	Bomb explodes on board of a PanAm Boeing 747	80	270
17	Jul. 25, 1983	Sri Lanka	NA	Riot	65	0
18	Jul. 7, 2005	U.K.	London	Four bombs explode during rush hour in a tube and bus	65	52
19	Nov. 23, 1996	Comoros	Indian Ocean	Hijacked Ethiopian Airlines Boeing 767-260 ditched at sea	62	127
20	Mar. 17, 1992	Argentina	Buenos Aires	Bomb attack on Israel's embassy in Buenos Aires	53	24

[1]Includes bodily injury and aviation hull losses. Updated to 2017 dollars by the Insurance Information Institute using the U.S. Bureau of Labor Statistics CPI Inflation Calculator.
[2]Differs from inflation-adjusted estimates made by other organizations due to the use of different deflators.
NA=Data not available.

Source: Swiss Re.

NUCLEAR INCIDENTS

The International Atomic Energy Agency (IAEA) rates the severity of nuclear incidents on the International Nuclear and Radiological Event Scale (INES) from one (indicating an anomaly) to seven (indicating a major event). The scale considers an event's impact based on three criteria: its effect on people and the environment; whether it caused unsafe levels of radiation in a facility; and if preventive measures did not function as intended. Scales six and seven designate full meltdowns, where the nuclear fuel reactor core overheats and melts. Partial meltdowns, in which the fuel is damaged, are rated four or five.

Japan's Nuclear and Industrial Safety Agency assigned a rating of seven to the March 2011 accident at Japan's Fukushima Daiichi nuclear power plant. The 1986 Chernobyl accident in the former Soviet Union is the only other incident to rate a seven. The Chernobyl incident killed 56 people directly and thousands of others indirectly through cancer and other diseases. The 2011 incident released high amounts of radiation and caused widespread evacuations in affected areas but only one death to date.

The 1979 Three Mile Island accident in Harrisburg, Pennsylvania, the worst nuclear accident in the United States, was designated a five. Insurers paid about $71 million in liability claims and litigation costs associated with the accident. In addition to the liability payments to the public under the Price-Anderson Act, $300 million was paid by a pool of insurers to the operator of the damaged nuclear power plant under its property insurance policy.

Selected Examples Of Historic Nuclear Events, Classified By The INES[1]

Level	INES description	Example
1	Anomaly	Breach of operating limits at nuclear facilities
2	Incident	Atucha, Argentina, 2005 - Overexposure of a worker at a power reactor exceeding the annual limit
3	Serious incident	Sellafield, U.K., 2005 - Release of large quantity of radioactive material, contained within the installation
4	Accident with local consequences	Tokaimura, Japan, 1999 - Fatal exposure of workers following an event at a nuclear facility
5	Accident with wider consequences	3 Mile Island, U.S., 1979 - Severe damage to reactor core. Minimal breach of outside environment
6	Serious accident	Kyshtym, Russia, 1957 - Significant release of radioactive material from the explosion of high activity waste tank
7	Major accident	Chernobyl, Ukraine, 1986 - Widespread health and environmental effects from explosion in power plant

[1]International Nuclear and Radiological Event Scale.
Source: International Atomic Energy Agency. INES Flyer.

FIRE

Great strides have been made in constructing fire-resistant buildings and improving fire-suppression techniques, both of which have reduced the incidence of fire. However, in terms of property losses, these advances have been somewhat offset by increases in the number and value of buildings. On average in 2017, a fire department responded to a fire every 24 seconds in the United States, according to the National Fire Protection Association. A structure fire occurred every 63 seconds, a home fire occurred every 88 seconds, and an outside property fire occurred every 51 seconds. Fires occurred in highway-type vehicles every 3 minutes and 8 seconds.

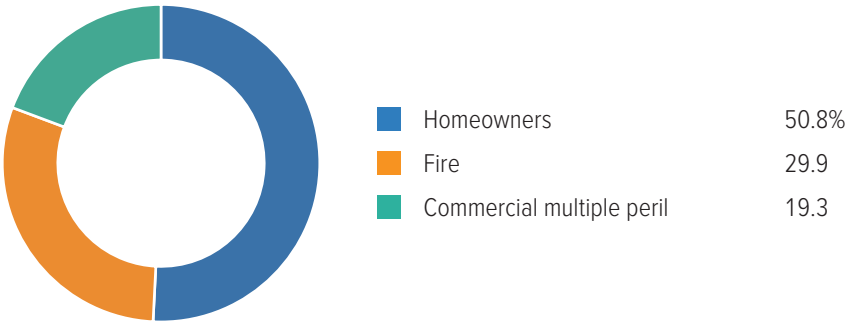
Fire Losses In The United States, 2008-2017[1]

Year	Property loss ($ millions)	Loss per capita[2]
2008	$24,734	$81.34
2009	22,911	74.68
2010	20,486	66.23
2011	19,511	62.61
2012	23,977	76.36
2013	19,054	60.25
2014	21,801	68.42
2015	19,759	61.55
2016	23,789	73.56
2017	31,186	95.75

[1]Including allowances for FAIR Plan and uninsured losses. [2]Calculated by the Insurance Information Institute using ISO property loss and population estimates from the U.S. Census Bureau, Population Division.

Source: ISO®, a Verisk Analytics® business; U.S. Census Bureau, Population Division.

Fire Losses In The United States, By Line Of Insurance, 2017[1]



[1]Estimated. Includes FAIR plan and uninsured losses.

Source: ISO®, a Verisk Analytics® business.

Structure Fires

The National Fire Protection Association (NFPA) reports that there were 499,000 structure fires in the United States in 2017, up 4.9 percent from 475,500 fires in 2016, which was the lowest number of fires since the NFPA began collecting data in 1977. Structure fires peaked at 1,098,000 in 1977 and have been trending downward over the past 40 years.

Fires in structures not related to wildfires caused $10.7 billion in property damage, up 37 percent from the 2016 loss of $7.8 billion. The average loss for these structure fires was $21,442, up 30.5 percent from a year ago. Wildfires resulted in $10 billion in direct property loss in 2017.

Structure Fires, 2008-2017[1]

Year	Number of fires	Direct property damage ($ billions)	
		As reported	In 2017 dollars
2008	515,000	$12.41	$13.91
2009	480,500	10.80	12.30
2010	482,000	9.70	10.90
2011	484,500	9.70	10.50
2012	480,500	9.80	10.50
2013	487,500	$9.50	$10.00
2014	494,000	9.80	10.10
2015	501,500	10.30	10.60
2016	475,500	7.81	8.01
2017	499,000	10.70[2]	10.70[2]

[1]Estimates based on data reported by fire departments responding to the 2017 National Fire Experience Survey. May exclude reports from all fire departments. [2]Excludes $10 billion in direct property damage from the California wildfires.

Source: Reproduced with permission from *Fire Loss in the United States During 2017* by Ben Evarts, ©2017, National Fire Protection Association https://www.nfpa.org/News-and-Research/Data-research-and-tools/US-Fire-Problem.

Civilian (Nonfirefighter) Fire Deaths And Injuries By Property Use, 2017

Property use	Civilian fire deaths	Percent change from 2016	Percent of all civilian fire deaths	Civilian fire injuries
Residential	2,710	-3%	80%	10,910
1 and 2 family homes[1]	2,290	-5	67	7,470
Apartments	340	5	10	3,130
Other residential[2]	80	23	1	310
Nonresidential structures3	105	-30	3	1,250
Highway vehicles	400	43	12	1,370
Other vehicles [4]	30	-60	1	240
All other fires5	145	71	4	900
Total	**3,400**	[6]	**100%**	**14,670**

[1]Includes mmanufactured homes. [2]Includes hotels and motels, college dormitories, boarding houses, etc. [3]Includes public assembly, educational, institutional, store and office, industry, utility, storage and special structure properties. [4]Includes trains, boats, ships, farm vehicles and construction vehicles. [5]Includes outside properties with value, as well as brush, rubbish and other outside locations. [6]Less than 1 percent.

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Structure Fires By Type Of Use, 2017[1]

Property use	Estimated number of fires	Percent change from 2016	Property loss[2] ($ millions)	Percent change from 2016
Public assembly	14,500	4%	$285	-7%
Educational	5,500	38	51	50
Institutional	7,000	27	40	8
Residential	379,000	2	7,900	36
1 and 2 family homes[3]	262,500	2	6,141	24
Apartments	95,000	4	1,600[5]	125
Other[6]	22,500	15	162	8
Stores and offices	18,000	13	763	75
Industry, utility, defense[7]	8,500	4	503	20
Storage in structures	27,500	2	834	25
Special structures	39,000	34	331	70
Total	**499,000**	**5%**	**$10,700**	**35%**

[1]Estimates based on data reported by fire departments responding to the 2017 National Fire Experience Survey. May exclude reports from all fire departments. [2]Includes overall direct property loss to contents, structures, vehicles, machinery, vegetation or any other property involved in a fire. Excludes indirect losses, such as business interruption or temporary shelter costs. [3]Includes manufactured homes. [4]Less than 0.1 percent. [5]Includes more than $400 million in large loss fires in apartment buildings under construction. [6]Includes hotels and motels, college dormitories, boarding houses, etc. [7]Excludes incidents handled only by private brigades or fixed suppression systems.

Source: Reproduced with permission from *Fire Loss in the United States During 2017* by Ben Evarts, ©2017, National Fire Protection Association https://www.nfpa.org/News-and-Research/Data-research-and-tools/US-Fire-Problem.

Top 10 Costliest Large-Loss Fires, 2017 ($ millions)

Rank	Month	State	Type of facility	Estimated loss
1	October	California	Wildland urban interface fire	$10,020.0
2	December	California	Wildland urban interface fire	1,775.2
3	July	Massachusetts	Apartments under construction	110.0
4	July	Hawaii	569-unit apartment building	107.4
5	April	Maryland	Apartments under construction	100.0
6	March	North Carolina	Apartments under construction	62.5
7	January	Florida	Paper mill	50.0
8	May	California	Apartments under construction	50.0
9	June	Massachusetts	Apartments under construction	45.0
10	March	Pennsylvania	Saw mill	35.6

Source: Reproduced with permission from *Large-Loss Fires in the United States, 2017* by Stephen G. Badger, © 2017, National Fire Protection Association https://www.nfpa.org/News-and-Research/Data-research-and-tools/US-Fire-Problem.

Top 10 Costliest Large-Loss Fires In U.S. History ($ millions)

Rank	Date	Location/event	Estimated loss[1]	
			Dollars when occurred	In 2017 dollars[2]
1	Sep. 11, 2001	World Trade Center (terrorist attacks)	$33,400[3]	$46,300[3]
2	Oct. 8, 2017	Northern, CA, wildland urban interface fire	10,000	10,000
3	Apr. 18, 1906	San Francisco Earthquake and Fire	350	9,500
4	Oct. 8-9, 1871	Great Chicago Fire	168	3,400
5	Oct. 20, 1991	Oakland, CA, firestorm	1,500	2,700
6	Oct. 20, 2007	San Diego County, CA, The Southern California Firestorm	1,800	2,100
7	Dec. 2017	Southern, CA, wildland urban interface fire	1,800	2,100
8	Sep. 12, 2015	Valley Fire, CA, wildland urban interface fire	1,500	1,600
9	Nov. 9, 1872	Great Boston Fire	75	1,500
10	Oct. 23, 1989	Pasadena, Texas, polyolefin plant	750	1,500

[1]Loss estimates are from National Fire Protection Association (NFPA) records. The list is limited to fires for which some reliable dollar loss estimates exist. [2]Adjustment to 2017 dollars made by the NFPA using the Consumer Price Index, including the U.S. Census Bureau's estimates of the index for historical times. [3]Differs from inflation-adjusted estimates made by other organizations due to the use of different deflators.

Source: Reproduced with permission, © 2017, National Fire Protection Association https://www.nfpa.org/News-and-Research/Data-research-and-tools/US-Fire-Problem.

Top Most Catastrophic Multiple-Death Fires, 2017[1]

Rank[2]	Month	State	Type of facility	Deaths
1	October	California	Wildfires	44
2	December	New York	5-story apartment building	13
3	May	Ohio	Single-family home	7
4	January	Maryland	Single-family home	6
4	March	Oregon	Single-family home	6
4	October	Texas	Single-family home	6
4	November	Illinois	Single-family home	6
8	March	Massachusetts	Single-family home	5
8	March	Michigan	9-unit apartment building	5
8	April	South Dakota	3-unit apartment building	5
8	April	Tennessee	Manufactured single-family home	5
8	April	New York	Single-family home	5
8	October	Ohio	Single-family home	5
8	September	Alaska	Single-family home	5
8	December	Iowa	Single-family home	5
8	May	Wisconsin	Corn milling plant	5

[1]Fires that kill five or more people in residential property, or three or more people in nonhome or nonstructural property. [2]Fires with the same number of deaths receive the same rank.

Source: Reproduced with permission, based on data from *Catastrophic Multiple-Death Fires in 2017* by Stephen G. Badger, © 2017, National Fire Protection Association https://www.nfpa.org/News-and-Research/Data-research-and-tools/US-Fire-Problem.

Top 10 Most Catastrophic Multiple-Death Fires In U.S. History[1]

Rank	Date	Location/event	Deaths
1	Sep. 11, 2001	New York, NY, World Trade Center terrorist attack	2,666[2]
2	Apr. 27, 1865	Mississippi River, SS Sultana steamship	1,547
3	Oct. 8, 1871	Peshtigo, WI, forest fire	1,152
4	Jun. 15, 1904	New York, NY, General Slocum steamship	1,030
5	Dec. 30, 1903	Chicago, IL, Iroquois Theater	602
6	Oct. 12, 1918	Cloquet, MN, forest fire	559
7	Nov. 28, 1942	Boston, MA, Cocoanut Grove night club	492
8	Apr. 16, 1947	Texas City, TX, SS Grandcamp and Monsanto Chemical Co. plant	468
9	Sep. 1, 1894	Hinckley, MN, forest fire	418
10	Dec. 6, 1907	Monongha, WV, coal mine explosion	361

[1]Fires that kill five or more people in home property, or three or more people in nonhome or nonstructural property. [2]Revised to 2,976 by government officials.
Source: Reproduced with permission, © 2017, National Fire Protection Association https://www.nfpa.org/News-and-Research/Data-research-and-tools/US-Fire-Problem.

CRIME: ARSON

Arson is the act of deliberately setting fire to a building, car or other property for fraudulent or malicious purposes and is a crime in all states. According to the National Fire Protection Association (NFPA), there were 22,500 fires intentionally set in structures in 2017, an increase of 13 percent from 2016. Intentionally set fires in structures resulted in 280 civilian deaths in 2017, a decrease of 10 percent from 2016. Intentionally set structure fires resulted in $582 million in property loss, up 23 percent from 2016. In addition, in 2017 there were also an estimated 8,500 intentionally set vehicle fires, a drop of 11 percent compared to 2016. These fires resulted in $75 million in property loss, an increase of 88 percent from 2016.

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In 2017 property loss from intentionally set structure fires rose 23 percent from 2016, according to the National Fire Protection Association, while the number of fires rose 13 percent.

Intentionally set fires in vehicles fell 11 percent in 2016 while the property loss from those fires increased 88 percent.

The property loss from all intentionally set fires (structures and vehicles) amounted to $657 million in 2017, up 28 percent from $513 million in 2016.

Intentionally Set Fires, 2008-2017

	Structures		Vehicles[2]	
Year	Number of fires	Property loss ($ millions)[1]	Number of fires	Property loss ($ millions)
2008	30,500	$866	17,500	$139
2009	26,500	684	15,000	108
2010	27,500	585	14,000	89
2011	26,500	601	14,000	88
2012	26,000	581	12,500	480[3]
2013	22,500	577	10,500	86
2014	19,000	613	8,000	116
2015	23,000	460	10,000	74
2016	20,000	473	9,500	40
2017	22,500	582	8,500	75

[1]Includes overall direct property loss to contents, structures, vehicles, machinery, vegetation or any other property involved in a fire. Excludes indirect losses, such as business interruption or temporary shelter costs. [2]Includes highway vehicles, trains, boats, ships, aircraft and farm and construction vehicles. [3]Includes $400 million in property loss from an intentionally set fire aboard the submarine USS Miami.

Source: Reproduced with permission from *Fire Loss in the United States During 2017* by Ben Evarts, ©National Fire Protection Association; earlier data from prior reports (www.nfpa.org).

CRIME: PROPERTY

The Federal Bureau of Investigation's (FBI) *Uniform Crime Reports* defines property crime as larceny-theft, motor vehicle theft and burglary. These crimes involve the unlawful taking of money or property without the use of force or threat of force against the victims. Larceny theft involves the successful or attempted taking of property from another; it includes shoplifting, pick-pocketing, purse-snatching and bicycle theft. While the theft of motor vehicles is a separate offense category, the thefts of motor vehicle parts and accessories are considered larceny. Burglary involves the unlawful entry into a structure such as a home or business.

Number And Rate Of Property Crime Offenses, 2008-2017[1]

	Burglary		Larceny-theft	
Year	Number	Rate	Number	Rate
2008	2,228,887	733.0	6,586,206	2,166.1
2009	2,203,313	717.7	6,338,095	2,064.5
2010	2,168,459	701.0	6,204,601	2,005.8
2011	2,185,140	701.3	6,151,095	1,974.1
2012	2,109,932	672.2	6,168,874	1,965.4
2013	1,932,139	610.5	6,019,465	1,901.9
2014	1,713,153	537.2	5,809,054	1,821.5
2015	1,587,564	494.7	5,723,488	1,783.6
2016	1,516,405	468.9	5,644,835	1,745.4
2017	1,401,840	430.4	5,519,107	1,694.4
	Motor vehicle theft		Total property crime[2]	
Year	Number	Rate	Number	Rate
2008	959,059	315.4	9,774,152	3,214.6
2009	795,652	259.2	9,337,060	3,041.3
2010	739,565	239.1	9,112,625	2,945.9
2011	716,508	230.0	9,052,743	2,905.4
2012	723,186	230.4	9,001,992	2,868.0
2013	700,288	221.3	8,651,892	2,733.6
2014	686,803	215.4	8,209,010	2,574.1
2015	713,063	222.2	8,024,115	2,500.5
2016	767,290	237.3	7,928,530	2,451.6
2017	773,139	237.4	7,694,086	2,362.2

[1]Rate is per 100,000 inhabitants. [2]Property crimes are the offenses of burglary, larceny-theft and motor vehicle theft.
Source: U.S. Department of Justice, Federal Bureau of Investigation, *Uniform Crime Reports*.

CRIME: CYBER AND IDENTITY THEFT

As businesses increasingly depend on electronic data and computer networks to conduct their daily operations, growing pools of personal and financial information are being transferred and stored online. This can leave individuals exposed to privacy violations, and financial institutions and other businesses exposed to potentially enormous liability, if and when a data security breach occurs.

Interest in cyber insurance and cyberrisk continues to grow as a result of high-profile data breaches and awareness of the almost endless range of exposures businesses face. Through November in 2018, 500 million records were exposed in November from Marriott International; 340 million records were exposed in June from Exactis, a marketing firm; 150 million at Under Armour; 92 million at MyHeritage, a genealogy firm; and 87 million records at Facebook. In 2017 the largest U.S. credit bureau, Equifax, suffered a breach that exposed the personal data of 145 million people, including Social Security numbers. It was among the worst breaches on record because of the amount of sensitive information stolen.

Cyberattacks and breaches have grown in frequency, and losses are on the rise. Breaches again hit a new record in 2017, with 1,579 breaches tracked, up 44.7 percent from 1,091 in 2016, according to the Identity Theft Resource Center (IRTC). The number of records exposed rose to about 179 million, compared with 37 million in 2016. The majority of the data breaches in 2017 affected the business sector, with 870 breaches or 55 percent of the total number of breaches. The business category suffered the most breaches for the third year in a row. Medical/healthcare organizations were affected by 374 breaches (23.7 percent of total breaches). The banking/credit/financial sector ranked third as it sustained 134 breaches (8.5 percent of all breaches). These figures do not include the many attacks that go unreported and undetected. Despite conflicting analyses, the costs associated with these losses are increasing. McAfee and the Center for Strategic and International Studies (CSIS) estimated the likely annual cost to the global economy from cybercrime is $445 billion a year, with a range of between $375 billion and $575 billion.

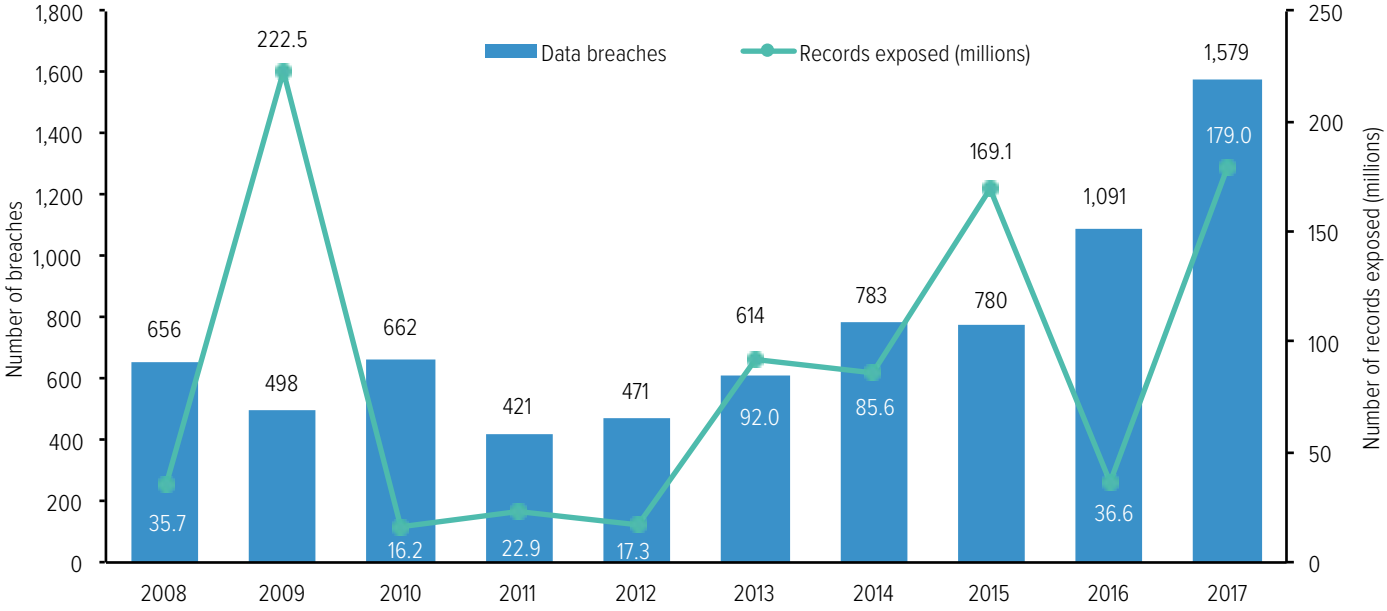
In 2018 the ITRC tracked 1,138 breaches through November. The number of records exposed totaled about 562 million. The business category continues to be the most affected sector, with 524 breaches, or 46 percent of all breaches detected. The business sector breaches affected 532 million records, or 95 percent of all records affected.

The cost of cybercrime is growing. The average cost of data breach globally was $3.86 million in 2018, up 6.4 percent from $3.62 million in 2017, according to a study from IBM and the Ponemon Institute. Researchers polled 477 organizations to determine what costs they incurred after a data breach, including systems to help victims with losses and expenses, notification costs and lost business costs such as those associated with business disruption, revenue losses and reputation costs. The study also found that the average cost for each lost record rose 4.8 percent in 2018 from $141 to $148 and the average size of data breaches studied rose by 2.2 percent. In the United States, the average cost of a data breach was $7.91 million. The United States had the highest average post data breach response cost: $1.76 million.

Cyber insurance evolved as a product in the United States in the mid- to late-1990s as insurers have had to expand coverage for a risk that is rapidly shifting in scope and nature. According to the National Association of Insurance Commissioners, 170 U.S. insurers reported writing some cyber insurance premiums in 2017, based on the Cybersecurity and Identity Theft Coverage Supplement for insurer financial statements. Direct premiums written totaled $1.86 billion in 2017, at companies that can report premiums for stand-alone and coverage provided as part of a package policies.

According to the Insurance Information Institute's 2017 report, *Protecting against #cyberfail: Small business and cyber insurance*, insurers foresee substantial growth coming from the small business segment, as these companies become aware of the possibilities of liability, especially due to a breach and the resulting response costs arising out of the possession of private data. According to the Insurance Information Institute (I.I.I.) and J.D. Power 2018 Small Business Cyber Insurance and Security Spotlight Survey℠, 10 percent of small businesses surveyed suffered one or more cyber incidents in the prior year, and the average cost of cyber-related losses over the past year was $188,400. Only about one-third of firms surveyed had cyber insurance, nearly 60 percent of respondents said their company is very concerned about cyber incidents–and 70 percent think that the risk of being victimized by a cyberattack is growing at an alarming rate. Insurers can reach these potential small business customers through education, training and risk assessment services regarding cybersecurity.

Number Of Data Breaches And Records Exposed, 2008-2017[1]



[1]As of January 22, 2018.
Source: Identity Theft Resource Center.

Data Breaches and Records Exposed, 2017

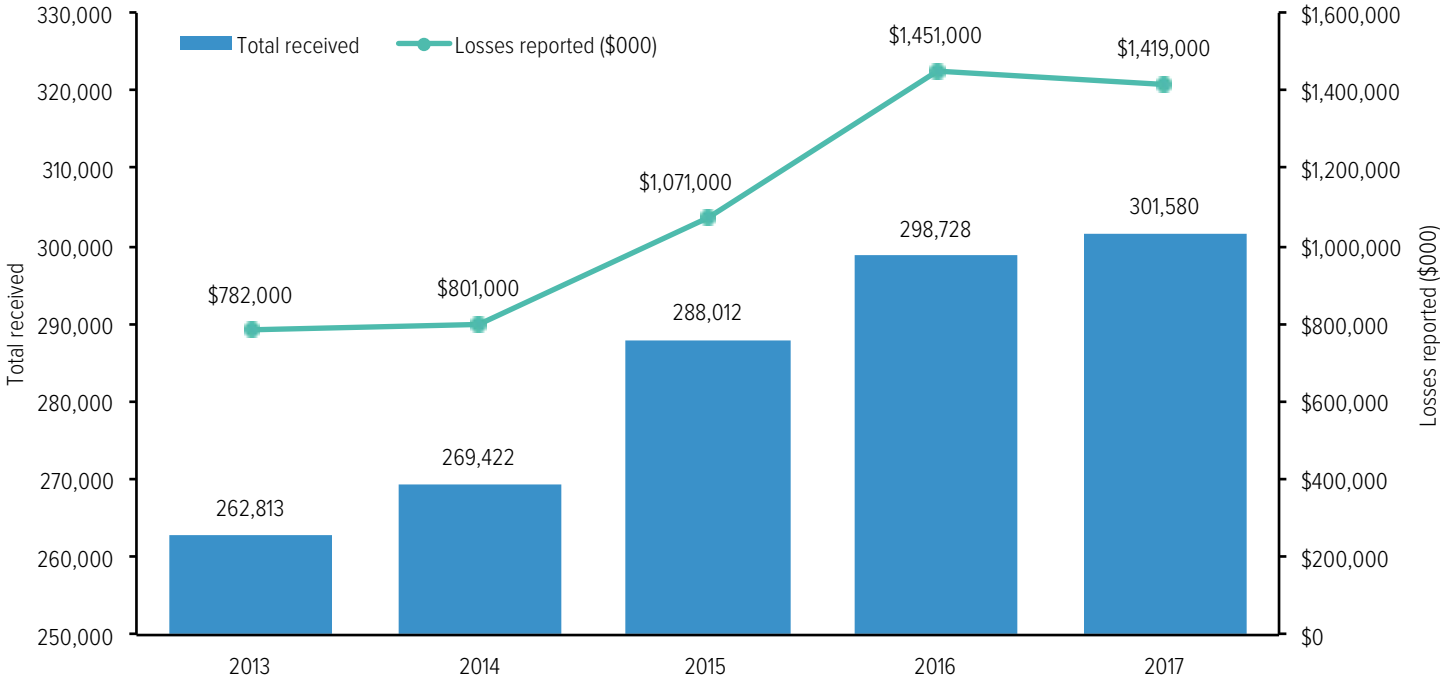
Category	Number of breaches	Percent of total
Business	870	55.1%
Medical/healthcare	374	23.7
Banking/credit/financial	134	8.5
Educational	127	8.0
Government/military	74	4.7

Category	Number of records exposed (000)	Percent of total
Business	163,449	91.3%
Government/military	5,903	3.3
Medical/healthcare	5,062	2.8
Banking/credit/financial	3,122	1.7
Educational	1,418	0.8

Source: Identity Theft Resource Center.

The Internet Crime Complaint Center (IC3), a joint project of the Federal Bureau of Investigation, the National White Collar Crime Center and the Bureau of Justice Assistance monitors Internet-related criminal complaints. In 2017 the IC3 received and processed 301,580 complaints. One out of five victims (21.2 percent) was over the age of 60, the most victims by age. People between the ages of 30 and 39 ranked second at 19.4 percent, followed by victims between the ages of 40 and 49 with 19.2 percent. Victim losses totaled $1.42 billion. The most common complaint received in 2017 involved nonpayment or nondelivery of goods or services, which affected about 84,000 victims. There were about 31,000 victims affected by personal data breaches. Identity theft—where a person's name or Social Security number is used without permission—affected about 18,000 victims.

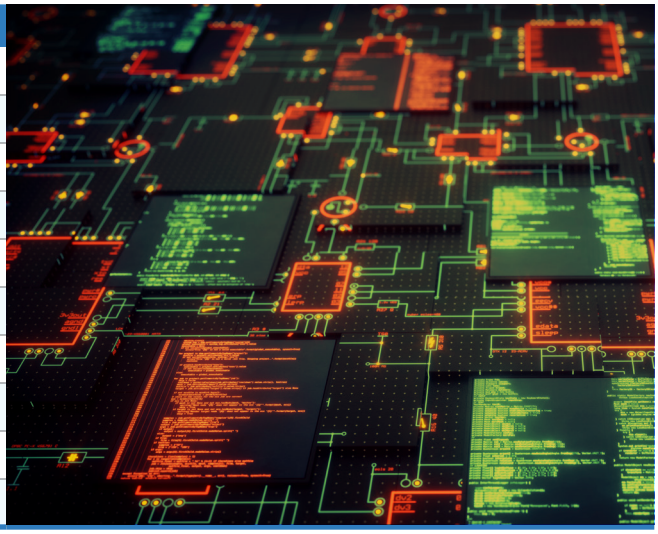
Cybercrime Complaints, 2013-2017[1]



[1]Based on complaints submitted to the Internet Crime Complaint Center.
Source: Internet Crime Complaint Center.

Top 10 States By Number Of Cybercrime Victims, 2017[1]

Rank	State	Number
1	California	41,974
2	Florida	21,887
3	Texas	21,852
4	New York	17,622
5	Pennsylvania	11,348
6	Virginia	9,436
7	Illinois	9,381
8	Ohio	8,157
9	Colorado	7,909
10	New Jersey	7,657



[1]Based on the total number of complaints submitted to the Internet Crime Complaint Center via its website from each state and the District of Columbia where the complainant provided state information.

Source: Internet Crime Complaint Center.

Top 10 Writers Of Cybersecurity Insurance By Direct Premiums Written, 2017[1] ($000)

Rank	Group/company	Direct premiums written[2]	As a percent of total
1	Chubb Ltd.	$316,253	17.0%
2	American International Group	228,739	12.3
3	XL Group Ltd.	177,879	9.6
4	Travelers Companies Inc.	119,133	6.4
5	AXIS	101,509	5.5
6	Beazley Insurance Co.	95,007	5.1
7	CNA Financial Corp.	73,127	3.9
8	BCS Financial Corp.	69,899	3.8
9	Liberty Mutual	60,013	3.2
10	Zurich Insurance Group[3]	43,040	2.3
	Total, top 10	**$1,284,600**	**69.1%**
	Total[4]	**$1,859,283**	**100.0%**

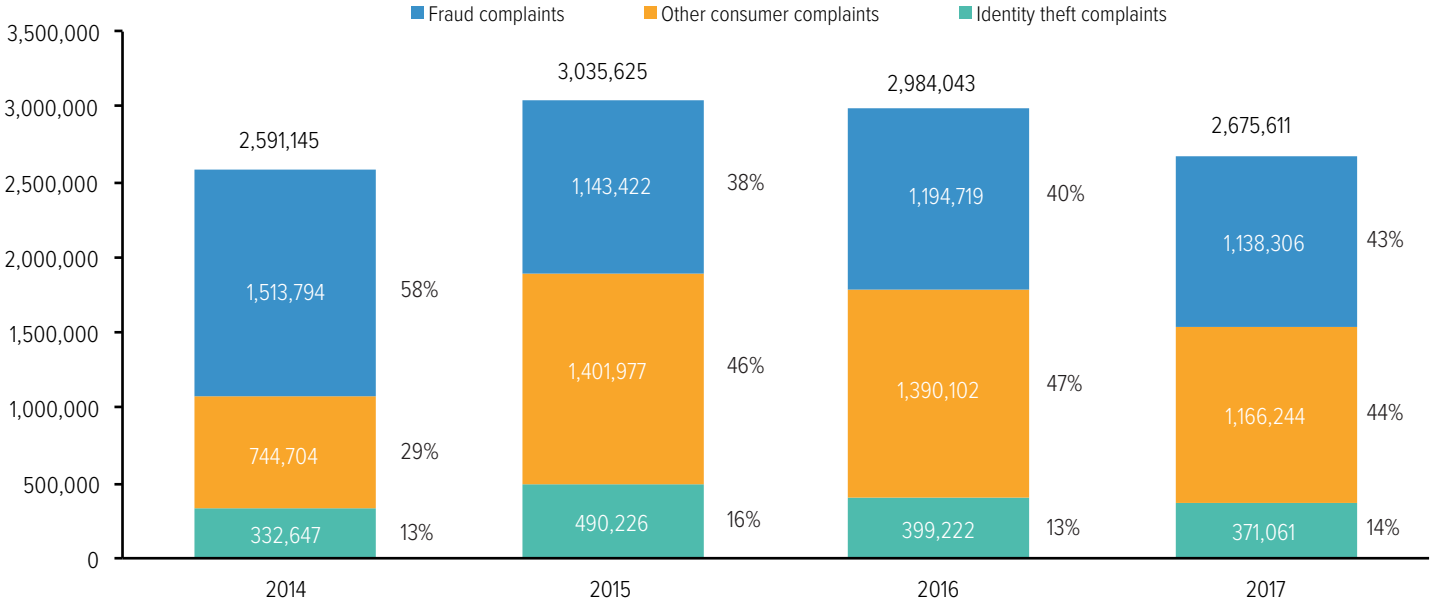
[1]Includes stand-alone policies and the cybersecurity portion of package policies. Does not include premiums from companies that cannot report premiums for cybersecurity coverage provided as part of package policies. [2]Before reinsurance transactions. [3]Data for Farmers Group of Insurance Companies and Zurich Financial Group (which owns Farmers' management company) are reported separately by S&P Global Market Intelligence. [4]Includes only companies that can report premiums for stand-alone cybersecurity coverage and coverage provided as part of package policies.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Consumer Fraud and Identity Theft

The Consumer Sentinel Network, maintained by the Federal Trade Commission (FTC), tracks consumer fraud and identity theft complaints that have been filed with federal, state and local law enforcement agencies and private organizations. Of the 2.7 million identity theft and fraud reports received in 2017, 1.1 million were fraud-related, costing consumers almost $905 million. The median amount consumers paid in these cases was $429. Within the fraud category, imposter scams were the most reported and ranked first among the top 10 fraud categories identified by the FTC. They accounted for $328 million in losses. In 2017, 14 percent of all complaints were related to identity theft. Identity theft complaints were the third most reported to the FTC and had increased almost 70 percent from 2013 to 2015 but fell about 24 percent from 2015 to 2017. Credit card fraud was the most reported incident to the Consumer Sentinel Network, with 133,000 reports.

Identity Theft And Fraud Complaints, 2014-2017[1]



[1]Percentages are based on the total number of Consumer Sentinel Network complaints by calendar year. These figures exclude "Do Not Call" registry complaints.

Source: Federal Trade Commission, Consumer Sentinel Network.

How Victims' Information Is Misused, 2017[1]

Type of identity theft fraud	Percent
Miscellaneous identity theft[2]	51.9%
Credit card fraud	16.8
New accounts	12.7
Employment or tax-related fraud	10.1
Tax fraud	7.5
Phone or utilities fraud	7.4
Bank fraud[3]	6.4
Loan or lease fraud	4.2
Government documents or benefits fraud	3.2

[1]Percentages are based on the total number of identity theft complaints in the Federal Trade Commission's Consumer Sentinel Network (371,061 in 2017). [2]Includes online shopping and payment account fraud, email and social media fraud, and medical services, insurance and securities account fraud, and other identity theft. [3]Includes fraud involving checking, savings, and other deposit accounts and debit cards and electronic fund transfers.

Source: Federal Trade Commission.

Identity Theft By State, 2017

State	Complaints per 100,000 population[1]	Number of complaints	Rank[2]
Alabama	74	3,609	33
Alaska	67	494	40
Arizona	119	8,330	11
Arkansas	69	2,084	37
California	140	55,418	4
Colorado	108	6,051	14
Connecticut	114	4,078	13
Delaware	126	1,211	1
D.C.	192	1,333	7
Florida	149	31,167	3
Georgia	120	12,548	10
Hawaii	62	890	43
Idaho	79	1,356	28
Illinois	124	15,841	8
Indiana	75	5,027	32
Iowa	59	1,870	49
Kansas	72	2,100	35
Kentucky	69	3,060	37
Louisiana	71	3,340	36
Maine	60	806	48
Maryland	129	7,788	5
Massachusetts	88	6,016	24
Michigan	151	15,027	2
Minnesota	78	4,324	31
Mississippi	69	2,064	37
Missouri	82	4,994	26
Montana	61	638	45
Nebraska	61	1,170	45
Nevada	128	3,828	6
New Hampshire	82	1,097	26
New Jersey	106	9,533	15
New Mexico	91	1,909	20
New York	103	20,397	16
North Carolina	92	9424	19
North Dakota	62	467	43
Ohio	78	9,121	30
Oklahoma	74	2,901	33
Oregon	90	3,714	21
Pennsylvania	97	12,468	18
Puerto Rico	61	2,046	45
Rhode Island	123	1,302	9
South Carolina	90	4,509	21
South Dakota	46	403	52
Tennessee	83	5,586	25
Texas	118	33,454	12
Utah	79	2,452	28
Vermont	57	354	50
Virginia	90	7,656	21
Washington	99	7,360	17
West Virginia	55	1,000	51
Wisconsin	64	3,731	42
Wyoming	67	389	40

[1]Population figures are based on the 2017 U.S. Census population estimates. [2]Ranked by complaints per 100,000 population. States with the same number of complaints per 100,000 population receive the same rank.

Source: Federal Trade Commission, Consumer Sentinel Network.

The Scope Of Identity Theft

According to 2018 Identity Fraud: Fraud Enters a New Era of Complexity from Javelin Strategy & Research, in 2017, there were 16.7 million victims of identity fraud, a record high that followed a previous record the year before. Criminals are engaging in complex identity fraud schemes that are leaving record numbers of victims in their wake. The amount stolen hit $16.8 billion in 2017 as 30 percent of U.S. consumers were notified of exposure to a data breach, an increase of 12 percent from 2016. For the first time, more Social Security numbers were exposed than credit card numbers. Following the introduction of microchip equipped credit cards in 2015 in the United States, which make the cards difficult to counterfeit, criminals focused on new account fraud. New account fraud occurs when a thief opens a credit card or other financial account using a victim's name and other stolen personal information. According to the Javelin study, account takeovers tripled in 2017 from 2016, with losses totaling $5.1 billion.

Top 10 Writers Of Identity Theft Insurance By Direct Premiums Written, 2017[1] ($000)

Rank	Group/company	Direct premiums written[2]	As a percent of total
1	Nationwide Mutual Group	$34,329	14.7%
2	State Farm Mutual Automobile Insurance	29,086	12.5
3	Travelers Companies Inc.	24,750	10.6
4	Markel Corp.	12,132	5.2
5	Liberty Mutual	11,326	4.9
6	Hanover Insurance Group Inc.	11,316	4.9
7	Allstate Corp.	11,167	4.8
8	Erie Insurance Group	8,513	3.7
9	Farmers Insurance Group[3]	8,275	3.6
10	American Family Insurance Group	7,904	3.4
	Total, top 10	**$158,796**	**68.2%**
	Total[4]	**$232,932**	**100.0%**

[1]Includes stand-alone policies and the identity theft portion of package policies. Does not include premiums from companies that cannot report premiums for identity theft coverage provided as part of package policies. [2]Before reinsurance transactions. [3]Data for Farmers Group of Insurance Companies and Zurich Financial Group (which owns Farmers' management company) are reported separately by S&P Global Market Intelligence. [4]Includes only companies that can report premiums for stand-alone identity theft coverage and coverage provided as part of package policies.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

MOTOR VEHICLES: CRASHES

The National Highway Traffic Safety Administration (NHTSA) reports that 37,133 people died in motor vehicle crashes in 2017, down 1.8 percent from 37,806 in 2016, the first decline since 2014. According to NHTSA, fatalities decreased in 2017 for almost all segments of the population, such as motorcyclists, pedestrians, and alcohol-impaired and speed-related fatalities but rose for SUV occupants and in crashes involving large trucks. The fatality rate, measured as deaths per 100 million vehicle miles traveled, dropped to 1.16 in 2017, from 1.19 in 2016. NHTSA property damage figures shown below are based on accidents reported to the police and exclude fender benders.

Traffic Deaths, 2008-2017

Year	Fatalities	Annual percent change	Fatality rate per 100 million vehicle miles traveled	Fatality rate per 100,000 registered vehicles
2008	37,423	-9.3%	1.26	14.43
2009	33,883	-9.5	1.15	13.08
2010	32,999	-2.6	1.11	12.82
2011	32,479	-1.6	1.10	12.25
2012	33,782	4.0	1.14	12.72
2013	32,894	-2.6	1.10	12.21
2014	32,744	-0.5	1.08	11.92
2015	35,485	8.4	1.15	12.61
2016	37,806	6.5	1.19	13.01
2017	37,133	-1.8	1.16	NA

NA=Data not available.
Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

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Speeding-related fatalities fell by 5.6 percent in 2017 to 9,717 from 10,291 in 2016.

The number of fatalities in distraction-affected crashes in 2017 was 3,166, or 8.5 percent of total fatalities.

The number of fatalities involving a drowsy driver in 2017 was 795, or 2.1 percent of total fatalities.

Motor Vehicle Crashes, 2007-2016

Year	Fatal	Injury	Property damage only	Total crashes
2007	37,435	1,711,000	4,275,000	6,024,000
2008	34,172	1,630,000	4,146,000	5,811,000
2009	30,862	1,517,000	3,957,000	5,505,000
2010	30,296	1,542,000	3,847,000	5,419,000
2011	29,757	1,530,000	3,778,000	5,338,000
2012	31,006	1,634,000	3,950,000	5,615,000
2013	30,057	1,591,000	4,066,000	5,687,000
2014	30,056	1,648,000	4,387,000	6,064,000
2015	32,539	1,715,000	4,548,000	6,296,000
2016	34,439	2,177,000	5,065,000	7,277,000

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

Motor Vehicle Traffic Deaths By State, 2016-2017

State	Number of deaths		Percent change
	2016	2017	
Alabama	1,083	948	-12.5%
Alaska	84	79	-6.0
Arizona	952	1,000	5.0
Arkansas	561	493	-12.1
California	3,837	3,602	-6.1
Colorado	608	648	6.6
Connecticut	304	278	-8.6
Delaware	119	119	0.0
D.C.	27	31	14.8
Florida	3,176	3,112	-2.0
Georgia	1,556	1,540	-1.0
Hawaii	120	107	-10.8
Idaho	253	244	-3.6
Illinois	1,078	1,097	1.8
Indiana	829	914	10.3
Iowa	402	330	-17.9
Kansas	429	461	7.5
Kentucky	834	782	-6.2
Louisiana	757	760	0.4
Maine	160	172	7.5
Maryland	522	550	5.4
Massachusetts	387	350	-9.6
Michigan	1,065	1,030	-3.3
Minnesota	392	357	-8.9
Mississippi	687	690	0.4
Missouri	947	930	-1.8
Montana	190	186	-2.1%
Nebraska	218	228	4.6
Nevada	329	309	-6.1
New Hampshire	136	102	-25.0
New Jersey	602	624	3.7
New Mexico	405	379	-6.4
New York	1,041	999	-4.0
North Carolina	1,450	1,412	-2.6
North Dakota	113	115	1.8
Ohio	1,132	1,179	4.2
Oklahoma	687	655	-4.7
Oregon	498	437	-12.2
Pennsylvania	1,188	1,137	-4.3
Rhode Island	51	83	62.7
South Carolina	1,020	988	-3.1
South Dakota	116	129	11.2
Tennessee	1,037	1,040	0.3
Texas	3,797	3,722	-2.0
Utah	281	273	-2.8
Vermont	62	69	11.3
Virginia	760	839	10.4
Washington	536	565	5.4
West Virginia	269	303	12.6
Wisconsin	607	613	1.0
Wyoming	112	123	9.8
United States	**37,806**	**37,133**	**-1.8%**

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

Vehicles Involved In Fatal Crashes By Vehicle Type And Crash Severity, 2007 And 2016

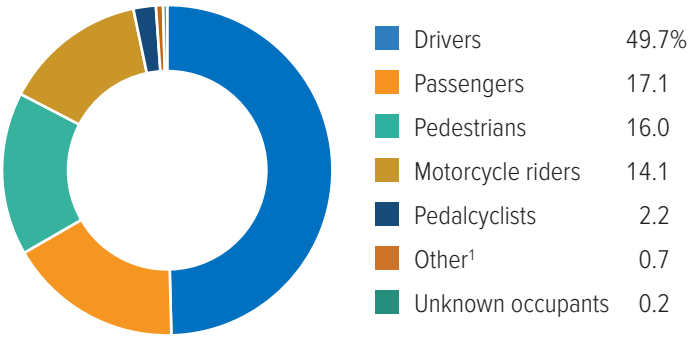
Vehicles Involved	2007	2016
Passenger cars		
Involved in crashes	22,856	20,839
Rate per 100 million vehicle miles traveled	1.47	1.45
Rate per 100,000 registered vehicles	16.57	15.45
Light trucks[1]		
Involved in crashes	21,810	20,069
Rate per 100 million vehicle miles traveled	1.92	1.42
Rate per 100,000 registered vehicles	21.63	15.20
Motorcycles		
Involved in crashes	5,306	5,421
Rate per 100 million vehicle miles traveled	24.80	26.52
Rate per 100,000 registered vehicles	74.33	62.46

[1]Trucks with 10,000 pounds or less gross vehicle weight. Includes pickups, vans, truck-based station wagons and utility vehicles.

Source: U.S. Department of Transportation (USDOT), National Highway Traffic Safety Administration (NHTSA). Vehicle miles traveled - USDOT, Federal Highway Administration, revised by NHTSA; Registered passenger cars and light trucks - R.L. Polk & Co; Registered motorcycles - USDOT, Federal Highway Administration.

According to the National Highway Traffic Safety Administration, vehicle occupants accounted for 67 percent of traffic deaths in 2016. Motorcycle riders accounted for 14 percent. Pedestrians accounted for another 16 percent; pedalcyclists, other nonoccupants, and unknown occupants accounted for the remainder.

Motor Vehicle Deaths By Activity Of Person Killed, 2016



[1]Includes other nonoccupants.

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

Sex Of Drivers Involved In Crashes, 2007-2016[1]

	Drivers in fatal crashes					
	Male		Female		Total	
Year	Number	Rate[2]	Number	Rate[2]	Number	Rate[2]
2007	40,764	39.83	14,101	13.67	54,872	26.7
2008	36,825	35.60	12,536	11.99	49,369	23.7
2009	32,690	31.42	11,797	11.22	44,492	21.3
2010	31,897	30.62	11,796	11.18	43,697	20.8
2011	31,771	30.34	11,227	10.51	43,001	20.3
2012	33,209	31.65	11,557	10.82	44,773	21.2
2013	32,457	30.92	11,382	10.63	43,849	20.7
2014	32,462	30.66	11,250	10.40	43,721	20.4
2015	35,679	33.15	12,332	11.17	48,029	22.0
2016	37,352	34.09	13,208	11.78	50,581	22.8

[1]Includes motorcycle riders and restricted and graduated drivers license holders in some states. [2]Rate per 100,000 licensed drivers.
Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

Teenage Drivers

Motor vehicle crashes are the leading cause of death among teens according to the Centers for Disease Control's Teen Driver Fact Sheet. According to the National Highway Traffic Safety Administration (download here), 1,908 drivers between the ages of 15 to 20 died in motor vehicle crashes in 2016, basically unchanged from 1,903 in 2015. Drivers between the ages of 15 to 20 accounted for 9 percent of all drivers involved in fatal crashes in 2016. In contrast, young drivers accounted for 5.4 percent of total drivers in the United States. Twenty-four percent of drivers between the ages of

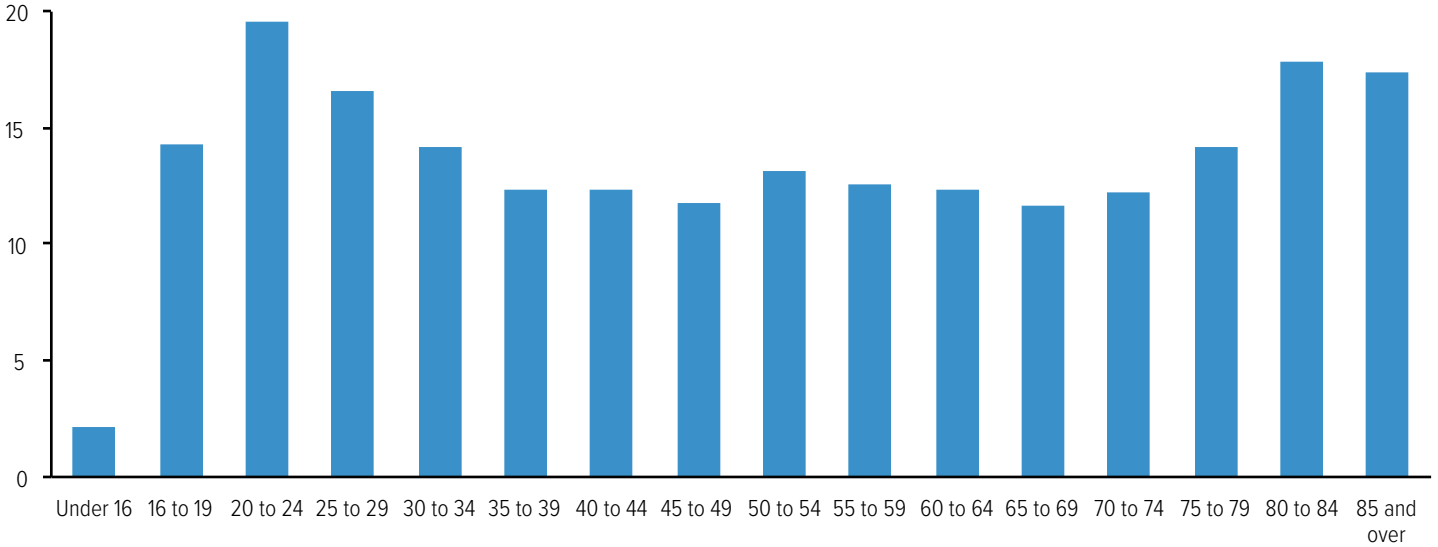
15 to 20 who were killed in motor vehicle crashes in 2016 had been drinking some amount of alcohol; 19 percent were alcohol-impaired, which is defined by a blood alcohol content of 0.08 grams per deciliter or higher. Almost half (47 percent) of the young drivers killed in crashes in 2016 where restraint use was known were unrestrained at the time of the crash.

Drivers In Fatal Motor Vehicle Crashes By Age, 2016

Age group	Number of licensed drivers	Percent of total	Drivers in fatal crashes	Involvement rate[1]
16 to 20	12,002,717	5.4%	4,412	36.76
21 to 24	14,460,176	6.5	5,233	36.19
25 to 34	39,194,065	17.7	10,815	27.59
35 to 44	36,500,347	16.5	8,116	22.24
45 to 54	39,407,317	17.8	7,946	20.16
55 to 64	38,379,823	17.3	6,966	18.15
65 to 74	26,070,715	11.8	4,122	15.81
Over 74	15,633,421	7.1	2,971	19.00
Total	**221,711,918**	**100.0%**	**51,914[2]**	**23.42**

[1]Per 100,000 licensed drivers. [2]Includes drivers under the age of 16 and 1,071 drivers of unknown age.
Source: U.S. Department of Transportation, National Highway Traffic Safety Administration; Federal Highway Administration.

Motor Vehicle Deaths Per 100,000 Persons By Age, 2016



Source: Insurance Institute for Highway Safety.

Driver Behavior

The National Highway Traffic Safety Administration has developed a list of driver behaviors as factors in fatal crashes. Speeding is at the top of the list of related factors for drivers involved in fatal crashes. In 2017, 9,234 drivers who were involved in fatal crashes (or almost 18 percent) were speeding. Ranking second was the influence of alcohol, drugs or medication, affecting 5,592 drivers, or about 11 percent of all drivers involved in fatal crashes. Failure to stay in the proper lane, and failure to yield the right of way were cited as third and fourth, with a total of about 7,500 drivers, or almost 15 percent of all drivers in fatal crashes.Distracted drivers were the fifth most likely to be involved in a fatal crash, with 3,210 drivers or 6 percent of all drivers in fatal crashes.

Driving Behaviors Reported For Drivers And Motorcycle Operators Involved In Fatal Crashes, 2016

Behavior	Number	Percent
Driving too fast for conditions or in excess of posted limit or racing	9,234	17.8%
Under the influence of alcohol, drugs, or medication	5,592	10.8
Failure to keep in proper lane	3,890	7.5
Failure to yield right of way	3,659	7.0
Distracted (phone, talking, eating, object, etc.)	3,210	6.2
Operating vehicle in a careless manner	2,696	5.2
Failure to obey traffic signs, signals, or officer	2,064	4.0
Operating vehicle in erratic, reckless or negligent manner	2,002	3.9
Overcorrecting/oversteering	1,967	3.8
Vision obscured (rain, snow, glare, lights, building, trees, etc.)	1,566	3.0
Drowsy, asleep, fatigued, ill, or blacked out	1,310	2.5
Swerving or avoiding due to wind, slippery surface, etc.	1,307	2.5
Driving wrong way on one-way traffic or wrong side of road	1,169	2.3
Making improper turn	348	0.7
Other factors	6,130	11.8
None reported	15,970	30.8
Unknown	8,479	16.3
Total drivers[1]	**51,914**	**100.0%**

[1]The sum of percentages is greater than total drivers as more than one factor may be present for the same driver.
Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

Alcohol-impaired driving

Alcohol is a major factor in traffic accidents. Based on data from the U.S. Department of Transportation (download here), National Highway Traffic Safety Administration (NHTSA), there was an alcohol-impaired traffic fatality every 48 minutes in 2017. These crashes involve at least one driver or motorcycle operator with a blood alcohol concentration (BAC) of 0.08 grams per deciliter or above, the legal definition of impaired driving. According to NHTSA 10,874 people died in alcohol-impaired crashes in 2017. Alcohol-impaired crash fatalities accounted for 29 percent of all crash fatalities.

The definition of alcohol-impaired driving was consistent throughout the United States until December 2018. All states and the District of Columbia except Utah define impairment as driving with a BAC (blood alcohol concentration) at or above 0.08 grams per deciliter. In Utah, the BAC limit was lowered to 0.05 in December 2018. Law enforcement officials have been able to measure BAC accurately for decades, and the results obtained from testing devices is accepted in almost all jurisdictions in the United States. As noted in the Auto Laws section of Chapter 7, enforcement of existing laws and enacting laws such as mandating ignition interlocks and administrative license suspension are the most effective measures against impaired driving.

In 2017, 10,874 people were killed in crashes in which a driver had a blood alcohol concentration (BAC) of 0.08 grams per deciliter or higher, down 1.1 percent from 10,996 in 2016, according to the National Highway Traffic Safety Administration.

In 2016 and 2017, 29 percent of total fatalities were alcohol-impaired, the lowest percentage since 1982 when NHTSA began reporting alcohol data.

Alcohol-Impaired Crash Fatalities, 2008-2017[1]

Year	Number	As a percent of all crash deaths
2008	11,711	31%
2009	10,759	32
2010	10,136	31
2011	9,865	30
2012	10,336	31
2013	10,110	31
2014	9,943	30
2015	10,320	30
2016	10,996	29
2017	10,874	29

[1]Alcohol-impaired driving crashes are crashes that involve at least one driver or a motorcycle operator with a blood alcohol concentration (BAC) of 0.08 grams per deciliter or above, the legal definition of alcohol-impaired driving.

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

Percent Of Alcohol-Impaired Drivers Involved In Fatal Crashes By Age, 2008 And 2017[1]

Age	2008	2017	Point change
16 to 20	17%	15%	-2 pts.
21 to 24	34	27	-7
25 to 34	31	26	-5
35 to 44	25	23	-2
45 to 54	20	19	-1
55 to 64	12	15	3
65 to 74	6	9	3
Over 74	4	6	2

[1]Alcohol-impaired driving crashes are crashes that involve at least one driver or a motorcycle operator with a blood alcohol concentration (BAC) of 0.08 grams per deciliter or above, the legal definition of drunk driving.

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

Persons Killed In Total And Alcohol-Impaired Crashes By Person Type, 2016

Person type	Total killed	Alcohol-impaired driving fatalities[1]	
		Number	Percent of total killed
Vehicle occupants			
Driver	18,610	6,067	33%
Passenger	6,407	1,880	29
Unknown occupant	79	2	2
Total	**25,096**	**7,949**	**32%**
Motorcyclists	**5,286**	**1,600**	**30%**
Nonoccupants			
Pedestrian	5,987	807	13
Pedalcyclist	840	91	11
Other/unknown	252	50	20
Total	**7,079**	948	**13%**
Total	**37,461**	**10,497**	**28%**

[1]Alcohol-impaired driving crashes are crashes that involve at least one driver or a motorcycle operator with a blood alcohol concentration (BAC) of 0.08 grams per deciliter or greater, the legal definition of alcohol-impaired driving.

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

Marijuana and impaired driving

Marijuana intoxication can cause impaired driving, thereby increasing the risk of accidents. Marijuana is prohibited under the Controlled Substances Act of 1970 (CSA), which established a scheduling system for substances regulated under federal law. Despite the regulation of marijuana under federal law, in 1996 California became the first state in the U.S. to pass legislation permitting a medical marijuana program. Since then, more than 30 states and the District of Columbia have passed legislation permitting comprehensive medical marijuana programs for qualifying patients to access marijuana and marijuana-related products. Since 2012 several states have passed legislation permitting anyone over the age of 21 to possess and use marijuana, subject to certain limitations. Most of those states also have or are developing regulations for a commercial market to support recreational marijuana sales.

Marijuana legalization is associated with an increase in impaired driving, increasing the risk of traffic accidents, although the magnitude of the increased risk is still a matter of study. A review from the Wiley Researcher Academy found evidence that 20 to 30 percent of crashes involving marijuana occurred because of the marijuana use. This compares to roughly 85 percent of crashes involving alcohol that occurred because of alcohol use. The review estimated that the crash risk increased 22 percent while under the influence of marijuana, controlling for concurrent alcohol use. Another review found that someone driving under the influence of marijuana is 1.65 times more likely to be culpable in a fatal accident.

Compared with marijuana, determining alcohol intoxication is relatively straightforward. Alcohol is processed at a rate that allows blood alcohol concentration (BAC) to closely correlate with intoxication, making it an effective and accurate benchmark for measuring impairment. Unlike alcohol, THC (the active chemical that induces user intoxication from marijuana) levels in a user's body may not be an accurate indication of impairment. Moreover, THC is processed differently than alcohol. The AAA Foundation for Traffic Safety noted that THC can remain in a user's body for weeks after marijuana is consumed. THC levels spike immediately after consumption, but decline to low levels very quickly – long before impairment ends. It is therefore not currently possible to accurately determine when a user consumed marijuana based on the THC levels in their body, and THC detection in a user post-accident does not necessarily mean that marijuana impairment contributed to a traffic accident. Currently there is no agreed-upon impairment limit above which an individual is indisputably impaired and no breathalyzer-equivalent for marijuana impairment. (See I.I.I.'s Background on Marijuana and Impaired Driving.)

Reports from the Insurance Institute for Highway Safety (IIHS) and the Highway Loss Data Institute (HLDI) conclude that highway crashes have risen in states with legalized recreational use marijuana laws. In 2017 HLDI released an analysis of insurance losses in Colorado, Oregon and Washington that found that legalizing recreational marijuana use in the three states was associated with a combined 2.7 percent increase in the frequency of collision claims per insured vehicle year,relative to nearby control states without legalized recreational marijuana. In a 2018 report (download here), HLDI estimates that the frequency of collision claims rose a combined 6 percent following the start of retail sales of recreational marijuana in Colorado, Nevada, Oregon and Washington, compared with the control states of Idaho, Montana, Utah and Wyoming. A 2018 IIHS study examined police-reported crashes in 2012 to 2016 before and after retail sales began in Colorado, Oregon and Washington. IIHS estimates that the three states combined saw a 5.2 percent increase in the rate of crashes per million vehicle registrations, compared with neighboring states that didn't legalize marijuana sales.According to the IIHS, the 5.2 percent increase in police-reported crash rates following legalization of recreational marijuana use is consistent with the 6 percent increase in insurance claim rates estimated by HLDI.

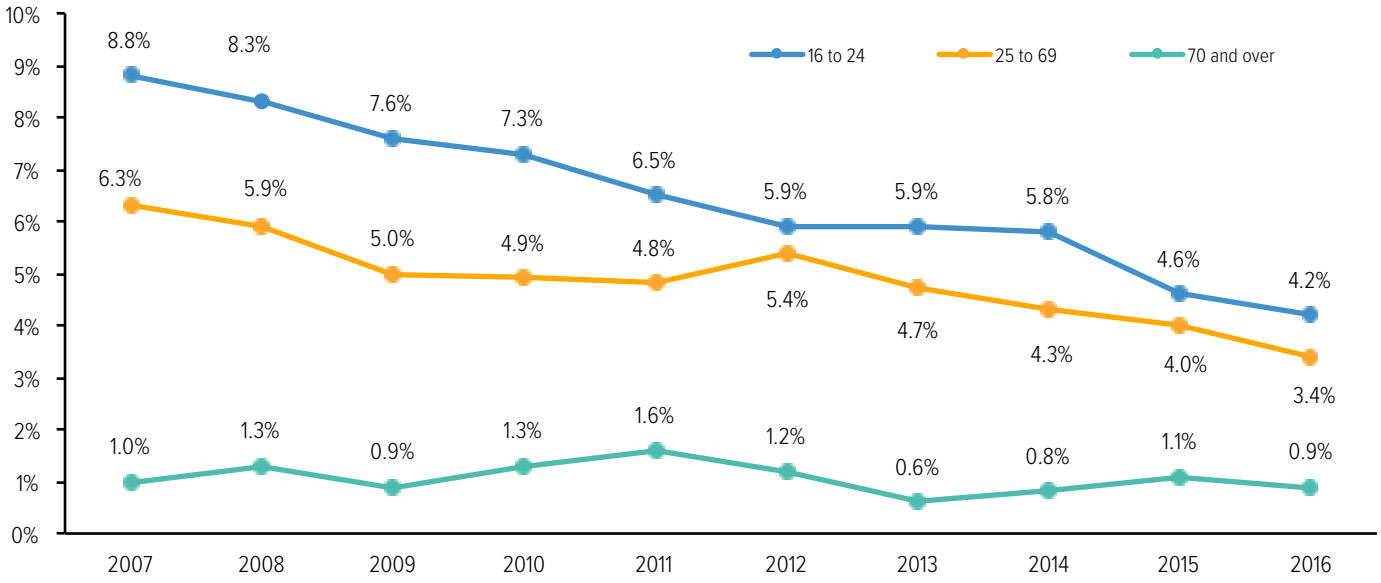
Aggressive Driving

Aggressive driving is a major factor in U.S. traffic accidents, playing a role not just in well-publicized incidents of road rage, but in a large number of fatal highway collisions each year. The National Highway Traffic Safety Administration (NHTSA) defines aggressive driving as occurring when "an individual commits a combination of moving traffic offenses so as to endanger other persons or property." While aggressive driving is difficult to quantify, a 2009 study by the American Automobile Association reported that, based on data tracked by NHTSA's Fatal Accident Reporting System, aggressive driving played a role in 56 percent of fatal crashes from 2003 through 2007, with excessive speed being the No. 1 factor. Speeding was also the leading driving behavior associated with fatal crashes in 2016 (17.8 percent), followed by driving under the influence (10.8 percent), according to NHTSA. (See chart, Driving Behaviors Reported For Drivers and Motorcycle Operators Involved In Fatal Crashes, 2016).

Distracted Driving

Activities that take drivers' attention off the road, including talking or texting on cellphones, eating, talking with passengers, adjusting vehicle controls and other distractions, are a major safety threat. The National Highway Traffic Safety Administration (NHTSA) gauges distracted driving by collecting data *on distraction-affected crashes* (download here), which focus on distractions that are most likely to affect crash involvement such as dialing a cellphone or texting and being distracted by another person or an outside event. In 2016, 3,450 people were killed in distraction-affected crashes. There were 3,157 distraction-affected fatal crashes, accounting for 9 percent of all fatal crashes in the nation.

Driver Hand Held Cellphone Use By Age, 2007-2016[1]



[1]Percent of drivers using hand held cellphones.

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

Fatal Crashes Affected By Distracted Drivers, 2016

	Crashes	Drivers	Fatalities
Total fatal crashes	**34,439**	**51,914**	**37,461**
Distracted-affected fatal crashes			
Number of distracted-affected fatal crashes	3,157	3,210	3,450
Percent of total fatal crashes	9%	6%	9%
Cellphone in use in distracted-affected fatal crashes			
Number of cellphone distracted-affected fatal crashes	444	457	486
Percent of fatal distracted-affected crashes	14%	14%	14%

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

Distraction was a factor in 9 percent of fatal crashes reported in 2016.

Cellphone use was a factor in 14 percent of all fatal distracted-affected crashes, but in only 1 percent of the 34,439 fatal crashes reported in 2016.

Motorcycle Helmet Use, 1998-2017[1]

Year	Percent	Year	Percent
2000	71%	2013	60%
2005	48	2014	64
2010	54	2015	61
2011	67	2016	65
2012	60	2017	65

[1]Based on surveys of motorcyclists using helmets meeting Department of Transportation standards. Surveys conducted in October for 1996-2000 and in June thereafter.

Source: U.S. Department of Transportation, National Occupant Protection Use Survey, National Highway Traffic Safety Administration's National Center for Statistics and Analysis.

Motorcycle helmet usage, at 65 percent in June 2017, was unchanged from 2016.

Helmet use was highest in the West, at 84 percent, down from 91 percent in 2016. In the Northeast, helmet use was 71 percent, the same as in 2016.

Helmet use was 77 percent in the South, up from 68 percent in 2016, and 41 percent in the Midwest, the lowest of all the regions, down from 54 percent.

Collision Losses

The chart below shows the claim frequency and average loss payment per claim under collision coverage for recent model vehicles. The claim frequency is expressed as a rate per 100 insured vehicle years. A vehicle year is equal to 365 days of insurance coverage for a single vehicle.

Passenger Vehicle Collision Coverage Insurance Losses, 2015-2017 Model Years

	Claim frequency[1]	Claim severity	Overall loss
Passenger cars and minivans	8.5	$5,580	$472
Pickups	6.4	5,556	356
SUVs	6.6	5,562	367
All passenger vehicles[2]	**7.4**	**$5,573**	**$415**

[1]Per 100 insured vehicle years. [2]Includes claims from cargo/passenger vans.
Source: Highway Loss Data Institute.

MOTOR VEHICLES: THEFT

The FBI includes the theft or attempted theft of automobiles, trucks, buses, motorcycles, scooters, snowmobiles and other vehicles in its definition of motor vehicle theft. About $6 billion was lost to motor vehicle theft in 2017. The average dollar loss per theft was $7,708. Motor vehicles were stolen at a rate of 237.4 per 100,000 people in 2017, virtually unchanged from 237.3 in 2016 but down 24.7 percent from 2008. In 2017, 773,139 vehicles were stolen, up 0.8 percent from 767,290 vehicles in 2016. One motor vehicle theft was reported every 40.9 seconds in the United States in 2017.

Motor Vehicle Theft In The United States, 2008-2017

Year	Vehicles stolen	Percent change
2008	959,059	-12.9%
2009	795,652	-17.0
2010	739,565	-7.0
2011	716,508	-3.1
2012	723,186	0.9
2013	700,288	-3.2%
2014	686,803	-1.9
2015	713,063	3.8
2016	767,290	7.6
2017	773,139	0.8

Source: U.S. Department of Justice, Federal Bureau of Investigation, *Uniform Crime Reports*.

Five of the top 10 U.S. Metropolitan Statistical Areas for motor vehicle theft were in California in 2017. The otherfive were in New Mexico, Alaska, Colorado and Missouri.

Top 10 U.S. Metropolitan Statistical Areas By Motor Vehicle Theft Rate, 2017

Rank	Metropolitan Statistical Area[1]	Vehicles stolen	Rate[2]
1	Albuquerque, NM	9,989	1,096.82
2	Anchorage, AK	3,274	816.69
3	Pueblo, CO	1,353	812.73
4	Redding, CA	1,352	751.44
5	St. Joseph, MO	952	749.99
6	Bakersfield, CA	6,560	734.50
7	Modesto, CA	3,870	706.33
8	Stockton-Lodi, CA	4,575	613.74
9	Yuba City, CA	1,050	604.56
10	Springfield, MO	2,686	580.92

[1]Metropolitan Statistical Areas are designated by the federal Office of Management and Budget and usually include areas much larger than the cities for which they are named. [2]Rate of vehicle thefts reported per 100,000 people based on the 2017 U.S. Census Population Estimates.

Source: National Insurance Crime Bureau.

Top 10 States With The Most And The Fewest Number Of Motor Vehicle Thefts, 2017

Most motor vehicle thefts		
Rank	State	Vehicles stolen
1	California	168,391
2	Texas	68,041
3	Florida	42,914
4	Washington	28,796
5	Georgia	26,263
6	Colorado	21,861
7	Illinois	20,881
8	Ohio	20,253
9	Missouri	19,921
10	Michigan	19,573

Fewest motor vehicle thefts		
Rank	State	Vehicles stolen
1	Vermont	194
2	Wyoming	779
3	Maine	793
4	New Hampshire	915
5	Delaware	1,369
6	South Dakota	1,383
7	Rhode Island	1,483
8	North Dakota	1,773
9	Idaho	2,146
10	D.C.	2,587

Source: U.S. Department of Justice, Federal Bureau of Investigation, *Uniform Crime Reports*.

Top 10 Most Frequently Stolen Vehicles, 2017

All model years[1]		
Rank	Model	Thefts
1	Honda Civic	45,062
2	Honda Accord	43,764
3	Ford Pickup (Full size)	35,105
4	Chevrolet Pickup (Full size)	30,058
5	Toyota Camry	17,278
6	Nissan Altima	13,358
7	Toyota Corolla	12,337
8	Dodge Pickup (Full size)	12,004
9	GMC Pickup (Full size)	10,865
10	Chevrolet Impala	9,487

2017 model year vehicles only		
Rank	Model	Thefts
1	Nissan Altima	1,153
2	Toyota Camry	1,100
3	GMC Pickup (Full size)	957
4	Hyundai Elantra	929
5	Ford Fusion	874
6	Ford Pickup (Full size)	842
7	Ram Pickup	835
8	Toyota Corolla	832
9	GMC Savana	774
10	Hyundai Sonata	759

[1]Includes all model years for each vehicle.
Source: National Insurance Crime Bureau.

RECREATION

Watercraft Accidents

Federal law requires owners of recreational boats and watercraft (non-commercial) to register them. In 2017 there were 12.0 million registered recreational watercraft, about the same number as in 2016. A recreational boating accident must be reported to the U.S. Coast Guard if a person dies or is injured and requires medical treatment beyond first aid; if damage to the boat or other property exceeds $2,000; if the boat is lost or if a person disappears from the boat.

The U.S. Coast Guard says that alcohol, combined with typical conditions such as motion, vibration, engine noise, sun, wind and spray can impair a person's abilities much faster than alcohol consumption on land. Operators with a blood alcohol concentration (BAC) above 0.10 grams per deciliter are estimated to be more than 10 times more likely to be killed in an accident than watercraft operators with zero BAC. Alcohol was a contributing factor in 323 recreational watercraft accidents in 2017 (7.5 percent of all accidents), accounting for 118 deaths (17.9 percent of all deaths) and 255 injuries (9.7 percent of all injuries). Other primary contributing factors were operator inexperience, resulting in 63 deaths; and operator inattention, accounting for 45 deaths.

In 2017, 76 percent of fatal boating accident victims died by drowning, and of those, 85 percent were not wearing life jackets.

The most common types of watercraft involved in reported accidents in 2017 were open motorboats (46 percent), personal watercraft (Jet Skis) (18 percent) and cabin motorboats (16 percent).

Recreational Watercraft Accidents, 2013-2017[1]

Year	Accidents		Fatalities		Injuries	Property damage ($ millions)
	Total	Involving alcohol use[2]	Total	Involving alcohol use[2]		
2013	4,062	305	560	94	2,620	$39
2014	4,064	345	610	137	2,678	39
2015	4,158	306	626	122	2,613	42
2016	4,463	350	701	133	2,903	49
2017	4,291	323	658	118	2,629	46

[1]Includes accidents involving $2,000 or more in property damage. Includes U.S. territories and offshore accidents. [2]The use of alcohol by a boat's occupants was a direct or indirect cause of the accident.

Source: U.S. Department of Transportation, U.S. Coast Guard.

Top 10 States By Recreational Watercraft Accidents, 2017[1]

Rank	State	Accidents	Deaths	People injured	Property damage ($000)
1	Florida	723	66	429	$8,327
2	California	350	50	249	2,681
3	Texas	170	63	100	1,375
4	New York	167	22	75	2,336
5	South Carolina	151	13	85	2,988
6	Maryland	147	6	108	850
7	Missouri	124	10	86	1,055
8	Arizona	123	13	77	962
9	North Carolina	117	15	71	2,790
10	Ohio	117	20	50	898

[1]Includes accidents involving $2,000 or more in property damage. Includes watercraft such as motorboats and sailboats and other vessels such as Jet Skis.

Source: U.S. Department of Transportation, U.S. Coast Guard.

Watercraft Thefts

In 2017 there were 4,864 recreational watercraft thefts in the United States, down 5 percent from 2016, according to an analysis of federal government data by the National Insurance Crime Bureau. The 2017 drop was in line with the downward trend in thefts that was broken by 2016's slight increase. Watercraft include motor boats, sailboats and other vessels such as Jet Skis. Of these thefts, 1,799, or 37 percent, were recovered by the end of February 2018. Personal watercraft such as Jet Skis were the most frequently stolen watercraft, with 1,180 thefts, followed by runabouts (618), utility boats (285), cruisers (185) and sailboats (41). On average, there were 13 watercraft thefts a day in 2017. June saw the highest number of reported thefts (628), and December had the fewest (222).

Top 10 States By Recreational Watercraft Theft, 2017

Rank	State	Thefts[1]
1	Florida	1,163
2	Californa	488
3	Texas	410
4	North Carolina	158
5	Washington	156
6	Georgia	155
7	Louisiana	154
8	Tennessee	153
9	Alabama	148
10	South Carolina	146

[1]Watercraft include motorboats and sailboats and other vessels such as Jet Skis.
Source: National Insurance Crime Bureau.

Sports Injuries

According to the National Safety Council (NSC) basketball was the most dangerous sport in 2015, with 493,011 injuries reported followed by biking, with 488,123 injuries, and football, with 399,873 injuries.

Concern is growing about the risks of sports-related concussions as lawsuits filed by injured professional football players have generated national headlines. The problem also affects thousands of young people who engage in a variety of sports. According to the NSC, among the sports shown in the chart on the following page, ice hockey injuries had the highest percentage of concussion as the primary diagnosis, at 12 percent of all hospital emergency department-treated injuries. Snowboarding and water tubing followed, with 10 percent and 9 percent of injuries reported as concussion-related. Football and lacrosse followed, both with 8 percent of injuries concussion-related. The Centers for Disease Control and Prevention reports that in 2012, an estimated 329,290 children (age 19 or younger) were treated in U.S. emergency departments for sports and recreation-related injuries that included a diagnosis of concussion or traumatic brain injury.

The NSC reports that there were 191,396 swimming injuries treated in emergency rooms in 2015, with children between the ages of five and 14 suffering the most injuries. A report by the Consumer Product Safety Commission found that between 2014 and 2016, 74 percent of children treated in emergency departments for pool related nonfatal drowning injuries were younger than five years of age.

Sports Injuries By Number of Injuries, 2015

Sport or activity	Injuries[1]	Percent concussion-related[2]	Number of injuries by age				
			Younger than 5	5 to 14	15 to 24	25 to 64	65 and over
Basketball	493,011	3%	1,736	172,998	225,560	91,529	1,158
Bicycle riding	488,123	3	20,085	147,916	87,869	195,576	36,646
Football	399,873	8	990	204,795	158,315	35,294	479
Exercise[3]	361,551	1	5,696	36,947	75,015	196,445	47,432
Soccer	227,732	6	2,064	104,167	84,972	36,122	407
Swimming[4]	191,396	2	18,089	79,312	32,309	51,537	10,133
Skateboarding	125,145	3	1,150	40,488	63,375	19,877	239
Baseball	120,234	5	3,248	61,215	33,958	20,266	1,547
Weight lifting	107,655	1	3,160	8,921	34,833	56,535	4,206
Trampolines	107,123	2	16,636	68,323	13,399	8,592	173
Softball	95,285	4	203	31,311	30,036	32,429	1,306
Fishing	66,529	<0.5	1,330	10,023	11,103	35,556	8,518
Dancing	58,160	1	2,124	14,521	16,531	19,856	5,128
Skating–roller[5]	57,192	<0.5	380	30,586	8,755	16,735	736
Volleyball	57,067	4	196	19,304	25,434	11,429	704
Horseback riding	56,727	7	754	9,268	14,402	28,055	4,248
Cheerleading	40,843	6	98	22,861	17,467	417	0
Wrestling	39,775	7	0	15,483	21,641	2,651	0
Golf[6]	37,369	<0.5	855	3,958	1,982	12,964	17,610
Gymnastics[7]	35,063	2	686	27,657	5,019	1,680	16
Track and field	32,237	2	114	12,821	14,347	4,719	237
Martial arts	26,949	3	181	7,351	7,823	11,451	143
Snowboarding	25,452	10	43	6,292	13,367	5,622	128
Tennis	23,609	2	121	3,254	3,352	10,078	6,804
Skating–ice	21,701	6	287	9,438	5,910	5,637	429
Hockey–unspecified	21,339	4	140	7,100	7,703	6,365	32
Hockey–ice	19,283	12	38	6,296	7,583	4,999	367
Bowling	17,680	1	1,501	2,118	3,451	8,496	2,113
Boxing	16,897	4	49	2,259	7,483	7,075	30
Lacrosse	15,999	8	0	5,691	9,579	729	0
Surfing	13,832	1	17	3,138	3,327	7,065	286
Rugby	11,101	7	0	255	9,186	1,660	0
Snowmobiling	9,561	6	81	733	2,404	5,974	370

(table continues)

Sports Injuries By Number of Injuries, 2015 (Cont'd)

Sport or activity	Injuries[1]	Percent concussion-related[2]	Number of injuries by age				
			Younger than 5	5 to 14	15 to 24	25 to 64	65 and over
Biking–mountain	9,011	5%	16	454	1,582	6,653	306
Waterskiing	7,335	4	0	544	2,535	3,946	311
Skating–unspecified	6,828	<0.5	16	4,484	1,042	1,237	49
Hockey–street, roller, field	5,901	6	17	1,766	2,635	1,483	0
Water tubing	5,280	9	0	1,205	1,336	2,690	49
Mountain climbing	5,186	2	91	315	1,874	2,877	31
Archery	4,506	<0.5	22	755	825	2,484	420
Racquetball, squash and paddleball	4,354	<0.5	6	392	1,108	2,081	767
Handball	4,103	2	0	1,302	1,469	1,045	287
Billiards, pool	3,299	2	126	752	314	1,601	506

[1]Treated in hospital emergency departments. Excludes skiing. [2]Concussion listed as primary diagnosis. [3]Includes exercise equipment (64,093 injuries) and exercise activity (297,458 injuries). [4]Includes injuries associated with swimming, swimming pools, pool slides, diving or diving boards and swimming pool equipment. [5]Includes roller skating (46,469 injuries) and in-line skating (10,723 injuries). [6]Excludes golf carts (17,754 injuries). [7]Excludes trampolines.

Source: National Safety Council. *Injury Facts®, 2017 Edition*. Itasca, IL.

ATV Accidents

More than one in four people (26 percent) injured in accidents involving all-terrain vehicles (ATVs) in 2016 were children under the age of 16, according to the Consumer Product Safety Commission. ATVs are open-air vehicles with three, four or six wheels designed for off-road use. Many states require ATV insurance for vehicles operated on state-owned land.

ATV-Related Deaths And Injuries, 2012-2016[1]

Year	Estimated number of deaths			Estimated number of injuries[2]		
	Total	Younger than 16		Total	Younger than 16	
		Number	Percent of total		Number	Percent of total
2012	573	68	12%	107,900	26,500	25%
2013	590	70	12	99,600	25,000	25
2014	581	72	12	93,700	24,800	26
2015	484	73	15	97,200	26,700	28
2016	337	53	16	101,200	26,800	26

[1]ATVs with 3, 4 or unknown number of wheels. [2]Emergency room-treated.

Source: U.S. Consumer Product Safety Commission.

AVIATION

There were 1,335 civil aviation accidents in 2016, up from 1,280 in 2015. Total fatalities rose to 408 in 2016 from 406 in 2015.

There were no fatalities on large scheduled commercial airlines in 2016 for the seventh consecutive year. There were no fatalities on large nonscheduled airlines (charter airlines) for the third consecutive year.

Small commuter airlines had eight accidents in 2016 compared with four accidents in 2015. There were eight fatalities in 2016 following one in 2015.

The number of small on-demand airline (air taxi) accidents fell to 31 in 2016 compared with 39 in 2015.

There were 1,266 general aviation (noncommercial) accidents in 2016, up from 1,210 in 2015. 2016 accidents resulted in 386 deaths, up from 378 in 2015. However, the National Transportation Safety Board notes that the number of fatal general aviation accidents decreased to 213 in 2016, resulting in the fatal accident rate dropping below 1 fatal accident per 100,000 flight hours for the first time in 50 years.

United States

In the United States the National Transportation Safety Board compiles data on aviation flight hours, accidents and fatalities for commercial and general aviation.

Commercial airlines are divided into two categories according to the type of aircraft used: Aircraft with 10 or more seats and aircraft with fewer than 10 seats. The nonscheduled commercial aircraft with more than 10 seats are also called charter airlines. Commercial airlines flying aircraft with fewer than 10 seats include commuter (scheduled) airlines and on-demand air taxis. General aviation includes all U.S. noncommercial or privately owned aircraft.

In fiscal year 2017 about 841 million people flew on commercial airlines in the United States. The Federal Aviation Administration projects that about 1.28 billion people will fly on scheduled commercial airlines in the United States annually by 2038.

Aircraft Accidents In The United States, 2016[1]

	Flight hours (000)	Number of accidents		Number of fatalities[2]	Total accidents per 100,000 flight hours
		Total	Fatal		
Commercial airlines					
10 or more seats					
Scheduled	17,853,752	27	0	0	0.151
Nonscheduled	420,475	4	0	0	0.951
Less than 10 seats					
Commuter	379,761	8	2	8	2.107
On-demand	3,499,517	31	7	19	0.886
General aviation	**21,333,747**	**1,266**	**213**	**386**	**5.925**
Total civil aviation	**NA**	**1,335**	**221**	**408**	**NA**

[1]Preliminary data. Totals do not add because of collisions involving aircraft in different categories. [2]Includes nonpassenger deaths. NA=Data not available.

Source: National Transportation Safety Board.

Large Airline Accidents In The United States, 2007-2016[1]

Year	Flight hours	Total accidents	Fatal accidents	Total fatalities[2]	Total accidents per 100,000 flight hours
2007	19,637,322	28	1	1	0.143
2008	19,126,766	27	2	3	0.141
2009	17,626,832	30	2	52	0.170
2010	17,750,986	30	1	2	0.169
2011	17,962,965	33	0	0	0.184
2012	17,722,236	26	0	0	0.147
2013	17,717,957	23	2	9	0.130
2014	17,752,026	32	0	0	0.180
2015	17,928,551	30	0	0	0.167
2016[3]	18,274,227	31	0	0	0.170

[1]Scheduled and unscheduled planes with more than 10 seats. [2]Includes nonpassenger deaths. [3]Preliminary.
Source: National Transportation Safety Board.

World Aviation Losses

More than 4 billion people flew safely on 41.8 million flights in 2017, according to the International Air Transport Association. The major global accident rate (as measured by the rate of hull losses on Western-built jets) was 0.11 in 2017, or about one major accident for every 8.7 million flights. The 2017 accident rate was an improvement from the 0.39 rate experienced in 2016, and an improvement from the five-year rate of 0.33 from 2012 to 2016. A hull loss is an accident in which the aircraft is destroyed or substantially damaged and is not subsequently repaired. There were 45 accidents in 2017 (on Eastern- and Western-built aircraft), down significantly from 67 in 2015 and 2016.

World Aviation Accidents, 2013-2017

Year	Accidents[1]		Fatalities[1]	Total accident rate[2]
	Total	Fatal		
2013	86	14	178	0.38
2014	77	12	641	0.27
2015	67	4	136	0.32
2016	67	9	202	0.39
2017	45	6	19	0.11

[1]On Eastern- and Western-built jet aircraft. [2]Measured in hull losses per million flights of Western-built jet aircraft. A hull loss is an accident in which the aircraft is destroyed or substantially damaged and is not subsequently repaired.
Source: International Air Transport Association (IATA).

Top 10 Deadliest World Aviation Crashes

Rank	Date	Location	Country	Operator	Fatalities
1	Mar. 27, 1977	Tenerife	Spain	Pan Am, KLM	583
2	Aug. 12, 1985	Yokota AFB	Japan	JAL	520
3	Nov. 12, 1996	New Delhi	India	Saudi Arabian Airlines, Kazakhstan Airlines	349
4	Mar. 3, 1974	Ermenonville	France	Turkish Airlines	346
5	Jun. 23, 1985	Atlantic Ocean		Air India	329
6	Aug. 19, 1980	Jedda	Saudi Arabia	Saudi Arabian Airlines	301
7	Jul. 17, 2014	Grabovo	Ukraine	Malaysia Airlines	298
8	Jul. 3, 1988	Persian Gulf		Iran Air	290
9	Feb. 19, 2003	Kerman	Iran	Islamic Republic of Iran Air Force	275
10	May 25, 1979	Chicago	U.S.	American Airlines	273

Source: Aircraft Crashes Record Office, Geneva (baaa-acro.com/statistics/worst-crashes).

Drones

The number of small hobbyist drones registered in the United States is projected to grow from 1.1 million units in 2017 to 2.4 million in 2022, according to the Federal Aviation Administration (FAA). Commercial (small non-model drones) registrations totaled 110,604 in 2017 and are projected to grow to 451,800 in 2022. Except for the eight-month period from May 2017 to December 2017, the FAA required owners of hobbyist and commercial drones weighing more than 0.55 pounds and less than 55 pounds to register them and mark them with a registration number, beginning December 2015. Larger drones—weighing more than 55 pounds—must register with the FAA as traditional aircraft.

Insurance coverage

If a drone is damaged in an accident it is most likely covered under a homeowners insurance policy (subject to a deductible). Coverage also applies to renters insurance. The liability portion of a homeowners or renters policy may provide coverage against lawsuits for bodily injury or property damage that a policyholder causes to other people with a drone. It may also cover privacy issues—for example if a drone inadvertently takes pictures of or videotapes a neighbor who then sues the policyholder. It will not cover any intentional invasion of privacy. The policy will cover theft of a drone. Damage or injuries caused by a drone used for commercial (i.e., business) purposes will not be covered by a homeowners policy.

A no-fault medical coverage policy may provide no-fault medical coverage if someone is accidentally injured by a drone. However, this coverage will not pay medical bills for a policyholder's family members or pets if they are injured by the policyholder's drone.

If a policyholder's drone crash-lands into his or her car, damage may be covered under optional comprehensive insurance of an auto insurance policy.

General liability insurance policies commonly contain exclusions for aviation activities. Insurers are entering the market for drone insurance and creating coverage tailored to drones and their equipment. Commercial drone operators can purchase commercial aviation insurance to cover property damage and liability caused by a drone. The policy would cover the drone, its equipment and remote control systems. Commercial aviation companies use underwriting processes similar to ones used for manned aircraft policies to cover drones.

WORKPLACE

Workplace Losses

According to the National Safety Council (NSC), the total cost of unintentional workplace deaths and injuries in 2016 was an estimated $151 billion. This figure includes wage and productivity losses of $49.5 billion, medical costs of $33.8 billion and administrative expenses of $48.3 billion. Other employer costs include uninsured losses of $12.7 billion, $4.7 billion in motor vehicle damage and fire losses of $2.7 billion. Economic losses from work injuries are not comparable from year to year; as additional or more precise data become available to the NSC, they are used from that year forward. Previously estimated figures are not revised.

The National Safety Council notes that the number of workplace fatalities from unintentional injuries rose in 2016 for the third consecutive year and reached 4,398 deaths. In addition, there were 792 homicides and suicides. In 2016 the construction industry suffered the largest number of unintentional injury deaths, followed by transportation and warehousing.

Workplace Losses And Deaths, 2007-2016

		Economic loss[1] ($ millions)		Fatalities[2]	
Year	Workers[3] (000)	Dollars when occurred	In 2016 dollars[4]	Number	Per 100,000 workers[5]
2007	147,203	$175,300	$201,504	4,829	3.3
2008	146,535	183,000	210,163	4,423	3.3
2009	141,102	168,900	188,831	3,744	2.9
2010	140,298	176,900	194,860	3,896	3.0
2011	140,298	188,900	202,092	3,901	3.0
2012	143,709	198,200	208,413	3,903	3.0
2013	145,171	206,100	213,514	3,899	2.9
2014	146,307	140,000	143,947 (6)	4,132	3.0
2015	150,031	142,500	145,456	4,190	3.0
2016	152,632	151,000	151,000	4,398	3.1

[1]Economic loss from unintentional injuries. These estimates are not comparable from year to year. [2]From unintentional injuries. [3]Age 16 and over, gainfully employed, including owners, managers and other paid employees, the self-employed, unpaid family workers and active duty resident military personnel. [4]Adjusted to 2016 dollars by the Insurance Information Institute using the Bureau of Labor Statistics' Inflation Calculator. [5]In 2008 the National Safety Council changed the method of calculating deaths per worker from employment-based rates to hours-based rates. As a result data prior to 2008 are not comparable to later data. [6]The 2015 National Safety Council cost estimate model represents a complete redesign and is not comparable to previous cost estimates. The 2014 estimate should be considered a data break from previous years.

Source: National Safety Council. *Injury Facts®*, 2018 Edition. Itasca, IL; U.S. Department of Labor, Bureau of Labor Statistics.

i

In 2016 the loss per worker for work injuries was $1,000, measured by the value of goods and services each worker must produce to offset the cost of work injuries.

Top 10 Private Industries By Number Of Nonfatal Occupational Injuries And Illnesses, 2017

Rank	Industry	Number (000)	Percent of total private industry
1	Healthcare and social assistance	582.8	20.7%
2	Manufacturing	428.9	15.3
3	Retail trade	395.7	14.1
4	Accommodation and food services	282.6	10.1
5	Transportation and warehousing	215.6	7.7
6	Construction	198.1	7.0
7	Wholesale trade	157.9	5.6
8	Administrative and waste services	116.9	4.2
9	Professional and technical services	69.7	2.5
10	Miscellaneous services	66.0	2.3
	Total, top 10	**2,514.2**	**89.4%**
	Total, private industry	**2,811.5**	**100.0%**

Source: U.S. Department of Labor, Bureau of Labor Statistics.

i

The top 10 industries combined acounted for 89.4 percent of all cases reported among private industry workplaces in 2017.

Top 10 Private Industry Occupations With The Largest Number Of Injuries And Illnesses, 2017[1]

Rank	Occupation	Number	Percent of total
1	Laborers (nonconstruction)	64,410	7.3%
2	Truck drivers, heavy and tractor-trailer	47,860	5.4
3	Janitors and cleaners	35,580	4.0
4	Nursing assistants	34,210	3.9
5	General maintenance and repair workers	30,580	3.5
6	Retail salespersons	25,200	2.9
7	Registered nurses	24,540	2.8
8	Stock clerks and order fillers	23,990	2.7
9	Construction laborers	23,290	2.6
10	Light truck and delivery service drivers	22,830	2.6
	Total, top 10	**332,490**	**37.7%**
	Total, all occupations	**882,730**	**100.0%**

[1]Nonfatal injuries and illnesses involving days off from work for private industries; excludes farms with fewer than 11 employees.
Source: U.S. Department of Labor, Bureau of Labor Statistics

Causes Of Workplace Deaths

According to the U.S. Department of Labor, the highest rate of workplace fatalities in 2016 was among logging workers, with 135.9 deaths per 100,000 full-time employees, followed by fishing industry workers, aircraft pilots and flight engineers, and roofers. The all-industry average was 3.6 deaths per 100,000 workers.

Workplace Deaths By Selected Cause, 2015-2016[1]

Cause	2015	2016	
	Number	Number	Percent of total
All transportation (includes vehicle crashes)	2,054	2,083	40%
Vehicle crashes[2]	1,264	1,252	24
Falls	800	849	16
Assaults and violence (includes homicides)	703	866	17
Homicides	417	500	10
Contact with objects and equipment	722	761	15
Exposure to harmful substances or environments	424	518	10
Fires and explosions	121	88	2
Total workplace fatalities	**4,836**	**5,190**	**100%**

[1]From intentional and unintentional sources. Data in this chart do not add to total workplace fatalities due to the inclusion of miscellaneous injuries in the total. [2]Roadway incidents involving motorized land vehicles.

Source: U.S. Department of Labor, Bureau of Labor Statistics, Census of Fatal Occupational Injuries.

Asbestos-Related Illness

Exposure to asbestos can cause lung cancer and other respiratory diseases. The first asbestos-related lawsuit was filed in 1966. Many workers who may have physical signs of exposure but not a debilitating disease are filing claims now out of concern that if they later develop an illness, the company responsible may be bankrupt, due to other asbestos claims. It can take as long as 40 years after exposure for someone to be diagnosed with an asbestos-related illness.

Estimated Asbestos Losses, 2008-2017[1] ($ billions)

Year	Beginning reserve	Losses		Ending reserve[3]
		Incurred[2]	Paid	
2008	$23.5	$1.1	$3.7	$20.5
2009	20.6	1.9	2.0	20.4
2010	20.5	2.4	2.3	20.6
2011	20.6	1.8	1.8	20.6
2012	20.4	1.9	2.0	20.3
2013	20.4	2.0	2.1	20.3
2014	20.3	1.5	2.4	19.4
2015	19.4	1.7	2.8	18.3
2016	18.6	1.5	3.0	17.1
2017	16.9	1.7	1.8	16.8

[1]All amounts are net of reinsurance recoveries. [2]Incurred losses are losses related to events that have occurred, regardless of whether or not the claims have been paid, net of reinsurance. Includes loss adjustment expenses. [3]Because of changes in the population of insurers reporting data each year, the beginning reserve may not equal the ending reserve of the prior year.

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

In 2017 incurred asbestos losses rose 14 percent to $1.7 billion from $1.5 billion in 2016.

HOME

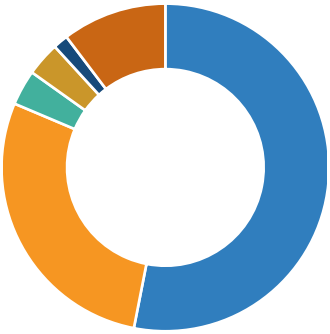
In 2015, 20.7 million Americans, or one in 15 people, experienced an unintentional injury in the home that required aid from a medical professional, according to an analysis by the National Safety Council (NSC). Injuries requiring medical attention occur more often at home than in public places, the workplace and motor vehicle crashes combined, according to the NSC. There were 74,600 deaths from unintentional home injuries in 2015. Despite population growth and a corresponding rise in the number of fatal injuries, the rate of fatal home injuries has declined dramatically over the past 100 years, falling by 17 percent to 23.2 deaths per 100,000 people in 2015 from 28 deaths per 100,000 people in 1912. However, the number and rate of unintentional home injury deaths has been rising steadily since 2000, largely due to increases in unintentional poisonings and falls.

Unintentional Home Deaths And Injuries, 2015

Deaths	74,600
Medically consulted injuries	20,700,000
Death rate per 100,000 population	23.2
Costs	$254.7 billion

Source: National Safety Council. *Injury Facts*®, 2017 Edition. Itasca, IL.

Principal Types Of Home Unintentional Injury Deaths, 2015



Poisoning	39,600	53.1%
Falls	21,100	28.3
Choking[1]	2,600	3.5
Fire, flames or smoke	2,500	3.4
Drowning	1,100	1.5
Other	7,700	10.3
Total	**74,600**	**100.0%**

[1]Inhalation and ingestion of food or other object that obstructs breathing.
Source: National Safety Council. *Injury Facts*®, 2017 Edition. Itasca, IL.

CAUSES OF DEATH

Mortality risks

Heart disease is the leading cause of death in the United States, accounting for 635,260 fatalities in 2016, according to the Centers for Disease Control and Prevention. Age-adjusted death rates (which factor out differences based on age) fell significantly in eight of the 15 leading causes of death in 2016 compared with 2015. However there were significant increases in 2016 death rates for four causes: unintentional injuries, Alzheimer's disease, suicide and Parkinson's disease.

Influenza and pneumonia ranked eighth in 2016, with 51,537 fatalities. However, pandemic influenza viruses have the potential to be far more deadly. An estimated 675,000 Americans died during the 1918 Spanish influenza pandemic, the deadliest and most infectious known influenza strain to date.

Top 15 Major Causes of Death, 2016

Rank	Cause of death	Number of deaths	Age-adjusted death rate[1]	
			Rate	Percent change from 2015
1	Heart disease	635,260	165.5	-1.8%
2	Malignant neoplasms (tumors)	598,038	155.8	-1.7
3	Accidents (unintentional injuries)	161,374	47.4	9.7
4	Chronic lower respiratory diseases	154,596	40.6	-2.4
5	Cerebrovascular diseases (stroke)	142,142	37.3	-0.8
6	Alzheimer's disease	116,103	30.3	3.1
7	Diabetes	80,058	21.0	-1.4
8	Influenza and pneumonia	51,537	13.5	-11.2
9	Kidney disease	50,046	13.1	-2.2
10	Intentional self-harm (suicide)	44,965	13.5	1.5
11	Septicemia	40,613	10.7	-2.7
12	Chronic liver disease and cirrhosis	40,545	10.7	-0.9
13	Hypertension[2]	33,246	8.6	1.2
14	Parkinson's disease	29,697	8.0	3.9
15	Pneumonitis due to solids and liquids	19,715	5.2	-1.9
	All other causes	546,313	NA	NA
	All deaths	**2,744,248**	**728.8**	**-0.6%**

[1]Per 100,000 population; factors out differences based on age. [2]Essential (primary) hypertension and hypertensive renal disease.
NA=Not applicable.
Source: National Center for Health Statistics.

Gun Deaths And Injuries

An analysis of the Centers for Disease Control and Prevention data by the Pacific Institute for Research and Evaluation found that in 2010 the societal cost of U.S. injuries from firearms, including lost work time, medical care, insurance, criminal-justice expenses, pain, suffering and lost quality of life amounted to about $174 billion. Fatal injuries accounted for $153.3 billion, or nearly 90 percent of the costs. Suicides accounted for 53 percent of the societal cost of firearm injuries, followed by homicides and assaults, accounting for 41 percent. Unintentional acts, legal intervention and acts of undetermined intent represent the remainder.

Two studies released in 2017 described the cost of hospitalizations for firearms injuries. One study from the American Journal of Public Health published in May 2017 showed that between 2006 and 2014, the costs and financial burden for initial hospitalizations from firearm injuries averaged $735 million each year. In an October 2017 report researchers at Johns Hopkins found that over the same eight years, firearms-related injuries cost about $2.8 billion in emergency department and inpatient care each year. Neither study included follow-up costs, such as the costs of readmissions, rehabilitation, disability, home medications or loss of work.

Deaths By Firearms, 2015 And 2016

	Number		Percent of total	
Deaths caused by firearms	**2015**	**2016[1]**	**2015**	**2016[1]**
Accidental discharge of firearms	489	495	1.3%	1.3%
Suicide by firearm	22,018	22,938	60.7	59.3
Assault (homicide) by firearm	12,979	14,415	35.8	37.3
Legal intervention	484	510	1.3	1.3
Undetermined intent	282	300	0.8	0.8
Total	**36,252**	**38,658**	**100.0%**	**100.0%**

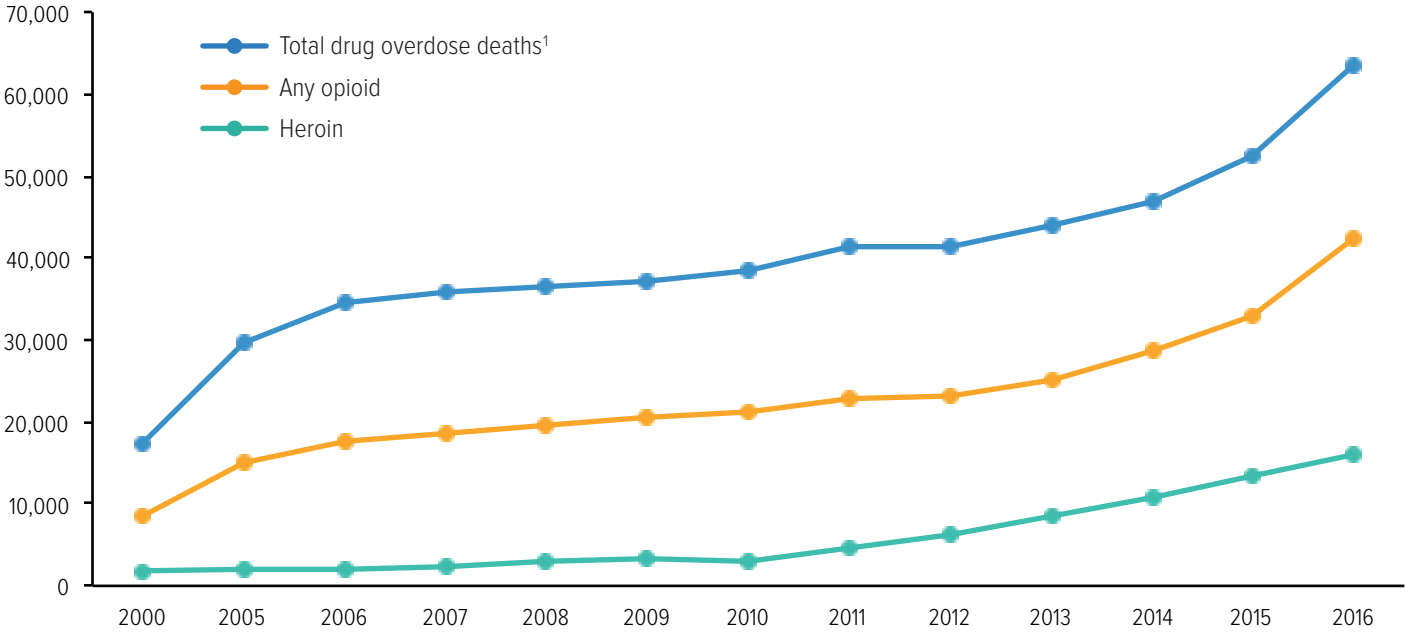
[1]Preliminary.

Source: Centers for Disease Control and Prevention, National Vital Statistics Report, sourced by the National Safety Council.

The Opioid Crisis In The United States

Opioid abuse and addiction is now recognized as a significant public health problem in the United States. Drug overdose, from prescription and illegal drugs combined, is the leading cause of injury death in the United States. Between 2000 and 2016 deaths from drug overdose increased almost four-fold from 17,415 in 2000 to 63,632 in 2016, according to the Centers for Disease Control and Prevention (CDC). Opioid analgesics, a group of prescription drugs that are used to alleviate chronic and acute pain, have been increasingly involved in the rise of drug overdose deaths over the same period. In 2000 there were 8,407 deaths attributed to opioids of all kinds, with prescription drugs and illegal drugs such as heroin, accounting for about half of all drug overdose deaths. By 2016 that proportion had grown to 66 percent. Heroin alone accounted for 11 percent of all drug overdose deaths in 2000 and grew to 24 percent in 2016.

Number Of Drug Overdose Deaths, 2000-2016



[1]Drug overdose caused by prescription and illegal drugs.
Source: Centers for Disease Control and Prevention, National Center for Health Statistics.

A June 2017 report issued by the Blue Cross Blue Shield Association found that diagnoses of opioid-use disorder (addiction to opioids, including prescription painkillers and illegal narcotics such as heroin) increased almost 500 percent between 2010 and 2016. The study examined claims from 30 million people who had commercial insurance provided by Blue Cross Blue Shield insurers. It found that opioid-use disorder was 40 times more likely in patients prescribed high doses for a short duration, compared with low doses for a short duration. Opioid-use disorder was seven times more likely when patients were prescribed a high dose for a long duration, rather than a low dose for a long duration. In addition, 21 percent of Blue Cross and Blue Shield commercially-insured members filled at least one opioid prescription in 2015, according to the report.

Many states and municipalities have filed lawsuits against opioid drug makers that they blame for a national addiction crisis. As of August 2018, there were more than 1,000 opioid-related lawsuits brought in more than 40 states, according to Fitch Ratings. In addition, industry experts cite over-prescribing narcotic drugs as a factor in escalating medical costs in the workers compensation insurance system

Chapter 9

Factors Affecting Costs

COST OF GOODS AND SERVICES

The Bureau of Labor Statistics *Consumer Expenditures Survey* describes the buying habits of American consumers, using household expenditure records and surveys. Expenditures include goods and services purchased, whether or not payment was made at the time of purchase and all sales and excise taxes.

Income, age of family members, geographic location, taste and personal preference influence expenditures. Location often affects the cost of auto and homeowners insurance. Rural households spend less than urban households on auto insurance; regional variations in residential building costs and vulnerability to natural catstrophes affect spending on homeowners insurance. In addition to the number and types of cars, where they are driven and by whom, auto insurance prices are influenced by such factors as the degree of competition in the marketplace and how claimants are compensated, i.e., through the no-fault or traditional tort systems.

Insurance And Other Consumer Expenditures As A Percent Of Total Household Spending, 1990-2017[1]

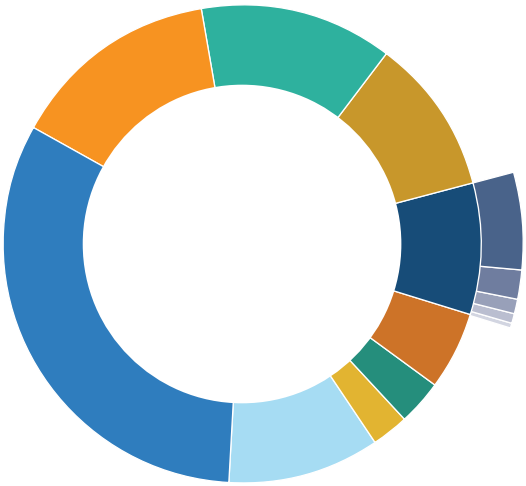
	1990	1995	2000	2005	2010	2015	2016	2017
Housing	30.0%	31.7%	31.7%	31.9%	33.7%	32.1%	32.1%	32.3%
Transportation	15.9	16.4	17.5	16.0	13.9	15.0	15.8	14.3
Food	15.0	14.0	13.6	12.8	12.7	12.5	12.6	12.9
Retirement[2]	8.8	8.0	7.8	10.4	10.5	10.7	11.4	10.6
Other	10.6	10.2	10.5	10.4	10.4	10.1	8.5	10.2
Total insurance	5.8	6.8	6.3	6.5	7.3	8.7	8.9	8.8
Health	2.0	2.7	2.6	2.9	3.8	5.3	5.5	5.7
Vehicle	2.0	2.2	2.0	2.0	2.1	1.9	2.0	1.6
Homeowners[3]	0.5	0.7	0.7	0.7	0.8	0.8	0.8	0.8
Life	1.2	1.1	1.0	0.8	0.6	0.6	0.5	0.6
Other	0.1	0.1	0.1	0.1	[4]	[4]	[4]	0.1
Entertainment	5.0	5.0	4.9	5.1	5.2	5.1	5.1	5.3
Clothing	5.7	5.3	4.9	4.1	3.5	3.3	3.1	3.1
Healthcare	3.1	2.7	2.8	2.8	2.8	2.4	2.5	2.5

[1]Ranked by 2017 expenditures. [2]Mostly payroll deductions for retirement purposes such as Social Security (74% of retirement expenditures), government and private pension plans (12%) and nonpayroll deposits such as IRAs (14%) in 2017. [3]Includes tenants. [4]Less than 0.1 percent.

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

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Insurance Expenditures As A Percentage Of Total Household Spending, 2017



Housing	32.3%
Transportation	14.3
Food	12.9
Retirement	10.6
All insurance	8.8
Health	5.7
Vehicle	1.6
Homeowners[1]	0.8
Life	0.6
Other	0.1
Entertainment	5.3
Clothing	3.1
Healthcare	2.5
Other	10.2

[1]Includes tenants insurance.
Note: Percentages may not add up to 100 percent due to rounding.
Source: U.S. Department of Labor, Bureau of Labor Statistics.

Insurance accounted for 8.8 percent of household spending in 2017, about the same as in 2016 and 2015. Of this, the share spent on health insurance rose 0.2 percentage points, while the vehicle insurance share fell 0.4 percentage points. The share spent on life insurance rose 0.1 percentage points, while the share spent on homeowners insurance remained the same.

Consumer Prices

The Bureau of Labor Statistics consumer price index (CPI) tracks changes in the prices paid by consumers for a representative basket of goods and services. The cost of living (all items) rose 2.1 percent in 2017. The cost of motor vehicle insurance and hospital services rose faster (7.7 percent and 4.9 percent, respectively). The cost of tenants and household insurance rose 0.7 percent, and medical care rose 2.5 percent.

Consumer Price Indices For Insurance And Related Items And Annual Rates Of Change, 2008-2017

(Base: 1982-84=100)

Year	Cost of living (all items)		Motor vehicle insurance		Medical care items		Physicians' services		Hospital services[1]	
	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change
2008	215.3	3.8%	341.5	2.5%	364.1	3.7%	311.3	2.7%	197.2	7.4%
2009	214.5	-0.4	357.0	4.5	375.6	3.2	320.8	3.0	210.7	6.9
2010	218.1	1.6	375.2	5.1	388.4	3.4	331.3	3.3	227.2	7.8
2011	224.9	3.2	388.7	3.6	400.3	3.0	340.3	2.7	241.2	6.2
2012	229.6	2.1	402.5	3.6	414.9	3.7	347.3	2.1	253.6	5.1
2013	233.0	1.5	419.4	4.2	425.1	2.5	354.2	2.0	265.4	4.7
2014	236.7	1.6	437.2	4.2	435.3	2.4	359.1	1.4	278.8	5.0
2015	237.0	0.1	460.6	5.4	446.8	2.6	366.1	1.9	290.1	4.1
2016	240.0	1.3	489.1	6.2	463.7	3.8	378.1	3.3	303.3	4.5
2017	245.1	2.1	526.9	7.7	475.3	2.5	380.1	0.5	318.2	4.9
Percent change, 2008-2017		**13.8%**		**54.3%**		**30.6%**		**22.1%**		**61.4%**

Year	Motor vehicle body work		New vehicles		New cars		New trucks[2]	
	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change
2008	239.7	3.2%	134.2	-1.5%	135.4	-0.3%	137.1	-2.6%
2009	248.5	3.7	135.6	1.1	136.7	0.9	138.8	1.3
2010	254.4	2.4	138.0	1.8	138.1	1.0	142.7	2.8
2011	259.9	2.2	141.9	2.8	142.2	3.0	146.5	2.7
2012	264.9	1.9	144.2	1.7	144.2	1.4	149.4	1.9
2013	271.0	2.3	145.8	1.1	144.9	0.5	151.8	1.6
2014	278.0	2.6	146.3	0.3	144.5	-0.3	153.6	1.1
2015	280.8	1.0	147.1	0.6	144.4	-0.1	155.4	1.2
2016	287.6	2.4	147.4	0.2	143.7	-0.5	156.4	0.6
2017	294.5	2.4	147.0	-0.2	142.7	-0.7	156.6	0.1
Percent change, 2008-2017		**22.8%**		**9.5%**		**5.4%**		**14.2%**

(table continues)

Consumer Price Indices For Insurance And Related Items And Annual Rates Of Change, 2008-2017 (Cont'd)

(Base: 1982-84=100)

Year	Used cars and trucks		Tenants and household insurance[3,4]		Repair of household items[3,5]		Legal services		Existing single-family homes	
	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Median price ($000)	Percent change
2008	134.0	-1.3%	118.8	1.6%	170.0	5.5%	270.7	4.0%	$198	-9.5%
2009	127.0	-5.2	121.5	2.2	176.0	3.5	278.1	2.7	172	-13.1
2010	143.1	12.7	125.7	3.5	181.7	3.2	288.1	3.6	173	0.6
2011	149.0	4.1	127.4	1.4	NA	NA	297.4	3.2	166	-4.0
2012	150.3	0.9	131.3	3.1	198.7	NA	303.5	2.0	177	6.6
2013	149.9	-0.3	135.4	3.1	206.7	4.0	311.8	2.8	197	11.3
2014	149.1	-0.5	141.9	4.8	212.4	2.8	318.5	2.1	208	5.6
2015	147.1	-1.3	146.4	3.2	220.1	3.6	323.6	1.6	224	7.7
2016	143.5	-2.5	147.7	0.9	226.3	2.8	334.5	3.4	236	5.4
2017	138.3	-3.6	148.8	0.7	239.3	5.8	346.4	3.6	249	5.5
Percent change, 2008-2017		**3.2%**		**25.2%**		**40.8%**		**27.9%**		**25.8%**

[1]December 1996=100. [2]December 1983=100. [3]December 1997=100. [4]Only includes insurance covering rental properties. [5]Includes appliances, reupholstery and inside home maintenance.

Note: Percent changes are calculated from unrounded data.

Source: U.S. Department of Labor, Bureau of Labor Statistics; National Association of Realtors.

FRAUD

Insurance fraud is a deliberate deception perpetrated against or by an insurance company or agent for the purpose of financial gain. Fraud may be committed at different points in the insurance transaction by applicants for insurance, policyholders, third-party claimants or professionals who provide services to claimants. Insurance agents and company employees may also commit insurance fraud. Common frauds include padding, or inflating actual claims, misrepresenting facts on an insurance application, submitting claims for injuries or damage that never occurred and staging accidents.

Size Of The Problem

The exact amount of fraud committed is difficult to determine. In the late 1980s, the Insurance Information Institute interviewed claims adjusters and concluded that fraud accounted for about 10 percent of the property/casualty insurance industry's incurred losses and loss adjustment expenses each year. Using this measure, over the five-year period from 2013 to 2017, property/casualty fraud amounted to about $30 billion each year. The figure can fluctuate based on line of business, economic conditions and other factors. The nature of fraud is constantly evolving.

Insurance fraud is the second costliest white collar crime, according to the National Insurance Crime Bureau (NICB), trailing only tax evasion. The NICB is a not-for-profit organization that works with insurers and law enforcement to identify, detect and prosecute insurance crime, including insurance fraud. The bureau fosters fraud awareness, see nicb.org.

The Insurance Research Council (IRC) estimated that between $5.6 billion and $7.7 billion was fraudulently added to paid claims for auto insurance bodily injury payments in 2012, compared with a range of $4.3 billion to $5.8 billion in 2002. The IRC studied more than 35,000 auto injury claims closed with payment and reported the results in its 2016 report, *Fraud and Buildup in Auto Injury Claims*. Fraud accounted for between 15 percent and 17 percent of total claims payments for auto insurance bodily injury.

Fighting Insurance Fraud

Insurers are at the front line in combating insurance fraud despite the increase in the number of states that have passed laws to criminalize the practice. By 2016 every state and the District of Columbia had enacted laws that classify fraud as a crime at least for some lines of insurance and have instituted immunity for reporting insurance fraud. Forty-six states and the District of Columbia had fraud bureaus or divisions where fraud can be reported, investigated and prosecuted. Twenty-two states and the District of Columbia required insurers to create and implement programs to reduce insurance fraud. Many property/casualty insurers have created Special Investigative Units within their companies. These use specially trained professionals to examine suspicious claims, then work with law enforcement officials and organizations like the NICB to catch perpetrators.

One of the most effective means of combating fraud is the adoption of data technologies that cut the time needed to recognize fraud. Advances in analytical technology are crucial in the fight against fraud to keep pace with sophisticated rings that constantly develop new scams. According to a company that develops insurance fraud analytics, insurers typically see evidence of organized staged accidents shortly after they start a direct internet channel for their customers. These websites allow criminals to exploit loopholes in consumer applications and underwriting and they test the systems by filing many applications and observing which ones are flagged for additional information.

Traditional approaches that concentrate on detection after payments are made (pay and chase programs) have been improved by predictive modeling, claims scoring and other tools that attempt to uncover fraud before a payment is made. Newer strategies are employed when claims are first filed. Suspicious claims are flagged for further review, while those with no suspicious elements are processed normally. Data-mining programs that scan many insurance claims have been improved by the consolidation of insurance industry claims databases, such as ISO's ClaimSearch, the world's largest comprehensive database of claims information. Systems that identify anomalies in a database can be used to develop algorithms that enable an insurer to automatically stop claim payments. An insurance technology expert said that this approach has produced 20 to 50 percent reductions in fraud loss for some insurers. Newer programs that analyze patterns and text, such as adjuster notes, can search various kinds of data formats for key terms and word patterns. Investigators scan social media sites such as Facebook, Twitter and YouTube when they examine workers compensation claims.

In 2016 the Coalition Against Insurance Fraud and the SAS Institute published a report entitled, *State of Insurance Fraud Technology*, to track how insurers deploy technology to combat insurance fraud. An online survey of 86 insurers found that in 2016, 61 percent of the survey participants said suspected fraud has increased to some degree in the past three years, compared with 51 percent in 2014. The Coalition asked whether fraud is increasing, or if insurers are getting better at detecting it, in part through increased use of technology. By 2016 almost 75 percent of insurers polled had fully integrated technology into their anti-fraud systems, compared with roughly half in 2012. By primary use, insurers say claims fraud detection technology is the most popular, as 76 percent of insurers use this technology compared with 65 percent in the last four years. The most commonly employed method used by insurers is automated red flags, which are used by 90 percent of the respondents, up from 64 percent in the last four years.

LITIGIOUSNESS

Insurers' Legal Defense Costs

Lawsuits against businesses affect the cost of insurance and the products and services of the industries sued. Travelers Insurance *2017 Business Risk Index* showed that legal liability was the fourth highest rated worry for business leaders in the United States, same as in 2016. Of 1,203 business managers surveyed, 55 percent indicated they worry about it somewhat or a great deal, about the same as the 56 percent who felt that way in 2016.

The U.S. Chamber of Commerce Institute for Legal Reform (ILR) has found that U.S. litigation costs reached 2.3 percent of gross domestic product (GDP) in 2016. Analysts used data on liability insurance premiums and estimates of the liability exposure of uninsured or self-insured businesses and individuals to determine the total cost of litigation. Costs and compensation paid in the tort system totaled $429 billion. This total is comprised of $250 billion from general and commercial liability exposure, which includes personal injury, consumer and other litigation; $160 billion stemming from liability related to auto accident claims and $19 billion from medical malpractice litigation. The study also found that 57 percent of the tort system costs and compensation was paid out in compensation to plaintiffs. The remainder—43 percent—was the cost of litigation of both sides and includes the operation costs for insurers.

Tort costs and compensation vary significantly among the states, and in the most expensive states can be up to 2.1 times larger than in the least expensive states. One example is Florida, which has the highest tort system costs—3.6 percent of its GDP—compared with Alaska, Washington and Wyoming which have tort costs of less than 1.8 percent. Also of note, Maine, North Carolina and South Dakota have about $2,000 in tort costs per household, but California, Florida and New Jersey have more than $4,000 in tort costs. New York has $6,066 in tort costs per household, topping the list by state. In the District of Columbia, per household tort costs were even higher—$6,257.

Tort Costs And Compensation Paid By State, 2016[1]

Rank[2]	State/territory	Total tort costs[3] ($ millions)	Total tort costs as percent of state GDP[4]	Tort costs per household (dollars)[5]
1	D.C.	$1,760	1.4%	$6,257
2	New York	43,730	2.9	6,066
3	New Jersey	17,734	3.1	5,551
4	Delaware	1,890	2.7	5,383
5	Connecticut	6,209	2.4	4,574
6	Florida	33,645	3.6	4,442
7	California	55,966	2.1	4,324
8	Nevada	4,507	3.0	4,272
9	Rhode Island	1,660	2.9	4,066
10	Louisiana	6,909	2.9	4,015
11	Massachusetts	9,980	2.0	3,869
12	Illinois	18,026	2.3	3,738
13	Pennsylvania	18,374	2.5	3,721
14	Colorado	7,672	2.4	3,638
15	Georgia	13,384	2.5	3,631
16	Hawaii	1,629	1.9	3,573
17	Texas	33,704	2.1	3,535
18	Utah	3,285	2.1	3,483
19	Maryland	8,032	2.1	3,360
20	Montana	1,329	2.9	3,195
21	Alaska	771	1.5	3,105
21	Oregon	4,879	2.1	3,105
23	Missouri	7,352	2.5	3,099
24	Washington	8,501	1.8	3,071
25	Vermont	780	2.5	3,061
26	Michigan	11,846	2.4	3,050
27	New Mexico	$2,273	2.4%	$2,998
28	Oklahoma	4,246	2.3	2,890
29	Minnesota	6,173	1.8	2,873
30	Arkansas	3,265	2.7	2,857
31	Arizona	7,122	2.3	2,827
32	Tennessee	7,204	2.2	2,818
33	Nebraska	2,103	1.8	2,813
34	South Carolina	5,261	2.5	2,802
35	West Virginia	2,019	2.8	2,796
36	Alabama	5,122	2.5	2,765
37	Virginia	8,439	1.7	2,704
38	New Hampshire	1,405	1.8	2,698
39	Mississippi	2,921	2.7	2,676
40	Wyoming	598	1.6	2,675
41	Iowa	3,316	1.8	2,657
42	Indiana	6,644	1.9	2,623
43	Kentucky	4,479	2.3	2,608
44	North Dakota	806	1.5	2,557
45	Idaho	1,519	2.2	2,486
46	Kansas	2,744	1.8	2,471
47	Wisconsin	5,734	1.8	2,464
48	Ohio	11,166	1.8	2,414
49	South Dakota	791	1.6	2,369
50	North Carolina	8,900	1.7	2,292
51	Maine	1,163	2.0	2,187
	United States	**$428,966**	**2.3%**	**$3,329**

[1]Ranked on tort costs per household. [2]States that have the same tort costs receive the same ranking. [3]Includes general, professional, homeowners, and personal and commercial automobile liability tort costs. [4]Gross domestic product. [5]2016 state household estimates from the U.S. Bureau of the Census.

Source: U.S Chamber of Commerce Institute for Legal Reform.

Insurers are required to defend their policyholders against lawsuits. The costs of settling a claim are reported on insurers' financial statements as defense and cost containment expenses incurred. These expenses include defense, litigation and medical cost containment. Expenditures for surveillance, litigation management and fees for appraisers, private investigators, hearing representatives and fraud investigators are included. In addition, attorney legal fees may be incurred owing to a duty to defend, even when coverage does not exist, because attorneys must be hired to issue opinions about coverage. Insurers' defense costs as a percentage of incurred losses are relatively high in lines such as product liability and medical malpractice, reflecting the high cost of defending certain types of lawsuits, such as medical injury cases and class actions against pharmaceutical companies. For example, in 2017, in addition to $940 million in product liability incurred losses, insurers spent $648 million on settlement expenses, equivalent to 68.9 percent of the losses.

Defense Costs And Cost Containment Expenses As A Percent of Incurred Losses, 2015-2017[1] ($000)

	2015		2016		2017	
Rank	Amount	As a percent of incurred losses	Amount	As a percent of incurred losses	Amount	As a percent of incurred losses
Product liability	$1,037,576	70.5%	$844,615	102.5%	$648,145	68.9%
Medical malpractice	1,871,109	53.8	1,927,338	50.3	1,652,485	43.3
Commercial multiple peril[2]	1,977,804	34.7	2,152,707	35.0	2,114,746	34.8
Other liability	4,786,370	19.9	4,066,792	15.4	5,163,952	21.9
Workers compensation	3,315,025	13.6	3,276,491	13.7	2,955,804	13.6
Commercial auto liability	1,542,092	11.3	1,487,353	9.9	1,745,693	11.2
Private passenger auto liability	4,924,216	6.2	5,008,720	5.7	5,371,440	5.9
All liability lines	**$19,454,192**	**12.8%**	**$18,764,016**	**11.4%**	**$19,652,265**	**12.1%**

[1]Net of reinsurance, excluding state funds. [2]Liability portion only.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Personal Injury Awards

Most lawsuits are settled out of court. Of those that are tried and proceed to verdict, Jury Verdict Research data from Thomson Reuters show that in 2016 (latest data available) the median (or midpoint) award in personal injury cases was $100,000, up from $87,600 in 2015. The average award also rose in 2016 and was $1,354,801 compared with $1,132,339 in 2015. Thomson Reuters notes that average awards can be skewed by a few very high awards and that medians are more representative.

In cases of product liability the highest median award was in transportation products cases ($2,957,986). In disputes concerning medical malpractice the highest median award was in childbirth cases ($2,320,210). In lawsuits involving business negligence the highest median award was against manufacturing industries ($922,500).

Awards of $1 million or more accounted for 21 percent of all personal injury awards in 2015 and 2016, about the same as in the prior two-year period. In 2015 and 2016, 76 percent of product liability awards and 59 percent of medical malpractice awards amounted to $1 million or more, the highest proportion of awards, followed by government negligence at 55 percent and business negligence at 29 percent. Personal negligence and premises and vehicular and liability cases had the lowest proportions of awards of $1 million or more, at 14 percent, 13 percent and 10 percent, respectively.

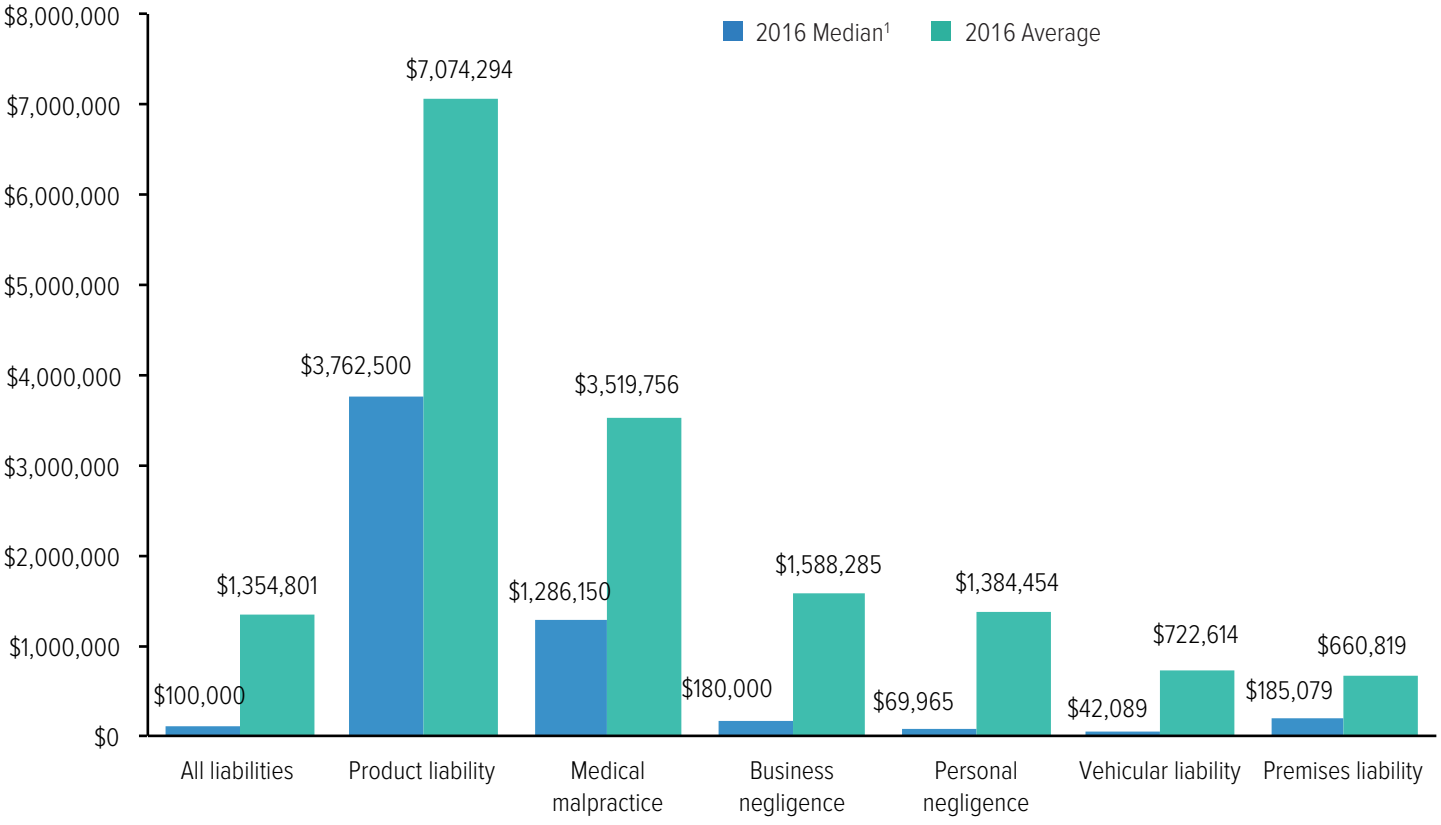
Trends In Personal Injury Lawsuits, 2010-2016[1]

Year	Award median	Probability range[2]	Award range	Award mean
2010	$39,300	$10,000 - $200,000	$1 - $71,000,000	$654,041
2011	60,924	12,268 - 344,060	1 - 58,619,989	805,886
2012	75,000	19,067 - 362,562	1 - 155,237,000	1,097,507
2013	70,000	16,000 - 300,000	1 - 165,972,503	1,010,202
2014	75,000	16,011 - 400,000	1 - 172,061,728	1,041,726
2015	87,631	20,000 - 485,475	1 - 88,246,000	1,132,339
2016	100,000	23,000 - 520,000	1 - 115,000,000	1,354,801
Overall	**$68,189**	**$15,000 - $350,000**	**$1 - $172,061,728**	**$995,975**

[1]Excludes punitive damages. [2]Twenty-five percent above and below the median award. The median represents the midpoint jury award. Half of the awards are above the median and half are below. This helps establish where awards tend to cluster.

Source: Reprinted with permission of Thomson Reuters, *Current Award Trends in Personal Injury*, 57th edition.

Median And Average Personal Injury Jury Awards By Type Of Liability, 2016



[1]Represents the midpoint jury award. Half of the awards are above the median and half are below.

Source: Reprinted with permission of Thomson Reuters, *Current Award Trends in Personal Injury*, 57th edition.

Directors And Liability Insurance

Directors and officers liability insurance (D&O) covers directors and officers of a company for negligent acts or omissions and for misleading statements that result in lawsuits against the company. There are various forms of D&O coverage. Corporate reimbursement coverage indemnifies directors and officers of the organization. Side-A coverage provides D&O coverage for personal liability when directors and officers are not indemnified by the firm. Entity coverage for claims made specifically against the company is also available. D&O policies may be broadened to include coverage for employment practices liability (EPL). EPL coverage may also be purchased as a stand-alone policy.

Sixty-nine percent of corporations purchased D&O coverage in 2017, according to the *2018 RIMS Benchmark Survey* from the Risk and Insurance Management Society and Advisen, based on a survey of 511 organizations. Banks and materials companies were the most likely to purchase D&O coverage in 2017, with 85 percent of respondents in both industries purchasing the coverage, followed by 84 percent of respondents in the education industry. According to Advisen, the number of new cases that may be covered by D&O coverage fell in 2017 compared with 2016. Total shareholder risks, an area that encompasses securities class action suits, merger objections, derivative shareholder suits and other suits brought by shareholders, has stayed at relatively constant levels over the past four years. However, in 2017 alone the number of merger objection cases rose 28 percent from 2016 and securities class actions rose about 6 percent, while the number of derivative shareholder suits fell by 16 percent.

AIG led the top 10 writers of D&O liability insurance in 2017 with $940 million in direct premiums written and 15 percent of the market, followed by Chubb Ltd. with 12 percent, and AXA with 10 percent.

Top 10 Writers Of Directors And Officers Liability Insurance By Direct Premiums Written, 2017[1] ($000)

Rank	Group/company	Direct premiums written	Market share
1	American International Group (AIG)	$940,302	14.6%
2	Chubb Ltd.	787,092	12.2
3	AXA	664,853	10.3
4	Tokio Marine Group	553,322	8.6
5	CNA Financial Corp.	401,342	6.2
6	Travelers Companies Inc.	303,994	4.7
7	American Financial Group Inc.	252,980	3.9
8	Zurich Insurance Group[2]	213,554	3.3
9	Berkshire Hathaway Inc.	199,563	3.1
10	Sompo Holdings Inc.	164,125	2.5

[1]Includes property/casualty insurers that provided monoline directors and officers policies. The coverage may also be purchased as part of a package commercial multiperil policy. Includes some state funds [2]Data for Farmers Insurance Group of Companies and Zurich Financial Group (which owns Farmers' management company) are reported separately by S&P Global Market Intelligence.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

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Directors and officers liability insurance direct premiums written totaled $6.5 billion in 2017, according to S&P Global Market Intelligence.

Employment Practices Liability Insurance

Following the flood of high-profile sexual harassment lawsuits in 2017 and 2018, there has been a dramatic increase in the purchase of employment practices liability insurance (EPLI). The coverage was developed in 1990, following the rise in employment-related lawsuits that emerged after the passage of the Americans with Disabilities Act of 1990 and the Civil Rights Act of 1991. The coverage protects businesses from the financial consequences of various types of employment lawsuits such as sexual harassment, job-related discrimination, harassment and wrongful discharge. Other coverages include invasion of privacy, false imprisonment, breach of contract, emotional distress and wage law violations.

Premiums grew rapidly between 2001 and 2004, according to the Risk and Insurance Management Society (RIMS). More recently, employers are purchasing stand-alone policies, reversing the trend of including employment practices liability coverage with directors and officers insurance. There are about 20 major carriers and about 20 smaller companies that offer the coverage. Insurance research firm MarketStance found that U.S. companies spent an estimated $2.2 billion in EPLI coverage in 2016 and projects the market to grow to $2.7 billion in 2019. Demand is likely to continue. According to the 2018 Hiscox Workplace Harassment Study, which used data collected in June 2018, about one in three workers (35 percent) reported that they had been harassed at work. Of that number, 41 percent were women.

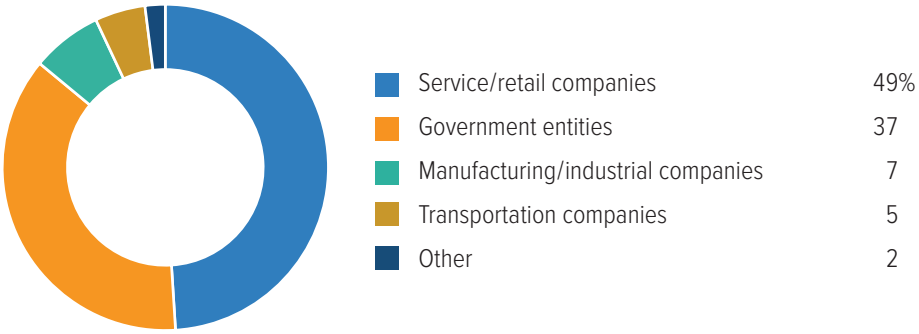
In 2017, 33 percent of the 511 respondents to the *2018 RIMS Benchmark Survey* from the Risk and Insurance Management Society and Advisen said they bought EPLI policies. Information technology companies and banks were the most likely to purchase EPLI coverage, with 53 percent of IT companies and 50 percent of banks purchasing the coverage, followed by consumer staples firms (45 percent), professional services companies (41 percent) and consumer discretionary companies (40 percent). AIG was the leading writer, based on EPLI premiums written, with a 25.8 percent market share in 2017, followed by Fairfax Holdings (11.9 percent) Chubb (11.6 percent), XL Catlin (10.0 percent) and Markel Corporation (9.4 percent).

Trends In Employment Practices Liability, 2012-2016

Year	Median (midpoint) award	Probability range[1]
2012	$69,792	$12,197 - $259,380
2013	100,000	15,707 - 251,623
2014	86,250	20,000 - 302,574
2015	81,239	17,566 - 336,245
2016	123,447	25,045 - 450,000

[1]The middle 50 percent of all awards arranged in ascending order in a sampling, 25 percent above and below the median award.
Source: Reprinted with permission of Thomson Reuters, *Employment Practice Liability: Jury Award Trends and Statistics*, 2017 edition.

Employment Practices Liability Verdicts, By Defendant Type, 2010-2016[1]



[1]Based on plaintiff and defendant verdicts rendered.
Source: Reprinted with permission of Thomson Reuters, *Employment Practice Liability: Jury Award Trends And Statistics*, 2017 edition.

Shareholder Lawsuits

Cornerstone Research has conducted annual studies of securities class-action settlements and filings each year since the passage of the 1995 Private Securities Litigation Reform Act, enacted to curb frivolous shareholder lawsuits.

New federal class action securities core filings (those that exclude mergers and acquisitions filings) in 2017 increased for the fifth consecutive year. 2017 core filings were dominated by consumer noncyclical companies such as biotechology, pharmaceutical and healthcare companies.

Federal filings of mergers and acquisition (M&A) lawsuits rose to 198 in 2017 from 85 in 2016, and accounted for nearly half of all federal securities class action filings in 2017.

In the first half of 2018, core filings totaled 111, up from 87 in the first half of 2017.

M&A filings fell to 93 in the first half of 2018, down from 102 in the first half of 2017.

Five core filings involving initial coin offerings (ICOs) tied to cryptocurrencies emerged at the end of 2017. In first half 2018 there were seven of these filings.

Post-Reform Act Class-Action Filings Of Securities Lawsuits By Industry, 1997-2017[1]

Industry	Average 1997-2017	2016	2017
Consumer	66	101	107
Industrial	16	16	26
Financial	33	22	20
Communications	27	9	18
Technology	23	15	14
Basic materials	4	8	11
Energy	7	8	9
Other	1	6	7
Utilities	3	1	2
Total	**180**	**186**	**214**

[1]Private Securities Litigation Reform Act of 1995. Data represent federal "core filings" and exclude mergers and acquisition (M&A) filings.
Source: Cornerstone Research.

Although the number of settlements in 2017 remained high, settlement dollars dropped significantly to $1.5 billion from $6.1 billion, due to a large number of settlements under $5 million and no settlements over $250 million.

There were only four mega settlements ($100 million or more) in 2017, compared with 10 in 2016.

Post-Reform Act Class-Action Settlements Of Securities Lawsuits, 1996-2017[1]

(2017 dollars)

Settlements	1996-2016	2016	2017
Minimum	$0.1 million	$0.9 million	$0.5 million
Median	8.5 million	8.7 million	5.0 million
Average	57.7 million	72.0 million	18.2 million
Maximum	8.8 billion	1.6 billion	210.0 million
Total settlements	**$93.2 billion**	**$6.1 billion**	**$1.5 billion**
Number of settlements	**1,616**	**85**	**81**

[1]Private Securities Litigation Reform Act of 1995; adjusted for inflation by Cornerstone Research.

Source: Cornerstone Research, *Securities Class Action Settlements–2017 Review and Analysis*© 2018 by Cornerstone Research, Inc.

Florida Assignment of Benefits Litigation

An assignment of benefits (AOB) is a contractual agreement between an insurance policyholder and a business, in which the policyholder gives over ("assigns") to the business some of the policyholder's rights and benefits under the policy. The business might require this assignment before it will repair or replace a policyholder's property, or to conduct other services the insurance policy covers. When benefits are transferred to a business, it completes its job and bills the insurer. AOBs are an efficient, customer-friendly way to settle claims and are common in health insurance and personal auto physical damage claims. Standard homeowners policies usually allow AOBs.

According to the Insurance Information Institute's white paper, Florida's assignment of benefits crisis, abuse of AOBs has fueled an insurance crisis in the state. Its legal environment has encouraged vendors and their attorneys to solicit unwarranted AOBs from tens of thousands of Floridians, conduct unnecessary or unnecessarily expensive work, then file tens of thousands of lawsuits against insurance companies that deny or dispute the claims. There were roughly 1,300 AOB lawsuits statewide in 2000, according to the Florida Justice Reform Institute. There were more than 79,000 in 2013 and nearly 135,000 through November 9, 2018, a 70 percent increase in just five years.

Once limited to personal injury protection (PIP) claims, the AOB litigation problem has spread to homeowners insurance and auto glass coverage. In addition, AOB abuse has historically been localized to a few counties in South Florida and the metro areas around Tampa Bay and Orlando. However, the abuse is quickly becoming a statewide problem, resulting in Florida insurer legal costs rising significantly above nationwide averages and increasing costs for Florida insurance consumers.

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