2021 Insurance Fact Book

INSURANCE INFORMATION INSTITUTE

TO THE READER

Who could have predicted a year ago that in 2020 we would live in *such* interesting times? The year began with a pandemic that still rages at year-end; the 2020 Atlantic hurricane season was one for the record books; and Western wildfires have burned their way through homes and businesses.

For calamities seen and unforeseen—the insurance industry is there for its customers and is a vital component of the predicting and prevention work, as well as the rebuilding and recovery process. Year after year, insurers are in communities, helping them prepare and better manage risk, while also being financial first responders to assist in recovery from losses ranging from the extreme devastation of a wildfire to a broken windshield after a hailstorm.

The 2021 Insurance Information Institute (Triple-I) *Insurance Fact Book* has added content to address many of the year's events, including: Emerging Risks: Insurer Response to the Pandemic; new sections on Civil Disturbance and COVID-19; Homeowners High-Risk Markets; and expanded commercial insurance data and more.

As always, the book provides valuable information on:

- World and U.S. catastrophes
- Property/casualty and life/annuity 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 *Fact Book* is meant to be used along with the institute's website, www.iii.org, which features information for consumers, the industry, researchers, public policymakers and businesses. The Triple-I remains a vital and trusted source for the media, and we welcome you to find us on Facebook and follow us on Twitter at @iiiorg or connect with us on LinkedIn.

Some happy 2020 news to report: The Triple-I is now an affiliate of The Institutes, the leading provider of risk management and insurance education and research. Together, the Triple-I and The Institutes will be better equipped and empowered to serve both the information and education needs of those interested in risk management and insurance.

Thanks as always to the many associations, consultants and others who collect industry statistics and who have generously given permission to use their data—and thanks especially to our members, for their longstanding support.

Sean Kevelighan
Chief Executive Officer
Insurance Information Institute

The *2021 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

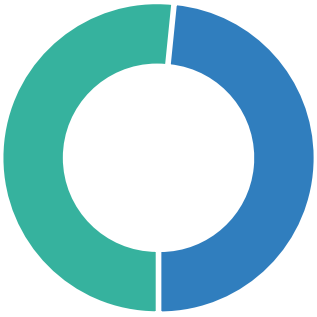
Chapter 9: Factors Affecting Costs

Appendices

Insurance Industry At A Glance

- U.S. insurance industry net premiums written totaled $1.32 trillion in 2019, with premiums recorded by property/casualty (P/C) insurers accounting for 48 percent, and premiums by life/annuity (L/A) insurers accounting for 52 percent, according to S&P Global Market Intelligence.
- P/C insurance consists primarily of auto, homeowners and commercial insurance. Net premiums written for the sector totaled $637.7 billion in 2019.
- The L/A insurance sector consists of annuities, accident and health, and life insurance. Net premiums written for the sector totaled $678.7 billion in 2019.
- Although most private health insurance is written by companies that specialize in that line of business, life and P/C insurers also write coverage referred to as accident and health insurance. Total private health insurance direct premiums written were $968.3 billion in 2019, including: $757.4 billion from the health insurance segment; $204.1 billion from the L/A segment; and $6.7 billion from P/C annual statements, according to S&P Global Market Intelligence. The health insurance sector also includes government programs.
- In 2019 there were 5,965 insurance companies in the U.S. (including territories), according to the National Association of Insurance Commissioners. This number includes: P/C (2,496 companies), L/A (837), health (952), fraternal (82), title (61), risk retention groups (243) and other companies (1,251).
- Insurance carriers and related activities contributed nearly $630 billion, or 2.9 percent, to the nation's gross domestic product (GDP) in 2019, according to the U.S. Bureau of Economic Analysis.

U.S. P/C And L/A Insurance Premiums, 2019[1] ($ billions)



P/C	48.4%	$637.7
L/A	51.6	678.7
Total	**100.0%**	**$1,316.4**

[1]P/C: net premiums written after reinsurance transactions, excludes state funds; L/A: premiums, annuity considerations (fees for annuity contracts) and deposit-type funds. Both sectors include accident and health insurance.

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

- Total P/C cash and invested assets were $1.9 trillion in 2019, according to S&P Global Market Intelligence. L/A cash and invested assets totaled $4.3 trillion in 2019; separate accounts assets and other investments totaled $2.8 trillion. The total of cash and invested assets for both sectors was $9.0 trillion. Most of these assets were in bonds (57 percent of P/C assets and 71 percent of L/A assets, excluding separate accounts).
- P/C and L/A insurance companies paid $23.6 billion in premium taxes in 2019, or $72 for every person living in the United States, according to the U.S. Department of Commerce.
- P/C insurers paid out $39.2 billion in property losses related to natural catastrophes in 2019 according to Aon, down from $60.4 billion in 2018 and $130.8 billion in 2017, including losses from the National Flood Insurance Program.
- The U.S. insurance industry employed 2.8 million people in 2019, according to the U.S. Department of Labor. Of those, 1.6 million worked for insurance companies, including life and health insurers (923,000 workers), P/C insurers (647,000 workers) and reinsurers (28,500 workers). The remaining 1.2 million people worked for insurance agencies, brokers and other insurance-related enterprises.

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- Insurers have responded quickly to the COVID-19 pandemic. Using information collected by the Insurance Industry Charitable Foundation (IICF), the Insurance Information Institute (Triple-I) estimates that by June 2020 U.S. insurers and their foundations had donated about $280 million in the fight against COVID-19. In addition, international insurers and their foundations donated more than $150 million. U.S. auto insurers have also responded to the pandemic by returning over $14 billion to their customers nationwide in response to reduced driving during the pandemic, according to a Triple-I estimate.

Employment In Insurance, 2010-2019 (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						
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	850.4	639.7	26.6	1,516.7	809.6	333.3	1,142.9	2,659.6
2018	882.8	629.5	28.6	1,540.9	825.6	346.2	1,171.8	2,712.7
2019	923.0	647.0	28.5	1,598.5	843.0	348.7	1,191.7	2,790.2

[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 2019

Outside the United States, the insurance industry is divided into life and nonlife (or general insurance), rather than life/annuity and property/casualty. Swiss Re's 2019 world insurance study is based on direct premium data from 147 countries, with detailed information on the largest 88 markets. World insurance premiums rose 2.9 percent in 2019, adjusted for inflation, to $6.3 trillion. Nonlife premiums grew 3.5 percent in 2019, adjusted for inflation, slightly above the rate of growth from 2009 to 2018. Life insurance premiums grew 2.2 percent in 2019, faster than the 1.5 percent rise in 2009 to 2018, adjusted for inflation.

Outlook for 2020-2021

Following 2.9 percent real growth in 2019, Swiss Re estimates total global insurance premiums would fall 1.4 percent in real terms in 2020 due to the COVID-19 pandemic and forecasts 3.4 percent rebound growth in 2021. China is forecast to drive the rebound in 2021 with 10 percent growth in the nonlife sector and 8.5 percent growth in the life sector. After 2.2 percent growth in 2019, in 2020 global life premiums are estimated to fall 4.5 percent, and to grow 3 percent in 2021. Nonlife premiums will fare better: following 3.5 percent real growth in 2019, premiums are estimated to grow 1.1 percent in 2020 and to rebound with 3.6 percent growth in 2021 and 2022.

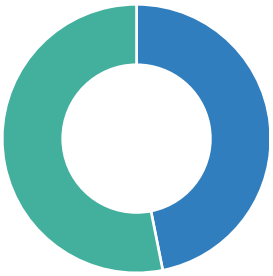
Top 10 Countries By Life And Nonlife Direct Premiums Written, 2019[1] (US$ millions)

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, 5]	$628,522	$1,831,601	$2,460,123	3.9%	39.10%
2	PR China[5]	329,432	287,967	617,399	7.4	9.81
3	Japan[5, 6]	341,328	118,019	459,357	4.8	7.30
4	United Kingdom[5]	264,221	102,022	366,243	-3.8	5.82
5	France[5]	167,588	94,694	262,283	-1.5	4.17
6	Germany[5]	101,550	142,301	243,852	-0.4	3.88
7	South Korea[6]	94,483	80,037	174,520	-3.3	2.77
8	Italy	124,133	43,705	167,838	-1.4	2.67
9	Canada[5, 7]	53,317	79,840	133,157	2.9	2.12
10	Taiwan	97,423	20,401	117,823	-3.4	1.87

[1]Before reinsurance transactions. [2]Includes accident and health insurance. [3]Nonlife premiums now include private medical insurance, which had been included for other countries. [4]Nonlife premiums include state funds; life premiums are net premiums and are supplemented by estimated premiums for group pension business. [5]Estimated or provisional. [6]Financial year April 1, 2019 – March 31, 2020. [7]Nonlife premiums are gross premiums, including reinsurance; life premiums are net premiums.

Source: Swiss Re, *sigma*, No. 4/2020.

World Life And Nonlife Insurance Direct Premiums Written, 2019[1] (US$ billions)



Life	$2,916	46%
Nonlife[2]	3,376	54
Total	**$6,293**	**100%**

[1]Before reinsurance transactions. [2]Includes accident and health insurance.
Source: Swiss Re, *sigma* No.4/2020.

World Life And Nonlife Insurance Direct Premiums Written, 2017-2019[1] (US$ millions)

Year	Life	Nonlife[2]	Total
2017	$2,723,040	$3,066,759	$5,789,799
2018	2,882,179	3,266,841	6,149,020
2019	2,916,267	3,376,333	6,292,600

[1]Before reinsurance transactions. [2]Includes accident and health insurance.
Source: Swiss Re, *sigma* database, *sigma* No. 4/2020.

Life And Nonlife Insurance Direct Premiums Written By Country, 2019[1] (US$ millions)

Country	Nonlife premiums[2]	Life premiums	Total premiums	
			Amount	Percent of total world premiums
Algeria	$1,128	$120	$1,248	0.02%
Argentina	8,058	1,288	9,346	0.15
Australia	47,667	22,175	68,690	1.09
Austria	13,584	6,126	19,710	0.31
Bahamas	622	211	830	0.01
Bahrain	650	138	788	0.01
Bangladesh	442	1,033	1,475	0.02
Belgium	18,039	18,368	36,407	0.58
Brazil	32,803	41,303	74,106	1.18
Bulgaria	1,440	200	1,641	0.03
Canada	79,840	53,317	133,157	2.12
Cayman Islands	798	30	829	0.01
Chile	5,310	7,875	13,185	0.21
Colombia	6,188	2,930	9,119	0.14
Costa Rica	1,197	229	1,426	0.02
Croatia	1,120	463	1,583	0.03
Cuba	636	[3]	758	0.01
Cyprus	568	431	999	0.02
Czech Republic	4,906	2,309	7,215	0.11
Denmark	9,464	27,676	37,140	0.59
Dominican Republic	1,150	208	1,362	0.02
Ecuador	1,364	434	1,797	0.03
Egypt	1,029	870	1,899	0.03
Finland	5,033	22,291	27,324	0.43
France	94,694	167,588	262,283	4.17

(table continues)

Life And Nonlife Insurance Direct Premiums Written By Country, 2019[1] (US$ millions) (Cont'd)

Country	Nonlife premiums[2]	Life premiums	Total premiums	
			Amount	Percent of total world premiums
Germany	$142,301	$101,550	$243,852	3.88%
Greece	2,540	2,180	4,721	0.08
Guatemala	766	212	978	0.02
Hong Kong	5,413	66,840	72,253	1.15
Hungary	2,168	1,741	3,909	0.06
India	26,637	79,671	106,307	1.69
Indonesia	6,487	15,798	22,286	0.35
Iran	10,418	1,962	12,380	0.20
Ireland	7,050	66,297	73,347	1.17
Israel	8,709	10,615	19,324	0.31
Italy	43,705	124,133	167,838	2.67
Jamaica	525	345	870	0.01
Japan	118,019	341,328	459,347	7.30
Jordan	745	121	865	0.01
Kazakhstan	836	387	1,223	0.02
Kenya	1,283	956	2,239	0.04
Kuwait	1,163	171	1,334	0.02
Lebanon	1,140	471	1,611	0.03
Liechtenstein	3,158	2,426	5,584	0.09
Luxembourg	13,905	30,210	45,467	0.72
Macao	353	3,202	3,555	0.06
Malaysia	4,985	12,166	17,150	0.27
Malta	3,663	2,003	5,666	0.09
Mexico	16,302	14,193	30,495	0.48
Morocco	2,555	2,084	4,640	0.07
Namibia	267	1,038	1,305	0.02
Netherlands	69,220	14,437	83,657	1.33
New Zealand	8,810	1,742	10,552	0.17
Nigeria	840	796	1,636	0.03
Norway	8,781	12,053	20,834	0.33
Oman	968	148	1,116	0.02
Pakistan	770	1,723	2,492	0.04
Panama	1,162	406	1,568	0.02
Peru	2,151	2,079	4,230	0.07
Philippines	1,941	4,254	6,195	0.10

(table continues)

Life And Nonlife Insurance Direct Premiums Written By Country, 2019[1] (US$ millions) (Cont'd)

Country	Nonlife premiums[2]	Life premiums	Total premiums	
			Amount	Percent of total world premiums
Poland	$11,977	$3,892	$15,869	0.25%
Portugal	5,926	8,031	13,957	0.22
PR China	287,967	329,432	617,399	9.81
Qatar	1,326	57	1,383	0.02
Romania	2,122	481	2,604	0.04
Russia	16,533	6,324	22,856	0.36
Saudi Arabia	9,823	259	10,081	0.16
Serbia	748	226	973	0.02
Singapore	8,638	21,022	30,813	0.49
Slovakia	1,557	933	2,490	0.04
Slovenia	1,974	844	2,819	0.04
South Africa	9,368	37,725	47,093	0.75
South Korea	80,037	94,483	174,520	2.77
Spain	40,193	31,562	71,002	1.13
Sri Lanka	609	481	1,090	0.02
Sweden	9,738	28,648	38,385	0.61
Switzerland	28,743	30,808	58,953	0.94
Taiwan	20,401	97,423	117,823	1.87
Thailand	9,316	17,807	27,123	0.43
Trinidad and Tobago	710	640	1,359	0.02
Tunisia	653	177	830	0.01
Turkey	9,244	1,689	10,933	0.17
Ukraine	2,040	182	2,222	0.04
United Arab Emirates	10,056	2,656	12,712	0.20
United Kingdom	102,022	264,221	366,243	5.82
United States	1,831,601	628,522	2,460,123	39.10
Uruguay	915	649	1,554	0.02
Venezuela	[3]	122	NA	NA
Vietnam	2,645	4,723	7,368	0.12
Other	11,982	4,902	16,884	2.27
World[4]	**$3,376,333**	**$2,916,267**	**$6,292,600**	**100.00%**

[1]Before reinsurance transactions. For more information on country data see www.swissre.com. [2]Includes accident and health insurance. [3]Data not available. [4]Totals may not add up due to rounding.

NA = Not applicable.

Source: Swiss Re, *sigma*, No. 4/2020.

Top 10 Countries By Total Insurance Premiums Per Capita And Percent Of Gross Domestic Product (GDP), 2019[1]

Rank	Country	Total premiums per capita
1	Cayman Islands	$12,764
2	Hong Kong	9,706
3	United States	7,495
4	Switzerland	6,835
5	Denmark	6,384
6	Ireland	5,920
7	Macao	5,551
8	Luxembourg	5,165
9	Taiwan	4,993
10	Finland	4,948
Total world		**$818**

Rank	Country	Total premiums as a percent of GDP
1	Taiwan	19.97%
2	Hong Kong	19.74
3	Cayman Islands	19.18
4	South Africa	13.40
5	United States	11.43
6	South Korea[2]	10.78
7	Denmark	10.68
8	Namibia	10.44
9	United Kingdom	10.30
10	Finland	10.17
Total world		**7.23%**

[1]Includes nonlife and life insurance and cross-border business. [2]April 1, 2019 to March 31, 2020.
Source: Swiss Re, *sigma*, No. 4/2020.

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 34.3 percent of the U.S. premiums written that was ceded in 2018, while offshore companies accounted for 65.7 percent. However, many U.S.-based reinsurers are owned by foreign companies. Taking this into consideration, offshore or foreign-owned U.S. reinsurers accounted for 88.9 percent of premiums assumed in 2018, while U.S. professional reinsurers accounted for 11.1 percent.

U.S. Reinsurance Premiums Ceded to Unaffiliated and Affiliated Offshore Reinsurers, 2014-2018 (US$ millions)

	2014	2015	2016	2017	2018
Unaffiliated offshore reinsurers	$30,211	$33,035	$34,652	$36,638	$46,005
Affiliated offshore reinsurers	42,295	45,469	49,019	48,302	22,529
Total	**$72,506**	**$78,504**	**$83,671**	**$84,940**	**$68,534**

Source: Reinsurance Association of America.

Top 10 Countries By U.S. Reinsurance Premiums Ceded To Unaffiliated And Affiliated Offshore Reinsurers, 2018 (US$ millions)

Unaffiliated offshore reinsurers		
Rank	**Country**	**Premiums ceded**
1	Bermuda	$12,962
2	United Kingdom	8,391
3	Germany	6,801
4	Switzerland	5,978
5	Cayman Islands	4,306
6	Turks and Caicos	2,138
7	Barbados	757
8	Channel Islands	628
9	British Virgin Islands	615
10	Ireland	607
Total, top 10 countries		**$43,182**
Total world		**$46,005**

Affiliated offshore reinsurers		
Rank	**Country**	**Premiums ceded**
1	Bermuda	$16,203
2	Germany	2,275
3	Cayman Islands	869
4	Switzerland	686
5	Japan	626
6	Turks and Caicos	574
7	France	397
8	United Kingdom	277
9	Canada	145
10	Spain	126
Total, top 10 countries		**$22,178**
Total world		**$22,529**

Source: Reinsurance Association of America.

LEADING COMPANIES

Top 10 Global Insurance Companies By Revenues, 2019[1] (US$ millions)

Rank	Company	Revenues	Country	Industry
1	Berkshire Hathaway	$254,616	United States	Property/casualty
2	Ping An Insurance	184,280	China	Life/health
3	AXA	148,494	France	Life/health
4	China Life Insurance	131,244	China	Life/health
5	Allianz	130,359	Germany	Life/health
6	Japan Post Holdings	109,915	Japan	Life/health
7	Assicurazioni Generali	105,921	Italy	Life/health
8	Prudential	93,736	United Kingdom	Life/health
9	Legal & General Group	90,615	United Kingdom	Life/health
10	Aviva	89,647	United Kingdom	Life/health

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

Top 10 Global Property/Casualty Reinsurance Groups By Gross Reinsurance Written Premiums, 2019[1] (US$ millions)

Rank	Company	Gross reinsurance premiums written	Country
1	Swiss Re Ltd.	$26,095	Switzerland
2	Munich Reinsurance Co.	24,742	Germany
3	Hannover Re S.E.[2]	16,555	Germany
4	Lloyd's of London[3]	14,978	United Kingdom
5	Berkshire Hathaway Inc.	11,112	United States
6	Scor S.E.	8,005	France
7	Everest Re Group Ltd.	6,356	Bermuda
8	PartnerRe Ltd.	5,792	Bermuda
9	XL Bermuda Ltd.	5,010	Bermuda
10	Transatlantic Holdings Inc.	4,946	United States

[1]Ranked by unaffiliated gross written premiums. [2]Net premiums earned. [3]Lloyd's premiums are reinsurance only. Premiums for cetrtain groups within the rankings also may include Lloyd's syndicate premiums when applicable.
Source: AM Best Co. Inc., Business Insurance (www.businessinsurance.com), October 2020.

Top 10 Global Insurance Brokers By Revenues, 2019[1] (US$ millions)

Rank	Company	Brokerage revenues	Country
1	Marsh & McLennan Cos. Inc.[2]	$16,752[3]	United States
2	Aon PLC	10,939	United Kingdom
3	Willis Towers Watson PLC	8,941	United Kingdom
4	Arthur J. Gallagher & Co.	5,716	United States
5	Hub International Ltd.	2,392	United States
6	Brown & Brown Inc.	2,385	United States
7	Truist Insurance Holdings Inc.[2]	2,271	United States
8	Lockton Cos. LLC[4]	1,868	United States
9	USI Insurance Services LLC	1,831	United States
10	Acrisure LLC	1,807	United States

Revenues from the 10 largest world brokers increased 9.6 percent to $54.9 billion in 2019 from $50.1 billion in 2018. The 2019 top 10 total includes revenue from Assurance Agency LTD, which was acquired by Marsh and McLennan Cos. in April 2020.

In 2009 revenues generated by the 10 largest world brokers totaled $28.9 billion.

[1]Revenue generated by insurance brokerage and related services. [2]Reflects acquisitions made in 2019. [3]Business Insurance estimate of pro forma revenue to reflect the acquisition of Assurance Agency Ltd. in April 2020. [4]Fiscal year ending April 30.

Source: Business Insurance (www.businessinsurance.com), July 2020.

Top Five Global Reinsurance Brokers By Reinsurance Brokerage and Related Services Revenues, 2019[1]

(US$ millions)

Rank	Company	Gross reinsurance revenues	Country
1	Aon's Reinsurance Solutions	$1,665.0	United Kingdom
2	Guy Carpenter & Co. LLC[2]	1,482.1	United States
3	Willis Re	1,021.8	United Kingdom
4	TigerRisk Partners LLC	125.0	United States
5	Gallagher Re[3]	100.0	United States

[1]Includes all reinsurance revenue reported through holding and/or subsidiary companies. [2]Acquired JLT Reinsurance in April 2019. [3]Formerly Capsicum Reinsurance Brokers LLP.

Source: Business Insurance (www.businessinsurance.com), October 2020

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, 2009-2018 (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	16,248	63,746
2016	16,819	62,509
2017	18,015	62,261
2018	17,466	NA

[1]Largely based on premiums. Includes adjustments for "normal," i.e., expected losses and premium supplements (income due to policyholders). BEA 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, 2013-2017 (US$ millions)

	Gross premiums written					
					2017	
	2013	2014	2015	2016	Amount	Percent of total
Life	$143,429	$150,000	$145,373	$154,523	$163,386	63.2%
Nonlife	74,219	76,306	78,314	92,272	95,229	36.8
Total	**$217,648**	**$226,306**	**$223,687**	**$246,795**	**$258,615**	**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 in the 1980s when businesses had trouble obtaining some types of commercial insurance coverage. Today alternative risk transfer arrangements include self insurance, risk retention groups and risk purchasing groups, and more recent innovations such as catastrophe bonds and other insurance-linked securities.

For a complete list of captives in the United States, see *A Firm Foundation: How Insurance Supports the Economy*.

Leading Captive Domiciles, 2018-2019

Rank	Domicile	Number of captives	
		2018	2019
1	Bermuda	730[1]	715
2	Cayman Islands	674	618
3	Vermont	580	585
4	Utah	441[1]	435
5	Delaware	421	366
6	Barbados	276	294
7	North Carolina	246[1]	235
8	Hawaii	231	231
9	Guernsey	209[1]	199
10	Luxembourg	198	195
11	South Carolina	171	179
12	Nevada	182[1]	174
13	Nevis	155	147
14	Tennessee	169	140
15	Anguilla	165	129
16	Arizona	124	128
17	Montana	128[1]	123
18	District of Columbia	105	104
19	Isle of Man	103	102
20	Singapore	72	73
Total, top 20		**5,380**	**5,172**
Total, all captives		**6,135**	**6,359**

[1]Restated.

Source: Business Insurance (www.businessinsurance.com), March 2020.

The Securitization Of Insurance Risk: Insurance-Linked Securities

Catastrophe (cat) bonds are a form of insurance-linked securities (ILS), also known as insurance securitization, where insurers transfer risk, usually from a catastrophe or natural disaster through a sponsor, typically a reinsurer, to investors. Insurers and reinsurers typically issue cat bonds through a special purpose vehicle, which is 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 a 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.

Other forms of insurance-linked securities are based on life, longevity and mortality, and are generally used to raise risk capital for life insurers as well as spread risk, according to Artemis. These securities allow investors to diversify their asset portfolios and provide a process for investors to share in the returns of the life insurance business.

According to Artemis, catastrophe bond and other insurance linked-securities issuance fell to $11.1 billion in 2019, down from $13.9 billion in 2018. In 2019, capital outstanding stood at $40.7 billion, compared with $37.6 billion in 2018. By December 2020 issuance was $16.1 billion and capital outstanding stood at $46.0 billion. The breakdown of issuance by type of transaction is $11 billion for property catastrophe bonds (68 percent of total issuance in 2020), $4 billion for mortgage ILS deals (25 percent) and $1.1 billion for other types of ILS including specialty, life, mortality and private deals (7 percent).

MICROINSURANCE AND EMERGING MARKETS

Microinsurance

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 covers those with low incomes for accidents, illnesses and natural disasters with premium payments customized for their income and level of risk, according to the Microinsurance Network. The global potential market for microinsurance is more than 2 billion people because 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 as a small percentage of the loan amount. The approach is an outgrowth of the micro-financing projects developed by Bangladeshi Nobel Prize-winning banker and economist Muhammad Yunus, who 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 almost 290 million people worldwide are covered by at least one microinsurance policy.

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 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. Swiss Re's 2020 *sigma* report on world insurance markets reported that premiums in emerging countries rose 6.6 percent in 2019, after adjusting for inflation, compared with 1.9 percent in 2018, and were mainly China-driven. Growth in developing markets outpaced growth in advanced markets, where premiums increased 2.1 percent in 2019 after rising 3.5 percent in 2018. Emerging markets accounted for 18.5 percent of total global premium volume in 2019, compared with 21.3 percent in 2018.

Life sector premiums rose 5.6 percent in emerging markets in 2019, after inflation, following a 2.0 percent decrease in 2018. In advanced markets, life premiums rose 1.3 percent in 2019 and 3.9 percent in 2018. Nonlife sector premiums in emerging markets rose 7.7 percent in 2019, adjusted for inflation, compared with 6.9 percent in 2018, while nonlife premiums rose 2.7 percent last year in advanced markets after increasing 3.1 percent in 2018.

Swiss Re expects premiums for life insurance to stagnate in 2020 in emerging markets in response to the COVID-19 pandemic, except for emerging Asia, and recover in 2021, particularly in China. The downturn in 2020 will affect emerging markets in Europe the most. Nonlife premiums are expected to grow 3 percent in 2020 in emerging markets, compared with declining 0.1 percent in total markets. Total premiums in emerging markets are expected to grow 7 percent in 2021.

Other insurance channels: Emerging markets also benefit from remittances, which represent a significant way migrants send payments to their families in their home countries. The World Bank estimated that remittances amounted to $554 billion worldwide in 2019 and were the largest source of capital for low- and middle-income countries. During the COVID-19 pandemic, the World Bank expects remittances to fall 20 percent to $445 billion. The largest remittances flow into countries that have the largest number of emigrants living in advanced economies. Central America, the Middle East and countries that were in the former Soviet Union are the most reliant on remittances. According to Swiss Re, these payments improve the economic welfare and resilience in home countries. Currently only a small fraction of remittance payments is insured for the death or disability of the sender. Migrants using remittance systems can be made aware of the benefits of insuring their remittances. Swiss Re estimates that insurance premiums linked to remittances could reach $1 billion in the next decade. Insurers could then begin to introduce other traditional insurance products such as auto, accident or renters insurance.

The parametric model is an alternative to traditional insurance where a specific trigger generates claims payments immediately. Triggers are designed to be objective and transparent, and insurers must thoroughly understand the consequences of the trigger. A payment schedule is set in advance based on the severity of an event. For example, an earthquake that reaches a certain magnitude defined by the U.S. Geological Survey, or a hurricane that meets the criteria of a certain category of storm by the National Weather Service, would serve as triggers. Other examples are crop yields and rainfall totals. Payments are made as soon as the triggers are reached, whether actual losses were sustained. Parametric insurance gives customers the advantage of fast claims payouts, often via mobile phone networks. For commercial insurers, it removes some of the barriers they face when entering new and developing markets. The Microinsurance Network looks to parametric insurance as a solution to losses by small farmers around the world who may be affected by extreme weather conditions.

Insurance In Emerging Markets, 2019

	Direct premiums written, 2019[1]	Percent change from 2018[2]	Share of world market	Premiums as a percent of GDP[3]	Premiums per capita (US$)
Total industry					
Advanced markets	$5,130,924	2.1%	81.54%	9.63%	$4,664
Emerging markets	1,161,675	6.6	18.46	3.25	175
Total	**$6,292,600**	**2.9%**	**100.00%**	**7.23%**	**$818**
Life					
Advanced markets	$2,298,700	1.3%	78.82%	4.25%	$2,056
Emerging markets	617,566	5.6	21.18	1.73	93
Total	**$2,916,267**	**2.2%**	**100.00%**	**3.35%**	**$379**
Nonlife					
Advanced markets	$2,832,224	2.7%	83.88%	5.39%	$2,608
Emerging markets	544,109	7.7	16.12	1.52	82
Total	**$3,376,333**	**3.5%**	**100.00%**	**3.88%**	**$439**

[1]Expressed in millions of U.S. dollars. [2]Inflation-adjusted. [3]Gross domestic product.
Source: Swiss Re, *sigma*, No. 4/2020.

According to Swiss Re, in 2019 China was the largest emerging market country based on insurance premiums written (including life and nonlife business), with $617.4 billion in premiums written, followed by India with $106.3 billion and Brazil with $74.1 billion. However, when measured by insurance density in 2018 (latest data available), the Bahamas ranked first, with $1,963 in premiums per capita (including life and nonlife business).

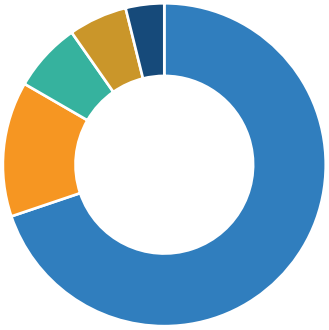
Top 10 Emerging Markets By Insurance Density, 2018[1]

Rank	Country	Total premiums[2]	
		Per capita (US$)	As a percent of GDP[3]
1	Bahamas	$1,963	6.20%
2	Slovenia	1,336	4.94
3	United Arab Emirates	1,305	2.92
4	Trinidad and Tobago	853	4.40
5	South Africa	840	12.89
6	Chile	747	4.60
7	Czech Republic	666	2.77
8	Bahrain	520	1.83
9	Malaysia	518	4.77
10	Slovakia	478	2.31

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

Source: Swiss Re, *sigma*, No. 3/2019.

Total Insurance Premiums, Emerging Markets, 2019[1] (US$ millions)



Emerging Asia	69.8%	$811,050
Latin America and Caribbean	13.5	157,146
Emerging Europe and Central Asia	6.9	80,505
Africa	5.9	68,155
Emerging Middle East	3.9	44,819
Total	**100.0%**	**$1,161,675**

[1]Includes life and nonlife insurance premiums.

Source: Insurance Information Institute using data from Swiss Re, *sigma*, No. 4/2020.

Chapter 2

U.S. Insurance Industry, All Sectors

PREMIUMS

Net Premiums Written, Property/Casualty And Life/Annuity

There are three main insurance sectors: property/casualty (P/C), which is mainly auto, home and commercial insurance; life/annuity, mainly life insurance and annuity products; and private health insurance, written by insurers whose main business is health insurance. Life/annuity and P/C insurers can also write health coverage. In 2019 total insurance industry net premiums written rose 8.1 percent. P/C net premiums written rose 3.2 percent. Life/annuity net premiums written rose faster, 13.1 percent. Net premiums written represent premiums after reinsurance transactions.

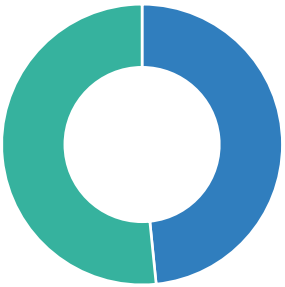
Net Premiums Written, Property/Casualty And Life/Annuity Insurance, 2010-2019 ($000)

Year	Property/casualty[1]	Life/annuity[2]	Total
2010	$426,082,428	$560,434,300	$986,516,728
2011	441,585,290	602,255,968	1,083,903,475
2012	460,666,320	623,237,155	1,083,903,475
2013	481,604,890	560,069,272	1,041,674,162
2014	502,578,473	644,479,853	1,147,058,326
2015	520,047,073	635,549,216	1,155,596,289
2016	533,744,458	597,634,158	1,131,378,616
2017	558,157,401	594,906,580	1,153,063,981
2018	617,945,973	600,261,046	1,218,207,019
2019	637,704,669	678,687,860	1,316,392,529
Percent change, 2010-2019	**49.7%**	**21.1%**	**33.4%**

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

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

Property/Casualty And Life/Annuity Insurance Premiums, 2019[1] (US$ billions)



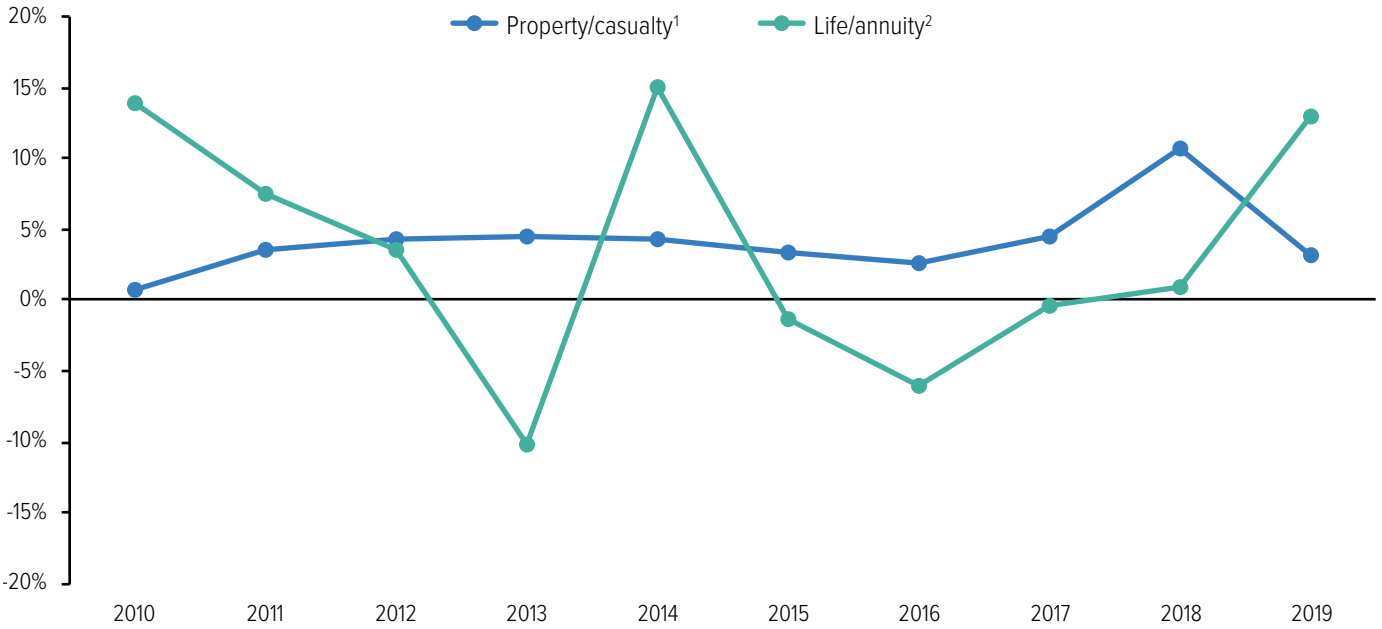
Property/casualty	48.4%	$637.7
Life/annuity	51.6	678.7
Total	**100.0%**	**$1,316.4**

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

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

Growth In Net Premiums Written, Property/Casualty And Life/Annuity Insurance, 2010-2019

(Percent change from prior year)



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

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

Direct Premiums Written, Property/Casualty And Life/Annuity

Direct premiums written represent premiums before reinsurance transactions.

Direct Premiums Written, Property/Casualty And Life/Annuity Insurance, 2010-2019 ($000)

Year	Property/casualty[1]	Life/annuity[2]	Total
2010	$484,400,894	$612,878,624	$1,097,279,518
2011	502,011,305	656,924,642	1,158,935,946
2012	523,914,193	684,846,102	1,208,760,295
2013	546,334,118	646,630,185	1,192,964,304
2014	570,782,303	662,282,225	1,233,064,528
2015	591,757,789	681,077,936	1,272,835,725
2016	613,383,327	683,352,546	1,296,735,873
2017	642,531,528	691,370,484	1,333,902,012
2018	678,281,318	733,204,093	1,411,485,410
2019	708,890,745	759,340,391	1,468,231,136
Percent change, 2010-2019	**46.3%**	**23.9%**	**33.8%**

[1]Direct premiums written before reinsurance transactions. Excludes state funds; includes accident and health insurance. [2]Includes premiums, annuity considerations (fees for annuity contracts), deposit-type funds and accident and health insurance.

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, 2019 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	State Farm Mutual Automobile Insurance Co.	$65,615,190	9.3%
2	Berkshire Hathaway Inc.	46,106,971	6.6
3	Progressive Corp.	39,222,879	5.6
4	Liberty Mutual	35,600,051	5.1
5	Allstate Corp.	35,025,903	5.0
6	Travelers Companies Inc.	28,016,966	4.0
7	USAA Insurance Group	23,483,080	3.3
8	Chubb Ltd.	23,388,385	3.3
9	Farmers Insurance Group of Companies	20,643,559	2.9
10	Nationwide Mutual Group	18,442,145	2.6

[1]Before reinsurance transactions, includes state funds. [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 Life/Annuity Insurance By Direct Premiums Written, 2019 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	MetLife Inc.	$95,079,321	13.0%
2	Prudential Financial Inc.	56,206,131	7.7
3	Equitable Holdings	44,721,302	6.1
4	New York Life Insurance Group	33,425,321	4.6
5	Massachusetts Mutual Life Insurance Co.	30,375,127	4.2
6	Lincoln National Corp.	28,471,688	3.9
7	Principal Financial Group Inc.	27,038,400	3.7
8	American International Group (AIG)	25,684,294	3.5
9	Jackson National Life Group	23,056,675	3.2
10	Transamerica	22,360,111	3.1

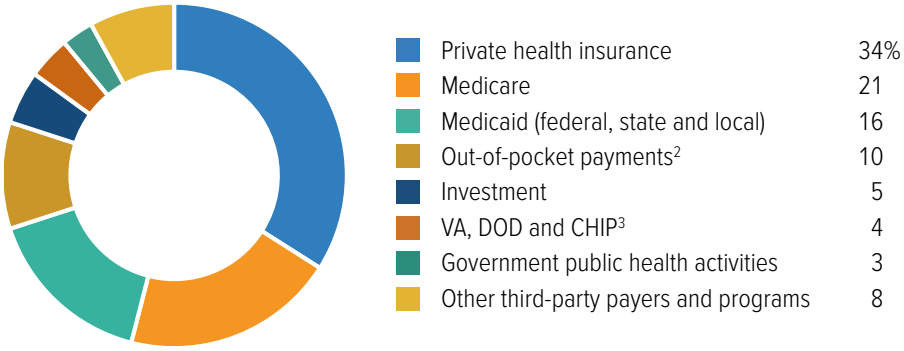
[1]Includes life insurance, annuity considerations, deposit-type contract funds and other considerations, and accident and health insurance. Before reinsurance transactions. [2]Based on U.S. total, includes territories.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

HEALTH

Healthcare Expenditures

In 2018 nearly half (44 percent) of the nation's healthcare costs of $3.6 trillion were covered under Medicaid, Medicare and other public programs, according to the U.S. Department of Health and Human Services Centers for Medicare and Medicaid Services (CMS).

Where the Nation's Healthcare Dollar Came From, 2018[1]



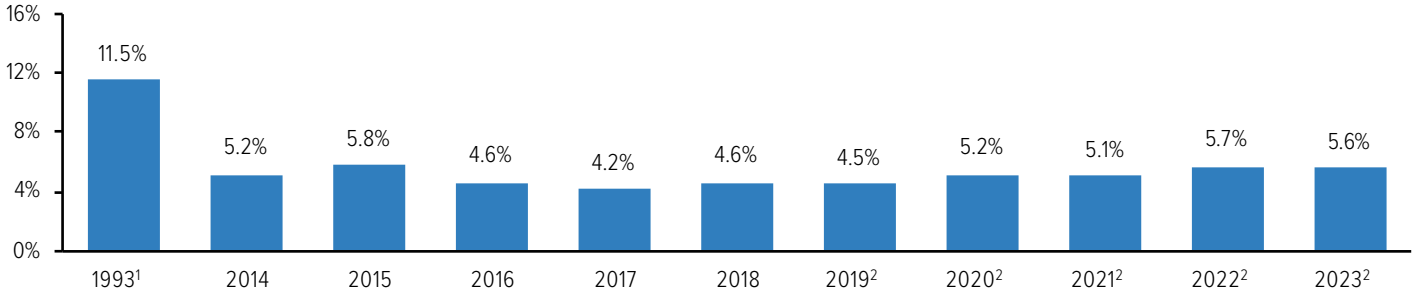
[1]Sum of components may not add to 100 percent due to rounding. [2]Includes co-payments, deductibles, and any amounts not covered by health insurance. [3]Department of Veterans Affairs, Department of Defense and Children's Health Insurance Program.

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

According to CMS, national healthcare expenditures rose 4.6 percent to $3.6 trillion in 2018, compared with 4.2 percent growth in 2017. The faster healthcare spending growth from 2017 to 2018 reflects faster growth in the net cost of health insurance, which grew 13.2 percent in 2018, following 4.3 percent growth in 2017. CMS further reports that the uptick in health insurance costs was due primarily to the reinstatement of the health insurance tax beginning in 2018. The health spending share of the U.S. GDP was 17.7 percent in 2018, down slightly from 17.9 percent in 2017. Healthcare spending rose to $11,172 per capita in 2018, up 4.0 percent from $10,742 in 2017.

CMS projects that annual health expenditures increased by 4.5 percent in 2019, reflecting private health insurance spending growth slowing from 5.8 percent in 2018 to 3.8 percent in 2019, due to the health insurance tax moratorium. National health spending is projected to grow at an average annual rate of 5.4 percent between 2019 and 2023 and to reach $6.2 trillion by 2028. The temporary return of the health insurance tax in 2020 is predicted to result in more rapid growth from 2020 to 2023, along with increases in wage growth for healthcare workers and Medicaid spending increases. The permanent repeal of the health insurance tax starting in 2021 will result in lower growth between 2021 and 2023.

National Health Expenditures, Average Annual Percent Growth From Prior Year, 1993-2023



[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/annuity insurance companies contribute to the U.S. economy far beyond their core function of helping to manage risk. These insurers drive the U.S. economy in the following ways:

- The insurance sector overall is a large employer, providing some 2.8 million jobs, or 2.2 percent of U.S. employment in 2019.
- Insurers have responded quickly to the COVID-19 pandemic. Using information collected by the Insurance Industry Charitable Foundation (IICF), the Insurance Information Institute (Triple-I) estimates that by June 2020 U.S. insurers and their foundations had donated about $280 million in the fight against COVID-19. In addition, international insurers and their foundations donated more than $150 million. U.S. auto insurers have also responded to the pandemic by returning more than $14 billion to their customers nationwide in response to reduced driving during the pandemic, according to a Triple-I estimate.
- The insurance industry has long been a major contributor to charitable causes. The industry raised more than $630,000 in disaster relief funds to benefit those affected by the devastating hurricanes and wildfires in 2017 and had contributed more than $31 million in local community grants and more than 300,000 volunteer hours to hundreds of community nonprofit organizations in the past 25 years. A 2020 report by McKinsey and Co. found that charitable giving in the insurance industry has held steady around $500 million to $600 million annually from 2015 to 2019, with an emphasis on education, health and social services and community. The report is based on responses from property/casualty companies and for the first time since 2011, life insurance and wealth management segments of the industry.
- 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 and construction industries, 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 life insurance claims are paid, funds flow into the general economy, as beneficiaries spend the money they receive.
- The healthcare industry is a prime recipient of claims filed under workers compensation and other liability insurance policies and the bodily injury portion of auto insurance policies.
- Helping to fund the building of roads, schools and other public projects, insurance companies invested $500 billion in U.S municipal securities in 2019.
- Providing businesses with capital for research, expansions and other ventures, insurance companies held $4.8 trillion in stocks and bonds in 2019.
- The insurance industry contributed $629.7 billion to the $21.4 trillion U.S. GDP in 2019.
- The taxes insurers pay include special levies on insurance premiums, which amounted to $23.6 billion in 2019, or 2.2 percent of all taxes collected by states.

Employment In Insurance, 2010-2019 (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						
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	850.4	639.7	26.6	1,516.7	809.6	333.3	1,142.9	2,659.6
2018	882.8	629.5	28.6	1,540.9	825.6	346.2	1,171.8	2,712.7
2019	923.0	647.0	28.5	1,598.5	843.0	348.7	1,191.7	2,790.2

[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, 2019[1]

State	Number of employees	State	Number of employees
Alabama	44,988	Montana	10,249
Alaska	2,818	Nebraska	38,616
Arizona	89,202	Nevada	25,080
Arkansas	27,290	New Hampshire	16,847
California	371,874	New Jersey	115,799
Colorado	65,692	New Mexico	16,140
Connecticut	73,060	New York	215,182
Delaware	8,672	North Carolina	104,181
D.C.	4,524	North Dakota	11,429
Florida	283,586	Ohio	155,624
Georgia	128,618	Oklahoma	36,568
Hawaii	12,929	Oregon	37,100
Idaho	17,076	Pennsylvania	177,283
Illinois	177,219	Rhode Island	13,119
Indiana	73,513	South Carolina	50,559
Iowa	64,556	South Dakota	13,549
Kansas	42,652	Tennessee	82,083
Kentucky	47,631	Texas	347,820
Louisiana	43,739	Utah	32,951
Maine	14,725	Vermont	5,659
Maryland	54,088	Virginia	82,571
Massachusetts	90,133	Washington	62,479
Michigan	94,566	West Virginia	12,960
Minnesota	84,868	Wisconsin	88,763
Mississippi	23,672	Wyoming	4,108
Missouri	81,290	**United States**	**3,779,700**

[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 2020.
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), 2015-2019

($ billions)

Year	Total GDP	Insurance carriers and related activities	
		GDP	Percent of total GDP
2015	$18,224.8	$552.3	3.0%
2016	18,715.0	569.1	3.0
2017	19,519.4	558.8	2.9
2018	20,580.2	609.2	3.0
2019	21,427.7	629.7	2.9

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

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 $629.7 billion to the $21.4 trillion GDP in 2019.

Ownership Of U.S. Municipal Securities

Insurance companies help fund the construction of schools, roads and other public sector projects through their investments in municipal securities, which totaled $500 billion in 2019. The property/casualty insurance industry invested $285 billion in such securities in 2019, and the life/annuity insurance industry invested $215 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, 2015-2019

($ billions, end of year)

	2015	2016	2017	2018	2019
Property/casualty insurance companies	$357.5	$350.7	$338.9	$291.6	$285.2
Life insurance companies	177.3	185.2	197.8	190.0	215.0
Total	**$534.8**	**$535.9**	**$536.7**	**$481.6**	**$500.2**

Source: Board of Governors of the Federal Reserve System, June 11, 2020.

MERGERS AND ACQUISITIONS

The number of announced global insurance-related mergers and acquisitions (M&A) rose to 1,179 transactions in 2019 from 1,031 in 2018, as distribution transactions remain at record highs. However, the value of those transactions fell to $56.1 billion in 2019, from $147.6 billion in 2018, according to Conning Research. In the P/C sector M&A slowed about 6 percent from a year ago, with 98 transactions globally compared with 104 in 2018, and $16.1 billion in transaction values compared with $40.8 billion in 2018. Conning attributes the decline to firming prices that led to rising premiums, which in turn decreased the need to acquire companies; reserve adequacy concerns at targets; and higher prices for higher-quality companies. In the life/annuity sector M&A transactions totaled 61 in 2019, down from 69 in 2018. The sector had $14.2 billion in transaction values, down by about half from the 2018 value of $28 billion.

In 2019 the number of insurance-related deals in which a U.S. firm was either a buyer or a target rose 7.4 percent to 825 from 768 transactions in 2018. The value of properties acquired in 2018 U.S. deals plummeted 58.7 percent to $41.5 billion from $100.5 billion in 2018, according to Conning data. The number of non-U.S. insurance-related M&A transactions (i.e., where a non-U.S. company was both buyer and seller) rose in 2019 to 354 from 263 in 2018, or 34.6 percent. The reported value of non-U.S. deals dropped 69 percent to $14.6 billion in 2019 from $47 billion in 2018.

Reported Global Insurance-Related Mergers And Acquisitions By Sector, U.S. And Non-U.S. Acquirers, 2019

	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	29	69	98	$8,805	$7,316	$16,121
Life/annuity	20	41	61	9,235	4,980	14,215
Health/managed care	22	12	34	17,410	2,109	19,519
Total	**71**	**122**	**193**	**$35,450**	**$14,405**	**$49,855**
Distribution and services						
Distribution	682	203	885	$2,389	$171	$2,560
Services	72	29	101	3,669	0	3,669
Total	**754**	**232**	**986**	**$6,058**	**$171**	**$6,229**
Total, all sectors	**825**	**354**	**1,179**	**$41,508**	**$14,576**	**$56,084**

[1]Components may not add to totals 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: ©2020 Conning, Inc., 2020: Global Property Casualty Insurance M&A in 2019 - Distribution Dominates; Global Life & Health Insurance M&A in 2019: The Quest for Growth Continues. Used with permission.

In 2019 the largest global transactions involved health companies as Centene Corp. acquired WellCare Health Plans, with an announced value of $17.3 billion. Led by this deal, the health sector accounted for $18.6 billion in transaction values or 46 percent of the top 10 M&A deals of 2019. Life deals ranked second, third and tenth largest, and as a whole the sector accounted for 29 percent of the transaction values of the top 10. The P/C sector, with three deals in the top 10, accounted for 17 percent of the total dollars involved in M&A in 2019. The services and distribution sectors both had one deal in the top 10 in 2019 and accounted for 6 percent and 3 percent, respectively, of the value of the top 10 deals.

Top 10 Global Insurance-Related Mergers And Acquisitions Announced, 2019 ($ millions)

Rank	Buyer (country)	Target (country)	Sector	Transaction value
1	Centene Corp. (U.S.)	WellCare Health Plans Inc. (U.S.)	Health	$17,300
2	New York Life Insurance Co. (U.S.)	Cigna Corp. (group life and disability) (U.S.)	Life	6,300
3	Phoenix Group Holdings, plc (U.K.)	ReAssure Group plc (U.K.)	Life	4,211
4	Tokio Marine Holdings, plc (Japan)	PURE Group (U.S.)	Property/casualty	3,100
5	Prudential Financial (U.S.)	Assurance IQ (U.S.)	Services	2,350
6	Brookfield Business Partners (Bermuda)	Genworth MI (Canada)	Property/casualty	1,800
7	The Carlyle Group (U.S.) and T&D Holdings (Japan)	Fortitude Group Holdings (U.S.)	Property/casualty	1,800
8	Willis Towers Watson (Ireland)	TRANZACT (U.S.)	Distribution	1,300
9	Hapvida Sistema de Saude (Brazil)	Grupo Sao Francisco (Brazil)	Health	1,260
10	Resolution Life Holdings, Inc. (U.S.)	Voya Financial, Inc. (in-force individual life) (U.S.)	Life	1,250

Source: ©2020 Conning, Inc., 2020: Global Property Casualty Insurance M&A in 2019 - Distribution Dominates; Global Life & Health Insurance M&A in 2019: The Quest for Growth Continues. Used with permission.

U.S. Insurance-Related Mergers And Acquisitions, 2010-2019[1] ($ millions)

Year	Underwriting mergers and acquisitions					
	Property/casualty		Life/annuity		Health/managed care	
	Number of transactions	Transaction values	Number of transactions	Transaction values	Number of transactions	Transaction values
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	3,298	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	7,404	19	5,796	17	75,954
2018	47	15,878	22	6,696	8	2,516
2019	29	8,805	20	9,235	22	17,410

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
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	454	19,319
2014	387	2,581	79	19,390	545	37,536
2015	472	18,695	88	22,905	634	101,401
2016	450	4,204	77	3,461	590	22,108
2017	564	6,594	74	10,645	712	106,393
2018	612	7,085	79	68,304	768	100,479
2019	682	2,389	72	3,669	825	41,508

[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: ©2020 Conning, Inc., 2020: Global Property Casualty Insurance M&A in 2019 - Distribution Dominates; Global Life & Health Insurance M&A in 2019: The Quest for Growth Continues. Used with permission.

2020 Outlook

Although the economic slowdown caused by the COVID-19 pandemic caused the volume of M&A transactions to fall substantially in the second quarter of 2020, according to Conning, most sectors saw a return to pre-pandemic levels by the third quarter. One of the biggest positive factors was the resilience of the P/C and life/annuity insurers' balance sheets as capital impacted by declining asset values in the second quarter recovered in the third and fourth quarters. Global M&A with P/C insurers as targets was about the same in the first three quarters of 2020 as in 2019, at $9.5 billion, and in the life/annuity sector, investment firm-backed insurers remained active.

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/Annuity, 2019

State	Property/ casualty	Life/ annuity	State	Property/ casualty	Life/ annuity
Alabama	19	6	Montana	12	1
Alaska	4	0	Nebraska	39	34
Arizona	41	28	Nevada	12	0
Arkansas	11	20	New Hampshire	50	1
California	97	14	New Jersey	65	3
Colorado	10	11	New Mexico	15	0
Connecticut	65	26	New York	171	82
Delaware	102	24	North Carolina	55	10
D.C.	7	0	North Dakota	10	3
Florida	115	9	Ohio	148	36
Georgia	23	13	Oklahoma	31	22
Hawaii	16	4	Oregon	17	3
Idaho	10	1	Pennsylvania	159	20
Illinois	194	51	Rhode Island	21	1
Indiana	60	25	South Carolina	21	6
Iowa	73	42	South Dakota	15	2
Kansas	24	11	Tennessee	15	15
Kentucky	8	6	Texas	199	120
Louisiana	33	31	Utah	11	15
Maine	12	3	Vermont	11	1
Maryland	27	4	Virginia	20	3
Massachusetts	47	16	Washington	6	7
Michigan	65	21	West Virginia	19	1
Minnesota	38	8	Wisconsin	164	16
Mississippi	16	13	Wyoming	2	0
Missouri	43	29	**United States[1]**	**2,448**	**818**

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

Source: 2019 Insurance Department Resources Report, published by the National Association of Insurance Commissioners (NAIC). Reprinted with permission. Further reprint or redistribution strictly prohibited without written permission of NAIC.

In 2019 there were 5,965 insurance companies in the U.S. (including territories), according to the National Association of Insurance Commissioners. This number includes: property/casualty (2,496 companies), life/annuities (837), health (952), fraternal (82), title (61), risk retention groups (243) and other companies (1,251).

Many insurance companies are part of larger organizations. According to AM Best, in 2019 the P/C insurance industry was comprised of about 1,107 organizations or groups (as opposed to 2,581 companies), including 632 stock (or public) organizations, 372 mutual organizations (firms owned by their policyholders), 86 reciprocals (a type of self-insurance) and six 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/annuity, health, property/casualty and other companies, paid $23.6 billion in premium taxes to the 50 states and the District of Columbia in 2019. On a per capita basis, this works out to $72 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 2019.

Premium Taxes By State, Property/Casualty, Life/Annuity and Health Insurers, 2019[1] ($000)

State	Amount	State	Amount
Alabama	$413,754	Montana	$108,445
Alaska	79,833	Nebraska	60,722
Arizona	590,604	Nevada	424,088
Arkansas	241,403	New Hampshire	114,148
California	2,722,787	New Jersey	519,968
Colorado	314,935	New Mexico	209,920
Connecticut	169,524	New York	1,866,069
Delaware	113,411	North Carolina	577,572
D.C.	121,417	North Dakota	68,568
Florida	1,178,214	Ohio	607,111
Georgia	510,850	Oklahoma	336,441
Hawaii	179,690	Oregon	80,618
Idaho	105,731	Pennsylvania	845,210
Ilinois	423,518	Rhode Island	117,152
Indiana	256,432	South Carolina	244,412
Iowa	153,428	South Dakota	90,906
Kansas	405,805	Tennessee	995,376
Kentucky	173,129	Texas	2,599,025
Louisiana	900,921	Utah	155,655
Maine	93,517	Vermont	57,765
Maryland	556,409	Virginia	554,299
Massachusetts	445,445	Washington	640,136
Michigan	435,393	West Virginia	129,111
Minnesota	524,654	Wisconsin	216,754
Mississippi	353,728	Wyoming	26,356
Missouri	445,800	**United States**	**$23,556,159**

[1]Includes other insurance companies. Data are for each state's fiscal year.
Source: U.S. Department of Commerce, Bureau of the Census.

Chapter 3

Distribution

PROPERTY/CASUALTY

Overview

Many insurance companies use several 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 different companies. While the two agency systems were expanding, commercial insurance brokers, who were often underwriters, began to establish themselves. 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 internet technology, alternative distribution channels sprang up. Insurers use other types of outlets as well such as banks, workplaces, associations and car dealers, to access potential policyholders.

Online Property/Casualty Insurance Sales

According to the J.D. Power *2020 U.S. Auto Insurance Study*SM released in June 2020, auto insurer websites contribute more to customer satisfaction than agents, accounting for 34 percent of an insurer's total interaction score. Although the difference between the results recorded for websites is only one percentage point higher than the agent channel—which accounts for 33 percent of total interaction satisfaction—J.D. Power noted that the trend toward increased satisfaction with digital channels has been building steadily for more than a decade. In 2020 overall customer satisfaction with auto insurers achieved a record high of 835 out of a possible 1,000 points, indicating that insurers fulfilled service expectations. J.D. Power noted this improvement from its 2018 poll, especially for the largest auto insurers.

The Triple-I's *2020 Consumer Poll* found that among the 61 percent of policyholders who compared prices for auto insurance at renewal, 36 percent of respondents said they did so online. Searching online was significantly more popular than talking to an agent by phone or in person. Each method was used by 20 percent of respondents, and respondents could report more than one method. Of those auto insurance customers who compared prices online, Generation X respondents ages 40 to 55 were the most likely to use this method—46 percent, compared with 45 percent of Generation Z respondents (ages 18 to 23); 44 percent of millennials (ages 24 to 39); and 24 percent of baby boomers (ages 56 to 74). In 2018, 31 percent of all respondents who said they had compared auto insurance prices did so online.

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

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 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 2019 direct writers accounted for 53.5 percent of P/C insurance net premiums written and agency writers accounted for 46.1 percent, according to AM Best.*
- In the personal lines market, direct writers accounted for 64.5 percent of net premiums written in 2019, and agency writers accounted for 35.4 percent. Direct writers accounted for 61.9 percent of the homeowners market, and agency writers accounted for 38.0 percent. Direct writers accounted for 65.8 percent of the personal auto market, and agency writers accounted for 34.1 percent.*
- Agency writers accounted for 76.5 percent of commercial P/C net premiums written, and direct writers accounted for 22.6 percent.*

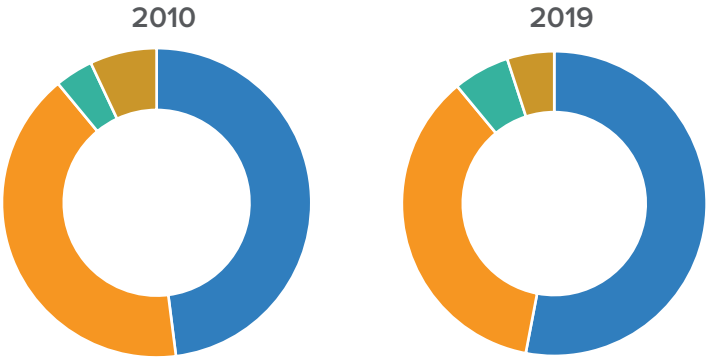
*Unspecified distribution channels accounted for the remainder.

LIFE

Life Insurance Distribution

From 2010 to 2019 independent insurance agents' share of the individual life insurance market grew to 53 percent from 48 percent. The direct response channel also grew, from 4 percent to 6 percent. Affiliated agents have lost some ground, falling from 41 percent to 36 percent, as shown in the chart below.

Life Individual Market Share by Distribution Channel, 2010 and 2019



	2010	2019
Independent agents[1]	48%	53%
Affiliated agents[2]	41	36
Direct response[3]	4	6
Other[4]	7	5

[1]Includes brokers, broker-dealers, personal producing general agents and registered investment advisers. [2]Includes agency building, multiline exclusive and home service agents. [3]No producers are involved. Excludes direct marketing efforts involving agents. Includes internet sales where consumers submit online applications. [4]Includes financial institutions, worksite and other channels.

Source: *U.S. Individual Life Insurance Sales Trends, Industry Estimates, 1975-2019,* LIMRA, 2020.

Online Life Insurance Sales

The latest information from the Life and Health Insurance Foundation for Education (LIFE) and LIMRA shows how purchasing preferences for life insurance have changed over the past five years. The *2020 Insurance Barometer Study* found that in 2016, 51 percent of respondents to the poll preferred in-person sales. By 2020 that proportion fell to 41 percent. Most of the 10 percent decline was attributed to the increase in the number of life insurance customers who preferred to purchase the insurance online. That number grew from 21 percent in 2016 to 29 percent in 2020. The 2020 study was conducted in January 2020, among 1,997 online respondents. LIFE and LIMRA note that the COVID-19 pandemic will result in an even higher proportion of life insurance customers avoiding in-person sales, thus raising preferences for online purchasing and other channels.

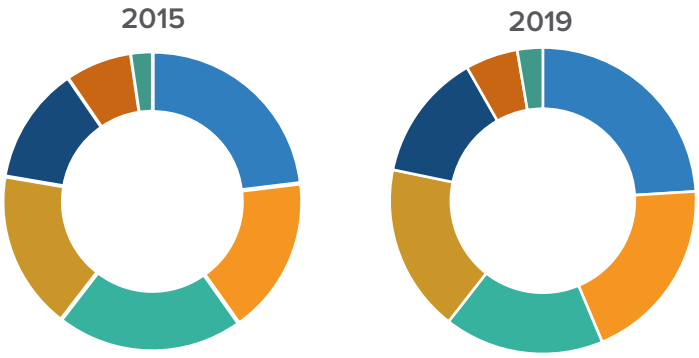
Another finding in the 2020 poll is that the majority of life insurance customers consult the internet to get information on life insurance products. About one-third (34 percent) of poll respondents said they go online to a company website when researching an insurance brand. Twenty-seven percent of respondents said they go to whatever website their search turns up first, and an equal proportion say they go to their local agent's website. Only 12 percent said they would not use an online search.

ANNUITIES

Annuities Distribution

Total U.S. individual annuity sales rose by $8 billion in 2019, or 3.4 percent, after growing 14.7 percent in 2018. Independent broker-dealers were the largest single distributor of annuities, with 24 percent of sales, about the same as in 2015 when they accounted for 23 percent of the market. Independent agents accounted for the second-largest share of annuity sales by channel with 20 percent in 2019, up from 17 percent in 2015.

Sales Of Individual Annuities By Distribution Channels, 2015 and 2019



	2015	2019
Independent broker-dealers	23%	24%
Independent agents	17	20
Career agents	20	17
Banks	17	18
Full-service national broker-dealers	13	14
Direct response	7	6
Other	2	3

Source: *U.S. Individual Annuities, 2019 Year in Review,* LIMRA, 2020.

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. These retirement assets totaled $32.3 trillion at the end of 2019, up from $27.8 trillion at the end of 2018, according to the Investment Company Institute (ICI). At the close of 2019, the largest components of retirement assets were IRAs and employer-sponsored defined contribution plans, which held $11.0 trillion and $8.9 trillion, respectively. An ICI report found that 63 percent of U.S. households (81 million) reported that they had employer-sponsored retirement plans, IRAs, or both in 2019.

U.S. Retirement Assets, 2015 And 2019 ($ trillions, year-end)

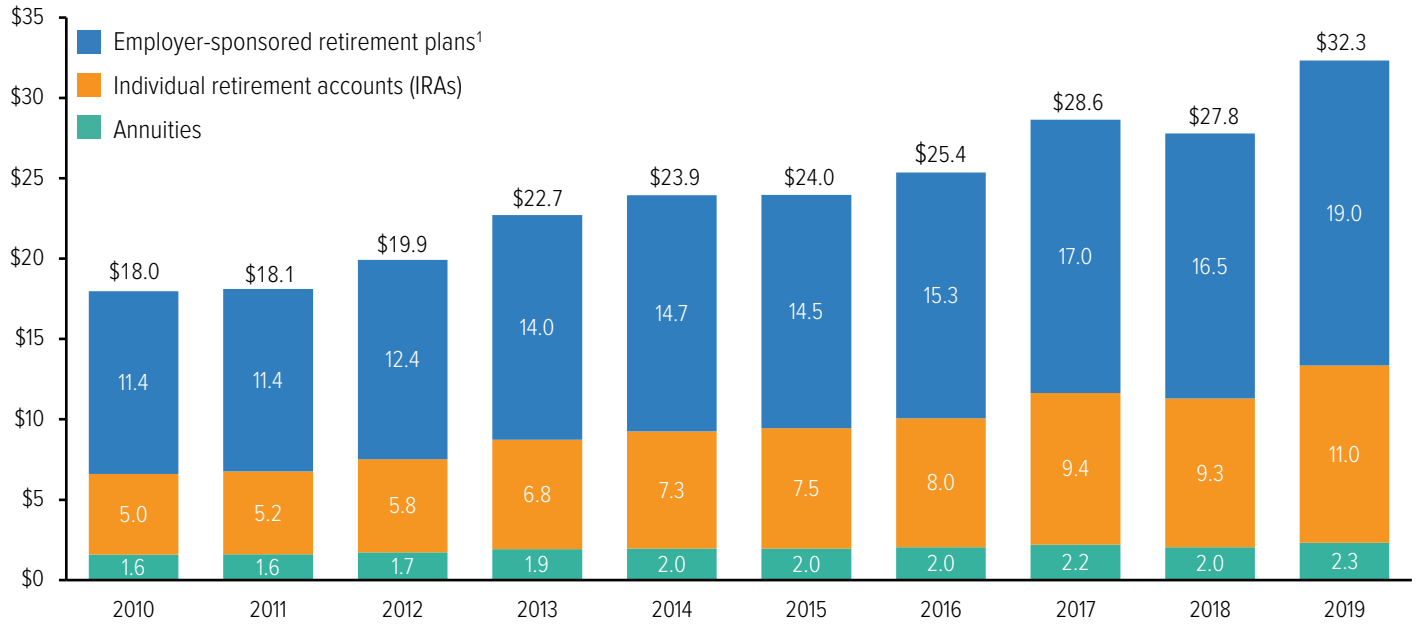
	2015		2019	
Individual retirement accounts	31%	$7.5	34%[1]	$11.0[1]
Defined contribution plans	27	6.5	28	8.9
State and local pension plans	15	3.7	15	4.8
Private defined benefit plans	12	2.9	11	3.4
Annuities	8	2.0	7	2.3
Federal pension plans	6	1.5	6	1.9
Total	**100%**	**$24.1**	**100%**	**$32.3**

[1]Estimated.

Source: Investment Company Institute. 2020. *2020 Investment Company Fact Book: A Review of Trends and Activities in the U.S. Investment Company Industry.* Washington, D.C. Investment Company Institute. www.icifactbook.org.

In 2019, 58.7 percent of Americans' retirement assets were held in private or public employer-sponsored plans, according to the ICI. These workplace plans included private pension plans, defined contribution plans such as 401(k) plans and state, local and federal pension plans. About one-third (34.1 percent) of all retirement assets were in individual retirement accounts (IRAs) and 7.2 percent were in annuities. By contrast, in 2010, 63.2 percent of the nation's retirement assets were held in private or public employer-sponsored plans, 28.0 percent were held in IRAs, and 8.8 percent were held in annuities. In 2019, 57 percent of households had employer-sponsored benefit plans. Thirty-six percent had assets in IRAs, and 30 percent had both IRAs and employer-sponsored retirement plans.

U.S. Retirement Assets, By Type, 2010-2019 ($ trillions, end of year)



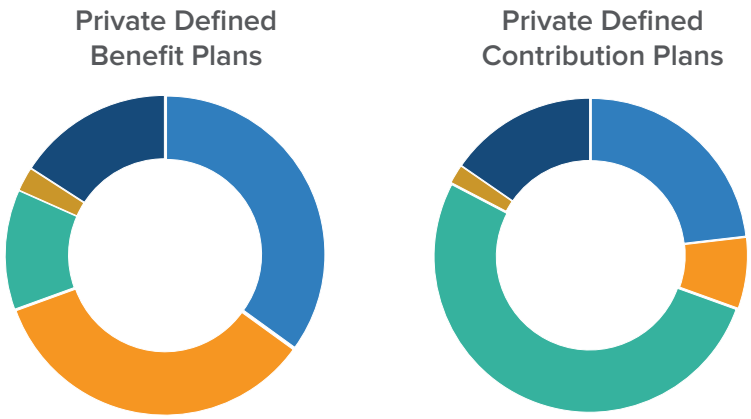
[1]Includes defined contribution plans, private defined benefit plans, and state, local and federal pension plans.

Source: Investment Company Institute. 2020. *2020 Investment Company Fact Book: A Review of Trends and Activities in the U.S. Investment Company Industry*. Washington, D.C. Investment Company Institute. 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. These include pension plans or qualified benefit plans. 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, 2019



	Private Defined Benefit Plans	Private Defined Contribution Plans
Equities	35%	23%
Credit market instruments	35	7
Mutual funds	12	52
Cash, etc.	2	2
Other	16	16
Total	**100%**	**100%**

Source: Board of Governors of the Federal Reserve System, June 11, 2020.

In defined benefit plans, equities and credit market instruments held the largest share by type of investment in 2019, both with 35 percent, followed by mutual funds, with 12 percent.

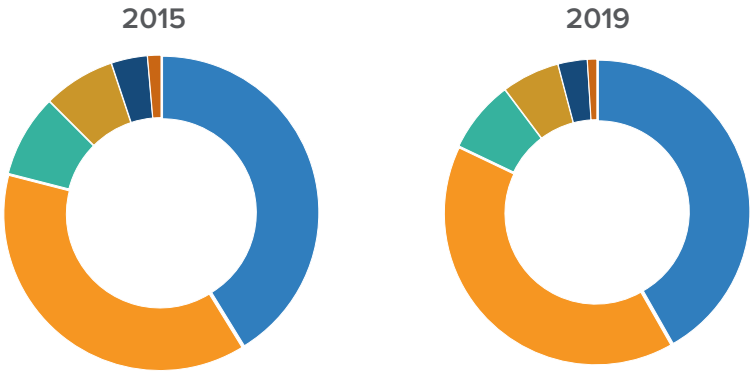
In defined contribution plans, mutual funds held the largest share, with 52 percent. Equities ranked second, with 23 percent, followed by other assets (such as guaranteed investment contracts) with 16 percent.

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

IRAs

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, more than 46 million households had at least one type of IRA in 2019. Of these, 36 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, 2015 And 2019 (Market value, end of year)



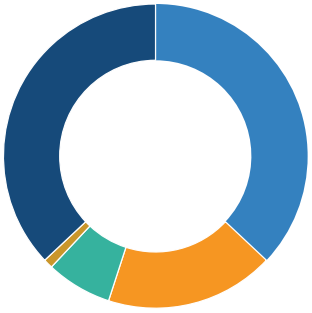
	2015	2019
Miscellaneous self-directed accounts	41.0%	46.9%
Mutual funds[1]	41.4	38.8
Life insurance companies[2]	7.7	6.5
U.S.-chartered depository institutions[3]	6.0	4.3
Money market mutual funds	2.9	2.8
Credit unions[2]	1.0	0.7
Total	**100.0%**	**100.0%**

[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 11, 2020.

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 $6.4 trillion in assets at year-end 2019, 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 2019 employer-sponsored defined contribution plans, including 401(k) plans and other defined contribution plans, held an estimated $8.9 trillion in assets, according to the ICI. The chart below shows the distribution of assets for 401(k)s in 2019.

Asset Allocation For 401(k) Plans, 2019



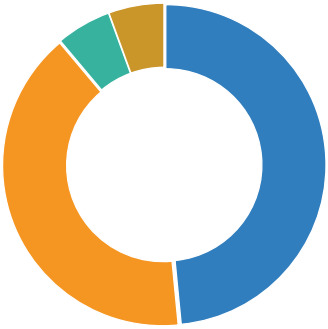
Equity funds	37%
Hybrid mutual funds	18
Bond funds	7
Money market funds	1
Other investments	37
Total	**100%**

Source: Based on data from Investment Company Institute: Holden, Sarah, James Duvall and Elena Barone Chism. *2020. The Economics of Providing 401(k) Plans: Services, Fees and Expenses, 2019. ICI Research Perspective 25, No. 4 (July 2020).* https://www.ici.org/pdf/per26-05.pdf.

MUTUAL FUNDS

Mutual funds held in employer-sponsored defined contribution plans and IRAs accounted for $9.9 trillion, or 31 percent, of the $32.3 trillion U.S. retirement market at the end of 2019, according to the ICI.

Mutual Fund Retirement Assets By Type Of Plan, 2019[1] ($ billions, end of year)



IRAs	48.5%	$4,816
401(k) plans	40.4	4,017
403(b) plans	5.5	551
Other defined contribution plans	5.6	554
Total	**100.0%**	**$9,938**

At the end of 2019, 44 percent of mutual fund assets was invested in domestic equity funds, 14 percent in foreign equity funds, 24 percent in hybrid funds, 14 percent in bond funds and 5 percent in money market funds.

[1]Preliminary data. Excludes defined benefit plans.

Source: Investment Company Institute. 2020. *2020 Investment Company Fact Book: A Review of Trends and Activities in the U.S. Investment Company Industry.* Washington, D.C. Investment Company Institute. 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. As a result, 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/Annuity Premiums by Line table.)

Annuities can be used to fund structured settlements, which are 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.

Individual variable annuity sales in the United States rose 1.7 percent in 2019, after rising 2.0 percent the previous year. Fixed annuity sales grew 4.6 percent in 2019, after rising 26.9 percent in 2018.

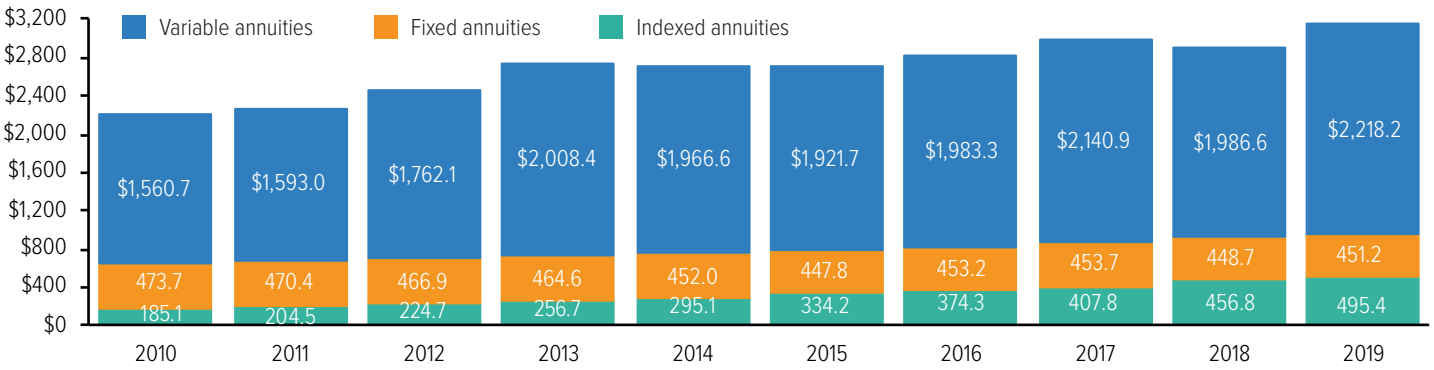
Individual Annuity Considerations, 2015-2019[1] ($ billions)

Year	Variable	Fixed	Total	
			Amount	Percent change from prior year
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
2018	100.2	133.6	233.8	14.9
2019	101.9	139.8	241.7	3.4

[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.

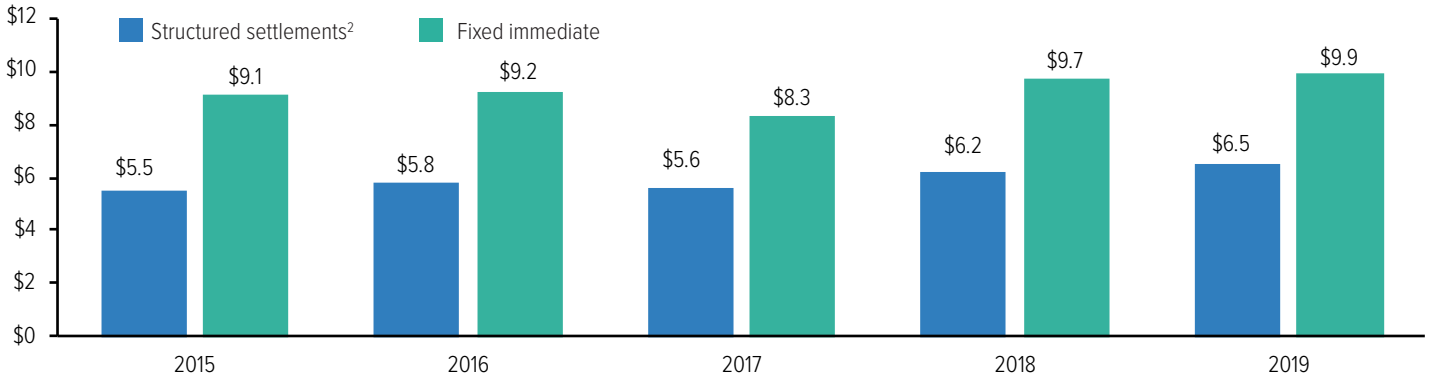
Source: *U.S. Individual Annuities, 4th Quarter 2019,* LIMRA, 2020.

Deferred Annuity Assets, 2010-2019 ($ billions, end of year)



Source: *U.S. Individual Annuities, 4th Quarter 2019,* LIMRA, 2020.

Individual Fixed Annuity Sales, 2015-2019[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, 2019 Year in Review,* LIMRA, 2020.

Top 10 Writers Of Annuities By Direct Premiums Written, 2019[1] ($000)

Rank	Group/company	Direct premiums written	Market share[2]
1	American International Group (AIG)	$19,849,362	6.7%
2	Jackson National Life Group	19,823,880	6.7
3	Lincoln National Corp.	18,820,181	6.4
4	Prudential Financial Inc.	16,033,502	5.4
5	Nationwide Mutual Group	15,601,991	5.3
6	TIAA	14,900,194	5.0
7	Allianz	12,506,864	4.2
8	Athene Holding Ltd.	12,187,991	4.1
9	New York Life Insurance Group	12,022,898	4.1
10	Equitable Holdings	11,947,681	4.0

[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, 2019 ($000)

Rank	Group/company	Direct premiums written	Market share[1]
1	Jackson National Life Group	$18,559,204	8.6%
2	American International Group (AIG)	16,677,134	7.7
3	Lincoln National Corp.	14,971,706	6.9
4	Allianz	12,506,864	5.8
5	Nationwide Mutual Group	11,089,038	5.1
6	New York Life Insurance Group	10,909,775	5.1
7	Prudential Financial Inc.	9,162,017	4.2
8	Equitable Holdings	8,900,255	4.1
9	Pacific Life	8,717,998	4.0
10	Global Atlantic	7,875,237	3.6

[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, 2019 ($000)

Rank	Group/company	Direct premiums written	Market share[1]
1	Voya Financial Inc.	$11,462,576	14.5%
2	TIAA	8,998,442	11.4
3	Prudential Financial Inc.	6,871,485	8.7
4	Athene Holding Ltd.	5,228,572	6.6
5	MetLife Inc.	4,834,403	6.1
6	Nationwide Mutual Group	4,512,953	5.7
7	Principal Financial Group Inc.	3,916,406	5.0
8	Great-West	3,902,623	4.9
9	Lincoln National Corp.	3,848,475	4.9
10	OneAmerica Financial Partners	3,552,190	4.5

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

Chapter 5

Life/Annuity Financial Data

FINANCIAL RESULTS

Life/Annuity Sector

Traditional life insurance is no longer the primary business of many companies in the life insurance industry. The emphasis has shifted to the underwriting of annuities, which accounted for 48 percent of life/annuity direct premiums written in 2019. Annuities are contracts that accumulate funds or pay out a fixed or variable income stream. An income stream can be for a set time period or over the lifetimes of the contract holder or beneficiaries. Accident and health insurance, which includes distinctive products apart from traditional health insurance, accounts for 27 percent of direct premiums written. Traditional life insurance products such as universal life and term life for individuals, and group life, remain an important part of the business, making up the remaining 25 percent of direct premiums written. In addition to annuities, accident and health, and life insurance products, life insurers may offer other types of financial services such as asset management.

Traditional health insurance, which is not included in this section and are not considered a part of the life/annuity sector, are described under Private Health Insurance. Health insurance pays for medical, surgical and hospital services received by the insured, as well as routine and preventive care, usually within a network format. Of the many types of plans available, most include a deductible paid by the insured, and benefits received are tax-free. Accident insurance and health insurance, which is included in the life/annuity and property/casualty (P/C) sectors, encompass a variety of specialty products related to health, such as reimbursement for the time a policyholder spent in a hospital or was disabled; short- and long-term disability based on employment; long-term care, and critical or catastrophic illness insurance. Accident and health insurance are not meant to replace health insurance.

2019 Financial Results

Net income after taxes for the life/annuity insurance industry grew 18.1 percent in 2019 to $44.7 billion from $37.8 billion in 2018, according to S&P Global Market Intelligence. Net income before capital gains grew 21.1 percent in 2019 from 2018, but a net realized capital gains loss of $6.9 billion reduced the net income level to $44.7 billion. Premiums and annuity considerations rose 12.7 percent in 2019, following weak growth in 2018, reflecting the 26.8 rise in annuity premiums and deposits, as life insurance premiums were flat. Expenses grew slightly in 2019, up 0.4 percent, following a 10.6 percent increase in 2018. Capital and surplus rose to $422.2 billion in 2019, up 5.5 percent from $400.1 billion in 2018, according to S&P Global Market Intelligence.

Life/Annuity Insurance Income Statement, 2015-2019 ($ billions, end of year)

	2015	2016	2017	2018	2019	Percent change, 2018-2019[1]
Revenue						
Life insurance premiums	$151.4	$115.0	$137.1	$145.4	$145.1	[2]
Annuity premiums and deposits	324.0	318.5	287.2	269.7	341.9	26.8%
Accident and health premiums	158.8	162.8	169.3	184.2	186.2	1.7
Credit life and credit accident and health premiums	1.4	1.3	1.3	1.3	[3]	NA
Other premiums and considerations	2.5	2.2	2.1	4.0	6.7	67.4
Total premiums, consideration and deposits	**$638.2**	**$599.9**	**$597.1**	**$604.6**	**$679.9**	**12.7%**
Net investment income	170.8	173.0	182.3	187.4	186.6	-0.4
Reinsurance allowance	-86.4	-17.0	-25.1	32.0	-29.7	NA
Separate accounts revenue	35.2	34.7	36.6	37.3	36.8	-1.4
Other income	90.5	61.3	49.0	44.0	48.8	10.7
Total revenue	**$848.2**	**$851.9**	**$839.8**	**$905.4**	**$922.3**	**2.0%**
Expense						
Benefits	$263.9	$271.4	$281.4	$290.7	$302.2	4.4%
Surrenders	273.0	265.1	308.9	350.3	339.6	-3.0
Increase in reserves	80.5	133.1	106.4	143.4	120.6	-15.9
Transfers to separate accounts	36.9	-38.0	-65.8	-89.6	-72.0	NA
Commissions	55.5	64.6	58.0	58.4	61.2	4.9
General and administrative expenses	60.1	62.4	65.9	66.0	67.9	3.0
Insurance taxes, licenses and fees	10.5	10.8	8.8	10.8	9.3	-13.4
Other expenses	-4.9	-2.7	-4.3	11.3	14.4	27.1
Total expenses	**$775.5**	**$766.6**	**$759.4**	**$839.8**	**$843.2**	**0.4%**
Net income						
Policyholder dividends	18.3	18.2	17.5	18.2	18.1	-0.4
Net gain from operations before federal income tax	54.4	67.1	63.0	46.0	61.0	32.7
Federal income tax	10.6	16.3	12.4	3.4	9.4	177.7
Net income before capital gains	**$43.8**	**$50.8**	**$50.6**	**$42.6**	**$51.5**	**21.1%**
Net realized capital gains (losses)	-3.5	-11.4	-8.6	-4.7	-6.9	44.6
Net income	**$40.3**	**$39.4**	**$42.1**	**$37.9**	**$44.7**	**18.1%**
Pre-tax operating income	54.4	67.1	63.0	46.0	61.0	32.7
Capital and surplus, end of year	354.0	367.2	380.7	394.9	400.0	5.5

[1]Calculated from unrounded data. [2]Less than 0.1 percent. [3]Data not available. NA = Not applicable.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Annuities are the largest life product line as measured by direct premiums written and accounted for 48 percent of direct premiums written by life insurers in 2019. Accident and health insurance accounted for 27 percent of direct premiums written. Accident and health insurance, not to be confused with traditional health insurance, includes reimbursement for certain medical expenses. These include: short- and long-term disability; critical or catastrophic illness insurance; and long-term care. Life insurance accounted for the remaining 25 percent of direct premiums written. 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/Annuity Insurance, 2017-2019 ($000)

Lines of insurance	2017		2018		2019	
	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	$181,849,769	26.3%	$207,806,482	28.3%	$217,475,933	28.6%
Group annuities	134,348,059	19.4	146,170,467	19.9	148,066,084	19.5
Total	**$316,197,828**	**45.7%**	**$353,976,949**	**48.3%**	**$365,542,017**	**48.1%**
Accident and health[2]						
Group	126,286,104	18.3	134,734,119	18.4	139,417,933	18.4
Other	63,725,793	9.2	61,947,822	8.4	63,817,827	8.4
Credit	830,946	0.1	852,520	0.1	888,758	0.1
Total	**$190,842,843**	**27.6%**	**$197,534,461**	**26.9%**	**$204,124,517**	**26.9%**
Life						
Ordinary life	143,537,902	20.8	142,275,947	19.4	149,041,507	19.6
Group life	39,856,057	5.8	38,489,603	5.2	39,744,357	5.2
Credit life (group and individual)	808,621	0.1	814,935	0.1	808,078	0.1
Industrial life	123,394	[3]	107,475	[3]	74,820	[3]
Total	**$184,325,973**	**26.7%**	**$181,687,589**	**24.8%**	**$189,668,763**	**25.0%**
All other lines	3,839	[3]	4,723	[3]	5,093	[3]
Total, all lines[4]	**$691,370,484**	**100.0%**	**$733,204,093**	**100.0%**	**$759,340,391**	**100.0%**

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

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

INVESTMENTS

Life/annuity and P/C insurers are key players in capital markets, with $9.0 trillion in cash and invested assets in 2019, according to S&P Global Market Intelligence. Life insurance and annuity cash and invested assets totaled $4.3 trillion in 2019, and separate accounts assets and other investments totaled $2.8 trillion. P/C insurer cash and invested assets were $1.9 trillion in 2019.

Because life insurance products are long-term, generally in force for 10 years or longer, payments are predictable. Therefore, life/annuity insurers invest primarily in long-term products. In 2019 life insurers, excluding separate accounts, invested 71 percent of their assets in bonds and 2 percent in corporate stocks. Life insurers invested 13 percent of their assets in mortgage loans on real estate that take seven years or longer to mature.

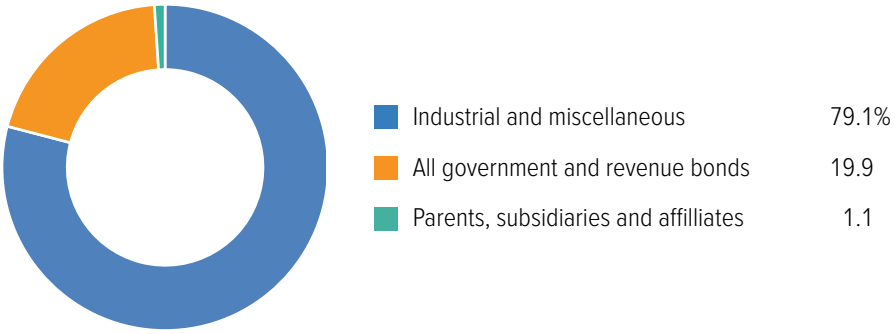
Investments, Life/Annuity Insurers, 2017-2019[1] ($ billions, end of year)

	Amount			Percent of total investments		
Investment type	2017	2018	2019	2017	2018	2019
Bonds	$2,973.5	$2,989.1	$3,087.8	72.97%	72.48%	71.11%
Stocks	**$104.9**	**$94.1**	**$105.3**	**2.57%**	**2.28%**	**2.43%**
Preferred stock	10.5	12.3	12.9	0.26	0.30	0.30
Common stock	94.5	81.8	92.4	2.32	1.98	2.13
Mortgage loans on real estate	**$477.0**	**$521.5**	**$565.5**	**11.71%**	**12.65%**	**13.02%**
First lien real estate mortgage loans	468.5	512.6	557.3	11.50	12.43	12.83
Real estate loans less first liens	8.6	8.9	8.3	0.21	0.22	0.19
Real estate	**$23.5**	**$20.4**	**$23.0**	**0.58%**	**0.50%**	**0.53%**
Occupied properties	6.0	5.8	5.9	0.15	0.14	0.14
Income generating properties	17.0	14.1	16.0	0.42	0.34	0.37
Properties for sale	0.5	0.5	1.1	0.01	0.01	0.03
Cash, cash equivalent and short term investments	104.7	104.7	118.7	2.57	2.54	2.73
Contract loans including premium notes	128.9	129.2	131.0	3.16	3.13	3.02
Derivatives	58.7	56.4	79.5	1.44	1.37	1.83
Other invested assets	175.1	187.1	206.0	4.30	4.54	4.74
Receivables for securities	5.3	4.5	5.0	0.13	0.11	0.11
Securities lending reinvested collateral assets	16.9	12.6	15.5	0.41	0.30	0.36
Write-ins for invested assets	6.4	4.5	5.3	0.16	0.11	0.12
Total cash and invested assets	**$4,074.8**	**$4,124.1**	**$4,342.5**	**100.00%**	**100.00%**	**100.00%**

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

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

Investments, Life/Annuity Insurers, Bond Portfolio, 2019[1]



[1]Long-term bonds with maturity dates more than one year, as of December 31, 2019. Does not add to 100 percent due to rounding.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

PAYOUTS

Life insurance benefits and claims totaled $762.1 billion in 2019. This amount includes life insurance death benefits, annuity benefits, disability benefits and other payouts and compares with $784 billion in 2018. The largest payout in 2019 was $339.6 billion, for surrender benefits and withdrawals from life insurance contracts made to policyholders who terminated their policies early or withdrew cash from their policies.

Life/Annuity Insurance Benefits And Claims, 2015-2019 ($000)

	2015	2016	2017	2018	2019
Death benefits	$72,320,822	$73,996,171	$74,942,626	$77,076,103	$76,053,733
Matured endowments, excluding annual pure endowments	397,554	420,287	437,591	381,587	423,780
Annuity benefits	73,535,187	74,769,738	77,043,317	78,392,309	82,348,408
Disability, accident and health benefits[1]	115,468,861	120,056,048	126,787,757	132,327,869	140,621,967
Coupons, pure endowment and similar benefits	18,237	19,509	19,406	11,216	4,327
Surrender benefits, withdrawals for life contracts	272,998,652	265,095,216	308,928,842	350,278,913	339,640,103
Group conversions	48,382	30,872	25,719	26,702	25,537
Interest and adjustments on deposit type contracts	8,009,313	9,407,551	8,348,035	9,539,457	10,044,709
Payments on supplementary contracts with life contingencies	2,120,777	2,062,662	2,106,523	2,152,431	2,413,542
Increase in aggregate reserve	72,537,331	123,731,601	98,004,458	133,818,788	110,528,530
Total benefits and claims	**$617,451,481**	**$669,589,655**	**$696,642,288**	**$784,005,035**	**$762,104,636**

[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

Private Health Insurance

Most private health insurance is written by companies that specialize in that line of business. However, life/annuity and property/casualty (P/C) insurers also write this coverage, referred to as accident and health insurance in their annual statements. Total private health insurance direct written premiums were $968.3 billion in 2019, including: $757.4 billion from the health insurance segment; $204.1 billion from the life/annuity segment; and $6.7 billion from P/C annual statements, according to S&P Global Market Intelligence.

In 2019, 26.1 million Americans did not have health insurance, according to a U.S. Census Bureau report, down from 27.6 million in 2018. The percentage of uninsured Americans in 2019 was 8.0 percent, an improvement from 8.5 percent in 2018. The rate of uninsured Americans has been falling since 2013 when 13.3 percent of Americans were uninsured. The Census Bureau points out that data collection, which started on March 15, 2020, was curtailed five days later in response to the COVID-19 pandemic. As a result, only phone interviews were conducted and there was a significant response rate decline. Census Bureau researchers found that respondents in 2020 had relatively higher incomes and more education.

In 2019, 92.0 percent of Americans had private or government health insurance coverage, compared with 91.5 percent in 2018.

Healthcare Coverage, 2019 ($000)

	Number	Percent of total
Insured[1]	**298,438**	**92.0%**
Private health insurance	220,848	68.0
Government health insurance	110,687	34.1
Uninsured	**26,111**	**8.0%**
Total[2]	**324,550**	**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. People can be covered by more than one type of coverage through the year. [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 rose to 68.0 percent in 2019 from 67.3 percent in 2018.
- The rate insured by government plans fell to 34.1 percent in 2019 from 34.4 percent in 2018.
- In 2019 people aged 19 to 34 had the highest uninsured rates, 15.6 percent compared with 8.0 percent of all Americans. By single-year age, 26-year-olds had the highest uninsured rate, 18.3 percent.
- In 2019, 5.7 percent of children under the age of 19 did not have health insurance coverage.
- Between 2018 and 2019, the percentage of people without health insurance coverage decreased in one state, and increased in 19 states.

Top 10 Health Insurance Groups By Direct Premiums Written, 2019[1] ($000)

Rank	Group/company	Direct premiums written	Market share
1	UnitedHealth Group Inc.	$107,481,328	14.1%
2	Anthem Inc.	73,336,651	9.6
3	Humana Inc.	64,000,392	8.4
4	Centene Corp.	63,557,977	8.3
5	HealthCare Service Corp.	39,629,317	5.2
6	CVS Health Corp.	26,079,700	3.4
7	Kaiser Permanente	20,035,052	2.6
8	GuideWell Mutual Holding Corp.	18,661,884	2.5
9	Independence Health Group Inc.	17,863,377	2.3
10	Blue Cross Blue Shield of Michigan	14,465,141	1.9

[1]Based on health insurer annual statement data. Excludes health insurance data from the property/casualty and life/annuity 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 Sales, 2019[1] ($000)

	Annualized premiums	Percent change, 2018-2019	Number of policies	Percent change, 2018-2019
Guaranteed renewable	$124,410	-5%	192,791	-10%
Noncancellable	354,421	1	161,935	-4
Total	**$478,831**	[2]	**354,726**	**-8%**

[1]Short-term and long-term individual disability income insurance. Based on a LIMRA survey of 18 personal disability insurance companies. Excludes commercial disability income.
[2]Less than one-half of negative 1 percent.
Source: *U.S. Individual Disability Income Insurance Sales, 2019 4th Quarter*, LIMRA, 2020.

Individual Disability Insurance In Force, 2019[1]

	Annualized premiums	Percent change, 2018-2019	Number of policies	Percent change, 2018-2019
Noncancellable	$4,163,830,441	1%	2,175,867	-1%
Guaranteed renewable	877,075,671	-3%	1,091,926	-4
Total	**$5,040,906,113**	**1%**	**3,267,793**	**-2%**

[1]Short-term and long-term individual disability income insurance. Based on a LIMRA survey of 17 personal disability insurance companies. Excludes commercial disability income.
[2]Less than 0.5 percent.
Source: *Individual Disability Income Insurance, Annual Supplement*, LIMRA, 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 from an illness 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 52.8 million people age 65 and older in 2019, accounting for 17.5 percent of the U.S. population, according to the U.S. Census Bureau. By 2030 the Census Bureau projects that there will be about 73.1 million people age 65 and over, and about 85.7 million in 2050.

Individual Long-Term Care Insurance, 2019[1]

	Lives	Percent change, 2018-2019	Premiums ($ millions)	Percent change, 2018-2019
New business	>55,000	-1.0%	$168	1.0%
In-force[2]	~4,700,000	<0.5	~11,100	<2.0

[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, 2019*, LIMRA, 2020.

Premiums By Line By State

Life/Annuity Insurers Direct Premiums Written And Annuity Considerations By State, 2019[1] ($ millions)

State	Life insurance	Annuities	Accident and health insurance[2]	Deposit-type contract funds	Other considerations	Total
Alabama	$2,335	$3,205	$1,919	$239	$424	$8,123
Alaska	519	380	290	25	246	1,459
Arizona	2,666	6,660	4,036	368	1,170	14,900
Arkansas	1,087	1,954	1,061	95	245	4,442
California	18,801	27,994	15,646	2,877	10,198	75,516
Colorado	2,897	5,637	4,318	1,192	931	14,975
Connecticut	2,616	6,458	3,146	9,451	1,804	23,474
Delaware	1,462	2,749	798	55,608	668	61,285
D.C.	412	745	1,110	1,041	668	3,976
Florida	10,695	22,449	16,487	1,452	2,651	53,734
Georgia	5,119	6,347	9,161	1,465	2,545	24,637
Hawaii	855	1,551	1,208	102	307	4,023
Idaho	611	1,168	841	91	267	2,977
Illinois	7,895	11,425	6,538	2,749	2,246	30,853
Indiana	2,870	5,934	4,965	3,637	776	18,183
Iowa	2,420	3,106	1,555	8,853	4,493	20,426
Kansas	1,401	2,621	4,077	1,170	296	9,566
Kentucky	1,657	2,891	1,832	367	674	7,421

(table continues)

Life/Annuity Insurers Direct Premiums Written And Annuity Considerations By State, 2019[1] ($ millions) (Cont'd)

State	Life insurance	Annuities	Accident and health insurance[2]	Deposit-type contract funds	Other considerations	Total
Louisiana	$2,391	$3,746	$2,414	$251	$542	$9,345
Maine	460	1,244	961	63	170	2,897
Maryland	3,180	5,738	3,988	805	1,159	14,871
Massachusetts	4,158	8,449	3,842	1,573	3,455	21,477
Michigan	4,692	10,674	3,786	1,329	1,311	21,793
Minnesota	4,815	5,388	1,861	753	2,434	15,251
Mississippi	1,297	1,758	1,571	112	158	4,896
Missouri	2,877	6,499	4,849	634	1,040	15,898
Montana	387	510	428	42	160	1,527
Nebraska	1,111	2,090	1,611	940	276	6,027
Nevada	1,210	1,922	1,434	185	482	5,233
New Hampshire	641	2,037	755	91	216	3,740
New Jersey	6,805	13,930	8,463	1,349	3,122	33,669
New Mexico	673	1,146	1,129	433	450	3,832
New York	12,902	19,567	11,439	64,329	6,345	114,582
North Carolina	5,031	8,816	6,710	766	1,355	22,678
North Dakota	447	675	323	83	144	1,672
Ohio	5,232	13,010	7,652	18,599	1,623	46,115
Oklahoma	1,468	2,120	1,776	280	459	6,104
Oregon	1,321	3,006	2,299	227	1,263	8,116
Pennsylvania	6,912	15,711	8,054	6,981	2,638	40,297
Rhode Island	462	1,633	527	81	181	2,884
South Carolina	2,367	4,537	4,442	254	360	11,961
South Dakota	1,062	591	427	317	91	2,488
Tennessee	3,213	4,953	3,819	869	1,165	14,019
Texas	12,622	18,712	18,559	2,421	2,831	55,145
Utah	1,504	2,830	1,414	348	468	6,565
Vermont	263	622	391	57	153	1,486
Virginia	4,390	6,702	5,800	784	1,165	18,841
Washington	2,774	5,593	4,252	364	1,611	14,593
West Virginia	640	1,247	882	119	139	3,026
Wisconsin	3,568	5,902	3,999	708	1,137	15,313
Wyoming	371	391	386	36	70	1,253
United States[3]	**$167,566**	**$295,023**	**$199,225**	**$196,966**	**$68,782**	**$927,562**

[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 10 Writers Of Life Insurance By Direct Premiums Written, 2019 ($000)

Rank	Group/company	Direct premiums written[1]	Market share
1	Northwestern Mutual Life Insurance Co.	$11,278,802	6.6%
2	New York Life Insurance Group	11,053,776	6.5
3	MetLife Inc.	10,767,181	6.3
4	Lincoln National Corp.	9,651,117	5.7
5	Prudential Financial Inc.	9,642,360	5.7
6	Massachusetts Mutual Life Insurance Co.	7,984,470	4.7
7	Transamerica	4,868,458	2.9
8	John Hancock Life Insurance Co.	4,817,850	2.8
9	State Farm	4,797,873	2.8
10	Securian Financial Group	4,724,703	2.8

[1]Before reinsurance transactions. Based on U.S. total, includes territories. Excludes annuities, accident/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 Individual Life Insurance By Direct Premiums Written, 2019 ($000)

Rank	Group/company	Direct premiums written[1]	Market share
1	Northwestern Mutual Life Insurance Co.	$11,271,640	8.4%
2	Lincoln National Corp.	8,255,755	6.2
3	New York Life Insurance Group	8,009,957	6.0
4	Massachusetts Mutual Life Insurance Co.	7,882,498	5.9
5	Prudential Financial Inc.	6,212,700	4.6
6	John Hancock Life Insurance Co.	4,812,785	3.6
7	State Farm	4,748,696	3.5
8	Transamerica	4,570,238	3.4
9	Pacific Life	3,874,563	2.9
10	American International Group (AIG)	3,571,493	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, 2019 ($000)

Rank	Group/company	Direct premiums written[1]	Market share
1	MetLife Inc.	$7,328,698	20.8%
2	Prudential Financial Inc.	3,429,660	9.7
3	New York Life Insurance Group	3,043,820	8.7
4	Securian Financial Group	2,543,280	7.2
5	Cigna Corp.	1,767,992	5.0
6	Unum Group	1,713,032	4.9
7	Hartford Life & Accident Insurance Co.	1,504,115	4.3
8	Lincoln National Corp.	1,395,326	4.0
9	Nationwide Mutual Group	1,036,250	2.9
10	Standard Life & Casualty Insurance Co.	985,585	2.8

[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.

SEPARATE ACCOUNTS

Separate accounts are funds held by life insurance companies that are maintained separately from the insurer's general assets. They were originally established in response to federal securities laws concerning investment-linked variable annuities, according to the National Association of Insurance Commissioners. Variable annuities operate like mutual funds because their earnings vary as they invest in many different vehicles. Separate accounts have evolved rapidly in the past 20 years and now support an array of hybrid investment products.

Separate accounts contribute to the revenue of life/annuity insurers. (See Life/Annuity Insurance Income Statement, 2015-2019.) In 2019 separate accounts contributed $36.8 billion to the total amount of life/annuity insurance revenue of $922.3 billion.

Chapter 6

Property/Casualty Financial Data

FINANCIAL RESULTS

2019 Financial Results

2019 was a solid, profitable year for the property/casualty (P/C) insurance industry. P/C insurers' net income after taxes grew 3.0 percent to $61.4 billion in 2019 from $59.6 billion in 2018, according to ISO, a Verisk business. Net premiums written rose 3.6 percent in 2019, following a 10.8 percent increase in 2018. The slower growth in 2019 occurred after premiums grew much faster in 2018 following changes to the U.S. tax code that became effective January 1, 2018, according to ISO, a Verisk business, and the American Property Casualty Insurance Association (APCIA). Losses incurred and loss adjustment expenses grew 4.3 percent in 2019, following 3.3 percent growth in 2018, as catastrophe losses fell to $24.4 billion in 2019 from $50.0 billion in 2018. As a result of lower catastrophe losses and a $7.2 billion increase in loss reserves, the industry had a net underwriting gain of $3.7 billion following an underwriting loss of $167 million in 2018. Net investment gains fell slightly to $64.9 billion in 2019 from $65.6 billion in 2018. The statutory rate of return, the percentage of net worth based on average surplus, fell to 7.7 percent in 2019 from 8 percent in 2018. The industry's capacity (policyholders' surplus) as of December 31, 2019, was $847.8 billion, up by $105.7 billion from year-end 2018, reflecting the stock market recovery in 2019. The combined ratio fell slightly to 99.1 in 2019, according to S&P Global Market Intelligence, from 99.3 in 2018. A combined ratio above 100 means that insurers paid out more than premiums they took in.

Property/Casualty Insurance Industry Income Analysis, 2015-2019[1] ($ billions)

	2015	2016	2017	2018	2019
Net premiums written	$514.4	$528.3	$552.6	$612.2	$634.0
Percent change	3.5%	2.7%	4.6%	10.8%	3.6%
Premiums earned	$506.0	$523.5	$540.6	$593.6	$621.9
Losses incurred	290.7	317.9	347.6	360.7	374.0
Loss adjustment expenses incurred	59.6	60.3	62.7	63.3	68.1
Other underwriting expenses	144.3	147.6	151.0	166.9	172.3
Policyholder dividends	2.5	2.3	2.6	3.0	3.8
Net underwriting gain/loss	8.9	-4.7	-23.3	-0.2	3.7
Net investment income	47.2	46.6	48.9	55.3	54.4
Miscellaneous income/loss	1.5	1.1	-5.2	1.4	1.4
Operating income	57.7	43.0	20.3	56.6	59.5
Realized capital gain	9.4	7.3	15.1	10.3	10.4
Federal and foreign income tax	10.2	7.4	-0.6	7.3	8.5
Net income after taxes	56.8	42.9	36.1	59.6	61.4

[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 gain of $3.7 billion in 2019, following an underwriting loss of $200 million in 2018, as net premiums written grew 3.6 percent. Incurred losses grew 3.7 percent, about the same as in 2018, as catastrophes losses fell $25.6 billion or 51.2 percent, from 2018 to 2019.

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, 2010-2019 ($ billions)

Year	Net premiums written[1]	Annual percent change	Combined ratio after dividends[2]	Annual point change[3]
2010	$425.9	0.6%	102.5	2.1 pts.
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
2014	502.8	4.4	97.2	0.8
2015	$520.1	3.4%	97.9	0.8 pts.
2016	533.8	2.6	100.8	2.8
2017	558.3	4.6	103.8	3.0
2018	618.1	10.7	99.3	-4.5
2019	640.1	3.5	98.9	-0.3

[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, 2019[1]

Expense	Percent of premiums
Losses and related expenses[2]	
Loss and loss adjustment expense (LAE) ratio	**70.2%**
Incurred losses	59.2
Defense and cost containment expenses incurred	4.4
Adjusting and other expenses incurred	6.6
Underwriting expenses[3]	
Expense ratio	**27.8%**
Net commissions and brokerage expenses incurred	11.3
Taxes, licenses and fees	2.4
Other acquisition and field supervision expenses incurred	7.0
General expenses incurred	7.1
Dividends to policyholders[2]	**0.9%**
Combined ratio after dividends[4]	**98.9%**

[1]After reinsurance transactions. [2]As a percent of net premiums earned ($574.3 billion in 2019). [3]As a percent of net premiums written ($585.0 billion in 2019). [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 lags other industries. The median return on shareholders' equity for the Fortune 500 Combined Industrial and Service Businesses for the years 2010 to 2019 has exceeded that of the P/C industry every year. Insurers are required to use statutory accounting principles (SAP), which are more conservative than generally accepted accounting principles (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 2019 was 7.7 percent, down from 8.0 percent in 2018.

Annual Rate Of Return: Net Income After Taxes As A Percent Of Equity, 2010-2019

Year	Property/casualty[1]		Life/annuity		Selected other industries[2]			Fortune 500 combined industrials and service[8]
	Statutory accounting[3]	GAAP accounting[4]	Life/annuity insurance[5]	Healthcare insurance[6]	Diversified financial[7]	Commercial banks	Electric and gas utilities	
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
2018	8.0	NA	6.0	12.0	20.0	12.0	10.0	14.5
2019	7.7	NA	7.0	19.0	24.0	11.0	10.0	13.2

[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.
NA = Data not available.

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

Property/Casualty Insurance Cycle

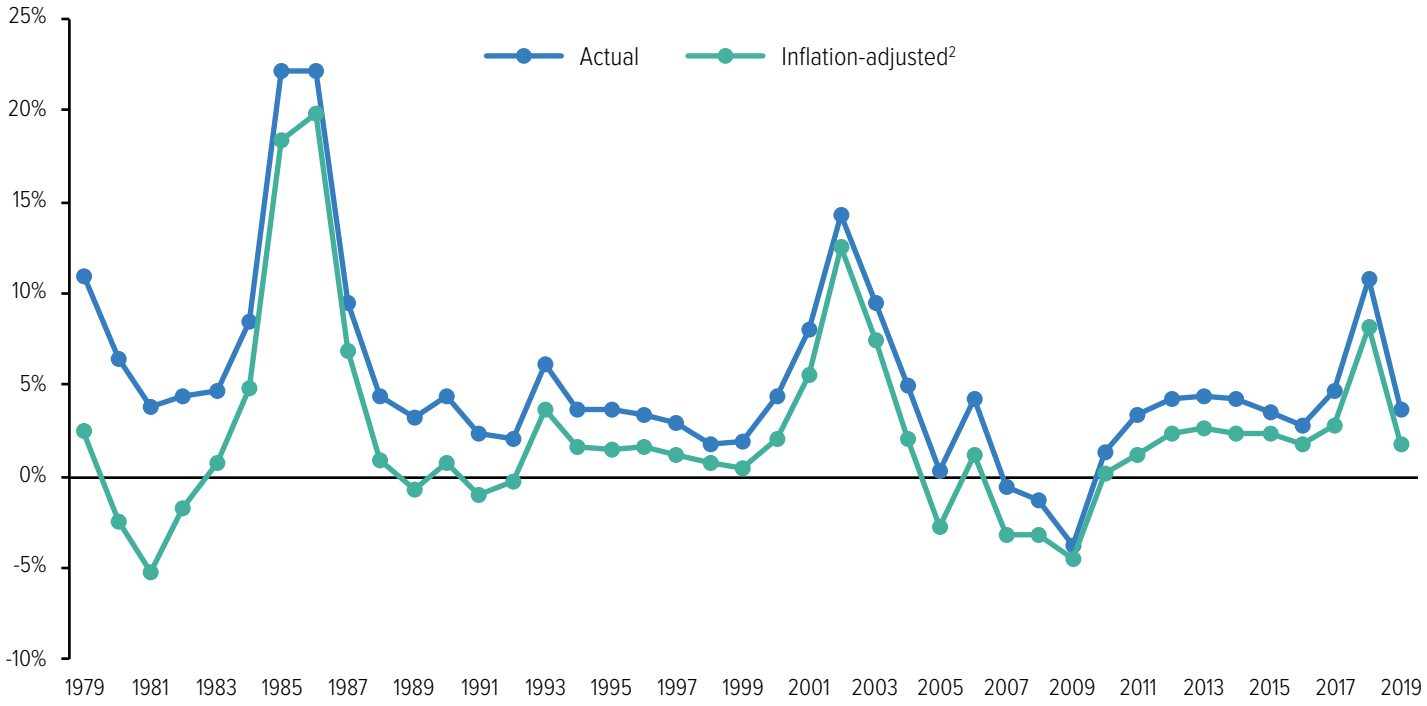
The property/casualty (P/C) insurance industry cycle is characterized by periods of soft market conditions, in which premium rates are stable or falling and insurance is readily available, and by periods of hard market conditions, where rates rise and coverage may be more difficult to find and insurers' 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, with premiums rising as a result. 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, 1979-2019[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

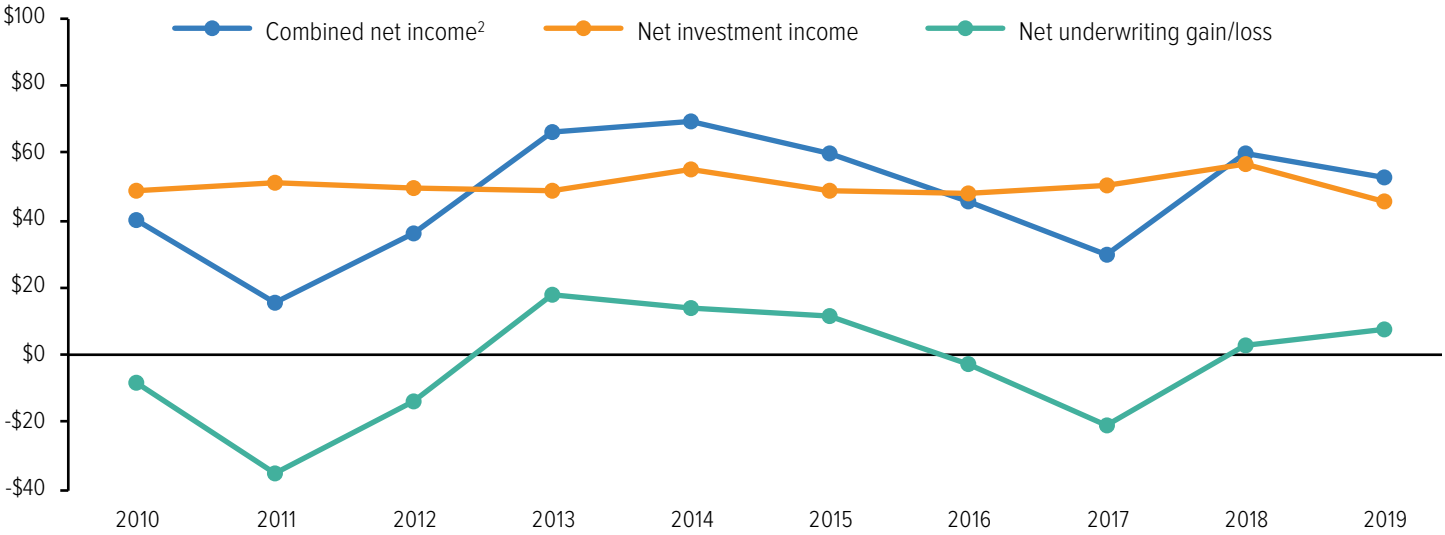
The insurance industry generally does not generate profits from its underwriting operations. Investment income from capital and surplus accounts, money set aside as loss reserves, and unearned premium reserves offsets losses. Underwriting results were favorable in 2006, 2007 and 2009, according to S&P 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. In 2018 the industry shifted to underwriting gains, which totaled of $3.1 billion in 2018 and $7.3 billion in 2019.

Operating Results, Property/Casualty Insurance, 2010-2019[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]
2010	-$8,422	$48,608	$7,896	$2,709	$8,919	$37,565
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	-2,394	48,144	8,058	2,944	7,321	44,557
2017	-20,599	50,520	19,058	3,309	-690	40,875
2018	3,098	56,981	10,699	3,710	7,268	61,116
2019	7,248	45,227	8,240	4,883	7,511	50,308

[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, 2010-2019[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 (P/C) 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, 2010-2019 ($ 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]
2010	$1,509,236	3.6%	$943,241	0.7%	$565,995	8.7%	$426,380	0.7%
2011	1,537,222	1.9	974,699	3.3	562,522	-0.6	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	1,811,796	3.6	1,096,758	3.7	715,039	3.4	534,003	2.6
2017	1,923,106	6.1	1,155,727	5.4	767,377	7.3	558,472	4.6
2018	1,941,538	1.0	1,182,588	2.3	758,950	-1.1	618,333	10.7
2019	2,087,507	7.5	1,230,340	4.0	857,167	12.9	639,618	3.4

[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.

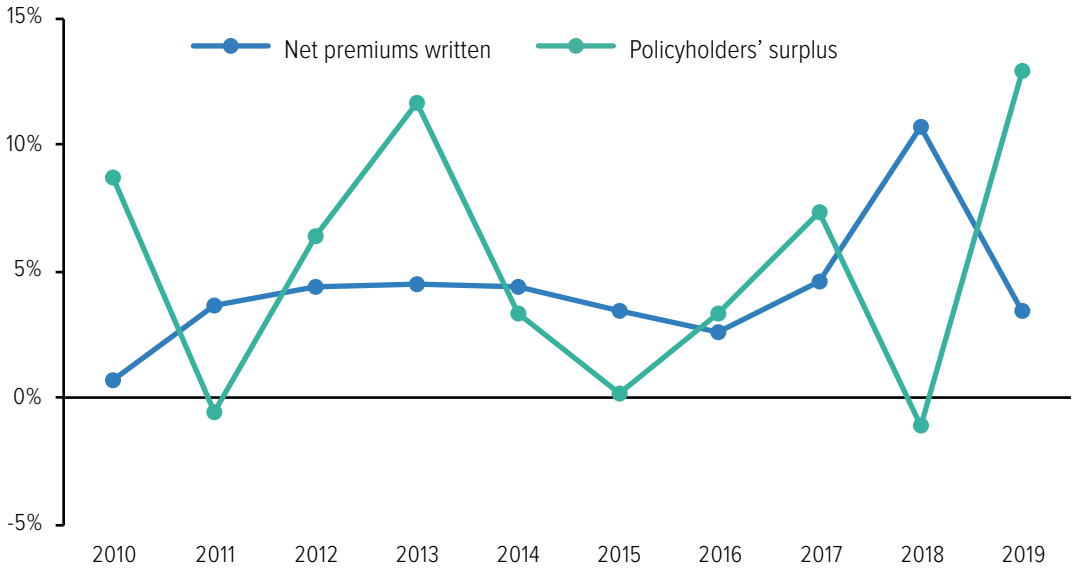
Source: NAIC data, sourced from S&P Global Market Intelligence.

Policyholders' surplus dropped in 2008 and 2009, reflecting the deterioration in global financial markets.

In 2018 policyholders' surplus declined 1.1 percent to $759.0 billion, following a record high of $767.4 billion in 2017.

Policyholders' surplus reached another record high in 2019 of $857.2 billion, rising 12.9 percent from 2018.

Percent Change From Prior Year, Net Premiums Written And Policyholders' Surplus, P/C Insurance, 2010-2019[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. It 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. The following chart shows the components of the combined ratio, a measure of the industry's underwriting performance.

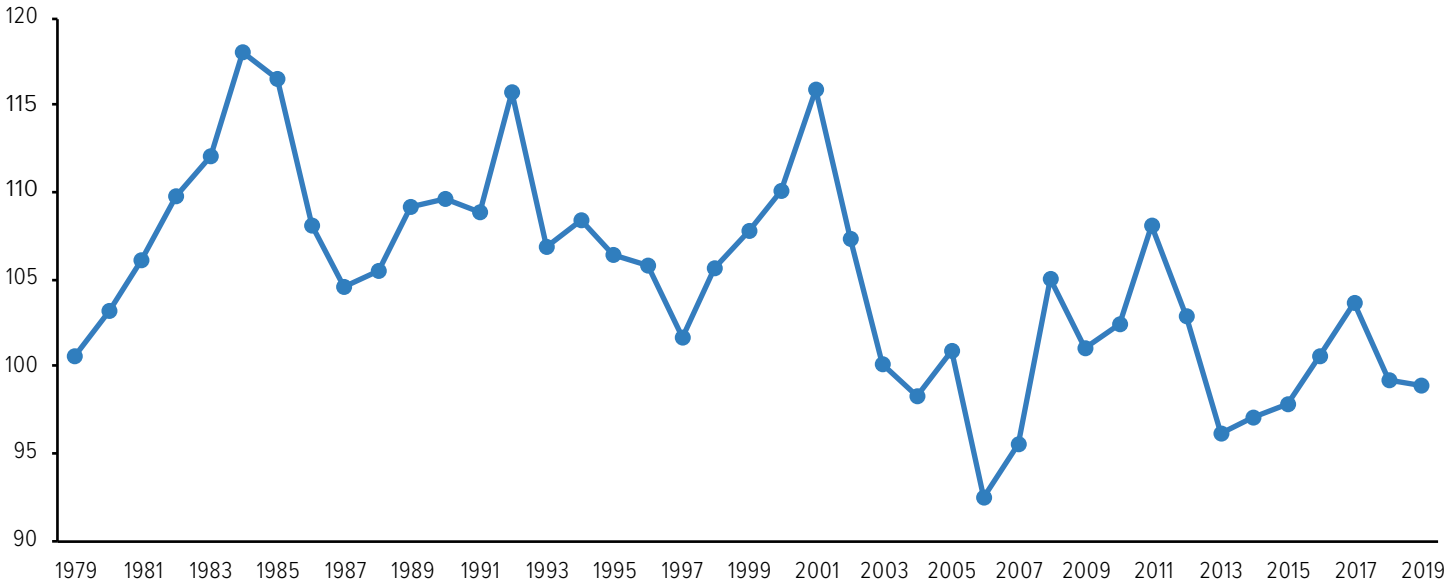
Components Of The Combined Ratio, Property/Casualty Insurance, 2010-2019[1]

Year	Loss ratio[2]	Expense ratio[3]	Combined ratio	Dividends to policyholders[4]	Combined ratio after dividends
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
2018	71.4	27.3	98.7	0.5	99.2
2019	71.1	27.2	98.3	0.6	98.9

[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, 1979-2019[1]



[1]Excludes state funds and other residual insurers.

Source: ISO®, a Verisk Analytics® business.

INVESTMENTS

Property/casualty (P/C) and life/annuity insurers are key players in capital markets, with $9.0 trillion in cash and invested assets in 2019, according to S&P Global Market Intelligence. P/C insurer cash and invested assets were $1.9 trillion in 2019. Life/annuity cash and invested assets totaled $4.3 trillion in 2019, and separate accounts assets and other investments totaled $2.8 trillion.

P/C and life/annuity insurer investments differ according to their payout needs. P/C insurers invest largely in high-quality liquid securities which can be sold quickly to pay claims resulting from a major hurricane, earthquake or man-made disaster such as a terrorist attack. In 2019 P/C insurers invested 27 percent of their assets in stocks, a highly liquid investment, and 57 percent in bonds (see chart below). Life/annuity insurers' benefit payments are more predictable, because life insurance policies and annuity contracts are much longer-term products. Life/annuity insurers invest more heavily in longer-term products. In 2019 life/annuity insurers invested 71 percent of their assets in bonds (compared with 57 percent for P/C insurers) and 2 percent in corporate stocks (compared with 27 percent for P/C insurers). (see chart, Investments, Life/Annuity Insurers, 2017-2019.) Life/annuity insurers invested 13 percent of their assets in mortgage loans on real estate, investments that may take seven years or longer to mature, compared with P/C insurers, who invested only 1 percent of their assets in this sector.

Investments, Property/Casualty Insurers, 2017-2019[1] ($ millions, end of year)

	Amount			Percent of total investments		
Investment type	**2017**	**2018**	**2019**	**2017**	**2018**	**2019**
Bonds	$979,530	$1,020,600	$1,066,685	57.91%	60.23%	57.05%
Stocks	**417,449**	**396,972**	**500,031**	**24.68**	**23.43**	**26.74**
Preferred	5,448	5,247	14,261	0.32	0.31	0.76
Common	412,001	391,725	485,770	24.36	23.12	25.98
Mortgage loans on real estate	**17,324**	**18,876**	**22,132**	**1.02**	**1.11**	**1.18**
First liens	16,643	18,220	20,835	0.98	1.08	1.11
Other than first liens	681	656	1,298	0.04	0.04	0.07
Real estate	**12,887**	**13,667**	**13,677**	**0.76**	**0.81**	**0.73**
Properties occupied by company	9,122	9,290	9,190	0.54	0.55	0.49
Properties held for income production	3,543	3,950	4,102	0.21	0.23	0.22
Properties held for sale	223	427	384	0.01	0.03	0.02
Cash, cash equivalent and short-term investments	115,060	101,384	115,039	6.80	5.98	6.15
Derivatives	233	411	273	0.01	0.02	0.01
Other invested assets	137,878	133,876	146,380	8.15	7.90	7.83
Receivable for securities	2,102	1,919	1,545	0.12	0.11	0.08
Securities lending reinvested collateral assets	4,440	4,804	4,444	0.26	0.28	0.24
Aggregate write-in for invested assets	4,673	1,915	-353	0.28	0.11	NA
Total cash and invested assets	**$1,691,575**	**$1,694,424**	**$1,869,854**	**100.00%**	**100.00%**	**100.00%**

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

NA=Not applicable.

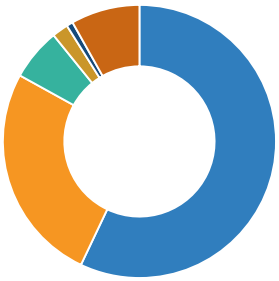
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

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 majority of bonds are government issued or are high-grade corporates. Bonds in or near default accounted for less than 1 percent (0.15 percent) of all short- and long-term bonds owned by insurers at the end of 2019, according to S&P Global Market Intelligence.

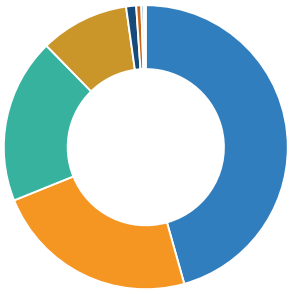
Investments, Property/Casualty Insurers, 2019

Investments by type[1]



Bonds	57.05%
Common stock	25.98
Cash and short-term investments	6.15
Real estate[2]	1.91
Preferred stock	0.76
Other	8.15

Bond portfolio*



Industrial and miscellaneous	45.6%
Special revenue	23.3
Governments	18.8
States, territories and others	10.1
Bank loans	1.1
Parent, subsidiaries and affilates	0.6
Hybrid securities	0.3
Other	0.2

[1]Cash and invested net admitted assets, as of December 31, 2019. [2]Includes mortgage loans on real estate.
* Bonds represents 57.05% of total investments.
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. 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. This type of structure differs from a traditional insurance company. According to AM Best, in 2019 the Lloyd's market represented 22.5 percent of the total surplus lines market share and wrote $12.5 billion in surplus lines premiums, as shown in the chart below. Because of its unique structure, AM Best does not include Lloyd's in the ranking. 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, 2019 ($000)

Rank	Group	Direct premiums written	Percent of total U.S. surplus lines market
	Lloyd's Market[1]	$12,477,000	22.5%
1	American International Group	2,946,471	5.3
2	Markel Corporation Group	2,747,110	5.0
3	Berkshire Hathaway Ins. Group	2,341,442	4.2
4	W. R. Berkley Insurance Group	2,048,959	3.7
5	Nationwide Group	2,034,571	3.7
6	Fairfax Financial (USA) Group	1,764,026	3.2
7	Chubb INA Group	1,649,400	3.0
8	AXA U.S. Group	1,582,356	2.9
9	Liberty Mutual Insurance Companies	1,510,361	2.7
10	Alleghany Insurance Holdings Group	1,057,411	1.9
11	James River Group	949,659	1.7
12	Argo Group	948,881	1.7
13	Tokio Marine U.S. PC Group	895,637	1.6
14	Starr International Group	872,251	1.6

(table continues)

Top 25 U.S. Surplus Lines Groups By Direct Premiums Written, 2019 ($000) (Cont'd)

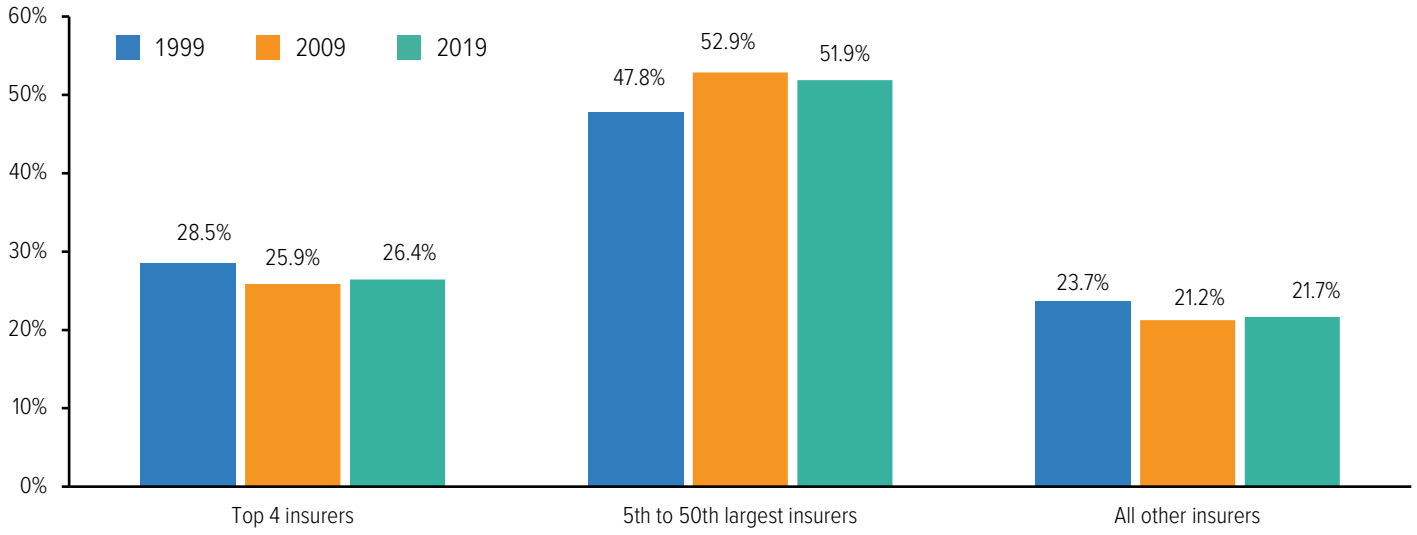
Rank	Group	Direct premiums written	Percent of total U.S. surplus lines market
15	Sompo Holdings U.S. Group	$858,741	1.5%
16	Zurich Financial Services Group NA	813,298	1.5
17	QBE Americas Group	810,066	1.5
18	AXIS U.S. Operations	770,726	1.4
19	Hartford Insurance Group	729,707	1.3
20	Great American P&C Group	688,103	1.2
21	Swiss Reinsurance Group	676,036	1.2
22	CNA Insurance Companies	613,541	1.1
23	Everest Re U.S. Group	584,836	1.1
24	Arch Insurance Group	567,964	1.0
25	Aspen U.S. Insurance Group	544,148	1.0
	Total, top 25	**$31,005,711**	**78.4%**
	Total U.S. surplus lines market	**$55,484,985**	**100.0%**

[1]Because Lloyd's Market company structure differs from traditional insurance companies, AM Best does not include it in the ranking in this chart.
Source: ©A.M.Best – used with permission.

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 330.2 in 1999 to 310.0 in 2009. By 2019, the index had fallen further to 297.5. 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, 1998-2019[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 an insurer's 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, 2010-2019 ($000)

Year	Net premiums written	Annual percent change	Combined ratio[1]	Annual point change
2010	$25,722,426	0.7%	94.5	2.2 pts.
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
2018	63,153,563	29.0	103.3	-5.1
2019	61,835,210	-2.1	100.5	-2.8

[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, 2019 ($000)

Rank	Company[1]	Country of parent company	Gross premiums written
1	National Indemnity Co. (Berkshire Hathaway)[2]	U.S.	$25,778,758
2	Everest Reinsurance Co.	Bermuda	7,207,815
3	Swiss Reinsurance America Corp.	Switzerland	7,061,317
4	XL Reinsurance America Inc.	Bermuda	6,531,134
5	Munich Re America, Corp.	Germany	5,530,356
6	Transatlantic Reinsurance Co.	U.S.	4,682,248
7	Odyssey Group	Canada	3,518,206
8	General Reinsurance Corp.	U.S.	3,356,323
9	Partner Re Co. of the U.S.	Bermuda	2,355,127
10	SCOR US Corporation	France	2,281,526

[1]See Reinsurance Underwriting Review 2019 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, 2019[1] ($000)

State	Total, all lines	State	Total, all lines
Alabama	$9,464,522	Montana	$2,603,863
Alaska	1,655,434	Nebraska	5,246,317
Arizona	12,412,578	Nevada	6,256,586
Arkansas	5,706,437	New Hampshire	2,594,303
California	85,065,113	New Jersey	22,950,973
Colorado	14,313,384	New Mexico	3,749,310
Connecticut	9,121,825	New York	47,972,124
Delaware	2,906,703	North Carolina	17,429,299
D.C.	2,061,502	North Dakota	2,616,611
Florida	56,603,317	Ohio	17,737,703
Georgia	22,955,335	Oklahoma	8,605,472
Hawaii	2,701,616	Oregon	7,729,747
Idaho	3,231,797	Pennsylvania	26,196,162
Illinois	27,124,319	Rhode Island	2,623,145
Indiana	12,062,056	South Carolina	10,654,885
Iowa	6,798,988	South Dakota	2,555,565
Kansas	6,980,597	Tennessee	12,534,844
Kentucky	8,064,413	Texas	62,219,925
Louisiana	12,446,010	Utah	5,405,116
Maine	2,474,585	Vermont	1,334,464
Maryland	12,795,777	Virginia	15,047,355
Massachusetts	16,414,548	Washington	13,813,314
Michigan	20,874,072	West Virginia	3,165,214
Minnesota	12,462,969	Wisconsin	11,213,719
Mississippi	5,591,836	Wyoming	1,288,005
Missouri	12,677,129	**United States[2]**	**$698,510,881**

[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 2019 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.

In 2019 direct premiums written rose 4.8 percent nationally.

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, 2019[1] ($000)

State	Incurred losses	State	Incurred losses	State	Incurred losses
Alabama	$5,021,062	Louisiana	$6,888,509	Oklahoma	$4,614,956
Alaska	748,428	Maine	1,217,021	Oregon	4,356,292
Arizona	6,937,130	Maryland	7,567,341	Pennsylvania	15,874,888
Arkansas	3,547,203	Massachusetts	8,060,079	Rhode Island	1,363,715
California	44,488,554	Michigan	11,644,625	South Carolina	5,928,911
Colorado	8,800,495	Minnesota	8,438,256	South Dakota	2,227,477
Connecticut	4,967,377	Mississippi	3,120,632	Tennessee	6,317,565
Delaware	1,575,961	Missouri	7,615,718	Texas	39,462,827
D.C.	750,576	Montana	2,123,593	Utah	3,026,937
Florida	36,870,506	Nebraska	3,632,370	Vermont	663,772
Georgia	14,298,049	Nevada	3,832,778	Virginia	8,071,714
Hawaii	1,251,898	New Hampshire	1,209,413	Washington	7,737,237
Idaho	1,771,513	New Jersey	13,470,081	West Virginia	1,699,944
Illinois	16,998,439	New Mexico	2,205,237	Wisconsin	6,328,775
Indiana	6,780,466	New York	28,392,877	Wyoming	919,249
Iowa	3,644,935	North Carolina	9,827,941		
Kansas	4,012,555	North Dakota	1,850,490		
Kentucky	4,661,744	Ohio	10,673,940	**United States**	**$407,492,050**

[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. Some states—including New Jersey, New York and Pennsylvania—have separate pre-assessment funds for workers compensation. New York's pre-assessment system makes annual estimates of how much will be needed in the coming year to fulfill the system's obligations to pay the claims of insolvent insurers. 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, 2010-2019

Year	Net assessments[1]
2010	$219,349,059
2011	138,898,346
2012	450,429,770
2013	456,953,717
2014	483,844,426
2015	458,510,638
2016	392,031,219
2017	469,164,131
2018	225,560,454
2019	211,349,533
Total, inception-2019[2]	**$18,005,207,156**

[1]Assessments less refunds. [2]Includes pre-1978 net assessments.
Source: National Conference of Insurance Guaranty Funds.

Guaranty fund net assessments fell to $211.3 million in 2019, down 6.3 percent from $225.6 million in 2018.

In 2019 net assessments were the lowest since 2011 when they stood at $139 million.

Property/Casualty Guaranty Fund Net Assessments By State, 2019

State	Net assessments[1]	State	Net assessments[1]
Alabama	$7,225,984	Nebraska	0
Alaska	1,194,685	Nevada	0
Arizona	0	New Hampshire	($12,000,000)
Arkansas	0	New Jersey	126,711,272
California	0	New Mexico	6,227,820
Colorado	0	New York	NA
Connecticut	-11,868,282	North Carolina	0
Delaware	373,500	North Dakota	0
D.C.	0	Ohio	0
Florida	50,000,000	Oklahoma	0
Georgia	0	Oregon	0
Hawaii	44,411,404	Pennsylvania	0
Idaho	0	Puerto Rico	11,000,000
Illinois	5,000,000	Rhode Island	1,051,307
Indiana	0	South Carolina	0
Iowa	0	South Dakota	829,583
Kansas	0	Tennessee	0
Kentucky	745,000	Texas	0
Louisiana	0	Utah	0
Maine	0	Vermont	0
Maryland	0	Virginia	0
Massachusetts	-20,000,000	Washington	447,260
Michigan	0	West Virginia	0
Minnesota	0	Wisconsin	0
Mississippi	0	Wyoming	0
Missouri	0		
Montana	0	**United States**	**$211,349,533**

[1]Assessments less refunds. Negative numbers represent net refunds.
NA=Data not available.
Source: National Conference of Insurance Guaranty Funds.

Chapter 7

Property/Casualty Insurance By Line

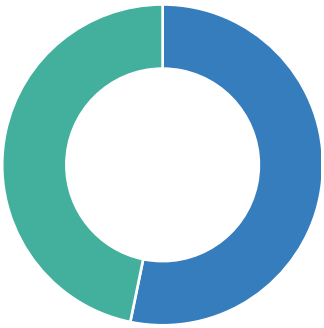
PREMIUMS BY LINE

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 2019 private passenger auto insurance was the largest line of insurance, based on net premiums written, making up 39 percent of all P/C insurance (commercial and personal combined) and 73 percent of personal lines 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 10 percent of all P/C net premiums and 20 percent of all commercial premiums.

Net Premiums Written, Personal And Commercial Lines, 2019 **($ billions)**



Personal lines	53.2%	$340.7
Commerical lines	46.8	299.3
Total	**100.0%**	**$640.1**

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

Net Premiums Written By Line, Property/Casualty Insurance, 2017-2019[1] ($ millions)

Lines of insurance	2017	2018	2019	Percent change from prior year 2017	2018	2019	Percent of total, 2019
Private passenger auto	$222,234.9	$240,925.2	$247,745.8	7.2%	8.4%	2.8%	38.7%
Liability	133,745.2	144,450.2	147,302.5	7.5	8.0	2.0	23.0
Collision and comprehensive	88,489.7	96,475.1	100,443.3	6.7	9.0	4.1	15.7
Homeowners multiple peril	82,811.3	88,938.5	92,977.6	2.0	7.4	4.5	14.5
Other liability[2]	46,676.5	58,590.9	60,771.6	4.7	25.5	3.7	9.5
Workers compensation	45,047.4	48,614.1	47,142.2	-1.3	7.9	-3.0	7.4
Commercial auto	30,638.4	35,774.4	39,020.4	8.4	16.8	9.1	6.1
Liability	22,881.2	26,992.2	29,348.7	7.3	18.0	8.7	4.6
Collision and comprehensive	7,757.3	8,782.2	9,671.7	11.6	13.2	10.1	1.5
Commercial multiple peril	34,190.7	37,558.7	38,947.8	0.3	9.9	3.7	6.1
Inland marine	11,973.6	14,588.6	15,614.0	5.0	21.8	7.0	2.4
Reinsurance[3]	12,258.9	14,141.9	14,074.3	5.7	15.4	-0.5	2.2
Fire	10,688.2	11,622.6	11,951.4	-2.9	8.7	2.8	1.9
Allied lines	8,711.2	10,169.9	11,003.4	-10.7	16.7	8.2	1.7
Accident and health[4]	9,992.5	8,205.8	9,335.3	20.0	-17.9	13.8	1.5
Medical professional liability	8,062.0	8,403.8	8,724.4	-1.6	4.2	3.8	1.4
Surety	5,390.8	6,357.9	6,560.8	4.9	17.9	3.2	1.0
Multiple peril crop	4,742.0	5,380.1	6,478.4	42.8	13.5	20.4	1.0
Mortgage guaranty	4,376.8	4,693.8	4,863.0	-0.8	7.2	3.6	0.8
Farmowners multiple peril	3,925.3	4,128.9	4,328.5	3.2	5.2	4.8	0.7
Ocean marine	2,370.5	2,885.7	3,182.1	-7.0	21.7	10.3	0.5
Product liability	2,689.1	2,794.7	3,019.1	11.0	3.9	8.0	0.5
Boiler and machinery	2,043.2	2,600.8	2,551.1	8.0	27.3	-1.9	0.4
Earthquake	1,511.5	1,827.5	1,985.8	-1.5	20.9	8.7	0.3
Credit	1,221.0	1,511.0	1,851.4	9.2	23.8	22.5	0.3
Fidelity	986.4	1,215.5	1,274.5	-9.8	23.2	4.9	0.2
Aircraft	861.0	1,219.3	1,196.1	-1.2	41.6	-1.9	0.2
Other lines[5]	1,080.4	1,256.3	1,188.1	18.1	16.3	-5.4	0.2
Warranty	1,090.6	1,247.7	1,155.3	17.2	14.4	-7.4	0.2
Excess workers compensation	796.6	1,097.7	931.4	-10.4	37.8	-15.2	0.1
Private crop	498.8	693.3	686.6	9.5	39.0	-1.0	0.1
International	265.2	487.0	477.9	220.9	83.7	-1.9	0.1
Financial guaranty	420.8	364.3	391.2	15.4	-13.4	7.4	0.1
Burglary and theft	222.9	280.1	332.9	-12.7	25.6	18.9	0.1
Private flood	471.0	540.9	287.2	NA	69.5	-46.9	[6]
Federal flood[7]	12.8	12.9	13.7	197.8	0.3	6.4	[6]
Total, all lines[8]	**$558,261.1**	**$618,130.0**	**$640,062.9**	**4.6%**	**10.7%**	**3.5%**	**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]Includes miscellaneous coverages. [6]Less than 0.1 percent. [7]Provided by FEMA through participating private insurers. [8]May not match total premiums shown elsewhere in this book because of the use of different exhibits from S&P Global Market Intelligence.
NA = Data not available.

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

Direct Premiums Written, Property/Casualty Insurance, By State By Line, 2019[1] ($000)

State	Private passenger auto		Commercial auto		Homeowners multiple peril	Farmowners multiple peril	Commercial multiple peril
	Liability	Coll./Comp.	Liability	Coll./Comp.			
Alabama	$2,048,850	$1,643,285	$461,234	$163,580	$1,827,367	$80,660	$628,536
Alaska	290,982	217,487	59,799	17,535	170,781	724	108,319
Arizona	3,391,304	2,162,552	569,365	150,272	1,795,395	17,496	681,876
Arkansas	1,125,516	981,344	297,818	135,174	977,094	53,723	353,330
California	17,960,468	13,161,683	4,266,869	1,045,899	9,128,100	215,936	5,248,209
Colorado	3,146,970	2,174,938	555,744	213,116	2,720,363	93,957	899,807
Connecticut	2,007,742	1,139,216	386,006	101,323	1,565,336	7,353	681,116
Delaware	643,968	292,814	123,468	28,110	299,714	7,794	348,408
D.C.	214,924	164,762	61,698	9,583	171,638	0	173,026
Florida	14,559,970	6,108,304	3,058,528	504,107	10,080,578	23,428	2,092,259
Georgia	6,454,183	3,467,824	1,283,631	347,832	3,576,136	133,045	1,125,855
Hawaii	450,984	349,163	102,823	28,578	415,699	0	190,428
Idaho	623,430	484,551	141,620	77,087	424,996	69,118	234,167
Illinois	4,312,455	3,486,047	1,508,814	461,729	3,911,977	195,945	1,824,788
Indiana	2,280,693	1,738,060	593,768	249,592	2,070,585	198,823	891,934
Iowa	911,865	964,407	270,013	194,882	851,528	228,552	425,196
Kansas	1,029,419	974,478	235,791	154,584	1,257,180	253,436	406,047
Kentucky	2,091,646	1,147,298	377,596	131,540	1,252,972	166,326	553,898
Louisiana	3,168,648	1,718,448	696,944	131,231	1,949,039	15,628	512,014
Maine	408,478	377,105	112,170	54,297	450,504	5,810	261,638
Maryland	3,200,082	2,154,944	562,354	163,594	1,962,764	30,698	696,597
Massachusetts	3,093,015	2,477,152	767,961	267,295	2,570,374	3,992	1,315,150
Michigan	6,366,246	3,565,296	827,946	306,654	2,919,756	146,947	1,172,932
Minnesota	2,157,405	1,754,277	453,172	236,429	2,314,333	159,978	764,087
Mississippi	1,097,288	909,781	322,145	110,643	1,024,524	28,714	336,700
Missouri	2,361,843	1,903,805	530,912	246,620	2,237,167	192,602	853,239
Montana	397,723	400,526	118,524	77,446	374,911	81,667	195,566
Nebraska	712,457	635,534	182,558	139,482	829,246	248,903	301,548
Nevada	2,024,599	834,748	427,883	64,315	663,329	8,147	364,166
New Hampshire	458,657	453,795	111,672	44,576	437,373	3,220	261,793
New Jersey	5,544,754	2,593,304	1,467,749	262,382	2,869,233	3,214	1,591,958
New Mexico	953,415	596,769	195,156	64,611	579,481	26,807	239,184
New York	9,067,247	5,162,880	2,426,993	415,344	5,629,375	47,712	4,241,547
North Carolina	3,373,372	3,215,673	842,954	278,144	2,887,386	64,603	1,028,836
North Dakota	220,100	290,670	105,125	80,326	229,667	132,591	135,821
Ohio	3,899,483	3,136,913	881,389	346,272	3,052,963	180,033	1,356,040
Oklahoma	1,516,170	1,298,102	399,737	188,071	1,761,317	169,392	584,084
Oregon	2,111,192	1,021,762	366,666	118,500	919,570	72,643	549,209
Pennsylvania	5,048,101	4,175,011	1,289,976	518,067	3,520,057	111,083	1,906,007
Rhode Island	637,542	343,175	102,041	29,259	440,212	439	176,139
South Carolina	2,869,343	1,656,757	433,740	133,802	1,851,056	16,694	535,156
South Dakota	260,043	335,692	81,243	68,079	278,660	131,685	143,761
Tennessee	2,447,191	2,015,848	547,610	281,547	2,197,924	158,826	800,485
Texas	12,953,302	10,289,932	3,580,760	1,057,354	10,163,809	367,319	3,067,741
Utah	1,409,045	829,983	272,037	100,617	611,549	16,821	309,535
Vermont	186,550	208,911	49,861	28,590	212,610	15,600	145,376
Virginia	3,342,881	2,551,398	655,113	214,865	2,477,917	78,521	863,054
Washington	3,747,958	2,008,431	649,692	205,313	1,962,573	78,001	938,490
West Virginia	697,354	588,463	151,055	59,028	462,844	17,030	216,096
Wisconsin	1,812,293	1,525,774	458,447	221,550	1,544,682	194,328	754,968
Wyoming	186,904	241,263	65,515	47,770	221,978	32,762	106,764
United States	**$151,276,047**	**$101,930,336**	**$34,491,691**	**$10,576,592**	**$104,105,619**	**$4,588,721**	**$43,592,879**

[1]Includes some state funds.

(table continues)

Direct Premiums Written, Property/Casualty Insurance, By State By Line, 2019[1] ($000) (Cont'd)

State	Workers compensation	Excess workers compensation	Medical professional liability	Product liability	Other liability	Fire	Allied lines
Alabama	$361,666	$23,501	$130,454	$35,401	$709,897	$207,973	$220,246
Alaska	225,834	3,165	24,089	5,414	152,062	64,210	31,679
Arizona	849,588	13,986	210,933	59,079	1,030,841	150,751	154,148
Arkansas	239,079	6,146	64,399	18,130	455,478	162,623	134,678
California	11,437,892	204,194	812,817	605,601	9,809,326	1,486,018	980,843
Colorado	1,053,233	15,722	151,244	91,615	1,358,587	196,497	238,325
Connecticut	737,331	21,714	205,278	53,849	1,091,436	142,534	140,167
Delaware	210,437	1,627	30,183	10,448	415,047	30,405	40,454
D.C.	192,042	2,868	25,689	6,804	431,684	39,021	35,658
Florida	3,115,238	62,956	647,865	244,002	6,456,443	1,316,039	2,670,778
Georgia	1,681,121	35,993	285,068	96,480	1,866,509	386,749	335,823
Hawaii	282,963	7,032	30,096	10,763	321,220	88,025	111,246
Idaho	436,849	1,728	34,036	16,246	245,390	45,015	35,703
Illinois	2,383,918	55,866	453,463	166,786	4,261,597	406,451	358,149
Indiana	799,356	13,590	127,727	88,233	1,028,959	266,270	185,763
Iowa	643,879	9,645	67,944	39,875	624,015	125,936	145,505
Kansas	389,841	9,010	70,063	35,236	479,863	113,087	170,358
Kentucky	560,341	13,370	107,955	29,188	523,452	132,106	119,135
Louisiana	828,581	53,929	102,003	47,248	986,022	373,424	460,712
Maine	231,424	4,134	52,042	8,716	186,352	45,478	41,396
Maryland	931,692	13,536	300,788	55,004	1,227,609	171,057	160,528
Massachusetts	1,278,260	20,220	339,693	127,983	2,142,212	312,703	274,509
Michigan	1,043,564	30,536	197,085	102,795	1,443,135	326,120	196,115
Minnesota	961,783	1,217	83,204	91,738	1,237,028	218,292	324,559
Mississippi	345,370	9,053	45,160	20,062	352,233	134,811	144,669
Missouri	910,547	34,813	155,161	60,905	1,172,734	217,711	216,005
Montana	269,331	5,771	35,640	11,196	189,370	36,206	41,959
Nebraska	363,469	5,752	34,155	21,522	384,803	75,948	99,676
Nevada	425,385	20,583	74,557	76,883	509,506	93,256	85,009
New Hampshire	216,894	5,416	48,726	11,976	231,344	37,736	33,192
New Jersey	2,436,669	34,720	419,455	193,646	2,745,377	391,644	352,036
New Mexico	291,634	6,234	59,328	11,835	268,109	52,439	49,739
New York	3,624,641	59,069	1,585,033	360,336	9,137,784	878,446	699,213
North Carolina	1,396,161	25,510	198,948	94,618	1,446,224	298,245	380,436
North Dakota	4,606	43	11,782	13,437	181,776	40,502	48,984
Ohio	21,458	77,956	236,397	117,309	1,760,126	401,503	285,138
Oklahoma	651,366	11,560	97,720	40,923	655,879	188,001	225,272
Oregon	684,154	8,853	91,186	52,074	649,931	119,444	85,069
Pennsylvania	2,620,627	43,066	719,828	159,835	2,991,507	460,292	345,434
Rhode Island	229,321	1,883	31,588	12,063	261,602	41,354	49,065
South Carolina	806,841	11,005	79,955	55,474	645,203	254,259	218,856
South Dakota	167,172	1,544	15,711	11,093	142,194	37,483	41,332
Tennessee	767,689	18,045	234,885	63,641	1,160,357	284,947	242,852
Texas	2,525,436	33,412	343,135	370,664	6,073,697	1,892,035	2,045,184
Utah	445,478	4,386	56,582	39,338	516,299	91,728	54,265
Vermont	185,438	2,153	17,034	6,387	106,453	32,092	16,603
Virginia	1,088,830	26,291	186,858	54,938	1,524,506	235,954	231,471
Washington	21,396	30,481	191,108	82,988	1,358,412	243,946	162,321
West Virginia	269,008	5,034	96,095	11,999	248,795	65,810	41,347
Wisconsin	1,931,595	10,343	75,186	89,588	1,073,168	196,464	178,072
Wyoming	4,864	297	18,905	5,904	116,793	25,120	25,418
United States	**$53,581,288**	**$1,118,957**	**$9,714,236**	**$4,097,267**	**$74,388,346**	**$13,634,161**	**$13,965,094**

[1]Includes some state funds.

(table continues)

Direct Premiums Written, Property/Casualty Insurance, By State By Line, 2019[1] ($000) (Cont'd)

State	Inland marine	Ocean marine	Surety	Fidelity	Burglary and theft	Boiler and machinery	Financial guaranty
Alabama	$365,829	$42,501	$80,638	$13,720	$4,812	$37,817	$1,795
Alaska	89,333	38,270	29,127	2,477	900	10,174	203
Arizona	431,886	21,647	128,388	14,070	4,957	26,078	600
Arkansas	242,280	18,388	41,149	9,292	3,029	18,287	795
California	3,448,527	359,168	900,744	138,448	48,087	141,406	26,503
Colorado	497,293	21,745	147,579	24,755	8,021	24,067	37,288
Connecticut	364,761	62,213	69,530	24,829	6,141	18,400	2,455
Delaware	92,106	10,036	22,144	4,742	1,533	4,569	11,429
D.C.	138,536	4,725	152,852	15,458	4,152	6,152	2,037
Florida	1,633,270	418,876	436,752	64,445	26,264	69,277	4,305
Georgia	760,911	73,722	166,504	32,962	12,087	48,046	968
Hawaii	119,277	19,101	48,218	4,195	1,215	5,498	3,908
Idaho	115,098	10,635	24,517	3,279	1,213	8,397	0
Illinois	960,524	130,008	239,067	68,097	23,431	73,807	3,805
Indiana	414,411	27,731	96,833	18,286	7,209	47,489	1,582
Iowa	235,159	9,466	51,461	14,656	4,403	24,629	3,627
Kansas	218,355	9,155	46,657	11,262	3,394	19,700	1,024
Kentucky	296,704	31,318	81,423	9,733	3,619	29,712	1,650
Louisiana	459,192	146,120	119,609	13,435	6,873	40,049	3,467
Maine	90,278	30,537	22,022	4,497	1,333	8,594	234
Maryland	419,685	110,266	165,197	25,469	7,752	27,048	2,019
Massachusetts	591,207	103,961	161,948	47,361	10,653	38,313	3,523
Michigan	623,112	88,159	102,211	34,120	11,791	63,734	845
Minnesota	424,095	29,722	92,197	25,961	8,035	39,146	1,736
Mississippi	236,559	19,982	45,259	7,554	2,542	15,175	1,211
Missouri	431,827	37,282	102,921	23,672	8,277	30,765	7,378
Montana	88,163	4,065	36,534	3,110	1,326	5,530	7
Nebraska	179,083	5,314	43,257	8,653	2,239	13,918	216
Nevada	217,540	8,091	90,818	7,365	3,006	12,944	1,660
New Hampshire	102,429	13,907	16,760	5,046	1,226	6,499	0
New Jersey	806,781	167,562	193,135	42,647	12,725	48,086	1,784
New Mexico	124,076	2,694	54,290	4,099	1,069	8,414	347
New York	1,801,368	417,732	467,607	157,588	41,751	135,355	134,021
North Carolina	743,420	73,590	194,377	40,362	10,329	44,078	6,217
North Dakota	86,057	1,853	18,631	3,275	798	12,685	541
Ohio	713,269	59,594	154,935	39,672	19,330	70,264	4,492
Oklahoma	289,210	18,791	65,945	11,699	3,326	22,829	29
Oregon	315,019	33,619	85,431	11,014	4,213	18,806	34
Pennsylvania	892,865	76,959	248,850	51,752	17,678	74,279	11,027
Rhode Island	96,117	41,597	29,016	4,719	1,442	5,225	645
South Carolina	404,734	43,582	86,855	10,627	4,183	25,934	535
South Dakota	73,292	1,675	18,203	3,413	880	7,455	40
Tennessee	509,324	70,427	112,219	18,732	7,776	40,388	514
Texas	2,540,192	292,104	742,523	83,083	48,247	139,243	16,594
Utah	210,164	14,224	60,884	8,121	2,958	10,661	801
Vermont	49,736	3,871	8,643	2,250	646	5,259	0
Virginia	573,038	85,904	185,209	36,513	11,110	33,432	498
Washington	732,367	146,977	201,899	20,662	7,172	33,245	2,092
West Virginia	88,808	3,511	49,160	3,932	1,197	7,229	0
Wisconsin	355,696	40,163	60,155	23,283	7,501	44,118	849
Wyoming	54,186	1,463	57,011	1,523	458	7,836	0
United States	**$25,747,151**	**$3,504,002**	**$6,857,295**	**$1,259,917**	**$434,307**	**$1,710,041**	**$307,330**

[1]Includes some state funds.

(table continues)

Direct Premiums Written, Property/Casualty Insurance, By State By Line, 2019[1] ($000) (Cont'd)

State	Aircraft	Earthquake	Federal flood	Credit	Warranty	Accident and health
Alabama	$19,389	$10,014	$28,360	$39,488	$11,464	$105,092
Alaska	44,419	30,264	1,509	1,924	735	13,428
Arizona	54,745	12,342	16,036	19,228	29,460	116,559
Arkansas	25,650	35,813	10,279	14,958	7,880	62,777
California	170,956	1,251,925	144,675	142,819	202,135	605,726
Colorado	58,029	13,839	14,581	27,162	24,857	124,438
Connecticut	32,851	8,207	45,291	31,321	9,824	70,892
Delaware	14,508	1,297	15,633	9,911	23,695	177,585
D.C.	2,516	4,143	1,406	14,225	192	149,724
Florida	135,674	26,340	859,228	132,625	675,638	309,186
Georgia	60,878	18,427	42,174	50,795	50,097	164,740
Hawaii	10,307	13,296	36,942	7,685	3,803	11,457
Idaho	15,287	4,437	3,476	3,275	5,313	21,152
Illinois	71,260	76,216	27,765	79,477	205,125	342,213
Indiana	25,096	40,857	16,149	31,764	40,653	252,903
Iowa	12,990	5,212	10,927	12,224	7,371	83,871
Kansas	22,292	8,029	6,629	14,488	197,308	69,628
Kentucky	9,441	53,831	13,039	42,007	10,637	61,415
Louisiana	41,296	5,572	253,593	38,724	6,497	73,989
Maine	4,827	1,884	8,160	9,513	4,407	16,701
Maryland	25,012	14,121	32,140	29,244	23,033	82,228
Massachusetts	19,297	31,103	66,539	41,208	18,985	103,688
Michigan	32,354	8,618	16,751	63,883	595,657	183,725
Minnesota	34,629	6,293	7,436	19,508	23,858	84,123
Mississippi	14,132	16,687	36,294	25,223	5,226	89,637
Missouri	25,483	101,823	16,912	32,288	53,565	174,796
Montana	12,459	6,922	2,840	1,734	1,088	30,659
Nebraska	14,895	2,267	6,894	5,567	6,603	112,203
Nevada	31,382	26,931	6,510	6,613	7,359	38,955
New Hampshire	8,767	3,262	7,613	11,130	7,132	15,369
New Jersey	20,841	23,199	177,340	87,570	29,832	193,158
New Mexico	7,844	3,507	8,331	8,695	5,261	21,341
New York	62,858	61,995	177,013	213,387	68,892	514,574
North Carolina	36,957	13,738	85,710	42,498	46,616	142,838
North Dakota	9,706	1,046	5,733	1,440	696	14,871
Ohio	63,103	36,051	25,610	58,748	55,116	182,559
Oklahoma	22,346	18,976	8,353	21,315	15,111	71,632
Oregon	31,589	106,635	17,031	10,525	4,474	62,693
Pennsylvania	36,192	19,807	53,803	71,810	81,318	355,337
Rhode Island	12,229	2,356	16,004	7,354	2,581	25,405
South Carolina	15,539	49,122	119,433	23,104	11,075	83,797
South Dakota	8,198	491	2,749	5,613	1,943	16,843
Tennessee	34,225	87,637	20,864	39,171	13,690	147,708
Texas	224,228	42,189	371,207	273,983	445,835	591,709
Utah	25,076	60,615	2,194	13,689	38,509	77,742
Vermont	1,624	1,197	4,634	2,755	8,818	14,559
Virginia	50,062	24,955	62,490	23,353	19,485	149,718
Washington	48,281	239,773	24,854	33,311	72,058	97,358
West Virginia	2,873	1,321	12,525	8,946	4,589	28,019
Wisconsin	21,977	5,189	10,557	22,881	30,932	146,178
Wyoming	5,118	4,215	1,335	1,019	743	20,925
United States	**$1,791,688**	**$2,643,986**	**$2,963,552**	**$1,931,181**	**$3,217,171**	**$6,707,820**

[1]Includes some state funds.

(table continues)

Direct Premiums Written, Property/Casualty Insurance, By State By Line, 2019[1] ($000) (Cont'd)

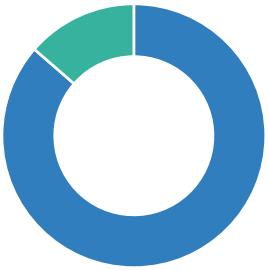
State	Multiple peril crop	Private crop	Mortgage guaranty	Miscellaneous	Private flood
Alabama	$65,646	$1,022	$61,106	$27,003	$6,175
Alaska	101	0	18,302	1,456	734
Arizona	84,730	3,268	180,980	21,075	8,944
Arkansas	137,851	23,214	35,517	11,586	3,161
California	456,465	13,105	489,017	102,285	59,230
Colorado	168,717	18,548	138,317	45,776	8,256
Connecticut	7,952	0	74,129	5,813	6,815
Delaware	9,681	98	21,872	1,445	1,542
D.C.	0	12	24,549	9,982	1,441
Florida	137,046	720	403,016	241,810	88,352
Georgia	144,304	3,874	190,898	46,343	11,357
Hawaii	1,568	0	18,398	2,359	5,371
Idaho	83,864	13,447	44,013	2,715	1,741
Illinois	639,492	108,606	244,625	28,329	14,487
Indiana	342,096	30,372	115,498	13,502	6,273
Iowa	629,637	127,149	51,225	8,589	3,149
Kansas	654,115	61,872	47,246	7,327	3,722
Kentucky	148,780	8,578	42,761	5,871	7,070
Louisiana	82,906	4,651	64,105	27,394	14,665
Maine	10,745	0	18,578	1,221	1,511
Maryland	29,179	106	145,320	20,995	5,707
Massachusetts	4,307	0	126,977	43,429	11,529
Michigan	169,226	7,838	176,874	42,476	7,573
Minnesota	587,430	113,901	162,085	40,725	4,558
Mississippi	134,664	3,459	26,696	26,452	3,930
Missouri	388,768	26,938	93,554	21,033	5,781
Montana	151,040	739	18,328	2,657	829
Nebraska	525,790	239,894	34,501	7,591	2,380
Nevada	37,266	24	80,727	3,379	3,652
New Hampshire	391	0	32,563	4,379	1,457
New Jersey	4,870	40	165,983	42,080	27,177
New Mexico	58,131	2,899	31,803	9,063	2,706
New York	58,916	194	181,676	99,380	42,086
North Carolina	185,947	6,226	183,112	32,003	10,171
North Dakota	848,486	98,227	15,090	1,352	695
Ohio	240,033	18,183	179,138	54,112	10,513
Oklahoma	165,659	12,737	50,714	15,165	4,042
Oregon	64,290	2,989	85,220	19,858	6,053
Pennsylvania	52,775	574	190,985	36,008	15,252
Rhode Island	194	0	18,088	2,673	1,818
South Carolina	90,133	381	91,647	11,382	14,681
South Dakota	638,591	44,039	13,757	2,134	558
Tennessee	86,806	3,250	95,880	16,684	7,702
Texas	928,675	64,444	477,713	123,813	49,027
Utah	18,643	80	83,488	17,531	2,072
Vermont	3,041	2	12,409	780	586
Virginia	61,298	2,133	161,701	23,676	10,152
Washington	197,264	20,583	187,330	58,248	8,729
West Virginia	2,942	12	14,516	3,943	1,733
Wisconsin	229,241	15,533	115,420	13,049	4,538
Wyoming	16,790	1,822	11,621	763	921
United States	**$9,786,481**	**$1,105,780**	**$5,549,065**	**$1,408,694**	**$522,605**

[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, 2019 ($ billions)



Private passenger auto	86.4%	$247.7
Commercial auto	13.6	39.0

Liability	61.6%	$176.6
Collision/ comprehensive	38.4	110.1

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

Auto Share Of P/C Industry Net Premiums Written, 2019 ($ billions)

Private passenger auto	38.7%	$247.7
Commercial auto	6.1	39.0
All other P/C	55.2	353.3

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

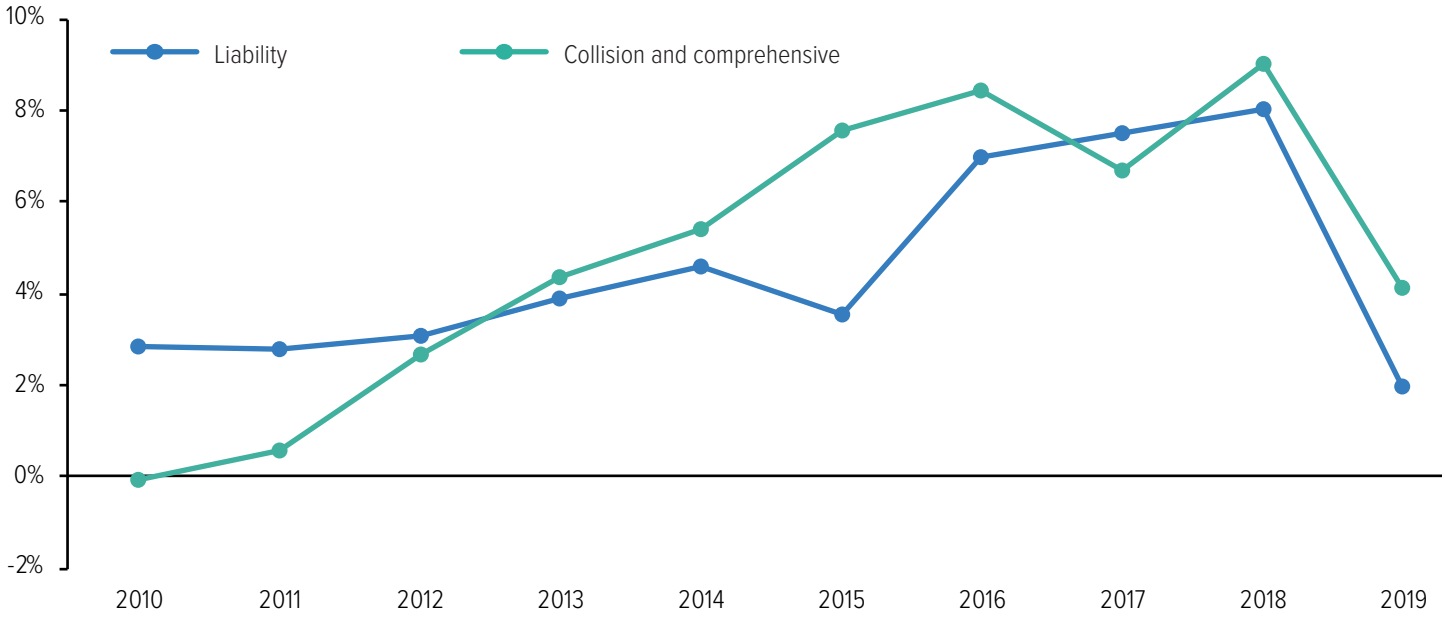
Private Passenger Automobile Insurance, 2010-2019 ($000)

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]
2010	$97,672,826	2.8%	105.9	0.3 pts.	$62,595,851	-0.1%	93.4	0.4 pts.
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	124,439,721	7.0	109.4	1.5	82,931,826	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
2018	144,450,175	8.0	100.5	-5.0	96,475,072	9.0	93.7	-4.6
2019	147,300,544	2.0	101.6	1.1	100,442,485	4.1	94.6	0.9

[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 numbers.

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, 2010-2019



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, 2019 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	State Farm	$40,878,781	16.1%
2	Berkshire Hathaway Inc.	34,892,004	13.8
3	Progressive Corp.	31,025,772	12.2
4	Allstate Corp.	23,626,743	9.3
5	USAA Insurance Group	15,231,169	6.0
6	Liberty Mutual	11,701,811	4.6
7	Farmers Insurance Group of Companies	10,533,343	4.2
8	Nationwide Mutual Group	6,245,588	2.5
9	American Family Insurance Group	5,776,711	2.3
10	Travelers Companies Inc.	4,903,033	1.9

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Commercial Automobile Insurance, 2010-2019 ($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]
2010	$16,249,433	-2.0%	97.1	-3.5 pts.	$4,870,380	-8.9%	101.6	4.7 pts.
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	22,881,174	7.3	113.4	[4]	7,757,275	11.6	104.2	2.1
2018	26,992,199	18.0	111.7	-1.7	8,782,227	13.2	96.9	-7.3
2019	29,347,917	8.7	114.0	2.3	9,671,004	10.1	95.6	-1.3

[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. [4]Less than 0.1 point.

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

Top 10 Writers Of Commercial Auto Insurance By Direct Premiums Written, 2019 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	Progressive Corp.	$5,578,099	12.3%
2	Travelers Companies Inc.	2,798,420	6.2
3	Liberty Mutual	1,888,126	4.2
4	Nationwide Mutual Group	1,673,431	3.7
5	Old Republic International Corp.	1,613,671	3.6
6	Berkshire Hathaway Inc.	1,568,586	3.5
7	Zurich Insurance Group	1,426,525	3.2
8	Auto-Owners Insurance Co.	1,116,121	2.5
9	Chubb Ltd.	966,797	2.1
10	Allstate Corp.	917,778	2.0

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories.

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

AUTO: COSTS/EXPENDITURES

AAA's 2019 *Your Driving Costs* study found that the average cost to own and operate a 2019 model vehicle was $9,282 in 2019. The average insurance cost for medium sedans was $1,251. 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, has had no accidents; and lives in a suburban/urban location. The policy coverage is 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.

78 percent of insured drivers purchase comprehensive coverage in addition to liability insurance, and 74 percent buy collision coverage, based on a Triple-I analysis of 2017 NAIC data.

Average Expenditures For Auto Insurance, 2008-2017

Year	Average expenditure	Percent change
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	841.06	3.5
2014	868.81	3.3
2015	896.75	3.2
2016	944.36	5.3
2017	1,004.58	6.4

Source: © 2020 National Association of Insurance Commissioners (NAIC).

Auto Insurance Expenditures, By State

The tables below show estimated average expenditures for private passenger automobile insurance by state from 2013 to 2017 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. Many other factors can also affect auto insurance prices.

Top 10 Most Expensive And Least Expensive States For Auto Insurance, 2017[1]

Rank	Most expensive states	Average expenditure
1	Louisiana	$1,443.72
2	Michigan	1,358.62
3	Florida	1,356.90
4	New Jersey	1,350.28
5	New York	1,349.72
6	D.C.	1,334.11
7	Rhode Island	1,300.60
8	Delaware	1,221.29
9	Connecticut	1,168.33
10	Maryland	1,149.42

Rank	Least expensive states	Average expenditure
1	North Dakota	$659.94
2	Maine	667.38
3	Iowa	674.33
4	Idaho	678.57
5	South Dakota	693.42
6	North Carolina	705.56
7	Wisconsin	731.20
8	Wyoming	742.20
9	Indiana	744.39
10	Vermont	762.59

[1]Based on average automobile insurance expenditures.

Average Expenditures For Auto Insurance By State, 2013-2017

State	2017					2016		Average expenditure percent change, 2016-2017
	Liability	Collision	Comprehensive	Average expenditure	Rank[1]	Average expenditure	Rank[1]	
Alabama	$478.68	$366.12	$169.90	$856.67	31	$791.40	37	8.2%
Alaska	561.06	370.63	140.50	930.20	23	911.37	17	2.1
Arizona	607.66	312.95	204.93	994.42	17	926.76	21	7.3
Arkansas	458.33	364.07	216.70	848.24	32	781.00	36	8.6
California	565.70	453.88	96.15	957.08	21	892.64	22	7.2
Colorado	639.99	326.39	228.32	1,050.19	15	945.59	18	11.1
Connecticut	743.61	398.50	133.91	1,168.33	9	1,108.65	10	5.4
Delaware	843.98	344.34	133.19	1,221.29	8	1,173.92	8	4.0
D.C.	744.18	497.81	224.28	1,334.11	6	1,258.45	5	6.0
Florida	964.28	343.41	137.88	1,356.90	3	1,268.19	6	7.0
Georgia	735.15	381.66	169.68	1,127.22	13	1006.30	14	12.0
Hawaii	468.99	342.17	106.97	803.45	37	780.44	31	2.9
Idaho	403.37	246.22	130.86	678.57	48	633.41	51	7.1
Illinois	507.40	336.00	133.32	897.07	25	852.80	26	5.2
Indiana	432.08	277.65	130.71	744.39	43	705.53	43	5.5
Iowa	339.12	244.39	211.60	674.33	49	635.99	50	6.0
Kansas	399.96	280.48	267.10	766.50	41	719.74	39	6.5
Kentucky	585.99	300.45	157.38	896.33	26	840.07	27	6.7
Louisiana	936.94	468.87	231.76	1,443.72	1	1,328.81	3	8.6
Maine	370.18	286.22	108.54	667.38	50	646.63	48	3.2
Maryland	700.58	393.57	162.34	1,149.42	10	1,081.72	11	6.3
Massachusetts	642.92	427.17	145.10	1,136.60	12	1,096.53	9	3.7
Michigan	873.73	462.80	157.50	1,358.62	2	1,304.10	4	4.2
Minnesota	483.93	257.41	197.67	840.12	33	809.57	28	3.8
Mississippi	511.45	365.06	229.41	930.45	22	879.13	24	5.8
Missouri	492.63	305.96	204.08	869.14	30	807.52	34	7.6
Montana	423.03	278.31	267.84	784.72	38	731.14	40	7.3
Nebraska	417.32	263.68	253.30	766.89	40	722.68	41	6.1
Nevada	798.52	344.81	115.46	1,141.02	11	1062.44	12	7.4
New Hampshire	425.84	319.72	115.63	824.03	34	801.96	30	2.8
New Jersey	932.43	403.19	129.12	1,350.28	4	1,306.73	1	3.3
New Mexico	548.33	304.46	197.95	870.23	29	819.68	32	6.2
New York	869.13	437.13	179.31	1,349.72	5	1,303.25	2	3.6
North Carolina	371.51	333.60	133.49	705.56	46	667.65	46	5.7
North Dakota	303.66	263.72	241.51	659.94	51	639.13	47	3.3
Ohio	438.68	297.50	128.46	777.80	39	743.13	38	4.7
Oklahoma	502.71	343.57	254.61	895.36	27	854.78	25	4.7
Oregon	677.07	265.06	101.80	961.21	20	889.04	23	8.1
Pennsylvania	539.44	363.42	162.59	961.40	19	915.94	16	5.0
Rhode Island	869.96	460.49	136.58	1,300.60	7	1,230.85	7	5.7
South Carolina	645.39	302.52	197.24	1,020.35	16	930.77	20	9.6
South Dakota	327.34	236.35	308.71	693.42	47	652.30	49	6.3
Tennessee	456.05	343.10	158.13	820.63	35	778.80	35	5.4
Texas	631.22	430.54	234.17	1,096.82	14	1,008.91	13	8.7
Utah	568.07	293.62	122.44	889.67	28	829.41	29	7.3
Vermont	375.02	324.51	142.83	762.59	42	732.97	42	4.0
Virginia	468.79	305.61	146.00	819.77	36	785.60	33	4.3
Washington	666.72	297.16	113.77	994.03	18	935.36	15	6.3
West Virginia	513.12	345.68	213.34	913.39	24	897.92	19	1.7
Wisconsin	412.46	243.52	148.83	731.20	45	701.47	44	4.2
Wyoming	354.35	290.18	291.22	742.20	44	714.17	45	3.9
United States	**$611.12**	**$363.08**	**$159.72**	**$1,004.58**		**$944.36**		**6.4%**

(table continues)

Average Expenditures For Auto Insurance By State, 2013-2017 (Cont'd)

State	Average expenditure		
	2015	2014	2013
Alabama	$739.93	$709.48	$685.91
Alaska	915.59	924.80	923.07
Arizona	877.11	857.76	828.76
Arkansas	742.44	736.57	715.32
California	840.65	807.58	782.57
Colorado	869.84	824.06	779.12
Connecticut	1,074.95	1,054.22	1,031.10
Delaware	1,146.44	1,125.65	1,104.46
D.C.	1,206.00	1,187.97	1,175.03
Florida	1,190.50	1,139.30	1,142.47
Georgia	929.72	869.19	821.71
Hawaii	761.05	751.11	741.37
Idaho	599.02	582.08	560.86
Illinois	811.40	781.48	749.10
Indiana	671.16	645.17	624.04
Iowa	608.94	587.75	574.32
Kansas	708.98	692.03	662.80
Kentucky	801.75	780.83	770.87
Louisiana	1,254.37	1,209.60	1,161.25
Maine	619.02	596.58	584.38
Maryland	1,020.65	998.56	976.31
Massachusetts	1,058.50	1,035.52	1,007.98
Michigan	1,268.10	1,230.25	1,132.66
Minnesota	791.72	771.62	743.00
Mississippi	840.48	806.99	777.48
Missouri	758.32	729.47	707.19
Montana	704.70	702.20	683.81
Nebraska	693.87	664.89	644.10
Nevada	1,012.69	984.21	949.27
New Hampshire	775.17	749.81	732.35
New Jersey	1,274.30	1,267.08	1,256.69
New Mexico	794.54	779.23	747.23
New York	1,247.76	1,207.86	1,179.63
North Carolina	639.01	643.84	624.76
North Dakota	637.24	628.58	604.97
Ohio	714.47	691.35	662.20
Oklahoma	826.43	806.68	767.73
Oregon	831.80	818.02	783.84
Pennsylvania	880.90	857.45	840.44
Rhode Island	1,170.98	1,122.38	1,077.85
South Carolina	870.56	827.30	795.05
South Dakota	624.52	598.92	578.19
Tennessee	753.73	737.33	714.89
Texas	934.22	905.64	864.24
Utah	792.19	765.91	733.43
Vermont	700.46	673.89	663.09
Virginia	756.47	740.78	717.73
Washington	890.17	871.31	840.45
West Virginia	883.34	874.83	863.02
Wisconsin	670.98	648.54	623.17
Wyoming	692.05	676.91	647.66
United States	**$896.75**	**$868.81**	**$841.06**

[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: © 2020 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 98.7 in 2019, reflecting a claims ratio of 75.5 percent and an expense ratio of 22.7 percent. Dividends to policyholders account for the remainder. A combined ratio above 100 indicates an underwriting loss.

Private Passenger Auto Insurance Industry Losses And Underwriting Expenses, 2019[1]

Expense	Percent of premiums
Losses and related expenses[2]	
Loss and loss adjustment expense (LAE) ratio	**75.5%**
Incurred losses	64.6
Defense and cost containment expenses incurred	2.8
Adjusting and other expenses incurred	8.0
Operating expenses[3]	
Expense ratio	**22.7%**
Net commissions and brokerage expenses incurred	8.6
Taxes, licenses and fees	2.1
Other acquisition and field supervision expenses incurred	7.3
General expenses incurred	4.7
Dividends to policyholders[2]	**0.6%**
Combined ratio after dividends[4]	**98.7%**

[1]After reinsurance transactions. [2]As a percent of net premiums earned ($245.7 billion in 2019). [3]As a percent of net premiums written ($247.7 billion in 2019). [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, 2010-2019[1]

	Liability			
	Bodily injury[2]		Property damage[3]	
Year	Claim frequency[4]	Claim severity[5,6]	Claim frequency[4]	Claim severity[5,6]
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	0.97	15,384	3.41	3,516
2015	1.00	16,046	3.41	3,791
2016	1.05	16,149	3.44	3,969
2017	1.11	16,075	3.46	4,064
2018	1.10	17,164	3.32	4,295
2019	1.07	18,417	3.18	4,525

	Physical damage[7]			
	Collision		Comprehensive[8]	
Year	Claim frequency[4]	Claim severity[5]	Claim frequency[4,9]	Claim severity[5,9]
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	6.13	3,442	2.76	1,747
2017	6.14	3,423	2.86	1,811
2018	6.13	3,578	3.02	1,832
2019	6.13	3,750	3.25	1,780

[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 earned 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 2019, 1.1 percent of people with liability insurance had a bodily injury liability claim, while 3.2 percent of those with liability insurance had a property damage liability claim, according to ISO.

In 2019, 6.1 percent of collision insurance policyholders had a claim, while 3.3 percent of people with comprehensive coverage had a claim.

In 2019 the average auto liability claim for property damage was $4,525; the average auto liability claim for bodily injury was $18,417.

In 2019 the average collision claim was $3,750; the average comprehensive claim was $1,780.

Incurred Losses For Auto Insurance, 2015-2019[1] ($000)

	2015	2016	2017	2018	2019
Private passenger auto					
Liability	$79,098,617	$88,249,238	$90,495,835	$91,736,331	$96,189,924
Physical damage	48,564,511	55,738,221	57,052,411	58,766,743	62,637,686
Commercial auto					
Liability	13,587,152	14,987,073	15,528,570	17,810,709	20,434,568
Physical damage	3,902,124	4,279,414	4,874,748	4,999,100	5,407,130
Total	**$145,152,404**	**$163,253,946**	**$167,951,564**	**$173,312,883**	**$184,669,308**

[1]Losses occurring within a fixed period, whether or not adjusted or paid during the same period, after reinsurance transactions.
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.

Motorists can also obtain auto insurance from the nonstandard portion of the private market. The nonstandard market is a niche market for drivers who have a worse than average driving record or drive specialized vehicles 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. AM Best estimates that the nonstandard auto market generated $16.9 billion in direct premiums in 2019. The market consists of about 130 mostly small- to medium-sized insurers whose nonstandard auto premiums account for more than 50 percent of their total net premiums written.

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 available 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.

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 New Hampshire—which is not a compulsory insurance state—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. In the chart below, in the minimum liability limits column, the first two numbers refer to BI liability limits and the third number to 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.

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	25/50/15
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	25/50/25
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	25/50/25[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	25/50/25
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. [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, 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 crash 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

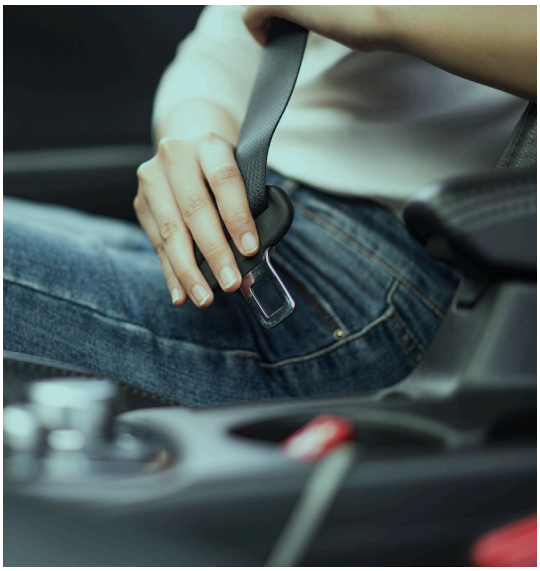
Wyoming

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 a crash 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 90.7 percent of the time nationwide in 2019, virtually unchanged from 89.6 percent in 2018, according to the National Highway Traffic Safety Administration (NHTSA). Generally, states with stronger seatbelt enforcement laws achieve higher rates of seatbelt use than states with weaker laws. State seat belt usage rates for 2019 published by NHTSA can be found here; details on state seatbelt laws published by the Insurance Institute for Highway Safety (IIHS) can be found here.

Impaired Driving Laws

In 2018, 10,511 people died in the United States in alcohol-impaired crashes, down 3.6 percent from 10,908 in 2017, according to the NHTSA. In 2018 alcohol-impaired crash fatalities accounted for 29 percent of all crash fatalities, the same proportion as in 2016 and 2017. NHTSA notes that this percentage is the lowest since 1982, when the Administration began recording alcohol data. Despite this improvement, the IIHS 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 grams per deciliter 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. For details on state laws curbing alcohol-impaired driving, see Facts + Statistics: Alcohol-impaired driving.

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-eight 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. For details on statutes or court cases holding alcoholic beverage servers liable by state, see Facts + Statistics: Alcohol-impaired driving.

Older Drivers

In 2018, 16 percent of the total U.S. resident population (52.4 million people) were 65 years old and older. That year 6,907 people age 65 and older were killed in traffic crashes, accounting for 19 percent of all traffic fatalities. 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. For details on state drivers license renewal laws including requirements for older drivers, see Background on: Older drivers.

Young Drivers

Motor vehicle crashes are the second 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, 1,719 drivers between the ages of 15 to 20 died in motor vehicle crashes in 2018, down 7 percent from 1,844 in 2017. Drivers between the ages of 15 to 20 accounted for 8 percent of all drivers involved in fatal crashes in 2018. In contrast, young drivers accounted for 5.3 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 2018 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 in most states. In 2018, 49 percent of drivers ages 15 to 20 involved in accidents were found not to be using a seatbelt or other restraint (in situations where the use of restraints was known).

HOMEOWNERS: PREMIUMS

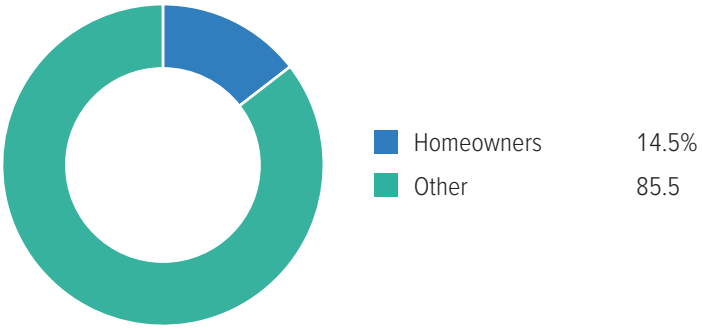
Homeowners Insurance

Homeowners insurance accounted for 14.5 percent of all property/casualty (P/C) insurance premiums, and 27.3 percent of personal lines insurance premiums in 2019.

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 a 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 a house is being repaired or rebuilt after a 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, 2019



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

Homeowners Multiple Peril Insurance, 2010-2019 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2010	$61,659,466	5.4%	106.0	0.3 pts.
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
2018	88,938,451	7.4	103.0	-5.1
2019	92,965,248	4.5	97.9	-5.2

[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 numbers.

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

Top 10 Writers Of Homeowners Insurance By Direct Premiums Written, 2019 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	State Farm	$18,685,957	18.0%
2	Allstate Corp.	8,723,238	8.4
3	USAA Insurance Group	6,835,804	6.6
4	Liberty Mutual	6,745,864	6.5
5	Farmers Insurance Group of Companies	5,943,814	5.7
6	Travelers Companies Inc.	4,240,933	4.1
7	American Family Insurance Group	4,057,499	3.9
8	Nationwide Mutual Group	3,244,683	3.1
9	Chubb Ltd.	2,989,474	2.9
10	Erie Insurance Group	1,746,390	1.7

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

HOMEOWNERS: HIGH-RISK MARKETS

In 2017, 94.7 million people, or almost one-third of the total U.S. population, lived in coastal counties along the Atlantic and Pacific Coasts and the Gulf of Mexico, according to the U.S. Bureau of the Census. The U.S. coastal county population grew 15.3 percent from 2000 to 2017. The Atlantic region was the most populated of the three coastal regions, with 129 counties where 44.4 million people lived, and accounted for 13.6 percent of the total U.S. population. The Pacific region was the second most populous, with 70 counties, 34.4 million people and 10.6 percent of the U.S. population. The counties along the Gulf of Mexico was the smallest coastal region, with 56 counties, 15.8 million people and 4.9 percent of U.S. population.

Counties along the Gulf of Mexico grew the fastest between 2000 and 2017, where the population grew 26.1 percent, compared with 15.7 percent for the total United States. One of the Gulf counties, Harris County, Texas, had the fastest population growth of any county in the United States. In counties along the Pacific Coast, population grew 13.5 percent and in counties along the Atlantic Coast, population grew 13.2 percent. Noncoastline county population grew at about the same rate as the total United States, at 15.9 percent.

U.S. Population By Coastline Region, 2017

Region	Number of counties	Population		
		Number (millions)	Percent of total U.S.	Percent change, 2000-2017
Atlantic	129	44.4	13.6%	13.2%
Pacific[1]	70	34.4	10.6	13.5
Gulf of Mexico	56	15.8	4.9	26.1
Total coastline	255	94.7	29.1	15.3
Noncoastline	2,887	231.1	70.9	15.9
Total United States	**3,142**	**325.7**	**100.0%**	**15.7%**

[1]Includes Alaska and Hawaii.
Source: U.S. Census Bureau, V.2017 Population Estimates and 2000 to 2010 Intercensal Estimates.

Atlantic And Gulf Of Mexico Coastline County Population, 2000-2017

Year	Population (millions)	Year	Population (millions)
2000	51.9	2009	55.9
2001	52.5	2010	56.4
2002	53.0	2011	57.0
2003	53.5	2012	57.6
2004	54.0	2013	58.1
2005	54.5	2014	58.7
2006	54.5	2015	59.3
2007	54.9	2016	59.8
2008	55.4	2017	60.2

Source: U.S. Census Bureau, V.2017 Population Estimates and 2000 to 2010 Intercensal Estimates.

Coastal State Storm Surge Risk

According to CoreLogic, storm surge is ocean water that is pushed ahead of a storm and can cause severe damage. States along the U.S. Gulf of Mexico and Atlantic Basin are potentially vulnerable to storm surge damage. The latest CoreLogic report shows that in 2019, there were 7.3 million coastal homes along the Gulf and Atlantic Coasts, worth almost $1.8 trillion, at risk for storm surge damage. Along the Gulf Coast, 3.1 million homes are at risk from storm surge, and another 4.1 million homes along the Atlantic Coast are at risk. The reconstruction cost value of homes at risk for storm surge damage is $668 billion along the Gulf of Mexico in the United States and $1.1 trillion along the highly populated Atlantic Coast. 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.

The data shown in the following charts are cumulative. A home potentially affected by a Category 1 storm would also be affected by Category 2 to 5 storms. Thus, Category 5 represents the aggregate total risk from Category 1 to 5 storms.

i

The Atlantic and Gulf Coast are vulnerable to damage from tropical storms and hurricanes.

According to the National Climatic Data Center, between 2000 and 2017, hurricanes costing $10 billion or more in total losses occurred in seven of those 18 years: 2004 (Hurricanes Charley, Frances, Ivan and Jeanne), 2005 (Katrina, Rita and Wilma), 2008 (Ike), 2011 (Irene), 2012 (Sandy), 2016 (Matthew) and 2017 (Harvey and Irma).

Hurricane Maria, which caused an estimated $91.8 billion in total losses in Puerto Rico and the U.S. Virgin Islands, was not included in the tally above because it did not occur in the continental U.S.

U.S. Storm Surge Risk, Gulf and Atlantic States, 2020

Storm surge risk level[3] (Storm category)	Single-family residential homes potentially affected[1]		Multi-family residential homes potentially affected[2]	
	Number of units	Reconstruction cost value[4] ($ millions)	Number of units	Reconstruction cost value[4] ($ millions)
Category 1	804,316	$195.10	24,924	$8.13
Category 2	2,546,714	631.48	87,139	31.71
Category 3	4,656,483	1,142.89	165,317	61.74
Category 4	6,198,017	1,520.88	236,221	90.83
Category 5	7,110,779	1,709.77	252,657	95.24

[1]Residential structures less than four stories, including mobile homes, duplexes, manufactured homes and cabins. [2]Apartments, condominiums and multi-unit dwellings. [3]The risk categories are cumulative and increase in value from Category 1 to Category 5. Category 1 represents the higher risk of damage from a weak hurricane; Category 5 includes Categories 1 to 4 and the low risk of damage from a Category 5 hurricane. [4]Represents the cost to completely rebuild including labor and materials by geographic location.

Source: CoreLogic®, a property data and analytics company.

Storm Surge Risk By State By Number Of Single-Family Homes and Reconstruction Value, 2020[1]

Rank	State	Number of single-family homes at risk by storm category[2]				
		Category 1	Category 2	Category 3	Category 4	Category 5
1	Florida	353,994	1,088,511	1,806,312	2,362,323	2,851,642
2	Louisiana	72,883	212,707	640,307	770,030	843,349
3	Texas	41,398	122,453	264,103	399,741	563,024
4	New Jersey	95,473	277,147	381,388	471,323	471,323[3]
5	New York	76,805	228,069	351,937	467,787	467,787[3]
6	Virginia	23,232	89,347	243,707	366,117	410,277
7	South Carolina	37,107	132,728	219,420	308,387	363,875
8	North Carolina	33,254	97,694	165,266	216,446	267,802
9	Georgia	9,378	54,470	113,068	152,882	164,504
10	Massachusetts	8,102	42,832	97,083	151,979	151,979[3]
11	Maryland	16,091	59,214	98,757	126,589	126,589[3]
12	Mississippi	5,740	25,385	56,768	90,023	102,596
13	Pennsylvania	847	21,378	58,921	85,794	85,794[3]
14	Connecticut	6,708	27,921	46,186	67,433	67,433[3]
15	Delaware	10,855	31,057	49,103	67,055	67,055[3]
16	Alabama	5,203	15,841	27,769	40,287	51,929
17	Rhode Island	1,396	7,979	17,345	26,336	26,336[3]
18	Maine	5,657	7,912	11,969	18,149	18,149[3]
19	New Hampshire	193	4,069	7,074	9,336	9,336[3]
	Total homes potentially affected	**804,316**	**2,546,714**	**4,656,483**	**6,198,017**	**7,110,779**
Rank	**State**	**Reconstruction cost value of single-family homes at risk[2, 4] ($ millions)**				
		Category 1	**Category 2**	**Category 3**	**Category 4**	**Category 5**
1	Florida	$71,707.9	$224,088.9	$372,234.3	$483,618.4	$580,606.2
2	Louisiana	15,887.7	47,717.2	152,745.6	184,008.0	202,330.0
3	New York	30,410.9	95,248.1	146,867.2	196,107.2	196,107.2[3]
4	New Jersey	27,523.2	84,974.9	119,707.6	150,599.6	150,599.5[3]
5	Texas	7,467.3	22,579.6	51,408.9	81,181.5	113,419.1
6	Virginia	5,962.5	22,598.0	57,844.1	86,624.2	98,314.8
7	South Carolina	10,447.7	35,063.9	55,589.2	75,121.4	86,468.7
8	North Carolina	7,178.2	21,277.7	36,350.3	47,968.2	59,542.6
9	Massachusetts	2,306.8	12,658.0	29,179.0	47,309.5	47,309.5[3]
10	Georgia	2,869.0	14,504.6	26,994.0	35,215.7	37,416.2

(table continues)

Storm Surge Risk By State By Number Of Single-Family Homes and Reconstruction Value, 2020[1] (Cont'd)

Rank	State	Reconstruction cost value of single-family homes at risk[2, 4] ($ millions)				
		Category 1	Category 2	Category 3	Category 4	Category 5
11	Maryland	$3,878.3	$14,151.3	$23,657.9	$30,518.8	$30,518.8[3]
12	Connecticut	2,344.5	9,635.7	15,669.6	22,538.4	22,538.4[3]
13	Pennsylvania	193.8	5,120.6	14,596.0	21,349.8	21,349.8[3]
14	Mississippi	1,175.2	5,247.4	11,573.3	18,024.1	20,467.4
15	Delaware	3,082.8	8,693.8	13,892.8	18,943.9	18,943.9[3]
16	Alabama	965.3	2,972.1	5,112.2	7,360.8	9,449.8
17	Rhode Island	350.2	2,339.3	5,080.9	7,761.3	7,761.3[3]
18	Maine	1,314.9	1,892.6	2,949.9	4,589.9	4,589.8[3]
19	New Hampshire	35.2	713.9	1,434.1	2,038.9	2,038.9[3]
Total homes potentially affected		**$195,101.5**	**$631,477.6**	**$1,142,886.9**	**$1,520,879.6**	**$1,709,772.1**

[1]The risk categories are cumulative and increase in value from Category 1 to Category 5. Category 1 represents the higher risk of damage from a weak hurricane; Category 5 includes Categories 1 to 4 and the low risk of damage from a Category 5 hurricane. [2]Measured in units. [3]Storm surge risk for Category 5 storms 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®, a property data and analytics company.

Storm Surge Risk By State By Number Of Multi-Family Homes and Reconstruction Value, 2020[1]

Rank	State	Number of multi-family homes at risk by storm category[2]				
		Category 1	Category 2	Category 3	Category 4	Category 5
1	New York	9,484	35,591	65,566	98,980	98,980[3]
2	Florida	10,236	32,087	54,027	70,394	83,321
3	Massachusetts	2,430	7,604	16,124	25,792	25,792[3]
4	Louisiana	247	974	7,273	7,569	7,766
5	Pennsylvania	1	1,083	3,279	5,408	5,408[3]
6	Virginia	222	939	3,006	4,575	4,717
7	Texas	140	701	1,677	2,517	4,682
8	New Jersey	721	2,313	3,541	4,432	4,432[3]
9	North Carolina	529	2,038	2,970	3,319	3,543
10	Connecticut	83	477	1,447	2,905	2,905[3]
11	Georgia	53	367	1,358	2,522	2,856
12	Maryland	478	1,359	1,856	2,591	2,591[3]
13	Maine	140	499	1,041	1,851	1,851[3]
14	South Carolina	105	655	1,058	1,531	1,816
15	Mississippi	8	137	407	719	834

(table continues)

Storm Surge Risk By State By Number Of Multi-Family Homes and Reconstruction Value, 2020[1] (Cont'd)

Rank	State	Number of multi-family homes at risk by storm category[2]				
		Category 1	Category 2	Category 3	Category 4	Category 5
16	Rhode Island	39	184	435	665	665[3]
17	Alabama	4	20	59	130	177
18	New Hampshire	0	83	128	175	175[3]
19	Delaware	4	28	65	146	146[3]
Total homes potentially affected		**24,924**	**87,139**	**165,317**	**236,221**	**252,657**
Rank	**State**	**Reconstruction cost value of multi-family homes at risk[2, 4] ($ millions)**				
		Category 1	**Category 2**	**Category 3**	**Category 4**	**Category 5**
1	New York	$4,134.0	$17,047.2	$30,700.6	$47,195.4	$47,195.4[3]
2	Florida	2,677.9	8,240.9	13,821.2	18,185.9	21,533.9
3	Massachusetts	432.4	2,560.8	5,880.4	9,791.5	9,791.5[3]
4	Louisiana	57.8	245.7	3,469.5	3,543.8	3,589.0
5	Pennsylvania	0.4	358.8	1,213.4	2,134.8	2,134.8[3]
6	New Jersey	297.8	1,053.9	1,659.7	2,117.8	2,117.8[3]
7	Connecticut	54.2	283.3	871.5	1,758.4	1,758.4[3]
8	Virginia	80.5	297.8	1,013.5	1,402.2	1,444.9
9	Texas	38.0	196.9	469.9	708.5	1,371.7
10	Georgia	20.0	105.4	422.7	788.4	898.4
11	Maryland	141.5	426.3	576.3	752.1	752.1[3]
12	North Carolina	81.7	343.7	537.0	632.4	695.9
13	Maine	48.7	159.0	329.0	591.4	591.4[3]
14	South Carolina	37.5	201.8	321.7	461.5	539.3
15	Rhode Island	19.1	89.3	216.0	331.0	331.0[3]
16	Mississippi	3.7	43.0	132.1	249.0	287.4
17	Alabama	3.0	8.7	29.5	58.7	77.5
18	New Hampshire	0.0	32.2	51.3	73.0	73.0[3]
19	Delaware	1.2	11.5	26.3	53.7	53.7[3]
Total homes potentially affected		**$8,129.3**	**$31,705.9**	**$61,741.7**	**$90,829.4**	**$95,237.3**

[1]The risk categories are cumulative and increase in value from Category 1 to Category 5. Category 1 represents the higher risk of damage from a weak hurricane; Category 5 includes Categories 1 to 4 and the low risk of damage from a Category 5 hurricane. [2]Residential structures less than four stories, including mobile homes, duplexes, manufactured homes and cabins. [3]Storm surge risk for Category 5 storms 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®, a property data and analytics company.

Top 15 Metropolitan Areas By Storm Surge Risk, 2020[1]

Rank[2]	Metropolitan area	Number of single-family homes at risk of storm surge[3]	Reconstruction cost value of single-family homes at risk[4] ($ billions)
1	Miami, FL	798,601	$157.47
2	New York, NY	732,531	285.64
3	Tampa, FL	466,444	83.42
4	New Orleans, LA	400,252	101.47
5	Virginia Beach, VA	397,722	95.59
6	Fort Myers, FL	335,574	68.62
7	Houston, TX	298,511	64.57
8	Bradenton, FL	266,719	53.76
9	Naples, FL	190,865	42.28
10	Jacksonville, FL	175,919	41.31
11	Philadelphia, PA	165,941	43.93
12	Charleston, SC	158,280	41.58
13	Myrtle Beach, SC	132,738	24.93
14	Layfayette, LA	129,118	29.11
15	Beaumont, TX	120,918	22.13
	Total, 15 metropolitan areas	**4,770,133**	**$1,155.82**
Rank[2]	**Metropolitan area**	**Number of multi-family homes at risk of storm surge[5]**	**Reconstruction cost value of multi-family homes at risk[4] ($ billions)**
1	New York, NY	102,076	$48.7
2	Miami, FL	35,914	9.0
3	Boston, MA	24,474	9.0
4	Fort Myers, FL	13,693	3.3
5	Tampa, FL	12,068	3.3
6	Philadelphia, PA	6,300	2.5
7	New Orleans, LA	6,003	3.2
8	Virginia Beach, VA	4,124	1.4
9	Naples, FL	3,996	0.8
10	Jacksonville, FL	3,892	1.3
11	Bradenton, FL	3,248	0.9
12	Daytona Beach, FL	3,238	0.8
13	Savannah, GA	2,546	0.8
14	Providence, RI	2,018	1.1
15	Baltimore, MD	1,863	0.4
	Total, 15 metropolitan areas	**225,453**	**$86.5**

[1]Includes homes at risk from extreme to low storm surge. [2]Ranked by number of homes at risk from extreme to low storm surge. [3]Residential structures less than four stories, including mobile homes, duplexes, manufactured homes and cabins. [4]Represents the cost to completely rebuild including labor and materials by geographic location. [5]Apartments, condominiums and multi-unit dwellings.

Source: CoreLogic®, a property data and analytics company.

Wildfire Risk

The number of acres burned in the United States has been increasing since 2000 and rose above 10 million in both 2015 and 2017. According to CoreLogic's *September 2020 Wildfire Report*, no state is free of wildfire risk but the study has identified 15 states that accounted for 96.4 percent of the total acreage burned in the United States in 2019 and 2020. The report shows that there were almost 2 million single-family and almost 14,500 multi-family residences at moderate to extreme risk for wildfire damage in these 15 states. The reconstruction value of these single-family residences totaled $638 billion and $6.2 billion for the multi-family residences. The reconstruction cost value is based on the complete destruction of the residential structure using the cost of materials and labor as well as factoring in pricing variations due to different geographic locations.

CoreLogic identifies fuel, climate and terrain as factors that affect wildfire development. Fuel refers to the forests, brush and grasses such as chaparral and conifer forests that affect wildfires. The report says the COVID-19 pandemic has complicated the wildfire peril by adding another level of difficulty for property owners and firefighters. CoreLogic recommends homeowners implement mitigation strategies and insure their homes for replacement cost value and prevent underinsurance.

U.S. Wildfire Risk, 2020[1]

Risk	Single-family residences		Multi-family residences	
	Number	Reconstruction cost value[2] ($ billions)	Number	Reconstruction cost value[2] ($ billions)
Low	28,516,304	$7,776.14	593,888	$308.61
Moderate	313,092	105.58	3,339	1.35
High	895,714	311.97	7,826	3.29
Extreme	766,310	220.58	3,334	1.53
Total moderate-extreme	**1,975,116**	**638.14**	**14,499**	**6.17**

[1]Includes the states with the majority of wildfire activity and related property destruction: Alaska, Arizona, California, Colorado, Florida, Idaho, Montana, New Mexico, Nevada, Oklahoma, Oregon, Texas, Utah, Washington and Wyoming. [2]Based on the total destruction of the residential structure using the cost of materials and labor as well as factoring in pricing variations due to different geographic locations.

Source: CoreLogic®, a property data and analytics company.

Top 10 Metro Areas By Greatest Loss Potential From Wildfires, 2020 ($ billions)

	Single-family residences at elevated risk[1]			
Rank	Metro area	State	Number	Reconstruction value[2]
1	Los Angeles	California	154,462	$90.31
2	Riverside	California	126,628	50.62
3	San Diego	California	98,970	47.45
4	Sacramento	California	73,863	30.55
5	Austin	Texas	73,756	22.67
6	San Francisco	California	37,600	18.76
7	Denver	Colorado	55,762	17.73
8	Thousand Oaks	California	27,331	13.80
9	Truckee	California	35,523	12.27
10	San Antonio	Texas	41,229	11.66
	Multi-family residences at elevated risk[1]			
Rank	**Metro area**	**State**	**Number**	**Reconstruction value[2]**
1	Breckenridge	Colorado	4,135	$1.06
2	Los Angeles	California	1,028	0.77
3	Riverside	California	946	0.54
4	Sacramento	California	847	0.43
5	San Diego	California	760	0.43
6	San Francisco	California	619	0.41
7	Sonora	California	759	0.26
8	Redding	California	495	0.22
9	Salinas	California	223	0.17
10	Colorado Springs	Colorado	342	0.12

[1]Includes the states with the majority of wildfire activity and related property destruction: Alaska, Arizona, California, Colorado, Florida, Idaho, Montana, New Mexico, Nevada, Oklahoma, Oregon, Texas, Utah, Washington and Wyoming. [2]Based on the total destruction of the residential structure using the cost of materials and labor as well as factoring in pricing variations due to different geographic locations.

Source: CoreLogic®, a property data and analytics company.

Residual Market Property Plans

Myriad programs in place across the United States provide insurance to owners of property in high-risk areas 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 48.5 percent from 2011 to 2019, while exposure dropped by 51.0 percent.

Insurance Provided By FAIR Plans, Fiscal Years 2010-2019[1]

Year	Number of policies			Exposure[2] ($000)	Direct premiums written ($000)
	Habitational	Commercial	Total		
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
2018	1,339,004	24,484	1,363,488	324,765,281	1,694,115
2019	1,370,999	25,776	1,396,775	350,545,986	1,506,609

[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 2019[1]

State	Number of policies			Exposure[2] ($000)	Direct premiums written ($000)
	Habitational	Commercial	Total		
California	161,395	7,374	168,769	$76,960,000	$168,769
Connecticut	1,658	53	1,711	307,677	2,292
Delaware	1,330	49	1,379	235,868	517
D.C.	162	16	178	61,290	181
Florida[3]	463,757	5,642	469,399	111,248,584	616,075
Georgia	13,726	450	14,176	2,133,164	18,071
Illinois	3,850	50	3,900	258,300	3,857
Indiana	1,112	24	1,136	116,200	1197
Iowa	1,194	17	1,211	70,554	782
Kansas	14,659	179	14,838	913,569	8,132
Kentucky	7,821	340	8,161	398,265	4,330
Louisiana[3]	41,408	1659	43,067	6,743,563	61552
Maryland	1,123	50	1,173	332,802	796
Massachusetts	221,545	217	221,762	87,301,787	305,410
Michigan	17,283	258	17,541	2,327,253	11,931
Minnesota	4,803	50	4,853	373,198	3,367
Mississippi[4]	4,601	0	4,601	253,822	2,851
Missouri	2,335	67	2,402	162,455	1,659
New Jersey	10,658	273	10,931	1,524,493	6,950
New Mexico	10,498	253	10,751	79,738	5,207

(table continues)

Insurance Provided By FAIR Plans By State, Fiscal Year 2019[1] (Cont'd)

State	Number of policies			Exposure[2] ($000)	Direct premiums written ($000)
	Habitational	Commercial	Total		
New York	31,082	2,042	33,124	$8,934,000	$29,362
North Carolina	184,975	4549	189,524	21,684,257	102,272
Ohio	15,680	318	15,998	4,039,000	13790
Oregon	1,787	51	1,838	243,057	996
Pennsylvania	12,543	1019	13,562	1,316,010	5,531
Rhode Island	16,889	105	16,994	4,276,238	23,002
Texas[4]	89,913	0	89,913	13,441,524	85,327
Virginia	27,533	536	28,069	3,978,270	19,375
Washington	82	9	91	27,126	134
West Virginia	343	41	384	27,378	245
Wisconsin	5,254	85	5,339	776,544	2,649
Total	**1,370,999**	**25,776**	**1,396,775**	**$350,545,986**	**$1,506,609**

[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 2019[1]

State	Number of policies			Exposure[2] ($000)	Direct premiums written ($000)
	Habitational	Commercial	Total		
Alabama	17,949	43	17,992	$5,070,497	$24,024
Mississippi	17,671	285	17,956	2,762,962	29,861
North Carolina	201,374	9,529	210,903	75,660,857	331,397
South Carolina	19,509	211	19,720	5,816,000	36,797
Texas	189,935	8,674	198,609	55,189,814	372,016
Total	**446,438**	**18,742**	**465,180**	**$144,500,130**	**$794,095**

[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 2017, following a 1.6 percent increase in 2016, according to a November 2019 study by the National Association of Insurance Commissioners, the latest data available. The average renters insurance premium fell 2.7 percent in 2017 after falling 1.6 percent in 2016 and 1.1 percent in 2015.

The *2020 Triple-I Consumer Poll* found that 88 percent of homeowners had homeowners insurance, but only 57 percent of renters had renters insurance.

The U.S. homeownership rate continued to grow in 2020 and stood at 67.9 percent in the second quarter, after increasing for four consecutive quarters, 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, 2008-2017

Year	Homeowners[1]	Percent change	Renters[2]	Percent change
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
2017	1,211	1.6	180	-2.7

[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 and liability 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 2017. 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, 2017[1]

State	Homeowners		Renters	
	Average premium[2]	Rank[3]	Average premium[4]	Rank[3]
Alabama	$1,433	12	$235	3
Alaska	959	37	166	28
Arizona	825	46	178	20
Arkansas	1,373	13	212	7
California[5]	1,008	32	182	17
Colorado	1,495	8	159	33
Connecticut	1,479	11	192	11
Delaware	833	45	159	33
D.C.	1,235	20	158	35
Florida	1,951	2	188	12
Georgia	1,267	18	219	6
Hawaii	1,102	27	185	16
Idaho	730	49	153	39
Illinois	1,056	29	167	27
Indiana	1,000	33	174	23
Iowa	964	36	144	46
Kansas	1,584	5	172	25
Kentucky	1,109	26	168	26
Louisiana	1,968	1	235	3
Maine	882	42	149	42
Maryland	1,037	30	161	32
Massachusetts	1,488	9	194	9
Michigan	942	38	182	18
Minnesota	1,348	14	140	48
Mississippi	1,537	7	258	1
Missouri	1,285	16	173	24
Montana	$1,174	24	$146	45
Nebraska	1,481	10	143	47
Nevada	755	48	178	20
New Hampshire	972	35	149	42
New Jersey	1,192	23	165	29
New Mexico	1,017	31	187	15
New York	1,309	15	194	9
North Carolina	1,086	28	157	37
North Dakota	1,253	19	120	51
Ohio	862	43	175	22
Oklahoma	1,885	4	236	2
Oregon	677	51	163	30
Pennsylvania	931	40	158	35
Rhode Island	1,551	6	182	18
South Carolina	1,269	17	188	12
South Dakota	1,202	21	123	50
Tennessee	1,196	22	199	8
Texas[6]	1,893	3	232	5
Utah	692	50	151	41
Vermont	918	41	155	38
Virginia	999	34	152	40
Washington	854	44	163	30
West Virginia	940	39	188	12
Wisconsin	779	47	134	49
Wyoming	1,156	25	147	44
United States	**$1,211**		**$180**	

[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 and liability of tenants. [5]Data provided by the California Department of Insurance. [6]Texas data were obtained from the Texas Department of Insurance.

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 Insurance Premiums, 2017[1]

Rank	Most expensive states	Average expenditure
1	Louisiana	$1,968
2	Florida	1,951
3	Texas[2]	1,893
4	Oklahoma	1,885
5	Kansas	1,584
6	Rhode Island	1,551
7	Mississippi	1,537
8	Colorado	1,495
9	Massachusetts	1,488
10	Nebraska	1,481

Rank	Least expensive states	Average expenditure
1	Oregon	$677
2	Utah	692
3	Idaho	730
4	Nevada	755
5	Wisconsin	779
6	Arizona	825
7	Delaware	833
8	Washington	854
9	Ohio	862
10	Maine	882

[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]Texas data were obtained from the Texas Department of Insurance.

Homeowners Insurance Industry Losses and Underwriting Expenses, 2019[1]

Expense	Percent of premiums
Losses and related expenses[2]	
Loss and loss adjustment expense (LAE) ratio	**68.7%**
Incurred losses	59.8
Defense and cost containment expenses incurred	1.7
Adjusting and other expenses incurred	7.1
Operating expenses[3]	
Expense ratio	**28.6%**
Net commissions and brokerage expenses incurred	12.3
Taxes, licenses and fees	2.6
Other acquisition and field supervision expenses incurred	8.2
General expenses incurred	5.5
Dividends to policyholders[2]	**0.6%**
Combined ratio after dividends[4]	**97.9%**

[1]After reinsurance transactions. [2]As a percent of net premiums earned ($90.5 billion in 2019). [3]As a percent of net premiums written ($93.0 billion in 2019). [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 2018, 5.7 percent of insured homes experienced a claim, compared with 6.4 percent in 2017.

Homeowners insurance losses, net of reinsurance, fell slightly to $54.1 billion in 2019 from $56.3 billion in 2018, according to S&P Global Market Intelligence.

Homeowners Insurance Losses, 2014-2018[1]

Year	Total homeowners losses	
	Claim frequency[2]	Claim severity[3]
2014	5.19	$11,319
2015	5.92	11,748
2016	4.94	12,628
2017	6.36	$16,517
2018	5.73	15,855
Average[4]	**5.64**	**$13,814**

[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, 2014-2018.

Source: ISO®, a Verisk Analytics® business.

Causes Of Homeowners Insurance Losses

Property damage, including theft, accounted for 98.1 percent of homeowners insurance claims in 2018 (latest data available). Wind and hail accounted for 34.4 percent of homeowners insurance claims, followed by fire and lightning with 32.7 percent of claims. Water damage and freezing accounted for 23.8 percent of claims.

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, 2014-2018[1] (Percent of losses incurred)

Cause of loss	2014	2015	2016	2017	2018
Property damage[2]	**96.0%**	**96.4%**	**96.4%**	**98.0%**	**98.1%**
Wind and hail	28.8	21.1	32.8	41.7	34.4
Fire and lightning	24.6	22.2	25.9	32.8	32.7
Water damage and freezing	33.6	45.8	30.5	18.4	23.8
Theft	2.4	1.8	1.8	1.0	1.0
All other property damage[3]	6.7	5.6	5.4	4.1	6.2
Liability[4]	**4.0**	**3.6**	**3.6**	**2.0**	**1.9**
Bodily injury and property damage	3.9	3.4	3.4	1.9	1.8
Medical payments and other	0.2	0.2	0.2	0.1	0.1
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 from 2014 through 2018, 5.6 percent of insured homes had a claim. Wind and hail accounted for the largest share of claims, with 2.3 percent of insured homes having such a loss, followed closely by water damage and freezing with 2.1 percent of homes having a loss.

Average Homeowners Losses, 2014-2018[1] (Weighted average, 2014-2018)

Cause of loss	Claim frequency[2]	Claim severity[3]
Property damage[4]	**5.53**	**$13,687**
Fire and lightning	0.28	79,785
Wind and hail	2.30	11,200
Water damage and freezing	2.05	10,849
Theft	0.26	4,391
All other property damage[5]	0.64	6,598
Liability[6]	**0.11**	**20,371**
Bodily injury and property damage	0.08	26,872
Medical payments and other	0.03	3,707
Credit card and other[7]	[8]	**$8,273**
Average (property damage and liability), 2014-2018	**5.64**	**$13,814**

[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.

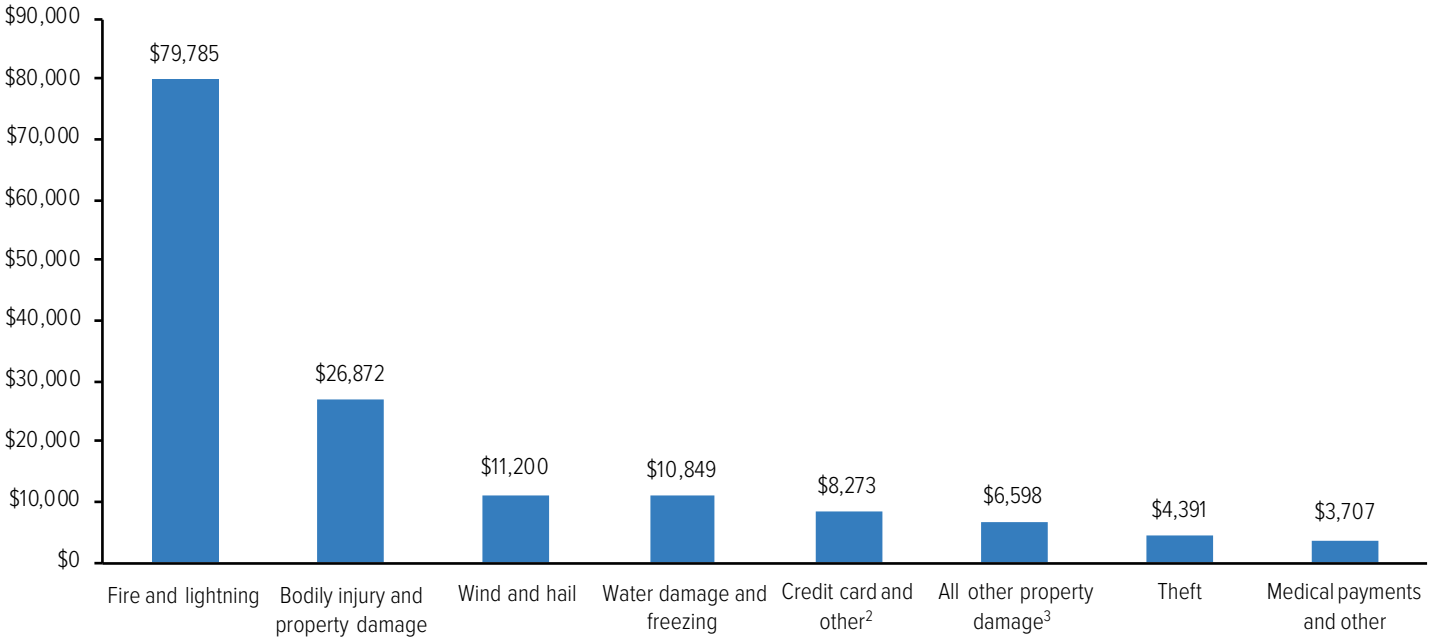
Source: ISO®, a Verisk Analytics® business.

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 20 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 350 insured homes has a property damage claim related to fire and lightning.
- About one in 400 insured homes has a property damage claim due to theft each year.
- About one in 900 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 2014-2018 (see table above).

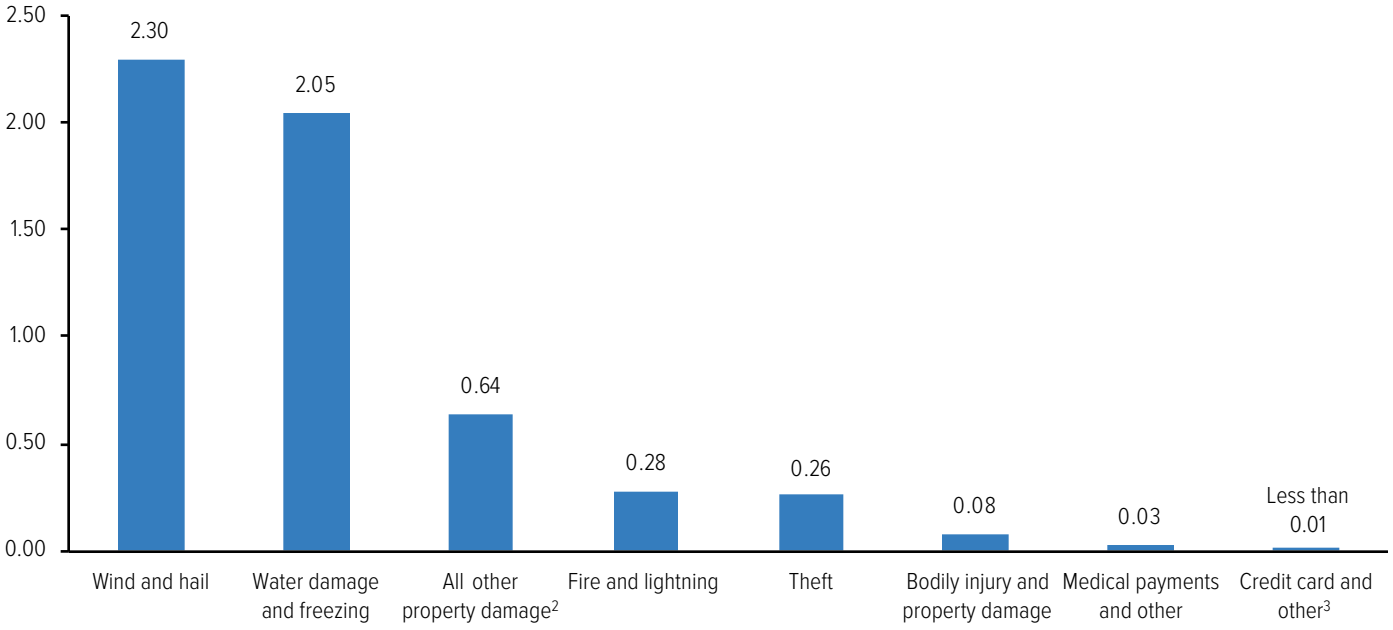
Homeowners Losses Ranked By Claims Severity (Average Claim), 2014-2018[1] (Weighted average, 2014-2018)



[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 coverage for unauthorized use of various cards, forgery, counterfeit money and losses not otherwise classified. [3]Includes vandalism and malicious mischief.

Source: ISO®, a Verisk Analytics® business.

Homeowners Losses Ranked By Claims Frequency, 2014-2018[1] (Weighted average, 2014-2018)



[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.

Incurred Losses For Homeowners Insurance, 2015-2019[1] ($000)

Year	Incurred losses
2015	$41,237,535
2016	44,388,823
2017	56,479,717
2018	56,252,556
2019	54,081,753

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

Water Damage

In July 2019 an online survey of 1,251 homeowners conducted for Chubb Ltd. found that 89 percent of homeowners say they are very or somewhat confident in their ability to check for possible damage or maintenance issues around their homes, up from 73 percent in the 2018 survey. However, there is a disconnect between homeowners' attitudes toward their home maintenance, particularly with regard to protecting their homes against water damage, according to the Chubb Homeowners' Risk Survey report. It found that no more than about 20 percent of homeowners took any single water-related risk mitigation action. These actions would include: conducting home heating system inspections; periodically checking appliance hoses; performing water heater maintenance; shutting off the water supply while on vacation or installing pipe insulation. And while homeowners acknowledge that water damage is a costly threat, totaling close to $11,000 on average from 2014 to 2018 according to ISO (See chart in the section above, Average Homeowners Losses, 2014-2018), in general the percentages of homeowners taking the necessary risk mitigation actions for water damage have decreased since the 2017 survey.

An insurance claims study conducted by LexisNexis® Risk Solutions found that a smart water shutoff device significantly reduced the number and severity (average amount paid for each claim) of non-weather water claims. Researchers compared the claims trends of 2,306 U.S. homes with a specific water shutoff system, using data for two years prior to installation and one year after installation, with 1.3 million homes sharing similar size, value, and geography over the same years. The October 2019 study discovered that the homes that installed the water shutoff device had a 96 percent decrease in paid water leak claims compared to two years prior to installation, while within the control group claims grew 10 percent. The severity of water losses generally remained constant over the study period for the control group, but among the homes that had installed the water shutoff device, severity decreased 72 percent one year after installation. The decrease in the severity of losses for the homes with the device is substantial. Those homes that had an average severity of almost three times the control group before they installed a water shutoff device were influenced to install such devices. According to the study, non-weather water loss claims payments were $9,700 on average nationally, in line with ISO's five-year average of almost $11,000 for water damage and freezing claims.

Lightning

In 2019 there were 20 direct lightning fatalities, the same as in 2018, the lowest number since record-keeping began in 1941. From 2009 to 2018, 27 people died on average each year from lightning strikes in the United States, according to the National Weather Service.

Homeowners Insurance Claims And Payout For Lightning Losses, 2017-2019

Year	Number of claims	Average cost per claim	Value of claims ($ millions)
2017	85,020	$10,781	$916.6
2018	77,898	11,668	908.9
2019	76,860	11,971	920.1
Percent change			
2018-2019	-1.3%	2.6%	1.2%
2017-2019	-9.6	11.0	0.4

Source: Insurance Information Institute.

Top 10 States For Homeowners Insurance Lightning Losses By Number Of Claims, 2019

Rank	State	Number of paid claims	Insured losses ($ millions)	Average cost per claim
1	Florida	6,821	$93.2	$13,669
2	Texas	5,780	88.3	15,278
3	California	5,100	71.9	14,105
4	Georgia	4,436	49.3	11,115
5	Louisiana	3,540	31.9	9,025
6	New York	2,866	39.5	13,792
7	North Carolina	2,849	31.8	11,165
8	Pennsylvania	2,838	27.3	9,612
9	Alabama	2,514	30.3	12,051
10	Illinois	2,438	24.6	10,078
	Total, top 10	**39,182**	**$488.2**	**$12,460**
	Other states	37,678	431.8	11,461
	Total U.S.	**76,860**	**$920.1**	**$11,971**

Source: Insurance Information Institute.

FLOOD INSURANCE

As of September 2020, 60 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 2019, 88 percent of NFIP policies were held in the WYO program.

As of July 2020, 69 percent of policies covered single family homes; 21 percent covered condominiums and other residential properties; and 4 percent covered two- to four-family units. Business and other non-residential policies accounted for the remainder.

As of December 23, 2019, Hurricane Katrina in 2005 had the highest NFIP payouts, at $16.3 billion. Hurricane Harvey in September 2017 ranked second with $8.9 billion in NFIP payouts.

Hurricane Irma, also in 2017, ranked ninth with $1.1 billion in payouts.

National Flood Insurance Program

Flood damage is excluded under standard homeowners and renters insurance policies. However, flood coverage is available as a separate policy from the National Flood Insurance Program (NFIP), administered by the Federal Emergency Management Agency (FEMA), and from many private insurers. Congress created the NFIP in 1968. The program makes federally backed flood insurance available in communities that agree to adopt and enforce floodplain management ordinances. The NFIP is self-supporting for the average historical loss year unless there is a widespread disaster.

Since 2017 FEMA has been conducting a reinsurance program for the NFIP. The NFIP arranged for $1.33 billion in coverage for 2020, slightly more than in 2019, receiving the funds from 27 private reinsurers. In 2020 coverage will be 10.25 percent of NFIP losses between $4 billion and $6 billion; 34.68 percent of losses between $6 billion and $8 billion; and 21.8 percent of losses between $8 billion and $10 billion. These changes, as well as higher pricing, increased the cost of reinsurance coverage to $205 million in 2020 from $186 million in 2019.

As of February 2020 FEMA had secured $1.2 billion in funding from catastrophe bonds for the NFIP. In August 2018 FEMA launched its first catastrophe bond to transfer risk from the NFIP to capital markets, acquiring $500 million of reinsurance protection from FloodSmart Re Ltd. (Series 2018-1 issuance). The transaction 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. In March 2019 FEMA secured a second catastrophe bond for $300 million from FloodSmart Re Ltd. (Series 2019-1) with coverage for three years with terms that are identical to the August 2018 catastrophe bond. Both the 2018 and 2019 bonds are still in-force. In February 2020 FEMA secured $400 million in reinsurance backed by catastrophe bonds from FloodSmart Re Ltd. (Series 2020-1). According to Artemis, FEMA's reinsurance program protection for the NFIP is now $2.53 billion, combining traditional reinsurance and its catastrophe bond program, continuing its plan, begun in 2017, to reduce taxpayers' burden of paying NFIP's losses.

Congress must periodically renew the program's authority to operate. If the program were to lapse, claims would still be paid but the NFIP would stop selling and renewing policies (more details here.) In March, 2019 the Trump administration announced plans to reform the NFIP with a shift to fully risk-based pricing. FEMA said the program would begin to assess properties individually, instead of calculating rates based on whether a home falls in a designated flood zone. This could potentially drive more flood risk into private reinsurance and risk markets. FEMA said it will implement the new system on October 1, 2021.

27 percent of homeowners with homeowners insurance said they had flood insurance, according to the *2020 Triple-I Consumer Poll*, higher than credible estimates of the percentage insured made by the National Flood Insurance Program. See the Poll report for details.

Homeowners Who Have Flood Insurance, 2014-2020[1]

	2014	2015	2016	2018	2020
By region					
South	20%	21%	14%	16%	30%
Northeast	11	11	13	18	32
Midwest	7	10	8	11	24
West	8	9	10	7	20
Total	**14%**	**14%**	**12%**	**13%**	**27%**

Asked of homeowners who have homeowners insurance. Question was not asked in 2017 and 2019. In 2014 to 2016, the surveys were conducted via telephone. In 2018 and 2020, the surveys were conducted online.

Source: Triple-I *Pulse* surveys, 2014 to 2018 and the *2020 Triple-I Consumer Poll*.

Flood Insurance Losses

National Flood Insurance Program (NFIP) payouts vary widely from year to year. Flood loss payments totaled $1.4 billion in 2018 (latest data available), well below 2017 when Hurricanes Harvey and Irma contributed to losses of $8.7 billion. Losses in 2018 were also 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 this section for information on flood insurance losses.

As of March 21, 2019, there were more than 76,000 paid losses from Hurricane Harvey and the average paid loss was $116,800. This compares to Hurricane Katrina, which had 167,000 paid losses, at an average of $97,500 per loss.

In 2018 the average amount of flood coverage was $257,000, and the average premium was $642.

The average flood claim in 2018 was $42,580, down from $91,735 in 2017, the year Hurricanes Harvey, Irma and Maria struck.

NFIP earned premiums rose 0.6 percent in 2018 after falling 0.7 percent in 2017.

National Flood Insurance Program, 1980-2018[1]

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	5,133,785	95,235	8,736,386	91,735
2018	5,178,978	31,801	1,354,075	42,580

[1]Data in this chart may not match similar data shown elsewhere from the same source due to the use of different exhibits.

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

National Flood Insurance Plan Policies By State, 2019[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	9,189	$2,090.2	43,606	$10,862.8	52,795	$12,953.0
Alaska	589	145.2	1,682	483.2	2,271	628.4
Arizona	4,873	1,218.7	24,092	6,354.0	28,965	7,572.7
Arkansas	2,873	491.1	11,462	2,363.1	14,335	2,854.2
California	34,035	9,793.8	179,997	53,513.0	214,032	63,306.8
Colorado	3,412	889.1	16,193	4,442.9	19,605	5,332.0
Connecticut	2,038	494.6	32,385	8,486.9	34,423	8,981.5
Delaware	4,272	1,188.4	22,082	5,993.0	26,354	7,181.4
D.C.	136	39.2	1,888	479.3	2,024	518.5
Florida	117,952	31,935.4	1,609,901	407,996.3	1,727,853	439,931.7
Georgia	14,206	3,817.9	68,053	18,982.5	82,259	22,800.3
Hawaii	2,596	643.8	58,704	13,828.5	61,300	14,472.3
Idaho	950	247.7	4,797	1,288.4	5,747	1,536.1
Illinois	9,468	1,757.6	27,034	5,702.6	36,502	7,460.2
Indiana	4,270	731.3	15,580	3,368.6	19,850	4,100.0
Iowa	2,503	426.2	10,027	2,327.7	12,530	2,753.9
Kansas	1,874	332.7	6,987	1,505.4	8,861	1,838.1
Kentucky	3,168	490.0	16,106	2,959.8	19,274	3,449.8
Louisiana	112,472	30,198.9	386,192	106,454.8	498,664	136,653.7
Maine	525	116.9	7,250	1,836.7	7,775	1,953.6
Maryland	5,817	1,517.6	59,509	14,539.4	65,326	16,057.0
Massachusetts	3,626	858.5	54,453	14,633.2	58,079	15,491.7
Michigan	3,603	580.6	17,145	3,571.4	20,748	4,152.0
Minnesota	1,845	451.5	8,663	2,178.7	10,508	2,630.3
Mississippi	12,535	3,098.2	48,979	12,564.8	61,514	15,663.1
Missouri	3,755	647.7	15,720	3,459.4	19,475	4,107.2
Montana	712	155.7	3,601	797.4	4,313	953.2
Nebraska	2,130	358.9	6,978	1,557.3	9,108	1,916.2
Nevada	1,821	456.3	8,749	2,354.5	10,570	2,810.8
New Hampshire	514	115.2	7,210	1,674.6	7,724	1,789.8
New Jersey	14,946	3,418.5	201,842	52,097.4	216,788	55,515.9
New Mexico	1,813	366.8	9,647	2,140.3	11,460	2,507.2

(table continues)

National Flood Insurance Plan Policies By State, 2019[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	16,189	$4,182.9	153,996	$43,263.5	170,185	$47,446.4
North Carolina	16,651	4,246.8	126,662	33,452.3	143,313	37,699.1
North Dakota	2,289	650.8	11,242	3,243.3	13,531	3,894.1
Ohio	5,296	844.0	23,463	4,825.1	28,759	5,669.1
Oklahoma	3,074	632.6	9,338	2,206.3	12,412	2,838.9
Oregon	5,084	1,311.0	19,872	5,284.0	24,956	6,595.0
Pennsylvania	7,586	1,330.6	43,755	10,123.7	51,341	11,454.3
Rhode Island	414	107.6	11,574	3,161.7	11,988	3,269.3
South Carolina	24,290	6,980.1	187,051	50,340.4	211,341	57,320.5
South Dakota	622	129.8	3,142	737.7	3,764	867.5
Tennessee	4,780	1,204.6	22,630	5,886.1	27,410	7,090.7
Texas	125,833	35,292.9	659,460	191,605.5	785,293	226,898.4
Utah	584	140.4	3,190	886.7	3,774	1,027.1
Vermont	276	54.0	3,038	717.0	3,314	771.0
Virginia	16,455	4,333.9	88,278	24,064.4	104,733	28,398.3
Washington	4,768	1,175.0	27,827	7,595.1	32,595	8,770.1
West Virginia	3,487	465.8	9,841	1,723.9	13,328	2,189.7
Wisconsin	1,727	320.1	11,251	2,424.4	12,978	2,744.5
Wyoming	300	79.0	1,415	378.5	1,715	457.5
Guam	95	18.7	78	16.1	173	34.8
American Samoa	18	1.3	28	0.6	46	1.9
N. Mariana Islands	2	0.1	6	0.2	8	0.3
Puerto Rico	3,115	232.2	4,586	826.7	7,701	1,058.9
Virgin Islands	268	53.0	1,190	237.7	1,458	290.7
Unknown	1	0.4	117	30.4	118	30.7
United States	**627,722**	**$162,861.9**	**4,409,544**	**$1,163,829.6**	**5,037,266**	**$1,326,691.5**

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

Private Flood Insurance

The National Flood Insurance Program, now 50 years old, compensated for coverage not available in the private market. Private insurers did not have reliable ways of measuring flood risk but technological advances now allow insurers to underwrite risk more accurately and make sounder actuarial decisions. In 2019 federal regulators allowed mortgage lenders to accept private homeowners flood insurance if the policies abide by regulatory definitions. Also allowed are private insurance policies that do not meet regulations if insurers provide adequate protection according to general safety and soundness requirements. The effect is likely to impact homeowners in states where most of the nation's flood insurance policies are held.

In 2019 net premiums written for private flood insurance totaled $287.2 million, down 46.9 percent from $540.9 million in 2018, according to NAIC data compiled by S&P Global Market Intelligence. Premiums in 2019 were impacted by the largest writer of private flood insurance, FM Global, reclassifying private flood insurance into allied lines. When 2018 net premiums written are restated to exclude premiums from FM Global, they totaled $307.9 million. On the restated basis, net premiums written for 2019, at $287.2 million, were down at the much lower rate of 6.7 percent. Direct premiums written (which are before reinsurance transactions) for private flood insurance totaled $522.6 million in 2019, up 45 percent from $360.1 million in 2018, excluding FM Global's 2018 private flood premiums. There were 41 private companies writing flood insurance in 2019, compared with 32 in 2018. The number of companies also excludes FM Global.

AM Best says the increase in private carriers improves competition and helps spread the economic risk that comes from flooding. Private carriers can also offer higher coverage than FEMA's National Flood Insurance Program policies, currently capped at $250,000 for residential buildings and $500,000 for non-residential buildings.

Private Flood Insurance, 2016-2019 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2016	$277,819	NA	93.8	NA
2017	470,961	69.5%	186.1	92.3 pts.
2018	540,875	14.8	55.0	-131.1
2019	287,184	-46.9	58.5	3.5

[1]After reinsurance transactions, excludes state funds and premiums written by private insurers participating in the National Flood Insurance Program's Write Your Own program. [2]After dividends to policyholders. A drop in the combined ratio represents an improvement; an increase represents a deterioration. [3]Calculated from unrounded numbers.

NA=Data not available.

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

Top 10 Writers of Private Flood Insurance By Direct Premiums Written, 2019[1] ($000)

Rank	Group/company[2]	Direct premiums written[3]	Market share[4]
1	Assurant Inc.	$94,056	16.9%
2	Zurich Insurance Group	87,613	15.7
3	Swiss Re Ltd.	73,321	13.2
4	American International Group (AIG)	56,998	10.2
5	AXA	38,702	7.0
6	Arch Capital Group Ltd.	37,967	6.8
7	Liberty Mutual	25,032	4.5
8	Berkshire Hathaway Inc.	24,652	4.4
9	Alleghany Corp.	21,799	3.9
10	Allianz	21,661	3.9

[1]Private flood includes both commercial and private residential coverage, primarily first-dollar stand-alone policies that cover the flood peril and excess flood. Excludes sewer/water backup and the crop flood peril. [2]Does not include FM Global, which reclassified private flood insurance as part of allied lines in 2019. FM Global had $300 million in direct premiums written for private flood insurance in 2018 or 43 percent of the total U.S. private flood market. [3]Before reinsurance transactions. [4]Based on U.S. total, includes territories.
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 non-profit, privately funded, publicly managed organization. According to the California Department of Insurance, almost 14 percent of Californians who have residential insurance have also purchased earthquake insurance.

Twenty-three percent of homeowners who had homeowners insurance responding to the *2020 Triple-I Consumer Poll* said they had earthquake insurance, up from 15 percent in 2018. Homeowners in the West were most likely to have earthquake insurance, with 28 percent saying they had the coverage, followed by the South at 25 percent; the Northeast at 21 percent; and the Midwest at 16 percent. See the Poll report for details. For information on earthquake insurance losses, see this section.

Earthquake Insurance, 2010-2019 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2010	$1,443,598	12.0%	41.4	5.1 pts.
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
2018	1,827,543	20.9	44.3	2.0
2019	1,982,730	8.5	29.0	-15.4

[1]After reinsurance transactions, excludes state funds, such as the California Earthquake Authority (CEA), a not-for-profit, privately funded, publicly managed organization that provides coverage in California. [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.

Leading Writers Of Earthquake Insurance

The California Earthquake Authority (CEA), a non-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 2019, according to data from S&P Global Market Intelligence. The CEA had $821 million in direct premiums written in 2019, all of which covered residential California properties. It accounted for 22.8 percent of the total U.S. earthquake insurance market in 2019. The nine other largest earthquake insurers in 2019 were all private insurance companies.

Top 10 Writers Of Earthquake Insurance By Direct Premiums Written, 2019 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	California Earthquake Authority	$820,924	22.8%
2	State Farm	275,793	7.7
3	Zurich Insurance Group	235,140	6.5
4	Chubb Ltd.	173,210	4.8
5	Travelers Companies Inc.	139,969	3.9
6	Palomar Specialty Insurance Co.	139,639	3.9
7	American International Group (AIG)	128,798	3.6
8	AXA	104,071	2.9
9	GeoVera Insurance Group	103,954	2.9
10	Sompo Holdings Inc.	97,635	2.7

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories.

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 while the personal lines sector offers products for individuals and households. 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, 2019 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	Travelers Companies Inc.	$18,666,277	5.5%
2	Chubb Ltd.	18,567,051	5.5
3	Liberty Mutual	16,794,384	5.0
4	Zurich Insurance Group	12,612,294	3.7
5	American International Group (AIG)	12,220,209	3.6
6	CNA Financial Corp.	10,602,312	3.1
7	Berkshire Hathaway Inc.	10,514,633	3.1
8	Hartford Financial Services	9,686,418	2.9
9	Nationwide Mutual Group	8,381,732	2.5
10	Tokio Marine Group	7,413,819	2.2

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

Top 10 Commercial Insurance Brokers Of U.S. Business By Revenue, 2019[1] ($ millions)

Rank	Company	Brokerage revenues
1	Marsh & McLennan Cos. Inc.[2, 3]	$7,934.4
2	Aon PLC	4,982.7
3	Willis Towers Watson PLC[2]	4,291.7
4	Arthur J. Gallagher & Co.[2]	3,944.3
5	Brown & Brown Inc.[2]	2,384.7
6	Truist Insurance Holdings Inc.[2]	2,270.8
7	Hub International Ltd.[2]	1,841.7
8	USI Insurance Services LLC[2]	1,813.0
9	Acrisure LLC[2]	1,716.2
10	Alliant Insurance Services Inc.[2]	1,576.4

[1]Companies that derive more than 49 percent of revenues from personal lines are not ranked. [2]Reported U.S. acquisitions in 2019. [3]Acquired Assurance Agency Ltd. on April 1, 2020. Business Insurance estimate of pro forma revenue to reflect acquisition.
Source: Business Insurance (www.businessinsurance.com), July 2020.

Incurred Losses

Incurred Losses For Commercial Insurance, 2015-2019[1] ($000)

Year	Incurred losses
2015	$117,591,118
2016	124,688,807
2017	137,939,620
2018	148,768,919
2019	155,123,166

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

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, 2010-2019 ($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
2010	$32,247,870	-12.7%	107.9	6.4 pts.	114	7 pts.
2011	31,643,087	-1.9	116.1	8.2	110	-4
2012	35,664,230	12.7	117.6	1.5	102	-8
2013	38,947,491	9.2	110.4	-7.2	96	-6
2014	41,147,216	5.6	103.0	-7.4	92	-4
2015	43,753,885	6.3	101.9	-1.2	92	0
2016	45,355,102	3.7	95.5	-6.4	93	1
2017	45,619,831	0.6	95.6	0.1	96	3
2018	45,047,380	-1.3	92.2	-3.4	95	-1
2019	48,343,292	7.3	86.2	-5.9	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.

Top 10 Writers Of Workers' Compensation Insurance By Direct Premiums Written, 2019 ($000)

Rank	Group/Company	Direct premiums written[1]	Market share[2]
1	Travelers Companies Inc.	$4,211,529	7.8%
2	Hartford Financial Services	3,365,298	6.2
3	Zurich Insurance Group	2,640,320	4.9
4	Liberty Mutual	2,447,306	4.5
5	Chubb Ltd.	2,430,118	4.5
6	Berkshire Hathaway Inc.	2,311,261	4.3
7	AmTrust Financial	2,172,219	4.0
8	Accident Fund Group	1,744,640	3.2
9	American International Group (AIG)	1,453,477	2.7
10	Old Republic International Corp.	1,408,124	2.6

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories.
Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

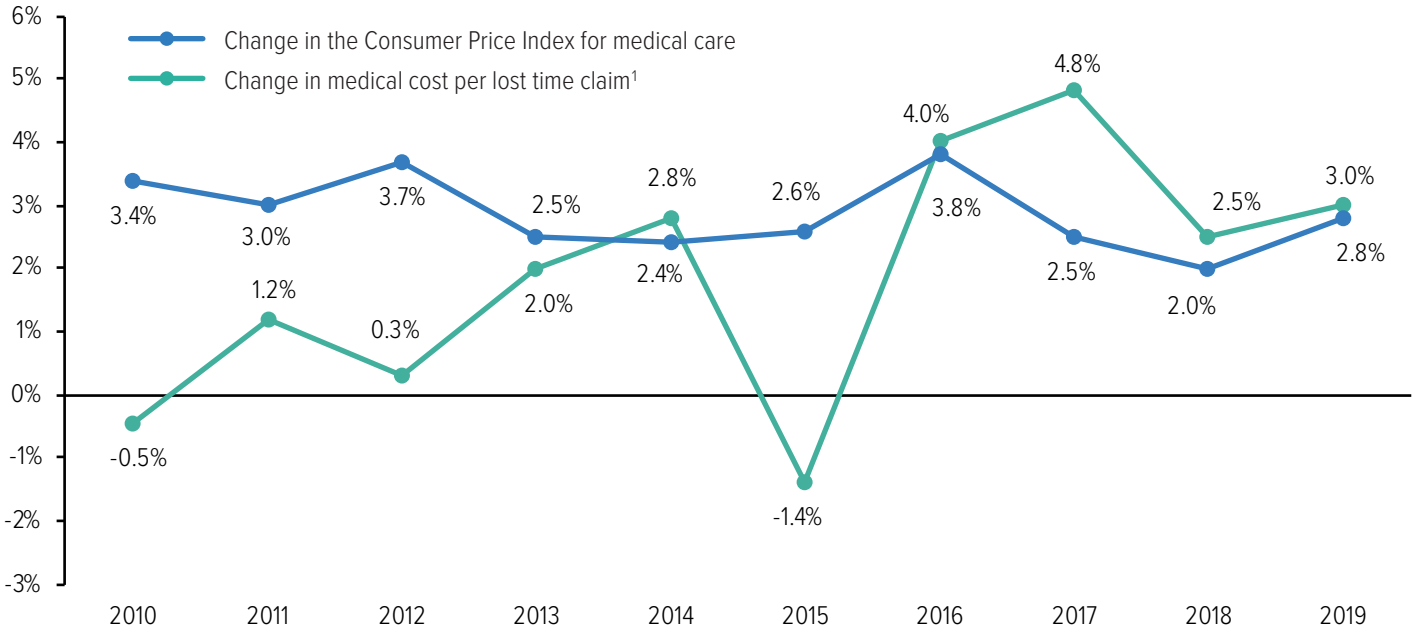
Excess Workers Compensation Insurance, 2010-2019 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2010	$799,733	-15.0%	50.9	16.0 pts.
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
2018	1,097,710	37.8	113.1	12.1
2019	931,400	-15.2	113.1	[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. [4]Less than 0.1 point.

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

Workers Compensation Medical Costs, 2010-2019



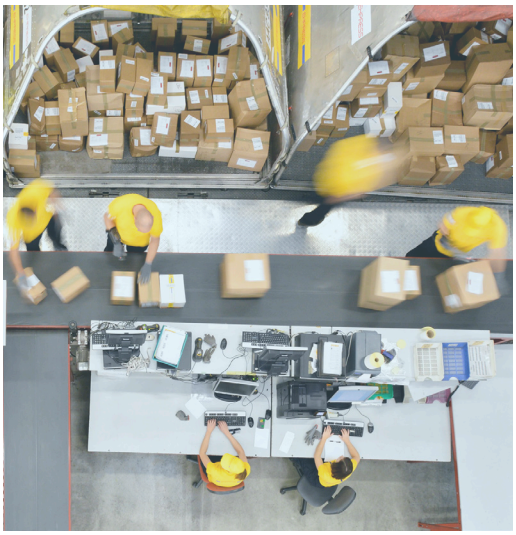
[1]Based on states where the National Council on Compensation Insurance provides ratemaking services. Represents costs for injuries that resulted in time off from work. Data for 2018 and 2019 are preliminary.

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

Workers Compensation Benefits, Coverage And Costs, 2017

	2017	Percent change, 2013-2017
Covered workers (000)	140,397	7.5%
Covered wages ($ billions)	$7,785	19.6
Workers compensation benefits paid ($ billions)	$62.0	-2.2
Medical benefits	31.2	-3.8
Cash benefits	30.8	-0.6
Employer costs for workers compensation ($ billions)	$97.4	9.1

Source: *Workers Compensation: Benefits, Coverage, and Costs, October 2019,* National Academy of Social Insurance.



Marijuana use and workers compensation issues

As of November 2020, 36 states, Washington, D.C., Guam and Puerto Rico have programs that allow qualifying patients to access medical marijuana products, according to the National Conference of State Legislatures. Another 11 states permit non-intoxicating medical products. Fifteen states and D.C. permit recreational marijuana for adults over the age of 21, according to the National Organization for the Reform of Marijuana Laws. The laws and regulations governing the use of legal marijuana vary by state and have impacts on workplace safety, employer duties and obligations, and workers compensation insurance. Federal law prohibits marijuana for any purpose.

Marijuana as an intoxicant has raised concerns about workplace safety where medical and recreational marijuana is legal, according to the Insurance Information Institute's white paper, *Haze of Confusion*. The complications in determining user impairment from marijuana intoxication and a lack of reliable data on workplace marijuana use make it difficult to determine how marijuana might affect workplace safety. Marijuana potency is linked to THC, the active chemical that induces intoxication from marijuana. A key issue in determining the prevalence and effects of workplace marijuana impairment is "THC persistence," the length of time THC is detectable in the blood. Unlike alcohol, THC levels in a user's body may not be an accurate indication of impairment (see Marijuana and impaired driving). While most studies agree that marijuana intoxication impairs coordination, memory, attention, cognitive flexibility and reaction time, it is not currently possible to determine worker impairment based on THC levels alone. However, marijuana's intoxicating effects have caused concern that workers using marijuana, whether off-duty or on-duty, may endanger themselves and their colleagues, particularly in safety-sensitive occupations.

There are conflicting findings concerning marijuana and workplace accident risks. A RAND Corp. survey of studies concluded that "the proportion of occupational injuries attributed to acute substance use [of marijuana and other drugs] is relatively small." A 2017 National Academies of Science, Engineering and Medicine (NASEM) study concluded that there is "insufficient evidence to support or refute a statistical association between cannabis use and occupational accidents or injuries." However, according to the U.S. National Institute on Drug Abuse, some evidence supports that workers who test positive for marijuana are more likely to be involved in a workplace accident, while a 2018 study in the *International Journal of Drug Policy* found evidence that medical marijuana legalization may be associated with a decline in workplace fatalities among workers ages 25 to 44. Also clouding the picture is THC persistence, which makes it difficult if not impossible to determine whether a worker with a positive test was intoxicated at the time of an accident.

Medical use

No state that permits medical marijuana requires employers to accommodate on-duty marijuana use and possession, or to tolerate impairment. States will often explicitly make clear that medical marijuana laws do not affect an employer's drug-free workplace policy. States do differ on whether an employer must accommodate off-duty medical marijuana use, with various courts taking conflicting positions. About 13 states protect patients from discrimination or adverse employment actions based solely on their off-duty marijuana use or on their status as medical marijuana cardholders. Some states also require employers to provide "reasonable accommodations" to medical marijuana cardholders with some conditions, and these laws may fall under state disability laws.

Implications for insurers

Marijuana is prohibited under the Controlled Substances Act of 1970 (CSA), which established a schedule for substances regulated under federal law. Because of this prohibition, workers who use medical marijuana are not covered by the Americans with Disabilities Act. Coverage under employment practices liability insurance (EPLI) policies, which cover businesses against claims by employees alleging discrimination or wrongful termination, could be affected as marijuana and employment issues evolve, especially if states and/or courts begin to take a more affirmative stance that disability laws and other accommodation laws cover medical or recreational marijuana use.

Workers compensation insurers need to address these issues related to marijuana use:

- Whether workers compensation covers a workplace injury in which the injured employee has tested positive for marijuana
- Whether workers compensation reimburses medical marijuana expenses incurred by an injured employee, and if so, how reimbursement works

The answers to these questions will largely depend on state law, as workers compensation is regulated on the state level and medical marijuana regulations vary by state. Workers compensation boards and courts can also interpret state statutes differently.

Most states restrict benefits if an employee was intoxicated at the time of injury or if the intoxication was a "proximate cause" of the injury. Some states limit compensation if an injured employee refuses to take a drug test. However, as stated previously it is difficult to determine whether an injured worker was impaired by marijuana when an accident occurred because THC levels in a user's body may not be an accurate indication of impairment.

A handful of states hold that medical marijuana is a permissible and reimbursable treatment under workers compensation. Whether workers compensation insurers are *required* to reimburse medical marijuana expenses depends on the state. Many state medical marijuana laws specifically exempt certain entities from a reimbursement requirement—usually health insurance providers. It has been argued, as in New York state, that these types of exemptions do not include workers compensation insurers. Other state medical marijuana laws specifically exempt workers compensation insurers and employers from being required to reimburse medical marijuana. In contrast, some states specifically prohibit reimbursement or make medical marijuana ineligible for reimbursement.

Currently an injured worker who qualifies for reimbursement under workers compensation is responsible for any purchases from a licensed medical marijuana dispensary. The worker then bills the workers compensation insurer or employer. Reimbursement is impeded by the fact that proper dosages for medical marijuana are still poorly understood and are not standardized across state medical programs. Furthermore, the potency of available medical marijuana and the maximum permissible purchasing amount varies by state.

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, 2010-2019 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2010	$35,802,772	-1.1%	108.1	2.6 pts.
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	46,676,454	4.7	100.8	-9.9
2018	58,590,945	25.5	100.1	-0.8
2019	60,771,177	3.7	105.1	5.0

[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.

Top 10 Writers Of Other Liability Insurance By Direct Premiums Written, 2019 ($000)

Rank	Group/Company	Direct premiums written[1]	Market share[2]
1	Chubb Ltd.	$6,565,794	8.6%
2	Assurant Inc.	4,032,991	5.3
3	American International Group (AIG)	3,915,374	5.1
4	Travelers Companies Inc.	3,722,887	4.9
5	Liberty Mutual	3,288,544	4.3
6	AXA	2,857,054	3.7
7	CNA Financial Corp.	2,735,918	3.6
8	W. R. Berkley Corp.	2,621,460	3.4
9	Fairfax Financial Holdings	2,617,439	3.4
10	Berkshire Hathaway Inc.	2,416,330	3.2

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories.

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

Product Liability Insurance, 2010-2019 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2010	$2,050,619	-13.3%	157.1	33.1 pts.
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
2018	2,794,716	3.9	122.3	20.2
2019	3,018,938	8.0	107.6	-14.7

[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.

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

Top 10 Writers Of Product Liability Insurance By Direct Premiums Written, 2019 ($000)

Rank	Group/Company	Direct premiums written[1]	Market share[2]
1	Chubb Ltd.	$426,607	10.2%
2	Allianz Group	259,917	6.2
3	Zurich Insurance Group	245,844	5.9
4	Liberty Mutual	213,359	5.1
5	Travelers Companies Inc.	189,293	4.5
6	American International Group (AIG)	180,806	4.3
7	Selective Insurance Group Inc.	152,733	3.6
8	W. R. Berkley Corp.	147,266	3.5
9	Great American Insurance Group	138,875	3.3
10	Hartford Financial Services	132,679	3.2

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories.

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, 2010-2019

Total ($000)					
Year	Net premiums written[1]	Annual percent change	Year	Net premiums written[1]	Annual percent change
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
2013	33,245,146	5.5	2018	37,558,700	9.9
2014	34,375,127	3.4	2019	38,929,805	3.7

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]
2010	$18,210,612	1.6%	102.9	4.5 pts.	2015	$21,478,010	-2.3%	91.6	-5.2 pts.
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
2013	21,058,709	7.9	93.3	-20.6	2018	22,570,966	9.2	107.7	-4.0
2014	21,983,697	4.4	96.8	3.5	2019	23,330,758	3.4	102.8	-4.9

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]
2010	$10,702,904	-2.7%	96.0	1.8 pts.	2015	$13,263,685	7.0%	99.2	-4.4 pts.
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
2013	12,186,437	1.6	103.8	9.7	2018	14,987,734	10.9	103.3	1.9
2014	12,391,430	1.7	103.6	-0.2	2019	15,599,047	4.1	108.1	4.8

[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.

Top 10 Writers of Commercial Multiple Peril Insurance By Direct Premiums Written, 2019 ($000)

Rank	Group/Company	Direct premiums written[1]	Market share[2]
1	Travelers Companies Inc.	$3,685,879	8.4%
2	Liberty Mutual	2,457,338	5.6
3	Nationwide Mutual Group	2,384,294	5.4
4	Chubb Ltd.	2,237,452	5.1
5	Hartford Financial Services	2,103,067	4.8
6	Tokio Marine Group	2,028,216	4.6
7	State Farm	1,644,089	3.7
8	Farmers Insurance Group of Companies	1,538,557	3.5
9	Cincinnati Financial Corp.	1,255,194	2.9
10	Auto-Owners Insurance Co.	1,208,442	2.8

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories.

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

Farmowners Multiple Peril Insurance, 2010-2019 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2010	$2,754,955	5.5%	108.2	0.3 pts.
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
2018	4,128,898	5.2	97.0	-8.7
2019	4,328,277	4.8	99.0	2.0

[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.

Medical Professional Liability Insurance

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

Medical Professional Liability Insurance, 2010-2019 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2010	$9,096,345	-1.2%	88.9	3.4 pts.
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
2018	8,403,838	4.2	104.2	2.6
2019	8,724,352	3.8	112.3	8.1

[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 numbers.

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

Top 10 Writers of Medical Professional Liability Insurance By Direct Premiums Written, 2019 ($000)

Rank	Group/Company	Direct premiums written[1]	Market share[2]
1	Berkshire Hathaway Inc.	$1,660,142	17.1%
2	The Doctors Company	920,009	9.5
3	CNA Financial Corp.	559,455	5.8
4	ProAssurance Corp.	490,242	5.0
5	Coverys Insurance Group	488,001	5.0
6	MCIC Vermont	398,529	4.1
7	NORCAL Mutual Insurance Co.	370,785	3.8
8	MagMutual Insurance Co.	313,187	3.2
9	Liberty Mutual	217,779	2.2
10	Physicians' Reciprocal Insurers	169,871	1.7

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories.

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, 2010-2019 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2010	$10,199,101	0.9%	80.2	1.7 pts.
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
2018	11,622,617	8.7	111.4	-7.2
2019	11,948,783	2.8	95.9	-15.5

[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.

Allied Lines Insurance, 2010-2019 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2010	$7,494,281	-3.2%	98.9	5.3 pts.
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
2018	10,169,924	16.7	132.9	-33.4
2019	11,000,175	8.2	104.8	-28.1

[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.

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. This line also includes special coverages such as builder's risk that protects structures and materials during new construction projects or renovations.

Inland Marine Insurance, 2010-2019 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2010	$8,527,512	-1.8%	86.0	-3.2 pts.
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
2018	14,588,646	21.8	86.3	-3.7
2019	15,613,867	7.0	86.5	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 numbers.

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

Top 10 Writers of Inland Marine Insurance By Direct Premiums Written, 2019 ($000)

Rank	Group/Company	Direct premiums written[1]	Market share[2]
1	Liberty Mutual	$3,782,758	14.3%
2	CNA Financial Corp.	3,528,743	13.4
3	American International Group (AIG)	1,634,074	6.2
4	Chubb Ltd.	1,353,606	5.1
5	Allianz Group	1,261,850	4.8
6	FM Global	1,187,057	4.5
7	Assurant Inc.	1,171,646	4.4
8	Nationwide Mutual Group	862,838	3.3
9	Travelers Companies Inc.	760,125	2.9
10	Zurich Insurance Group	686,888	2.6

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories.

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

Ocean Marine Insurance, 2010-2019 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2010	$2,740,956	-6.8%	96.1	4.3 pts.
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
2018	2,885,727	21.7	100.6	-9.6
2019	3,182,135	10.3	105.3	4.6

[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 numbers.

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

Top 10 Writers of Ocean Marine Insurance By Direct Premiums Written, 2019 ($000)

Rank	Group/Company	Direct premiums written[1]	Market share[2]
1	American International Group (AIG)	$600,325	15.4%
2	Berkshire Hathaway Inc.	318,336	8.1
3	Travelers Companies Inc.	270,889	6.9
4	Chubb Ltd.	265,993	6.8
5	Starr International Co.	231,943	5.9
6	Tokio Marine Group	200,827	5.1
7	Hartford Financial Services	181,520	4.6
8	Allianz Group	168,753	4.3
9	CNA Financial Corp.	137,906	3.5
10	Markel Corp.	134,458	3.4

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories.

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, 2010-2019 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2010	$4,851,328	0.3%	70.7	-8.8 pts.
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	5,390,826	4.9	72.3	0.3
2018	6,357,877	17.9	70.3	-2.0
2019	6,560,014	3.2	71.0	0.7

[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 numbers. [4]Less than 0.1 percent.

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

Fidelity Bonds, 2010-2019 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2010	$1,082,534	-1.4%	95.8	-9.6 pts.
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
2018	1,215,457	23.2	73.3	-0.6
2019	1,274,474	4.9	90.6	17.2

[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 numbers.

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. The combined ratio began falling in 2012 and by 2018 had fallen to 29.2, the lowest since S&P Global Market Intelligence began collecting data on mortgage guaranty insurance in 1996.

Mortgage Guaranty Insurance, 2010-2019 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2010	$4,248,798	-6.9%	198.4	-3.6 pts.
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
2018	4,693,844	7.2	29.2	-11.2
2019	4,862,954	3.6	32.8	3.6

[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 numbers.

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

Top 10 Writers Of Mortgage Guaranty Insurance By Direct Premiums Written, 2019 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	Arch Capital Group Ltd.	$1,202,130	21.6%
2	MGIC Investment Corp.	1,123,791	20.2
3	Radian Group Inc.	1,120,462	20.2
4	Genworth Financial Inc.	840,294	15.1
5	Essent Group Ltd.	760,677	13.7
6	NMI Holdings Inc.	376,052	6.8
7	PMI Group Inc.	74,706	1.3
8	Old Republic International Corp.	57,180	1.0
9	Biglari Holdings Inc.	246	[3]
10	Chubb Ltd.	32	[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. 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.

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.

Financial Guaranty Insurance, 2010-2019[1] ($000)

Year	Net premiums written[2]	Annual percent change	Combined ratio[3]	Annual point change[4]
2010	$1,371,908	-23.5%	228.4	127.8 pts.
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
2018	364,313	-13.4	130.5	-188.3
2019	391,160	7.4	181.6	51.1

[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 numbers.

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

Top 10 Writers Of Financial Guaranty Insurance By Direct Premiums Written, 2019 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	Assured Guaranty Ltd.	$263,568	71.2%
2	MBIA Inc.	32,392	8.8
3	Ambac Financial Group Inc.	27,983	7.6
4	Build America Mutual Assurance Co.	27,863	7.5
5	Syncora Guarantee Inc.	10,550	2.9
6	Financial Guaranty Insurance Co.	4,419	1.2
7	Transamerica Casualty Insurance Co.	3,000	0.8
8	Radian Group Inc.	534	0.1
9	W. R. Berkley Corp.	16	[3]
10	Enstar Group Ltd.	1	[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, 2010-2019 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2010	$167,152	9.8%	69.4	9.8 pts.
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
2018	280,103	25.6	77.4	28.5
2019	332,881	18.8	74.4	-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.

Boiler And Machinery Insurance, 2010-2019 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2010	$1,721,764	-4.5%	71.5	-0.2 pts.
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
2018	2,600,761	27.3	86.4	9.9
2019	2,551,136	-1.9	72.9	-13.5

[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 numbers.

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 (FCIC). Private crop insurance provides the same coverage but is not reinsured by the FCIC.

Private Crop Insurance, 2014-2019 ($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
2018	693,254	39.0	126.9	60.3
2019	686,589	-1.0	117.5	-9.4

[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.

NA=Data not available.

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

Top 10 Writers of Private Crop Insurance By Direct Premiums Written, 2019 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	Zurich Insurance Group	$192,452	17.4%
2	Farmers Mutual Hail Insurance Co. of Iowa	155,898	14.1
3	QBE Insurance Group Ltd.	134,657	12.2
4	Chubb Ltd.	124,788	11.3
5	American International Group (AIG)	115,185	10.4
6	CGB Insurance Co.	113,698	10.3
7	Great American Insurance Group	80,239	7.3
8	Sompo Holdings Inc.	56,740	5.1
9	Tokio Marine Group	43,454	3.9
10	Fairfax Financial Holdings	24,635	2.2

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories.

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

Multiple Peril Crop Insurance, 2010-2019[1] ($000)

Year	Net premiums written[2]	Annual percent change	Combined ratio[3]	Annual point change[4]
2010	$3,501,631	-11.7%	73.9	-5.8 pts.
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
2018	5,380,068	13.5	85.0	-10.8
2019	6,478,428	20.4	108.7	23.6

[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 numbers.

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, 2019 ($000)

Rank	Group/company	Direct premiums written[1]	Market share[2]
1	Chubb Ltd.	$1,874,275	18.2%
2	Zurich Insurance Group	1,521,949	14.8
3	QBE Insurance Group Ltd.	1,406,044	13.6
4	CGB Insurance Co.	1,083,596	10.5
5	Great American Insurance Group	912,255	8.9
6	Sompo Holdings Inc.	742,520	7.2
7	Farmers Mutual Hail Insurance Co. of Iowa	666,150	6.5
8	Fairfax Financial Holdings	518,675	5.0
9	American International Group (AIG)	506,714	4.9
10	Tokio Marine Group	473,573	4.6

[1]Before reinsurance transactions, includes state funds. [2]Based on U.S. total, includes territories.

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, 2010-2019 ($000)

Year	Net premiums written[1]	Annual percent change	Combined ratio[2]	Annual point change[3]
2010	$1,864,139	6.1%	106.4	8.5 pts.
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
2018	1,247,678	14.4	95.4	4.8
2019	1,155,275	-7.4	102.3	6.9

[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 numbers.

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

Cybersecurity Insurance

Cybersecurity insurance protects businesses from various technology-related risks. Coverage is available in stand-alone policies or as part of package policies. Cyber insurance covers first-party losses (damage suffered by the business) and third-party losses (damage suffered by customers or partners of the business). The policies can cover a variety of expenses associated with data breaches including: breach notification costs; credit monitoring; costs to defend against claims by state regulators; fines and penalties; and losses resulting from identity theft.

Insurers are facing challenges from "silent cyber" defined as when cyber-related losses stem from traditional property and liability insurance policies such as commercial general liability that were not specifically designed to cover cyberrisk. In some cases, an insurer may have to pay claims for cyber losses under a policy not designed for that purpose. According to Marsh & McLennan Global, PCS Global Cyber, a division of Verisk, found that about 90 percent of the insurance industry's losses from the 2017 NotPetya-related cyberattacks were due to silent cyber. Sometimes called non-affirmative cyber, insurer losses from the attack spurred regulatory action in the United Kingdom, where the Prudential Regulatory Authority (PRA) reviewed the issue and recommended that insurers identify means of managing cyberrisk. By January 2019 the PRA advised that insurers should have action plans to reduce exposure caused by non-affirmative coverage. According to Guy Carpenter, these guidelines have been adopted by Lloyd's, the European Insurance and Occupational Pensions Authority and the National Association of Insurance Commissioners. Challenges for the industry include the lack of a global definition of cyberrisk and the myriad approaches insurers and reinsurers are taking to remove inconsistencies in policy language.

The data below represent direct premiums written for companies that provide the coverage on a stand-alone, or separate policy basis, and for companies that can report premiums for coverage provided as part of a package policy. For more information on cybersecurity insurance see Chapter 8, Cybercrime and Identity Theft.

Cybersecurity Insurance, 2015-2019[1] ($000)

Year	Direct premiums written[2]	Annual percent change	Direct losses paid	Direct paid loss ratio
2015	$1,003,082	NA	$140,597	17.4%
2016	1,355,173	35.1%	196,344	16.6
2017	1,859,283	37.2	226,261	14.0
2018	2,008,086	8.0	393,732	21.6
2019	2,245,755	11.8	458,385	22.7

[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.

NA=Data not available.

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

Top 10 Writers Of Cybersecurity Insurance By Direct Premiums Written, 2019[1] ($000)

Rank	Group/company	Direct premiums written[2]	As a percent of total direct premiums written
1	Chubb Ltd.	$356,856	15.9%
2	AXA	229,680	10.2
3	American International Group (AIG)	225,758	10.1
4	Travelers Companies Inc.	178,526	7.9
5	Beazley Plc.	150,943	6.7
6	AXIS Capital Holdings Ltd.	97,305	4.3
7	CNA Financial Corp.	94,722	4.2
8	BCS Insurance Co.	76,062	3.4
9	Liberty Mutual	68,377	3.0
10	Fairfax Financial Holdings	65,101	2.9

[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.

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

Identity Theft Insurance

Identity theft insurance provides protection for expenses incurred as the result of an identity theft such as costs for notarizing fraud affidavits and certified mail; lost income from missing work to meet with law-enforcement personnel or credit agencies; fees for reapplying for loans; and attorney's fees to defend against lawsuits and remove criminal or civil judgments.

The data below represent direct premiums written for companies that provide the coverage on a stand-alone, or separate policy basis, and for companies that can report premiums for coverage provided as part of a package policy.

Identity Theft Insurance, 2015-2019[1] ($000)

Year	Direct premiums written[2]	Annual percent change	Direct losses paid	Direct paid loss ratio
2015	$241,145	NA	$1,982	0.9%
2016	230,524	-4.4%	2,051	0.9
2017	232,932	1.0	3,198	1.4
2018	225,922	-3.0	15,434	7.0
2019	234,176	3.7	464	0.2

[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.

NA=Data not available.

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

Top 10 Writers Of Identity Theft Insurance By Direct Premiums Written, 2019[1] ($000)

Rank	Group/company	Direct premiums written[2]	As a percent of total direct premiums written
1	State Farm	$31,492	13.4%
2	Nationwide Mutual Group	30,982	13.2
3	Travelers Companies Inc.	24,251	10.4
4	Hanover Insurance Group Inc.	12,722	5.4
5	Liberty Mutual	11,845	5.1
6	Allstate Corp.	10,863	4.6
7	American Family Insurance Group	10,119	4.3
8	Farmers Insurance Group of Companies	9,855	4.2
9	Erie Insurance Group	8,973	3.8
10	American International Group (AIG)	5,997	2.6

[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.

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

Directors and Officers Insurance

Directors and officers insurance is liability coverage that protects corporate directors or officers from liability that arises from the performance of their professional duties on behalf of the corporation, such as negligent acts or omissions and for misleading statements that result in lawsuits against the company. For more information on directors and officers insurance, see Chapter 9, Litigiousness.

The data below represent direct premiums written for companies that provide the coverage on a stand-alone, or separate policy, basis.

Directors and Officers Insurance, 2011-2019[1] ($000)

Year	Direct premiums written[2]	Annual percent change	Direct losses incurred	Direct incurred loss ratio
2011	$5,309	NA	$2,781	51.0%
2012	5,674	6.9%	2,735	48.8
2013	6,012	5.9	2,947	50.0
2014	6,432	7.0	3,112	49.3
2015	6,429	[3]	3,690	57.5
2016	6,435	0.1	3,542	55.7
2017	6,457	0.3	3,990	62.4
2018	6,391	-1.0	3,938	62.8
2019	7,641	19.6	4,129	60.0

[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. Does not include directors and officers policies sold as part of a package commercial multiperil policy. The directors and officers portion of commercial multiperil policies does not represent a material amount of industry directors and officers premiums written. [2]Before reinsurance transactions. [3]Less than 0.1 percent.

NA=Data not available.

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

Top 10 Writers Of Directors and Officers Insurance By Direct Premiums Written, 2019[1] ($000)

Rank	Group/company	Direct premiums written[2]	Market share
1	AXA	$1,001,809	13.1%
2	American International Group (AIG)	880,095	11.5
3	Chubb Ltd.	852,608	11.2
4	Tokio Marine Group	656,344	8.6
5	Travelers Companies Inc.	359,109	4.7
6	CNA Financial Corp.	317,563	4.2
7	Berkshire Hathaway Inc.	287,851	3.8
8	Fairfax Financial Holdings	272,426	3.6
9	Sompo Holdings Inc.	243,052	3.2
10	Zurich Insurance Group	237,064	3.1

[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. Does not include directors and officers policies sold as part of a package commercial multiperil policy. The directors and officers portion of commercial multiperil policies does not represent a material amount of industry directors and officers premiums written. [2]Before reinsurance transactions.

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

Chapter 8

Losses

MAJOR CATASTROPHIES: WORLD

World Insurance Losses

Natural catastrophes: In 2019 insured losses from natural catastrophes totaled $71 billion, according to Aon, down from $100 billion-plus losses in 2017 and 2018. Insured losses were $100 billion in 2018 and $157 billion in 2017. Typhoons Hagibis and Faxai—both in Japan—were the largest insured losses in 2019, resulting in $9 billion and $6 billion in losses, respectively. In 2018 Japan's Typhoon Jebi was the largest natural catastrophe ranked by insured losses, causing $12.5 billion in losses. Following 415 natural disaster events in 2018, Aon tallied 409 natural disasters in 2019, including 158 flooding events and 114 severe weather events. There were 33 tropical cyclones and 32 earthquakes, with winter weather, wildfires, European windstorms, droughts and other perils accounting for the remaining events.

Natural catastrophe events resulted in 11,000 deaths in 2019. Eight of the top 10 deadliest natural catastrophes in 2019 involved flooding, including the deadliest event, the India monsoon floods that killed 1,750 people over the five months from June to October. Cyclone Idai in southern Africa ranked second with 1,300 deaths.

Aon noted that the decade from 2010 to 2019 was the costliest in the modern record for global natural disasters. Insured losses during this period were $845 billion, paid by private and public insurance organizations. Disasters in the United States accounted for more than half of the losses, at $453 billion.

Economic losses in the decade were $2.98 trillion, resulting in a protection gap of more than $2 trillion, which was mostly burdensome for developing and emerging countries. This protection deficit was worst in Asia, where only 12 percent of economic losses were covered by insurance.

Top 10 Costliest World Natural Disasters by Insured Losses, 2019[1] (US$ billions)

Rank	Date[2]	Country/region	Event	Insured loss in U.S. dollars
1	Oct. 6-12	Japan	Typhoon Hagibis	$9.0
2	Sep. 7-9	Japan	Typhoon Faxai	6.0
3	May-July	U.S.	Mississippi Basin floods	4.0
4	May 27-30	U.S.	Severe weather	3.6
5	Aug. 25-Sep. 7	Bahamas, Caribbean, U.S., Canada	Hurricane Dorian	3.5
6	Mar. 12-31	U.S.	Missouri Basin floods	2.5
7	Oct. 20-21	U.S.	Dallas tornadoes	2.2
8	Mar. 23-25	U.S.	Severe weather	1.4
9	Mar. 10-11	Western and Central Europe	Windstorm Eberhard	1.2
10	Sep. 17-22	U.S.	Tropical Storm Imelda	1.2
All other events				**$36.0**
Total 2019				**$71.0[2]**

[1]Natural disasters that cause at least $25 million in insured losses; or 10 deaths; or 50 people injured; or 2,000 filed claims or homes and structures damaged. Hurricane losses in the United States include National Flood Insurance Program losses. As of January 2020. [2]Includes losses sustained by private insurers and government-sponsored programs. Subject to change as loss estimates are further developed.

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: Aon.

World Natural Disaster Events Ranked by Number Of Perils and Insured Losses, 2019[1]

Rank	Peril	Number of events
1	Flooding	158
2	Severe weather[2]	114
3	Tropical cyclone	33
4	Earthquake	32
5	Winter weather	19
6	Wildfire	18
7	European windstorm	16
8	Drought	15
9	Other	4

Rank	Peril	Insured loss (US$ billions)
1	Severe weather[2]	$27
2	Tropical cyclone	22
3	Flooding	13
4	Winter weather	2
5	European windstorm	2
6	Drought	2
7	Wildfire	2
8	Earthquake	[3]
9	Other	[3]

[1]Natural disasters that cause at least $25 million in insured losses; or 10 deaths; or 50 people injured; or 2,000 filed claims or homes and structures damaged. As of January 2020. [2]Includes severe convective storms such as thunderstorms, tornadoes and hailstorms, straight-line winds and flooding that could occur with these storms. [3]Less than $1 billion.

Source: Aon.

Top 10 Costliest World Natural Disasters By Insured Losses, 1900-2019[1] (2019 US$ billions)

Rank	Date[2]	Year	Country/region	Event	Insured loss[3]
1	Aug. 30	2005	U.S., Southeast	Hurricane Katrina	$85
2	Mar. 11	2011	Japan	2011 Tohoku Earthquake	40
3	Oct. 29	2012	U.S., Caribbean	Hurricane Sandy	33
4	Sep. 12	2017	U.S., Caribbean	Hurricane Irma	33
5	Sep. 2	2017	U.S., Southeast	Hurricane Harvey	31
6	Sep. 28	2017	U.S., Caribbean	Hurricane Maria	31
7	Aug. 27	1992	U.S., Bahamas	Hurricane Andrew	29
8	Jan. 17	1994	U.S., West	Northridge Earthquake	27
9	Sep. 15	2008	U.S., Caribbean	Hurricane Ike	21
10	Dec. 15	2011	Thailand	Thailand Floods	18

[1]Natural disasters that cause at least $25 million in insured losses; or 10 deaths; or 50 people injured; or 2,000 filed claims or homes and structures damaged. Losses for hurricanes in the United States include losses for the National Flood Insurance Program. As of January 2020. [2]Date event ended. [3]Adjusted for inflation by Aon.

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: Aon.

Top 10 Costliest World Natural Disasters By Insured Losses, 2010-2019[1] (2019 US$ billions)

Rank	Year	Country/region	Event	Insured loss[2]
1	2011	Japan	Tohoku earthquake and tsunami	$40
2	2012	U.S., Caribbean	Hurricane Sandy	33
3	2017	U.S., Caribbean	Hurricane Irma	33
4	2017	U.S., Southeast	Hurricane Harvey	31
5	2017	U.S., Caribbean	Hurricane Maria	31
6	2011	Thailand	Thailand floods	18
7	2012	U.S.	Drought	16
8	2011	New Zealand	Christchurch earthquake	16
9	2018	Japan	Typhoon Jebi	13
10	2018	U.S.	Hurricane Michael	13

[1]Natural disasters that cause at least $25 million in insured losses; or 10 deaths; or 50 people injured; or 2,000 filed claims or homes and structures damaged. Losses for hurricanes in the United States include losses for the National Flood Insurance Program. As of January 2020. [2]Adjusted for inflation by Aon.

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: Aon.

Top 10 Deadliest World Natural Catastrophes, 2019[1]

Rank	Date	Country	Event	Deaths
1	Jun.-Oct.	India	India monsoon floods	1,750
2	Mar. 4-17	Southern Africa	Cyclone Idai	1,303
3	Jun.-Jul.	China	China seasonal flooding	300
4	Oct.-Dec.	East Africa	East Africa floods	216
5	Jul. 9-31	Bangladesh	Flooding	210
6	Mar. 16-18	Indonesia	Flooding	194
7	Apr. 15-17	India, Pakistan, Afghanistan	Severe weather[2]	146
8	Jul.-Aug.	Pakistan	Flooding	143
9	Oct.	Central Africa	Central Africa floods	118
10	Jul.-Aug.	Nepal	Flooding	118
All other events				**6,500**
Total 2019				**11,000**

[1]Natural disasters that cause at least 10 deaths. As of January 2020. [2]Includes severe convective storms such as thunderstorms, tornadoes and hailstorms, straight-line winds and flooding that could occur with these storms.

Source: Aon.

Top 10 Deadliest World Natural Catastrophes, 1950-2019[1]

Rank	Date	Year	Country/region	Event	Deaths
1	Nov. 12	1970	Bangladesh	Cyclone Bhola	300,000
2	Jul. 27	1976	China	Tangshan earthquake	242,769
3	Jul. 30	1975	Taiwan, China	Super Typhoon Nina	230,000
4	Dec. 26	2004	Indian Ocean Basin	Indian Ocean earthquake and tsunami	227,899
5	Jan. 12	2010	Haiti	Port-au-Prince earthquake	160,000
6	Apr. 29	1991	Bangladesh	Cyclone Gorky	139,000
7	May 3	2008	Myanmar	Cyclone Nargis	138,366
8	Aug. 31	1971	Vietnam	Vietnam floods	100,000
9	Oct. 8	2005	Pakistan	Kashmir earthquake	88,000
10	May 12	2008	China	Sichuan earthquake	87,652

[1]Natural disasters that cause at least 10 deaths. Does not include drought or heatwave events. As of January 2020.

Source: Aon.

World Natural Disaster Insured Losses By Peril, 2000-2019[1] (2019 US$ billions)

Peril	Insured loss[2]
Tropical cyclone	$446
Severe weather[3]	359
Flooding	188
Earthquake	102
Drought	80
Winter weather	62
Wildfire	57
European windstorm	47
Other	1

[1]Natural disasters that cause at least $25 million in insured losses; or 10 deaths; or 50 people injured; or 2,000 filed claims or homes and structures damaged. As of January 2020. [2]Adjusted for inflation by Aon using the U.S. Consumer Price Index. [3]Includes losses from severe convective storms such as thunderstorms, tornadoes and hailstorms, straight-line winds and flooding that could occur with these storms.

Source: Aon.

Natural and man-made catastrophes: Swiss Re collects data on global insured losses resulting from both natural catastrophes and man-made disasters. Besides including man-made disasters, Swiss Re's figures differ from Aon's because Swiss Re uses different collection methods and criteria for classifying events. According to Swiss Re's February 2020 global losses report, insured losses totaled $60 billion in 2019, down from $93 billion in 2018, and below the previous 10-year average of $75 billion. While the decrease in losses from 2018 to 2019 was mostly due to the decline in hurricane losses in the United States, the global 2019 losses were driven by severe weather along with socio-economic factors such as economic development and increases in urban population. The report notes that a number of smaller- and medium-sized events, such as events that occur as a secondary effect of a primary event and defined as secondary perils, for example, a tsunami following an earthquake, accounted for the majority of losses in each year from 2017 to 2019.

Of the 317 disasters in 2019, 202 were natural catastrophes, and 115 were man-made. Natural disasters resulted in $52 billion in losses, compared with $84 billion in 2018. Man-made disasters accounted for the remaining $8 billion in losses, compared with $9 billion in 2018. In 2019, 11,500 people worldwide perished or were missing in natural and man-made disasters. Typhoons Faxai and Hagibis in Japan drove natural catastrophe losses.

Top 10 Costliest World Earthquakes And Tsunamis By Insured Losses, 1980-2018[1] (US$ 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]Data through 2018 as of January 2020. Ranked on insured losses when occurred. Updated by the Insurance Information Institute using data from Munich Re's *Relevant geophysical events worldwide 1980-2018*. [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.

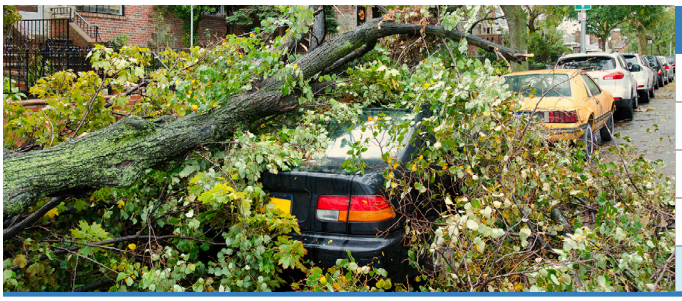
Source: © 2020 Munich Re, Geo Risks Research; Wikipedia.

MAJOR CATASTROPHES: UNITED STATES

Natural Catastrophes

Aon defines a catastrophe as a natural event that causes at least $25 million or more in insured property losses; or 10 or more deaths; or 50 or more people injured; or 2,000 or more filed claims or homes and structures damaged. Aon's natural catastrophe estimates include Puerto Rico and the U.S. Virgin Islands and include losses sustained by private insurers and government-sponsored programs such as the National Flood Insurance Program (NFIP). They are subject to change as loss estimates are further developed. Natural catastrophe losses in the United States rose to an historic high in 2017 of $137 billion in 2020 dollars, the year of Hurricanes Harvey, Maria and Irma and costly California wildfires. Natural catastrophe losses fell 55 percent in 2018 and 36 percent in 2019, when they totaled $39.6 billion in 2020 dollars.

Natural Catastrophes By Quarter, 2019[1] ($ millions)



Quarter	Estimated insured losses
1	$9,210
2	13,760
3	10,230
4	5,930
Full year	**$39,130**

[1]Natural disasters that cause at least $25 million in insured losses; or 10 deaths; or 50 people injured; or 2,000 filed claims or homes and structures damaged. Includes Puerto Rico and the U.S. Virgin Islands. Includes losses sustained by private insurers and government-sponsored programs such as the National Flood Insurance Program. Subject to change as loss estimates are further developed. As of November 25, 2020.

Source: Aon.

Natural Catastrophe Losses In The United States, 2019[1] ($ millions)

Event	Number of events[2]	Fatalities	Overall losses	Insured losses[3]
Severe thunderstorm	49	70	$27,000	$20,300
Winter storms and cold waves	16	73	7,400	2,100
Tropical cyclone	5	16	3,900	1,900
Wildfire, heat waves, and drought	9	11	1,300	830
Flood, flash flood	9	7	10100	200
Earthquake and geopyhsical	2	3	180	50
Total	**90**	**180**	**$49,900**	**$25,500**

[1]As of May 2020. [2]Events that have caused at least one fatality or losses of $3 million or more. [3]Sourced from Property Claim Services based on property losses including, if applicable, agricultural, offshore, marine, aviation and National Flood Insurance Program losses; may differ from data shown elsewhere.

Source: © 2020 Munich Re, NatCatSERVICE, Property Claim Services®, a unit of ISO®, a Verisk Analytics® business.

Estimated Insured Property Losses, U.S. Natural Catastrophes, 2010-2019[1] ($ billions)

Year	Dollars when occurred	In 2020 dollars[2]
2010	$19.2	$22.7
2011	48.4	55.7
2012	63.5	71.5
2013	24.1	26.8
2014	23.2	25.3
2015	22.9	25.0
2016	31.6	34.1
2017	130.8	137.4
2018	60.4	62.0
2019	39.2	39.6

[1]Natural disasters that cause at least $25 million in insured losses; or 10 deaths; or 50 people injured; or 2,000 filed claims or homes and structures damaged. Includes Puerto Rico and the U.S. Virgin Islands. Includes losses sustained by private insurers and government-sponsored programs such as the National Flood Insurance Program. Subject to change as loss estimates are further developed. As of November 25, 2020. [2]Adjusted for inflation by Aon using the U.S. Consumer Price Index.
Source: Aon.

The chart below shows insured losses for the top 10 U.S. natural catastrophes. According to Aon, Hurricane Katrina was the costliest natural catastrophe, causing $65 billion in damage when it occurred in 2005, including losses from the NFIP. Katrina would cost $85.6 billion in 2020 dollars. Seven additional hurricanes made the top 10 list, including Hurricane Sandy in 2012, which caused $30 billion when it occurred and Hurricanes Harvey, Irma and Maria in 2017, each of which also caused about $30 billion in losses. Hurricanes Andrew, Ike and Wilma are also included in the top 10.

Top 10 Costliest Natural Catastrophes, United States[1] ($ millions)

Rank	Date	Peril	Estimated insured property loss	
			Dollars when occurred	In 2020 dollars[2]
1	2005	Hurricane Katrina	$65,000	$85,570
2	2012	Hurricane Sandy	30,000	33,530
3	2017	Hurricane Harvey	30,000	31,590
4	2017	Hurricane Irma	29,900	31,320
5	2017	Hurricane Maria	29,670	31,100
6	1992	Hurricane Andrew	16,000	29,360
7	1994	Northridge Earthquake	15,300	27,060
8	2008	Hurricane Ike	18,200	21,510
9	2012	Drought loss	14,390	16,420
10	2005	Hurricane Wilma	10,670	13,840

[1]Natural disasters that cause at least $25 million in insured losses; or 10 deaths; or 50 people injured; or 2,000 filed claims or homes and structures damaged. Includes Puerto Rico and the U.S. Virgin Islands. Includes losses sustained by private insurers and government-sponsored programs such as the National Flood Insurance Program. Subject to change as loss estimates are further developed. As of November 25, 2020. [2]Adjusted for inflation by Aon using the U.S. Consumer Price Index.
Source: Aon.

U.S. NATURAL CATASTROPHES: HURRICANES

A tropical cyclone is a rotating low-pressure weather system that has organized thunderstorms but no fronts, according to the National Oceanic and Atmospheric Administration. Hurricanes are tropical cyclones whose sustained winds have reached 74 mph. At this point the hurricane reaches Category 1 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.

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.

Insured losses from hurricanes rose in the past 15 years as hurricane activity has intensified. When adjusted for inflation and after losses are tallied for the 2017 and 2018 hurricanes, nine of the 10 costliest hurricanes in U.S. history 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.

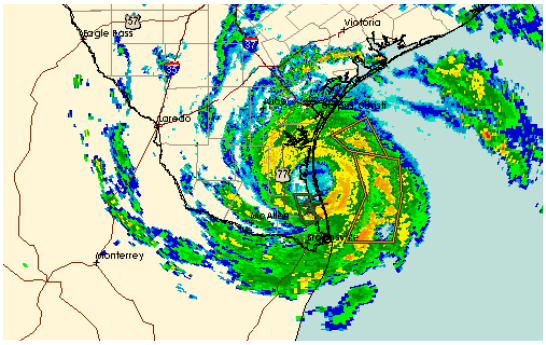
2020 Hurricane Season

Atlantic Basin: The record-breaking 2020 hurricane season produced 30 named storms. The old record was set in 2005 when there were 28 storms. Thirteen—Hanna, Isaias, Laura, Marco, Nana, Paulette, Sally, Teddy, Delta, Epsilon, Zeta, Eta and Iota—became hurricanes. Six—Laura, Teddy, Delta, Epsilon, Eta and Iota—became major (Category 3 or stronger) storms. A typical year has 12 named storms, six hurricanes, and three major hurricanes. Since all 21 of the letters of the alphabet that meteorologists use were exhausted, they began using the Greek alphabet to name storms. A record-breaking eleven named storms or hurricanes made landfall in the continental United States. Of those, six hurricanes made landfall in the continental United States. The 2020 Atlantic hurricane season also broke records as Tropical Storm Edouard formed as the earliest 5th named Atlantic storm on record, according to Colorado State University atmospheric scientist and Triple-I non-resident scholar, Dr. Phillip Klotzbach, and continued to shatter earliest storm records through Zeta as the earliest 27th named storm. The season began early as Tropical Storm Arthur formed on May 16 in the Atlantic Ocean, east of Florida, marking the sixth consecutive year that the hurricane season began before the traditional official beginning of the season on June 1. Tropical Storm Bertha, the second

named storm to occur before the official beginning of the hurricane season, formed on May 27 near South Carolina. After making landfall near Charleston with winds of 50 mph, Bertha brought heavy rainfall in South Carolina, North Carolina and Virginia. According to Aon, 2020 is the third year since 1965 that two named storms developed in the Atlantic Ocean before the beginning of the hurricane season. The company said Bertha caused millions of dollars in insured losses.

Tropical Storm Cristobal formed on June 2 in the Gulf Coast of Mexico. After landfall in Mexico, it made landfall in southeast Louisiana on June 7 between the mouth of the Mississippi River and Grand Isle, Louisiana. Cristobal brought tropical storm-force winds to the Gulf Coast from southeastern Louisiana to the Florida Panhandle and travelled into Arkansas and eastern Missouri, eventually reaching the Great Lakes area and Ontario, Canada.

Tropical Storm Fay became the 6th named storm of the 2020 Atlantic hurricane season when it formed on July 9 off the coast of North Carolina. Fay made landfall on July 10 near Atlantic City, New Jersey, as tropical storm conditions and heavy rainfall spread northeastward along the Mid-Atlantic coast. According to catastrophe risk modeler Karen Clark & Company (KCC), insured losses for wind and storm surge damage to residential, commercial and industrial properties and automobiles in Maryland, Delaware, New Jersey, Pennsylvania and New York are estimated to total $400 million.



Hurricane Hanna making its second landfall in Kenedy County, Texas. Source: National Weather Service Corpus Christi, public domain, via Wikimedia Commons.

Hurricane Hanna, the first hurricane of the 2020 Atlantic hurricane season, developed on July 23 southeast of Corpus Christi, Texas, in the Gulf of Mexico. Hanna strengthened into a hurricane on July 25 and made landfall on Padre Island, Texas, north of Port Mansfield, as a strong Category 1 hurricane, and then had a second landfall in Kennedy County. Hanna brought hurricane conditions to south Texas as it moved inland and brought heavy rain and flash flooding over far southeast Texas and northeast Mexico. Rainfall totals in the areas were between 4 to 6 inches but some areas received a foot of rain. Insured losses in Texas range from $350 million to $400 million, according to catastrophe modelers KCC and RMS.

Hurricane Isaias formed as a tropical storm on July 29 south of Puerto Rico, becoming the second hurricane of the 2020 season on July 30, and caused flash flooding and high winds over Puerto Rico. After weakening to a tropical storm, Isaias brought winds and storm surge to East Coast Florida and made its way up the coast. Isaias regained hurricane strength and made landfall in North Carolina near Ocean Isle Beach as a Category 1 hurricane on August 3. By August 4 Isaias weakened to a tropical storm and continued north into Virginia, the Mid-Atlantic states and New England, bringing storm surge, dangerous winds and heavy rain before dissipating on August 5 in southeastern Canada. The storm reportedly caused nine deaths and spawned tornadoes in five states.

Hurricane Laura formed on August 21 near the Leeward Islands and brought heavy rain and flooding to islands in the Caribbean, including the Virgin Islands and Puerto Rico before heading into the Gulf of Mexico. On August 24 Laura became the fourth hurricane of the 2020 Atlantic hurricane season northwest of Cuba, and the first major hurricane on August 26. Laura quickly intensified to a strong Category 4 storm and made landfall on August 27 near Cameron, Louisiana, close to the Texas-Louisiana border, bringing catastrophic storm surge, extreme wind and flash flooding. According to Dr. Klotzbach, Laura was the 7th named storm to make landfall in the continental U.S. in 2020, breaking the record of six recorded in 1886 and 1916. He also noted that Laura made landfall with 150 mph winds, stronger than Hurricane Katrina in 2005, and tied with the Last Island hurricane of 1856 as the strongest to strike Louisiana. On August 27 Laura later weakened to a tropical storm while damaging winds and flooding rainfall spread inland over central and northern Louisiana and became a tropical depression while over Arkansas. The remnants of

Laura traveled through the mid-Mississippi Valley and brought heavy rain to the Mid-Atlantic states. To date Laura was responsible for six deaths in Louisiana and widespread property damage, especially in Lake Charles, Louisiana. Insured loss estimates by catastrophe modelers range from $4 billion to $12 billion.

Also on August 21, Hurricane Marco formed in the northwest Caribbean near the Yucatan Peninsula of Mexico and became a hurricane on August 23 as it traveled northwest into the northern Gulf of Mexico. Marco made landfall in Louisiana near the mouth of the Mississippi River as a tropical storm on August 24 and weakened to a depression soon after. Nana formed on September 1 and became a hurricane on September 2 and made landfall on September 3 on the coast of Belize.

Hurricane Paulette formed over the central tropical Atlantic on September 7. On September 12 it became a hurricane as it approached Bermuda. It made landfall on the island on September 14 and brought hurricane conditions and torrential rain. Paulette became a Category 2 storm later that day.

Hurricane Sally developed on September 12 near the southernmost part of Florida and moved into the Gulf of Mexico. It became a hurricane on September 14 in the north central Gulf near the mouth of the Mississippi River. It made landfall as a slow-moving, Category 2 hurricane on September 16 near Gulf Shores, Alabama, bringing extremely dangerous, life-threatening storm surge and catastrophic, record-breaking rain to southern Alabama and the Florida Panhandle. Sally quickly deteriorated to tropical depression status that day as it continued into Georgia. Sally brought post-tropical conditions to the Carolinas and southern Virginia. Preliminary insured property losses ranged from $1 billion to $3.5 billion by catastrophe modelers.

Hurricane Sally passed through the area on September 17, 2020 in Gulf Shores, Alabama.

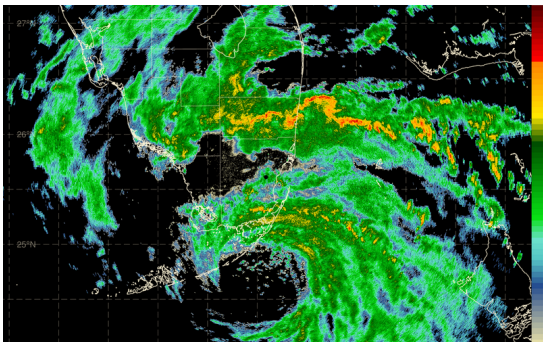
Hurricane Teddy formed on September 14 west of the Cabo Verde Islands and became a Category 2 hurricane on September 16 east of the Lesser Antilles. Teddy became a Category 4 hurricane on September 17 in the Western Atlantic. The hurricane turned northwestward and passed east of Bermuda as a Category 1 storm and continued north to Nova Scotia, becoming a Category 2 storm. By September 23 Teddy brought destructive waves, strong wind and heavy rainfall to Atlantic Canada and made landfall in Nova Scotia.

Tropical Storm Beta formed on September 18 in the Gulf of Mexico and brought tropical storm conditions to the southeastern coast of Texas on September 21 and made landfall there on September 21. The storm stalled inland in Texas before moving northeastward and deteriorating to a tropical depression. Beta dropped up to 20 inches of rain in parts of Texas, including about 14 inches in the Houston metropolitan area, and continued to bring heavy rain to Louisiana, Mississippi and Tennessee. According to Dr. Philip Klotzbach it was the 9th named storm to make landfall in the continental United States, tying the record set in 1916, and only the second time a letter from the Greek alphabet has had to be used by U.S. forecasters since the 1950s. It is also the first-ever Greek letter-named storm to make a U.S. landfall. Tropical Storm Gamma formed on October 2 over the northwestern Caribbean Sea near the Yucatan Peninsula, where it made landfall on October 3. Gamma made landfall at almost hurricane force.

Hurricane Delta, the earliest 25th named storm on record, formed on October 5 in the Caribbean Sea near Jamaica and became the ninth hurricane of 2020 later that day. Delta rapidly intensified near the Yucatan Peninsula to Category 4 strength and made landfall there on October 7 as a Category 2 storm. Delta moved into the southern Gulf of Mexico and strengthened to a Category 3 storm on October 8. Delta made landfall as a Category 2 storm on the Louisiana coast near Creole on October 9, close to Hurricane Laura's landfall site, and damaged areas already hit by Laura. Delta was the 10th named storm and fifth hurricane to strike the continental United States and the first Greek-letter hurricane to make U.S. landfall. Delta brought hurricane conditions to southwest and central Louisiana and

eastern Texas before moving northeastward through Arkansas, Mississippi, and Alabama and the Tennessee valley as a tropical storm and later affecting the Mid-Atlantic states. Preliminary insured property losses ranged from $1 billion to $3.5 billion by catastrophe modelers.

Hurricane Epsilon formed on October 19 in the central Atlantic Ocean and became a hurricane on October 20 and reached Category 3 status on October 21. It passed to the east of Bermuda and continued northeastward, bringing high surf and riptides to the Atlantic coast. Epsilon, still a large storm, deteriorated to tropical storm status and became post-tropical on October 26 in the North Atlantic. Hurricane Zeta formed on October 25 near Cozumel, Mexico, the earliest forming 27th Atlantic named storm on record. It became a hurricane on October 26 and made landfall on the Yucatan Peninsula of Mexico. Zeta made landfall on October 28 as a Category 2 hurricane near Cocodrie, Louisiana. The hurricane was the record-breaking fifth named storm to strike Louisiana in one season. Zeta brought storm surge, high winds and heavy rain to southeastern Louisiana and southern Mississippi before weakening to a tropical storm in central Alabama. The storm continued through the southeastern states with damaging winds and heavy rainfall. Zeta traveled quickly through the Mid-Atlantic states before moving into the western Atlantic Ocean. Zeta left about 2.6 million people without power across seven states. Louisiana Gov. John Bel Edwards said the hurricane caused catastrophic damage on Grand Isle in Jefferson Parish by causing three breaches in a levee. Insured loss estimates range from $1.5 billion to $4.7 billion excluding losses from the NFIP.



Tropical Storm Eta making landfall in the Florida Keys early on November 9, 2020. Source: National Weather Service Miami.

Hurricane Eta formed over the central Caribbean Sea on October 31 and became a Category 4 hurricane on November 2. On November 3 slow-moving Eta made landfall in Nicaragua as a Category 4 storm, bringing catastrophic wind damage, flash flooding, storm surge and landslides. Eta deteriorated over Honduras on its way to the northwestern Caribbean Sea, but regained tropical storm strength and made landfall in Cuba on November 8. The storm turned northwestward and made landfall in Lower Matecumbe Key, Florida on November 8 as a strong tropical storm and continued to the southwest coast of Florida, bringing heavy rainfall, flash flooding and wind. Eta traveled into the Gulf of Mexico and regained hurricane status on November 11 offshore of southwestern Florida bringing heavy squalls with tropical-storm force winds. On November 12 Eta made a second landfall in Florida near Cedar Key as a tropical storm, producing dangerous storm surge, heavy rains and gusty winds along the Florida Gulf Coast and the northern Florida Peninsula. The storm then moved into the Atlantic Ocean near the Florida/Georgia border. Eta passed offshore of the coasts of South and North Carolina before dissipating.

On November 10 a record-breaking 29th named storm—Theta—formed in the northeast Atlantic Ocean. Theta did not threaten land. Hurricane Iota was the 30th named storm of the 2020 hurricane season, formed on November 13 in the central Caribbean Sea and became a hurricane on November 15. Iota became a major hurricane and strengthened to high-end Category 4 status on its way to Central America bringing catastrophic winds, life-threatening storm surge and extreme rainfall to Nicaragua and Honduras. Iota was the strongest hurricane of the 2020 hurricane season.

East Pacific: Hurricane Douglas formed in the East Pacific on July 20 and became a hurricane on July 22. By July 23 Douglas was a Category 4 storm, heading toward the Hawaiian Islands. By July 26 Douglas was downgraded to a Category 1 hurricane and passed to the north of the islands of Maui, Oahu and Kauai, producing large swells, damaging surf, strong damaging winds and rainfall between three and 6 inches but possibly more.

See Facts + Statistics: Hurricanes for additional information on 2020 hurricanes.

2019 and 2018 Hurricane Season

2019: The 2019 season yielded 18 named storms, six of which became hurricanes, including three major ones (Category 3 or higher, with maximum sustained winds of at least 111 mph.) Barry became a hurricane on July 13 in the Gulf of Mexico as it moved toward the Louisiana coast. It made landfall later that day near Intracoastal City, Louisiana, as a tropical storm, bringing heavy rain and wind to the north central Gulf Coast, and remained over Louisiana as it weakened into a tropical depression on July 14. Other areas impacted were the Mississippi River Valley and the southeastern states of Alabama, Florida and Mississippi.

Workers put plywood over the windows of a store as they prepare it in case Hurricane Dorian hits the area in Delray Beach, Florida.

Dorian became a hurricane on August 28 near St. Thomas, U.S. Virgin Islands. By August 30, Dorian had strengthened to a Category 4 storm and became an historic Category 5 storm on September 1 as it made landfall over the Abaco Islands in the Bahamas and Grand Bahama Island. Dorian continued to pound the Bahamas into September 3 with devastating wind, rain and storm surge. Dorian brought storm surge resulting in beach erosion and flooding to east coast Florida as a Category 3 storm, and later affected South and North Carolina. On September 6 Dorian made landfall at Cape Hatteras, North Carolina, as a Category 1 storm, bringing wind, storm surge and flooding to North Carolina and Virginia on its way north. It made landfall over Nova Scotia on September 7 as a Category 1 hurricane. Aon estimates industry insured losses in the United States from Dorian to total $3.5 billion, including reinsurance and NFIP losses.

Humberto became a hurricane on September 15 southwest of Bermuda and peaked at Category 3 as it approached the island on September 16. As a post-tropical storm Humberto produced large swells and rip tides along the east coast of the United States. Tropical Storm Imelda brought an estimated 16 to 24 inches of rain to Beaumont and Houston, Texas and heavy rain over a large section between southwestern Louisiana and Texas by September 20. Aon estimated that Imelda caused $1.2 billion in insured losses, including NFIP flood claims. Hurricane Jerry formed around the same time, becoming a hurricane on September 19. Hurricane Lorenzo became a Category 5 hurricane in the central subtropical Atlantic—the farthest east Category 5 Atlantic hurricane on record. It generated 49-foot waves, with an occasional rogue wave nearing 100 feet, sending swells to both sides of the Atlantic.

2018: During the 2018 Atlantic hurricane season 15 named storms formed. Eight of those storms became hurricanes and two of those, Florence and Michael, became major storms, Category 3 and above. Florence, the third hurricane of the season, reached Category 4 status as a slow-moving storm that brought hurricane-force winds, life-threatening storm surge, and freshwater flooding. Florence made landfall along the southeastern coast of North Carolina as a Category 1 storm and brought significant storm surge flooding to portions of eastern North Carolina. It produced rainfall that exceeded 20 inches along the North and South Carolina border, and in some parts of North Carolina exceeded 30 inches, a state record. The previous record was 24 inches caused by Hurricane Floyd in 1999. In South Carolina a new record was reached when rainfall reached almost 24 inches. Florence directly caused 22 deaths in the United States, including 15 in North Carolina, four in South Carolina and three in Virginia, according to the National Hurricane Center (NHC). Catastrophe modelers have estimated that insured losses from Hurricane Florence would range from $2.0 billion to $5.5 billion, excluding NFIP losses.

Hurricane Michael became a strong Category 5 storm on October 10 and made landfall near Mexico Beach, Florida, in the Florida Panhandle. Hurricane Michael was the strongest hurricane ever to hit the Florida Panhandle, and the second known Category 5 landfall on the northern Gulf Coast, according to the National Oceanic and Atmospheric Administration. It was the first Category 5 storm to make landfall in the United States, after Hurricane Andrew in 1992.

Michael caused 16 deaths in the United States: seven in Florida, five in Virginia, three in North Carolina and one in Georgia. Aon estimates that insured losses from Hurricane Michael, including losses covered by the federally administered NFIP, totaled $13.3 billion in dollars when it occurred ($13.6 billion in 2020 dollars), making it the ninth-costliest hurricane to hit the United States.

Earlier Hurricane Seasons

2017: The Atlantic hurricane season of 2017 broke several records, as 17 tropical storms formed, with 10 of them 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 Triple-I.

The chart below shows insured losses in dollars for the top 10 costliest hurricanes in the United States when they occurred and in 2020 dollars, adjusted for inflation. According to Aon, Katrina was the costliest hurricane on record, causing $65 billion in insured losses when it occurred in 2005, including losses from the NFIP. Losses from Katrina totaled $85.6 billion in 2020 dollars. Insured losses for Irma in Florida are still being compiled by the Florida Office of Insurance Regulation.

Top 10 Costliest Hurricanes In The United States[1] ($ millions)

Rank	Year	Hurricane	Estimated insured losses	
			Dollars when occurred	In 2020 dollars[2]
1	2005	Hurricane Katrina	$65,000	$85,570
2	2012	Hurricane Sandy	30,000	33,530
3	2017	Hurricane Harvey	30,000	31,590
4	2017	Hurricane Irma	29,900	31,320
5	2017	Hurricane Maria	29,670	31,100
6	1992	Hurricane Andrew	16,000	29,360
7	2008	Hurricane Ike	18,200	21,510
8	2005	Hurricane Wilma	10,670	13,840
9	2018	Hurricane Michael	13,250	13,550
10	2004	Hurricane Ivan	8,720	11,870

[1]Includes Puerto Rico and the U.S. Virgin Islands and losses sustained by private insurers and government-sponsored programs such as the National Flood Insurance Program. Includes hurricanes that occurred through 2019. Subject to change as loss estimates are further developed. As of November 25, 2020. Ranked on insured losses in 2020 dollars.
[2]Adjusted for inflation by Aon using the U.S. Consumer Price Index.

Source: Aon.

The following chart from AIR Worldwide estimates insured property losses from the top 10 historical hurricanes, if they had hit the nation in 2017 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 year-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, 2000-2019

Year	Total hurricanes[1]	Made landfall as hurricane in the U.S.	Deaths[2]	Year	Total hurricanes[1]	Made landfall as hurricane in the U.S.	Deaths[2]
2000	8	0	4	2012	10	1[5]	83
2005	15	7	1,518	2013	2	0	1
2006	5	0	0	2014	6	1	2
2007	6	1	1	2015	4	0	3
2008	8	4[3]	41	2016	7	3	36
2009	3	1[4]	6	2017	10	4	147
2010	12	0	11	2018	8	2	48
2011	7	1	44	2019	6	2	15[6]

[1]Atlantic Basin. [2]Includes fatalities from high winds of less than hurricane force from tropical storms. [3]Includes one hurricane (Hanna) which made landfall as a tropical storm. [4]Hurricane Ida, which made landfall as a tropical storm. [5]Excludes Hurricane Sandy, which made landfall as a post-tropical storm. [6]All fatalities in 2019 are from storms that did not make landfall in the United States.

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]Direct deaths, 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.

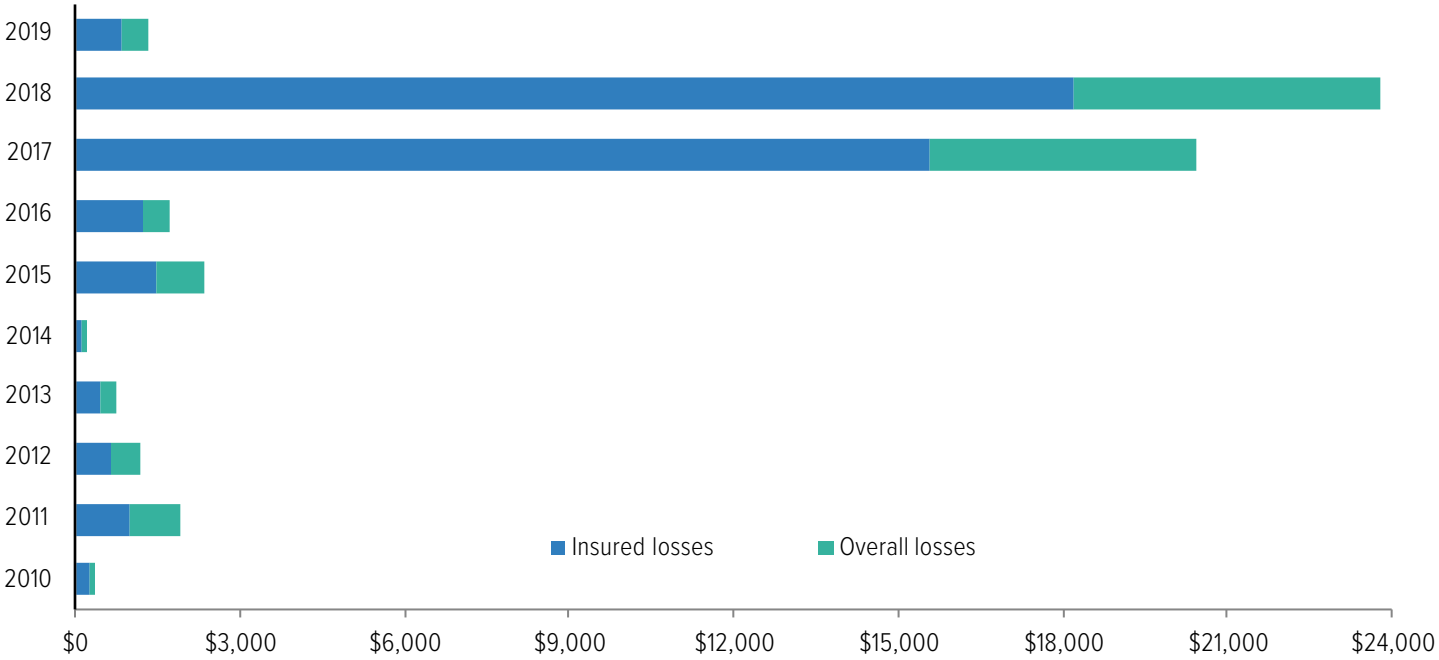
Source: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center.

U.S. NATURAL CATASTROPHES: 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), contained about a third of all housing units in the United States in 2017, according to the U.S. Forest Service. Fast-growing areas with moderate to high wildland fire potential range from parts of the South to large parts of the West. Rising temperatures and more intense droughts are also believed to contribute to large, destructive blazes. Warmer weather contributes to wildfire conditions in many ways: dryer and more combustible vegetation, more frequent lightning strikes, an extended fire season, more intense winds and earlier spring snowmelt in mountainous areas leading to dry vegetation earlier in the wildfire season. A typical wildfire season would run from mid-summer to early autumn, but with these changing conditions wildfires are becoming a year-round occurrence.

Wildfire Lossses In The United States, 2010-2019[1] (2019 $ millions)



[1]Adjusted for inflation by Munich Re based on the Consumer Price Index.
Source: © 2020 Munich Re, NatCatSERVICE.

2017-2020 Wildfires

2020: By December 2020 there were about 57,000 wildfires compared with 50,477 in 2019, according to the National Interagency Fire Center (NIFC). More than 10.3 million acres were burned in 2020, compared with 4.7 million acres in 2019. Five of the top 20 largest California wildfires fires occurred in 2020, according to CalFire's list. Wildfires in California have burned a record 4.2 million acres, damaging or destroying 10,500 structures and killing 31 people.

In August a series of lightning strikes started hundreds of fires across Northern California. Dubbed the August Complex Fire, they are the largest fires in California's history, together burning 1.03 million acres in six counties and continuing into November. Another fire, the SCU Lightning Complex Fire, located in five counties in northern California near San Francisco, is the third-largest fire on record in the state, burning almost 400,000 acres. The LNU Lightning Complex Fire spanned five counties and was nearly as large. The North Complex Fire, encompassing three counties, burned 319,000 acres and was the 6th largest fire in the state's history. The SQF Complex Fire was the 18th largest California fire, burning 171,000 acres.

On September 28 a state of emergency was declared in California in response to the wildfires that burned through Napa, Sonoma and Shasta Counties, where tens of thousands were forced to evacuate. In October the Glass Fire in Napa County and Sonoma County burned about 67,500 acres and destroyed 1,555 structures. State authorities ordered 70,000 residents of Sonoma and Napa Counties to evacuate, including the entire city of Calistoga in Napa Valley. The Creek Fire in Fresno and Madera counties has burned almost 400,000 acres into November, destroying 850 structures.

In early October, 65 large fires were burning in California, Idaho, Montana, Oregon, Washington and five other states, consuming over 2 million acres. In Oregon thousands of residents evacuated their homes to escape the flames that scorched more than 230,000 acres. In California fires burned from the north all the way down to the Mexican border, stretching across approximately 800 miles of landscape. In Washington, more acres had been burned in 2020

A firefighting aircraft drops retardant ahead of the LNU Lightning Complex Fire on August 20, 2020, in Healdsburg, California.

than in the past 12 fire seasons. The fires are being fueled by continuing dry conditions.

2019: In 2019 there were 50,477 wildfires compared with 58,083 wildfires in 2018, according to the NIFC. About 4.7 million acres were burned in 2019 while there were 8.8 million acres burned in 2018. In late October significant fires broke out throughout California, leading to the evacuation of more than 200,000 people and the declaration of a state of emergency. The Kincade Fire in Sonoma County ignited on October 23, and burned about 78,000 acres—an area more than twice the size of the city of San Francisco. According to CalFire, 374 buildings were destroyed, and 60 more were damaged. The Getty Fire in Los Angeles broke out on October 28, fueled by strong Santa Ana winds, with wind gusts up to 80 mph and burned 745 acres. In Ventura County, the Maria Fire began on October 1 and burned 10,000 acres and destroyed four structures. The Ranch Fire, ignited November 3, burned 2,500 acres.

2018: In 2018 there were 58,083 wildfires, compared with 71,499 wildfires in 2017, according to the NIFC. About 8.8 million acres were burned in 2018, compared with 10 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 eighth most destructive fire in the state's history to date. Eight fatalities are attributed to the fire, and 1,614 structures were destroyed. Aon estimates that insured losses from the Carr Fire were $1.3 billion in dollars when it occurred and in 2020 dollars, making it the tenth-costliest wildfire in the United States.

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. According to Cal Fire statistics 85 people perished. About 153,000 acres were burned and 18,800 structures were destroyed. Aon estimates that insured losses from the Camp Fire totaled $10.0 billion in dollars at the time ($10.3 billion in 2020 dollars), and was the costliest wildfire on record at the time.

The Hill and Woolsey 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. Aon estimates that insured losses from the Woolsey Fire totaled $4.2 billion when it occurred ($4.3 billion in 2020 dollars), making it the third-costliest wildfire in the United States. The Hill Fire burned about 4,500 acres and destroyed four structures.

2017: In 2017 there were 71,499 wildfires, compared to 65,575 wildfires in 2016, according to the NIFC. About 10 million acres were burned in 2017, compared with 5.4 million in 2016. The number of acres burned in 2017 was higher than the 10-year average. From October 6 to October 25, eight counties in Northern California were hit by a devastating wildfire outbreak that caused at least 23 fatalities, burned 245,000 acres and destroyed more than 8,700 structures.

The Tubbs Fire began on October 8 and destroyed almost 37,000 acres and 5,600 structures and claimed 22 victims. Aon estimates that insured losses from the Tubbs Fire totaled $8.7 billion when it occurred ($9.1 billion in 2020 dollars), making it the second-costliest wildfire in the United States. The Atlas Fire also began on October 8 and consumed 52,000 acres and destroyed 120 structures. Six people perished in the Atlas Fire. According to Aon the Atlas Fire caused insured losses of $3.0 billion when it occurred, or $3.1 billion in 2020 dollars, making it the fifth-costliest U.S. wildfire.

Top 10 States For Wildfires Ranked By Number Of Fires And By Number Of Acres Burned, 2019

Rank	State	Number of fires
1	California	8,194
2	Texas	6,892
3	North Carolina	3,872
4	Georgia	3,158
5	Oregon	2,293
6	Florida	2,121
7	Arizona	1,869
8	Montana	1,474
9	Washington	1,394
10	Alabama	1,107

Rank	State	Number of acres burned
1	Alaska	2,498,159
2	Arizona	384,942
3	Idaho	284,026
4	California	259,148
5	Texas	215,493
6	Washington	169,742
7	Florida	122,500
8	Utah	92,380
9	Nevada	82,282
10	New Mexico	79,887

Source: National Interagency Fire Center.

Top 10 Costliest Wildland Fires In The United States[1] ($ millions)

Rank	Year	Name	Estimated insured loss	
			Dollars when occurred	In 2020 dollars[2]
1	2018	Camp Fire	$10,000	$10,260
2	2017	Tubbs Fire	8,700	9,120
3	2018	Woolsey Fire	4,200	4,310
4	1991	Tunnel Fire (Oakland Hills Fire)	1,700	3,200
5	2017	Atlas Fire	3,000	3,140
6	2017	Thomas Fire	2,250	2,360
7	2007	Witch Fire	1,600	1,980
8	2003	Cedar Fire	1,060	1,480
9	2003	Old Fire	980	1,360
10	2018	Carr Fire	1,250	1,280

[1]Includes losses sustained by private insurers and government-sponsored programs such as the National Flood Insurance Program. Includes events that occurred through 2019. All fires on this list occurred in California. Includes Puerto Rico and the U.S. Virgin Islands. Ranked on losses in 2020 dollars. Subject to change as loss estimates are further developed. As of November 25, 2020. [2]Adjusted for inflation by Aon using the U.S. Consumer Price Index.

Source: Aon.

In response to the soaring cost of wildfires in 2018, which could add up to over $18 billion when all losses are tallied, California enacted legislation to form a $21 billion wildfire insurance fund designed to cover California utility companies for some of the losses they could incur when they pay victims of fires that their equipment caused. In May 2019 the California Department of Forestry and Fire Protection (CalFire) announced that the Camp Fire—the deadliest and costliest wildfire in U.S. history—was caused by electrical transmission lines owned by Pacific Gas and Electric (PG&E). The fund would prevent the state from having to bail out utilities facing bankruptcy, removing the burden from taxpayers. The California Earthquake Authority (CEA), which currently purchases reinsurance for earthquakes that occur in the state, will handle administrative responsibility for the fund. Utilities will contribute to the fund, while the state will raise 50 percent of the $21 billion via bond sales. According to Artemis, the fund could operate as a risk pool where electric utility exposure could be handled by insurance, reinsurance or insurance-linked securities. By the end of July 2019, all three of California's utilities had agreed to join and commit funds to the plan.

Wildfire Exposure

FireLine®, Verisk's wildfire risk management tool, assesses wildfire risk at the address level using advanced remote sensing and digital mapping technology. The three primary factors considered in analyzing wildfire risk are distribution of vegetative fuel, steepness of slope and degree of access for firefighting equipment. FireLine assigns a wildfire hazard score for each factor plus a cumulative score, on a scale from negligible to extreme risk. The following chart ranks the most wildfire-prone western U.S. states by high to extreme wildfire risk as of 2019. According to Verisk estimates, more than 4.5 million U.S. properties are at high to extreme wildfire risk.

Top 10 States At High To Extreme Wildfire Risk, 2019[1]

Rank	State	Estimated number of properties at risk
1	California	2,019,800
2	Texas	717,800
3	Colorado	371,100
4	Arizona	237,900
5	Idaho	175,000
6	Washington	160,500
7	Oklahoma	153,400
8	Oregon	151,400
9	Montana	137,800
10	Utah	136,000

Rank	State	Percent of properties at risk
1	Montana	29%
2	Idaho	26
3	Colorado	17
4	California	15
5	New Mexico	15
6	Utah	14
7	Wyoming	14
8	Oklahoma	9
9	Oregon	9
10	Arizona	8

[1]As of September 2019.
Source: Verisk Wildfire Risk Analytics used data from FireLine®, Verisk's wildfire risk management tool.

U.S. NATURAL CATASTROPHES: CONVECTIVE STORMS

Convective storms are the result of warm, moist air rising from the earth, and depending on atmospheric conditions, may develop into tornadoes, hail, thunderstorms with lightning, or straight-line winds. Convective storms are the most common and damaging natural catastrophes in the United States, according to the Triple-I's May 2020 white paper, *Severe convective storms*. According to catastrophe modeling company RMS, insured losses in the United States from these storms average about $17 billion each year, nearly equal to the losses incurred by hurricanes. While scientists cannot say that these storms are increasing, it is clear that the losses are increasing, as a result of population growth and economic development. In addition, the geography, frequency and intensity of these storms also may be changing.

According to Aon, there were 14 separate billion-dollar economic or total loss severe convective events in 2020. The most expensive included the August 10 Midwest derecho (straight line winds).

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) and in an average year, about 1,000 tornadoes are reported nationwide. 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

In 2020 there were 1,218 tornadoes compared with 1,520 in 2019, according to the National Oceanic and Atmospheric Administration (NOAA). In 2020, 78 people perished in tornadoes compared with 41 in 2019. On April 12 and 13, 32 people perished in tornadoes in Georgia, Mississippi, South Carolina and Tennessee. Those tornadoes were part of a larger convective storm system that affected the Plains, Midwest and Mid-Atlantic states from April 8 to April 12 and caused at least $3 billion in insured losses, according to Aon. On March 2 and 3, 24 people were killed in tornadoes in central Tennessee, including the city of Nashville. Tornado deaths in 2020 were the highest since 2011, when 553 people were killed in 1,691 tornadoes.

The number of tornadoes rose to 1,520 in 2019 from 1,126 in 2018, according to NOAA. The 2019 total was the highest since 2011, when there were 1,691 tornadoes. There were 41 direct fatalities from tornadoes in 2019, compared with 10 in 2018, according to NOAA. May was the top month for tornadoes in 2019, with 506 twisters, including two systems occurring May 26 to May 30 that resulted in $3.2 billion and $3.7 billion in insured losses, according to Aon. March was the deadliest month in 2019—on March 3 an F4 tornado struck Alabama and killed 23 people and left a half-mile wide path of destruction. The March 3 tornado storm system was the deadliest outbreak in the United States since a system in Arkansas and Mississippi in April 2014 killed 35 people. In 2019 U.S tornadoes and thunderstorms caused $20.3 billion in insured losses, according to Munich RE, up from $14.1 billion in 2018. For more information on 2019 tornadoes, see Facts + Statistics: Tornadoes and Thunderstorms.

The following chart shows the top 10 catastrophes involving tornadoes. It counts severe convective storms that may include tornadoes and other perils such as straight-line winds (derechos) and hail. The August 10, 2020, Midwest Derecho, which is not included in the chart, would rank as the third-costliest insured severe convective storm event on record for the U.S.

Top 10 Costliest U.S. Catastrophes Involving Tornadoes[1] ($millions)

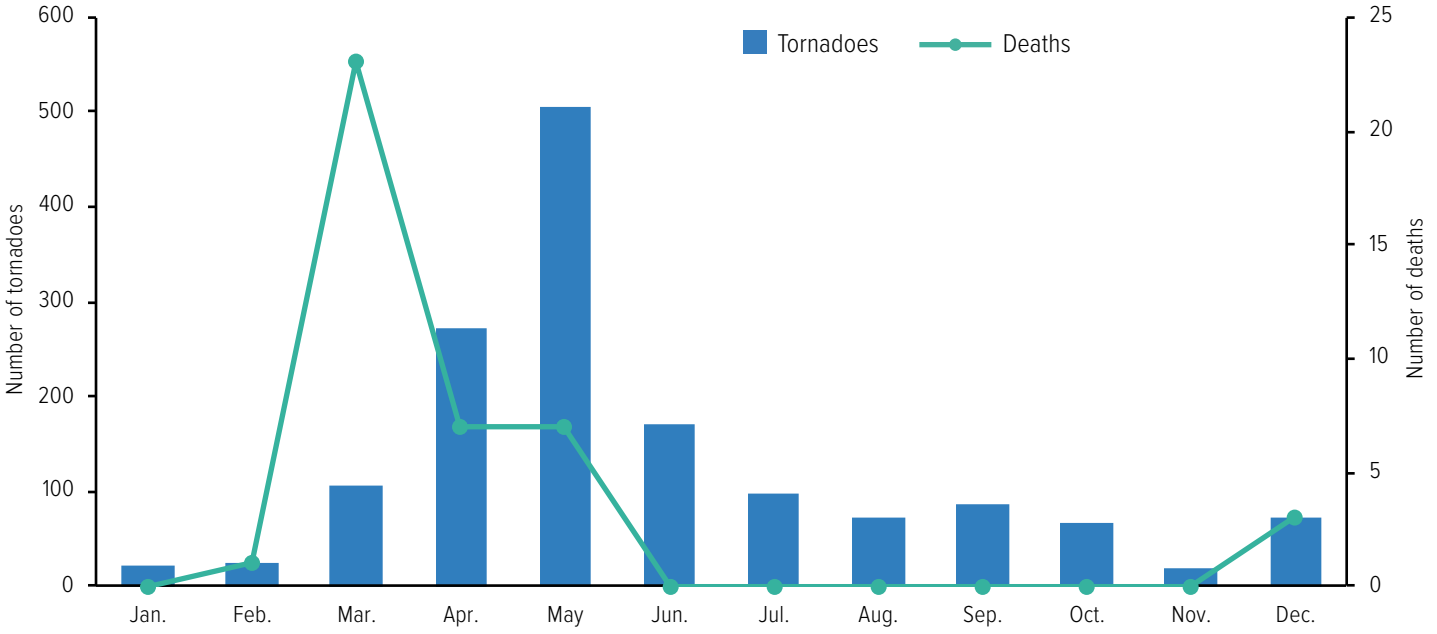
Rank	Date	Location	Estimated insured loss	
			Dollars when occurred	In 2020 dollars[2]
1	Apr. 22-28, 2011	AL, AR, GA, IL, KY, LA, MO, MS, OH, OK, TN, TX, VA	$7,300	$8,390
2	May 21-27, 2011	AR, GA, IA, IL, IN, KS, KY, MI, MN, MO, NC, NE, NY, OH, OK, PA, TN, TX, VA, WI	6,900	7,890
3	May 26-29, 2019	AL, AR, CO, GA, IA, IL, IN, KS, KY, MO, MS, NC, NE, OH, OK, SC, SD, TN	3,210	4,520
4	May 27-30, 2019	CO, TX, OK, KS, AR, MO, IA, IL, IN, OH, PA, WV, WY, NJ, NY	3,650	3,680
5	Apr. 10-15, 2016	TX, LA, OK, AR, MS, KS, MO	3,200	3,460
6	Apr. 6-12, 2001	AR, CO, IA, IL, IN, KS, MI, MN, MO, NE, OH, OK, PA, TX	2,200	3,220
7	May 18-23, 2014	CO, DE, IA, IL, IN, MT, NY, OH, PA, SC, VA	2,950	3,210
8	Oct. 5-6, 2010	AZ	2,700	3,190
9	Mar. 2-3, 2012	AL, GA, IN, KY, OH, TN	2,500	2,820
10	Apr. 28-May 1, 2012	TX, OK, KS, MO, IL, IN, KY	2,500	2,810

[1]Defined by Aon as severe convective storms including insured thunderstorm events and may include tornado, hail, damaging straight-line winds (derechos) and flash flood impacts from events. Includes events that occurred through 2019. Subject to change as loss estimates are further developed. As of November 25, 2020. [2]Adjusted for inflation by Aon using the U.S. Consumer Price Index.
Source: Aon.

The costliest U.S. catastrophe involving tornadoes occurred in April 2011, when a spate of twisters hit Tuscaloosa, Alabama, and other areas, causing $8.4 billion in insured losses in 2020 dollars.

The second costliest were the tornadoes that struck Joplin, Missouri, and other locations in May 2011, resulting in $7.9 billion in insured losses in 2020 dollars.

Number Of Tornadoes And Related Deaths Per Month, 2019[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, 2000-2019[1]

Year	Tornadoes	Deaths
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

Year	Tornadoes	Deaths
2010	1,282	45
2011	1,691	553
2012	938	70
2013	906	55
2014	886	47
2015	1,177	36
2016	976	18
2017	1,429	35
2018	1,126	10
2019	1,520	41

[1]Excludes Puerto Rico. A tornado that crosses state lines counts as one event.
Source: U.S. Department of Commerce, Storm Prediction Center, National Weather Service.

Top 10 States, By Number Of Tornadoes, 2019[1]

Rank	State	Number of tornadoes	Fatalities
1	Texas	188	2
2	Mississippi	138	2
3	Kansas	127	0
4	Oklahoma	99	4
5	Missouri	98	3
6	Louisiana	97	3
7	Alabama	95	25
8	Georgia	60	0
9	North Carolina	59	0
10	Ohio	59	1

[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, 2019[1]

State	Tornadoes	Fatalities	Rank[2]
Alabama	95	25	7
Alaska	0	0	[3]
Arizona	10	0	30
Arkansas	31	0	19
California	16	0	27
Colorado	53	0	12
Connecticut	1	0	41
Delaware	1	0	41
D.C.	0	0	[3]
Florida	25	0	22
Georgia	60	0	8
Hawaii	0	0	[3]
Idaho	5	0	35
Illinois	37	0	16
Indiana	39	0	15
Iowa	53	1	12
Kansas	127	0	3
Kentucky	28	0	21
Louisiana	97	3	6
Maine	1	0	41
Maryland	6	0	32
Massachusetts	3	0	38
Michigan	6	0	32
Minnesota	54	0	11
Mississippi	138	2	2
Missouri	98	3	5
Montana	6	0	32
Nebraska	44	0	14
Nevada	1	0	41
New Hampshire	0	0	[3]
New Jersey	9	0	31
New Mexico	21	0	25
New York	4	0	36
North Carolina	59	0	9
North Dakota	14	0	29
Ohio	59	1	9
Oklahoma	99	0	4
Oregon	4	4	36
Pennsylvania	34	0	17
Rhode Island	1	0	41
South Carolina	18	0	26
South Dakota	23	0	24
Tennessee	16	0	27
Texas	188	2	1
Utah	0	0	[3]
Vermont	1	0	41
Virginia	24	0	23
Washington	2	0	40
West Virginia	3	0	38
Wisconsin	32	0	18
Wyoming	30	0	20
United States[4]	**1,676**	**41**	

[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 2019. [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.

Hail

Hail-related insured losses between 2000 and 2019 averaged between $8 billion to $14 billion a year, according to Aon. There were 5,396 major hailstorms in 2019, according to the NOAA's Severe Storms database.

An August 2014 report issued by Verisk Insurance Solutions showed that 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 2018 report, *Hail: The Hidden Risk,* says that in 2017 more than 10.7 million properties in the United States were affected by one or more damaging hail events. 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. Verisk's latest report, *U.S. Hail Damage Insights*, shows that in 2019, more than 7.1 million U.S. properties were affected by one or more damaging hail events, resulting in losses of more than $13 billion. Verisk notes that the threat of hail damage has spread from the traditional "hail alley" states of Colorado, Nebraska, and Wyoming northward through the Midwest, south toward the Gulf Coast and desert Southwest, and east toward Appalachia. Underwriting may be impacted by the fact that hail damage is more common than can be measured just by claims data. Property owners may not be aware of hail damage to their roofs. In addition, hail exposure also accelerates the aging and weathering of roofs. These factors may present a risk of insurers covering pre-existing damage under a new policy.

Texas had the largest number of hail loss claims during the years 2017 to 2019, according to the National Insurance Crime Bureau's analysis of data from ISO ClaimSearch®, with 638,000 claims. Colorado ranked second with 381,000 claims over the three years, followed by Nebraska with 161,000 claims. These three states were also ranked the top three for 2019, with 193,000 claims in Texas, 70,000 in Colorado and 57,000 in Nebraska. From 2017 to 2019 the total United States experienced 2.8 million hail claims. In 2019 hail claims totaled 785,000, down from 845,000 in 2018 and 1.4 million in 2017.

Top 10 States Ranked By Number of Hail Loss Claims, 2017-2019

Rank	State	2017-2019
1	Texas	637,977
2	Colorado	380,066
3	Nebraska	161,374
4	Minnesota	150,673
5	Illinois	150,416
6	Kansas	147,793
7	Missouri	133,704
8	Iowa	113,139
9	Indiana	63,892
10	North Carolina	58,342

Rank	State	2019
1	Texas	192,988
2	Colorado	69,742
3	Nebraska	56,897
4	Kansas	50,737
5	Minnesota	49,973
6	Illinois	47,798
7	Missouri	33,976
8	North Carolina	25,026
9	Iowa	19,744
10	Indiana	18,404

Source: National Insurance Crime Bureau based on an analysis of data from ISO ClaimSearch®.

Top Five States By Number Of Major Hail Events, 2019[1]

Rank	State	Number of hail events
1	Texas	872
2	Kansas	538
3	Nebraska	430
4	South Dakota	302
5	Colorado	294
	United States	**5,392**

[1]Hailstones one inch in diameter or larger.
Source: U.S. Department of Commerce, Storm Prediction Center, National Weather Service.

Lightning

In 2019 there were 20 direct lightning fatalities, compared with 21 in 2018, according to the National Weather Service. From 2010 to 2019 on average, 26 people died each year from lightning strikes in the United States.

Florida and Texas were tied for the most lightning deaths in 2019 with three deaths, followed by two in Alabama, Pennsylvania and Ohio according to statistics from National Weather Service. North Dakota, Colorado, Kansas, Indiana, Kentucky, Virginia, North Carolina and South Carolina each reported one lightning death. For more information on lightning claims and payouts, see the Homeowners Claims section.

U.S. NATURAL CATASTROPHES: WINTER STORMS

Top 15 Costliest U.S. Winter Events By Insured Losses, 1980-2019[1] ($ millions)

Rank	Date	Event	Location	Losses when occurred		In 2019 dollars[3]	Deaths
				Overall	Insured[2]		
1	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	$3,573	270
2	Feb. 16-25, 2015	Winter storm, winter damage	AR, CT, DC, DE, IL, KY, LA, MA, MD, ME, MI, MS, NC, NH, NJ,NY, OH, PA, RI, SC, TN, VA, VT	2,800	2,100	2,295	39
3	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	2,229	500
4	Apr. 13-17, 2007	Winter storm, tornado, floods	CT, DE, GA, LA, MA, MD, ME, MS, NC, NH, NJ, NY, PA, RI, SC, TX, VA, VT, WV	2,000	1,600	1,986	19
5	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	1,865	NA
6	Dec. 10-13, 1992	Winter storm	CT, DE, NJ, NY, MA, MD, NE, PA, RI, VA	3,000	1,000	1,808	19
7	Mar. 1-3, 2018	Winter storm	CT, DE, DC, MD, MA, NJ, NY, NC, PA, RI, VA	2,300	1,600	1,645	9
8	Mar. 13-15, 2010	Winter storm (Nor'Easter), floods	CT, MA, NH, NJ, NY, PA, RI	1,700	1,200	1,415	11
9	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	1,404	70
10	Feb. 10-12, 1994	Winter damage	AL, AR, GA, LA, MS, NC, OK, SC, TN, TX, VA	3,000	800	1,399	9
11	Apr. 7-11, 2013	Winter storm	CA, IN, KS, MO, NE, SD, WI	1,500	1,200	1,324	NA
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	1,218	25
13	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	1,136	36
14	Jan. 4-9, 2008	Winter storm	AR, CA, CO, IL, IN, KS, MI, MO, NE, NY, OH, OK, OR, WA, WI	1,000	750	912	12
15	Mar. 8-17, 2019	Winter storm, blizzard, flood	NE, CO, TX, IO, KY, MI, NM, WI, MO, SD, ND	4,700	800	800	6

[1]Costliest U.S. blizzards and winter storms/damage based on insured losses when occurred, as of June 2020. [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]Adjusted for inflation through 2019 by the Insurance Information Institute using the Bureau of Labor Statistics Inflation Calculator.

NA=Data not available.

Source: © 2020 Munich Re, NatCatSERVICE, U.S. Bureau of Labor Statistics, Insurance Information Insitute.

U.S. NATURAL CATASTROPHES: FLOODS

The chart below shows the 10 most significant floods based on National Flood Insurance Program (NFIP) payouts from 1978 to January 31, 2019 (latest data available). Hurricane Katrina in 2005 was the worst U.S flood event based on the amount paid to NFIP policyholders, $16.2 billion, paid to 167,000 policyholders. Hurricane Harvey in 2017 ranks as the second most significant U.S. flood event, with $8.9 billion paid to more than 76,000 NFIP policyholders. Superstorm Sandy ranked third with $8.8 billion paid to more than 132,000 policyholders.

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	166,790	$16,258	$97,474
2	Sep. 2017	Hurricane Harvey	AL, AR, FL, GA, KY, LA, MS, NC, TX	76,257	8,909	116,823
3	Oct. 2012	Superstorm Sandy	CT, DC, DE, MA, MD, ME, NC, NH, NJ, NY, OH, PA, RI, VA, VT, WV	132,360	8,804	66,517
4	Sep. 2008	Hurricane Ike	AR, IL, IN, KY, LA, MO, OH, PA, TX	46,701	2,702	57,866
5	Aug. 2016	Louisiana severe storms and flooding	LA	26,976	2,468	91,507
6	Sep. 2004	Hurricane Ivan	AL, DE, FL, GA, LA, MD, MS, NJ, NY, NC, OH, PA, TN, VA, WV	28,154	1,608	57,097
7	Aug. 2011	Hurricane Irene	CT, DC, DE, MA, MD, ME, NC, NH, NJ, NY, PA, RI, VA, VT	44,314	1,346	30,369
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	21,920	1,054	48,095
10	Oct. 2016	Hurricane Matthew	FL, GA, NC, SC, VA	16,586	654	39,455

[1]Includes events from 1978 to January 31, 2019 as of December 23, 2019. Defined by the National Flood Insurance Program as an event that produces at least 1,500 paid losses. Stated in dollars when occurred.

Source: U.S. Department of Homeland Security, Federal Emergency Management Agency; U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Hurricane Center.

U.S. NATURAL CATASTROPHES: EARTHQUAKES

The 1994 Northridge quake was the costliest U.S. earthquake on record, causing $15.3 billion in insured damages when it occurred ($26.9 billion in 2019 dollars) according to Munich Re. It ranks as the eighth costliest U.S. disaster, based on insured property losses (in 2019 dollars). Six of the costliest U.S. quakes from 1980 to 2019, based on inflation-adjusted insured losses, were in California.

On January 7, 2020, a 6.5-magnitude earthquake struck southwest Puerto Rico, which lies in a tectonically active region. The island has not had a quake of this level since 1918. The 2020 quake caused widespread damage to infrastructure in a region that is still recovering from the effects of 2017's Hurricane Maria. The Alaska Peninsula was struck by a 7.5-magnitude quake on October 19 but no damage was reported. The Peninsula was earlier rocked by a 7.8-magnitude earthquake on July 22 in the ocean near Perryville. No damage was reported. Two states experienced 6.5-magnitude quakes—Challis, Idaho and in the Monte Cristo Range in Nevada. Although there were no losses from either quake, the Nevada quake caused 6,500 aftershocks. Four were magnitude 5.0 or greater. On May 2 a 5.4-magnitude quake hit Tallaboa, Puerto Rico, causing minor damage. On August 9 a 5.1-magnitude quake struck North Carolina, causing minor property damage in Sparta. In August a swarm of earthquakes beneath the Salton Sea in California began on August 10. The U.S. Geological Survey reported a peak of 54 tremors on August 10, with a mainshock of 4.6 magnitude.

In 2019 the sparsely populated Ridgecrest City section of California was struck by a pair of significant earthquakes. On July 4 a 6.4-magnitude "foreshock" earthquake hit the area, followed by a stronger 7.1-magnitude quake the following day, along with a number of aftershocks. The 7.1 quake was the largest to hit the state in 20 years. According to Karen Clark and Co., insured losses from the quakes are estimated to total less than $40 million.

In 2018 a large 7.9 magnitude earthquake hit Kodiak Island, Alaska, on January 23. No significant damage was reported from the quake or from the small 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 7.1 magnitude quake struck about 8 miles north of Anchorage, Alaska. It caused $130 million in insured losses, 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 a 1964 magnitude 9.2 quake are credited for the limited damage from the November 2018 quake. The 1964 quake was the largest magnitude in the nation.

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 2019 dollars[3]	
1	Jan. 17, 1994	California: Northridge, Los Angeles, San Fernando Valley, Ventura, Orange	$44,000	$15,300	$26,850	61
2	Apr. 18, 1906	California: San Francisco, Santa Rosa, San Jose	525	180	4,713[4]	3,000
3	Oct. 17, 1989	California: Loma Prieta, Santa Cruz, San Francisco, Oakland, Berkeley, Silicon Valley	10,000	960	1,961	68
4	Feb. 28, 2001	Washington: Olympia, Seattle, Tacoma; Oregon	2,000	300	438	1
5	Oct. 1, 1987	California: Los Angeles County, Whittier	360	75	167	8

(table continues)

Top 10 Costliest U.S. Earthquakes By Inflation-Adjusted Insured Losses[1] ($ millions) (Cont'd)

Rank	Date	Location	Overall losses when occurred	Insured losses[2]		Fatalities
				Dollars when occurred	In 2019 dollars[3]	
6	Aug. 24, 2014	California: Napa, Vallejo, Solano, Sonoma, American Canyon	$700	$150	$162	1
7	Nov. 30, 2018	Alaska: Anchorage, Wasilla, Palmer, Tok, Valdez	150	130	132	0
8	Apr. 4, 2010	California: San Diego, Calexico, El Centro, Los Angeles, Imperial; Arizona: Phoenix, Yuma	150	100	118	0
9	Oct. 15, 2006	Hawaii: Big Island, Kailua Kona, Oahu, Honolulu	200	50	64	0
10	Aug. 23, 2011	Virginia: Mineral, Richmond; D.C.; New York: New York; Maryland: Baltimore	150	50	57	0

[1]Costliest U.S. earthquakes occurring from 1980 to 2019, based on insured losses when occurred. Also 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 and may differ from data shown elsewhere. [3]Inflation-adjusted to 2019 dollars by the Insurance Information Institute using the Bureau of Labor Statistics' Inflation Calculator. [4]Inflation-adjusted to 2019 dollars based on 1913 Bureau of Labor Statistics data (earliest year available).

Source: © 2020 Munich Re, NatCatSERVICE; Insurance Information Institute.

The 2016 analysis below is based on AIR Worldwide's U.S. earthquake model. 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. 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.

U.S. MAN-MADE CATASTROPHES: FIRE

Fire Losses

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. In 2019 a fire department responded to a fire on average every 24 seconds in the United States, according to the National Fire Protection Association. A home fire was reported every 93 seconds, a home fire death occurred every three hours and 10 minutes, and a home fire injury occurred every 43 minutes.

Fire losses as shown in the chart below for homeowners, commercial multiple peril and fire insurance fell 20.9 percent from 2018 to 2019. In 2017 and 2018 fire losses rose 53.5 percent and 28.7 percent, respectively, reflecting the high losses from wildfires.

Fire Losses in The United States, 2010-2019[1]

Year	Property loss ($ millions)	Loss per capita[2]
2010	$20,486	$66.23
2011	19,511	62.62
2012	23,977	76.40
2013	19,054	60.30
2014	21,801	68.49
2015	19,759	61.62
2016	23,789	73.66
2017	36,510	112.34
2018	46,972	143.78
2019	37,135	113.13

[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, 2019[1]

Homeowners	58.4%
Commercial multiple peril	20.9
Fire	20.8

[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 481,500 structure fires in the United States in 2019, down 3.5 percent from 2018. Of note, the number of structure fires in 2016 was the lowest since the NFPA began collecting data in 1977.

Structure fires caused $12.3 billion in property damage in 2019, up 10.8 percent from $11.4 billion in 2018. The average loss for these structure fires was $25,545, up 14.8 percent from 2018. Vehicle and outside fires caused another $2.5 billion in property damage, bringing the total property loss from fires to $14.8 billion.

Structure Fires, 2010-2019[1]

Year	Number of fires	Direct property damage[2] ($ billions)	
		As reported	In 2020 dollars[3]
2010	482,000	$9.7	$11.5
2011	484,500	9.7	11.1
2012	480,500	9.8	11.1
2013	487,500	9.5	10.5
2014	494,000	9.8	10.7
2015	501,500	$10.3	$11.2
2016	475,500	7.8	8.4
2017	499,000	10.7	11.3
2018	499,000	11.1	11.4
2019	481,500	12.3	12.4

[1]Estimates based on data reported by fire departments responding to the 2019 National Fire Experience Survey. May exclude reports from all fire departments. [2]Does not include damage from major wildfires. [3]Calculated from unrounded numbers by the Insurance Information Institute using the U.S Bureau of Labor Statistics' Inflation Calculator.

Source: Reproduced with permission from *Fire Loss in the United States During 2019* by Marty Ahrens and Ben Evarts, ©2020 National Fire Protection Association www.nfpa.org.

Reported Fires By Property Use, 2019[1]

Property use	Fires	Property loss[2] ($ millions)
Structures	**481,500**	**$12,287**
Residential	361,500	7,976
Home	339,500	7,767
One- and two-family homes[3]	264,500	6,428
Apartments and other multi-family	75,000	1,339
Other residential structures[4]	22,000	209
Non-residential[5]	120,000	4,311
Vehicle fire	**223,000**	**2,229**
Highway vehicle fire	189,500	1,645
Other vehicle fire	33,500	584
Outside and other fire	**587,000**	**304**
Fire outside but no vehicle[6]	70,500	206
Fires in brush, grass, or wildlands[7]	244,500	NA
Outside rubbish fire	177,500	NA
All other fire	**94,500**	**98**
Total	**1,291,500**	**$14,820**

[1]Estimates based on data reported by fire departments responding to the 2019 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]Includes hotels and motels, dormitories, rooming houses, residential board and care properties, and other residential properties. [5]Public assembly, educational, institutional, retail, office, manufacturing, and industrial or utility properties. [6]Outside storage, crops, timber, etc. [7]Excludes crops and timber, with no value or loss involved.

NA=Data not available.

Source: Reproduced with permission from *Fire Loss in the United States During 2019* by Marty Ahrens and Ben Evarts, ©2020 National Fire Protection Association www.nfpa.org.

Top 10 Costliest Large-Loss Fires, 2019 ($ millions)

Rank	State	Month	Type of facility	Estimated loss
1	Texas	November	Petrochemical plant	$1,100.0
2	California	October	Wildfire	383.8
3	California	June	Restaurant	36.0
4	California	June	Helicopter	30.0
4	Texas	July	Power generation plant	30.0
5	Ohio	February	Shipboard fire (In port for repairs)	25.0
6	California	October	Wildfire	20.5
6	Tennessee	September	Metal refining	20.5
7	North Carolina	April	Coffee shop gas explosion and fire	20.0
7	Massachusetts	March	Manufacturing	20.0

[1]Large-loss fires of $20 million or more in 2019.

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: National Fire Protection Association www.nfpa.org.

Top 10 Costliest Large-Loss Fires In U.S. History ($ millions)

Rank	Date	Location/event	Estimated loss[1]	
			Dollars when occurred	In 2020 dollars[2]
1	Sep. 11, 2001	World Trade Center (terrorist attacks)	$33,400	$48, 536[3]
2	Oct. 8, 2017	Northern CA Wildland Urban Interface fire	10,000	10,504
3	Apr. 18, 1906	San Francisco Earthquake and Fire	350	9,973
4	Nov. 8, 2018	Camp Wildland Urban Interface fire	8,500	8,738
5	Oct. 8-9, 1871	Great Chicago Fire	168	3,599
6	Nov. 8, 2018	Woolsey Wildland Urban Interface fire	2,900	2,981
7	Oct. 20, 1991	Oakland, CA, firestorm	1,500	2,829
8	Oct. 20, 2007	San Diego County, CA, The Southern California Firestorm	1,800	2,232
9	Dec. 14, 2017	Southern CA Wildland Urban Interface fire	1,800	1,892
10	Sep. 12, 2015	Valley Fire, CA, Wildland Urban Interface fire	1,500	1,633

[1]Loss estimates are from National Fire Protection Association (NFPA) records. The list is limited to fires for which some reliable dollar loss estimates exists. [2]Adjustment to 2020 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: ©National Fire Protection Association, www.nfpa.org.

Top Catastrophic Multiple-Death Fires and Explosions, 2019[1]

Rank[2]	Month	State	Type of facility	Deaths
1	September	California	Dive boat	34
2	October	Connecticut	Airplane crash and fire	7
3	May	New York	Apartment building	6
3	June	Wisconsin	Single-family home	6
3	December	Nevada	Apartment building	6
4	February	California	Aircraft in single-family home	5
4	February	New York	Single-family home	5
4	April	Illinois	Single-family home	5
4	August	Pennsylvania	Day care	5
4	November	Minnesota	Apartment building	5
4	December	Alabama	Single-family home	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: ©National Fire Protection Association, www.nfpa.org.

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, © 2019 National Fire Protection Association https://www.nfpa.org.

U.S. MAN-MADE CATASTROPHES: CIVIL DISORDERS

On May 26, 2020, after the death of George Floyd in police custody in Minneapolis, Minnesota, protests and riots broke out in that city and spread over the next weeks to another 140 U.S. cities, including Washington, D.C.; New York, New York; Chicago, Illinois; Philadelphia, Pennsylvania; and Los Angeles, California. The National Guard were called in at least 21 states and Washington, D.C. The Property Claim Services (PCS) a unit of a Verisk Analytics, designated the riots in Minneapolis a catastrophe, the first time that PCS has compiled insured losses for a civil disorder event since the Baltimore, Maryland, riots of April 2015. Those riots did not meet PCS's threshold for a catastrophe (insured losses reaching $25 million) when they occurred. For the first time, PCS has designated the civil unrest in Minnesota and those events that followed across the United States from May 26 to June 8 as a multi-state catastrophe event. This makes the 2020 event the first time since 1992 that PCS has compiled significant insured losses for a civil disorder and declared it a catastrophe. PCS has included more than 20 states with significant losses for this catastrophe. A preliminary estimate of insured losses from PCS which is still subject to further evaluation, would be more than $1 billion, marking it as the costliest civil disorder in U.S. history.

The second costliest U.S. civil disorder occurred from April 29 through May 4, 1992, in Los Angeles, California, after a jury acquitted Los Angeles Police Department officers for using excessive force in the arrest and beating of Rodney King. The event caused $775 million in insured losses, according to PCS, or about $1.4 billion in 2020 dollars. For more information on Civil Disorders, see Facts + Statistics, Civil Disorders.

U.S. MAN-MADE CATASTROPHES: 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 $47.0 billion in 2019 dollars, including property, life, and liability insurance claim costs. It is the worst terrorist attack on record in terms of fatalities and insured property losses, which totaled about $27.1 billion in 2019 dollars, according to Swiss Re data. Loss estimates may differ from estimates calculated by other organizations.

Top 20 Costliest Terrorist Acts by Insured Property Losses (2019 $ millions)

Rank	Date	Country	Location	Event	Insured property loss[1]	Fatalities
1	Sep. 11, 2001	United States	New York, Washington D.C., Pennsylvania	Hijacked airliners crash into World Trade Center and Pentagon	$27,125[2]	2,982
2	Apr. 24, 1993	United Kingdom	London	Bomb explodes near NatWest tower in the financial district	1,310	1
3	Jun. 15, 1996	United Kingdom	Manchester	Irish Republican Army (IRA) car bomb explodes near shopping mall	1,074	0
4	Apr. 10, 1992	United Kingdom	London	Bomb explodes in financial district	969	3
5	Feb. 26, 1993	United States	New York	Bomb explodes in garage of World Trade Center	903	6
6	Jul. 24, 2001	Sri Lanka	Colombo	Rebels destroy 3 airliners, 8 military aircraft and heavily damage 3 civilian aircraft	575	20
7	Feb. 9, 1996	United Kingdom	London	IRA bomb explodes in South Key Docklands	374	2
8	Jun. 23, 1985	North Atlantic	Irish Sea	Bomb explodes on board of an Air India Boeing 747	234	329
9	Apr. 19, 1995	United States	OK, Oklahoma City	Truck bomb detonates outside government building	210	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	183	0
11	Sep. 6, 1970	Egypt	Cairo	Hijacked PanAm B-747 dynamited on ground	160	0
12	Apr. 11, 1992	United Kingdom	London	Bomb explodes in financial district	138	0
13	Nov. 26, 2008	India	Mumbai	Attack on two hotels; Jewish center	122	172
14	Mar. 27, 1993	Germany	Weiterstadt	Bomb attack on a newly built, still unoccupied prison	102	0
15	Dec. 30, 2006	Spain	Madrid	Bomb explodes in car garage at Barajas Airport	84	2
16	Dec. 21, 1988	United Kingdom	Lockerbie	Bomb explodes on board of a PanAm Boeing 747	82	270
17	Jul. 25, 1983	Sri Lanka		Riot	68	0
18	Jul. 7, 2005	United Kingdom	London	Four bombs explode during rush hour in the London Underground and on a bus	67	52
19	Nov. 23, 1996	Comoros	Indian Ocean	Hijacked Ethiopian Airlines Boeing 767-260 ditched at sea	65	127
20	Mar. 17, 1992	Argentina	Buenos Aires	Bomb attack on Israel's embassy in Buenos Aires	55	24

[1]Includes bodily injury and aviation hull losses. Updated to 2019 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.

Source: Swiss Re, U.S. Bureau of Labor Statistics, Insurance Information Institute.

U.S. MAN-MADE CATASTROPHES: NUCLEAR INCIDENTS

The International Atomic Energy Agency 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. Levels 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, as Classified by the INES Scale[1]

Level	INES description	Example	Location	Year
1	Anomaly	Fast stop of the main circulation pumps and simultaneous loss of their fly wheel systems during reactor scram	Olkiluoto Nuclear Power Plant, Finland	2008
		Exposure of two workers in the nuclear power plant beyond the dose constraints	Rajasthan Nuclear Power Plant, India	2012
2	Incident	Reactor trip due to high pressure in the reactor pressure vessel	Laguna Verde Nuclear Power Plant, Mexico	2011
		Overexposure of a practitioner in interventional radiology exceeding the annual limit	Paris, France	2013
3	Serious incident	Release of iodine 131 into the environment from the radioelements production facility	Fleurus, Belgium	2008
		Severe overexposure of a radiographer	Lima, Peru	2012
4	Accident with local consequences	Radioactive material in scrap metal facility resulted in acute exposure of scrap dealer	New Delhi, India	2010
		Overexposure of four workers at an irradiation facility	Stamboliysky, Bulgaria	2011
5	Accident with wider consequences	Severe damage to the reactor core	Three Mile Island Nuclear Power Plant, USA	1979
		Four people died after being overexposed from an abandoned and ruptured high activity source	Goiania, Brazil	1987
6	Serious accident	Significant release of radioactive material to the environment after the explosion of a high activity waste tank	Kyshtym, Russian Federation	1957
7	Major accident	Significant release of radioactive material to the environment resulting in widespread health and environmental effects	Chernobyl, Ukraine	1986
		Significant release of radioactive material to the environment resulting in widespread environmental effects	Fukushima, Japan	2011

[1]International Nuclear and Radiological Event Scale.
Source: International Atomic Energy Agency. INES Flyer.

CRIME: ARSON

Arson is the act of deliberately setting fire to a building, car or other property for fraudulent or malicious purposes, and it is a crime in all states. According to the National Fire Protection Association (NFPA), in 2018 (latest data available) there were 25,500 fires intentionally set in structures, an increase of 13 percent from 2017. Intentionally set fires in structures resulted in 350 civilian deaths in 2018, an increase of 25 percent from 2017. Intentionally set structure fires resulted in $593 million in property loss, up 2 percent from 2017. In 2018 there were also an estimated 9,500 intentionally set vehicle fires, an increase of 12 percent compared to 2017. These fires resulted in $65 million in property loss, down 13 percent from 2017.

In 2018 property loss from intentionally set structure fires rose 2 percent from 2017, according to the National Fire Protection Association, while the number of fires rose 13 percent.

Intentionally set fires in vehicles rose 12 percent in 2018 from 2017 while the property loss from those fires fell 13 percent.

The property loss from all intentionally set fires (structures and vehicles) amounted to $658 million in 2018, virtually unchanged from 2017.

Intentionally Set Fires, 2009-2018

Year	Structures		Vehicles[2]	
	Number of fires	Property loss ($ millions)[1]	Number of fires	Property loss ($ millions)
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
2018	25,500	593	9,500	65

[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 2018* by Ben Evarts, © 2019 National Fire Protection Association; earlier data from prior reports. http://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 motor vehicle theft of 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. According to the FBI, in 2019 there were a reported 6,925,677 property crime offenses in the United States, down 4.1 percent from 2018. The rate of property crimes in 2019 was 2,109.9 per 100,000 inhabitants, down 4.5 percent from 2018. Property crimes in 2019 cost $15.8 billion. Larceny-theft accounted for the largest share of total property crimes in 2019, at 73.4 percent of all property crimes. Burglary accounted for 16.1 percent, and motor vehicle theft for 10.4 percent.

Number And Rate Of Property Crime Offenses In The United States, 2010-2019[1]

	Burglary		Larceny-theft	
Year	Number	Rate	Number	Rate
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	1,397,045	429.7	5,513,000	1,695.5
2018	1,235,013	378.0	5,232,167	1,601.6
2019	1,117,696	340.5	5,086,096	1,549.5
	Motor vehicle theft		Total property crime[2]	
Year	Number	Rate	Number	Rate
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	772,943	237.7	7,682,988	2,362.9
2018	751,904	230.2	7,219,084	2,209.8
2019	721,885	219.9	6,925,677	2,109.9

[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: CYBERCRIME 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, when a data security breach occurs.

High-profile data breaches continue to threaten business with losses and consumers with exposure of their personal data. In 2020 more than 280 million Microsoft customer records were left unprotected on the web in January. A breach at Marriott Hotels in March reached a data system containing the personal information of about 5.2 million customers and MGM Resorts was hit by a February data breach that exposed the personal information of more than 10.6 million guests. In 2019 the worst data breaches were the Capital One Financial Corp. breach in July that exposed 100 million records and the October Adobe Creative Cloud breach that exposed 7 million users. In 2017 the largest U.S. credit bureau, Equifax Inc., suffered a breach that exposed the personal data, including Social Security numbers, of 145 million people. It was among the worst breaches on record because of the amount of sensitive information stolen. In 2019 ransomware attacks—a type of malware that denies access to an organization's system—more than doubled from 2018. In 2019 an organization fell victim to ransomware every 14 seconds on average. Also troubling is that while more organizations purchase insurance to protect against the risk, ransom demands grow larger as attackers realize that companies can meet these demands.

In 2019 there were 1,473 breaches, up 17 percent from 1,257 in 2018 but below the record of 1,632 breaches in 2017. However, the number of sensitive records (i.e., personal identifying information) exposed in 2019 totaled 164.7 million, down 65 percent from 471.2 million in 2018, according to the Identity Theft Resource Center's *2019 End-of-Year Data Breach Report*. The business sector again faced the highest number of breaches—644 in 2019 compared with 575 in 2018. The ITRC notes that while the business sector accounted for 44 percent of total 2019 breaches, these breaches exposed only 11 percent of all sensitive records. In 2019 the medical/healthcare sector ranked second for the number of breaches, with 525, exposing 39.4 million sensitive records. The education sector had 113 breaches, ranking third, with 2.3 million sensitive records exposed. Breaches in the banking/credit/financial sector—totaling 108—ranked fourth. However, those breaches exposed 100.6 million or 61 percent of total sensitive records. In July 2019 the Capital One breach alone exposed 99 percent of the sensitive records in the banking sector.

In 2019 the ITRC reported that hacking was the most used method of breaching data, with 577 data breaches resulting in 15.3 million records exposed. This form of breach includes intrusion methods like phishing, ransomware, malware and skimming. Unauthorized access ranked second with 538 data breaches, but this method affected the highest number of records exposed by data breach type—142 million, or 86 percent of all sensitive records exposed in 2019. Employee error or negligence, improper exposure or lost data had the third highest number of breaches, 161, with 2.9 million records exposed.

In the first three quarters of 2020 the ITRC tracked 846 data breaches. This number was down by 30 percent compared to the first three quarters of 2019, when there were 1,190 breaches. In 2020, 292 million people were impacted, down by 60 percent from the 897 million people whose identities were compromised in the same period in 2019. Of note, a ransomware attack at Blackbaud, a cloud computing software company used primarily by nonprofits, exposed data from at least 247 organizations. If the Blackbaud breach had been treated as multiple events in the tally,

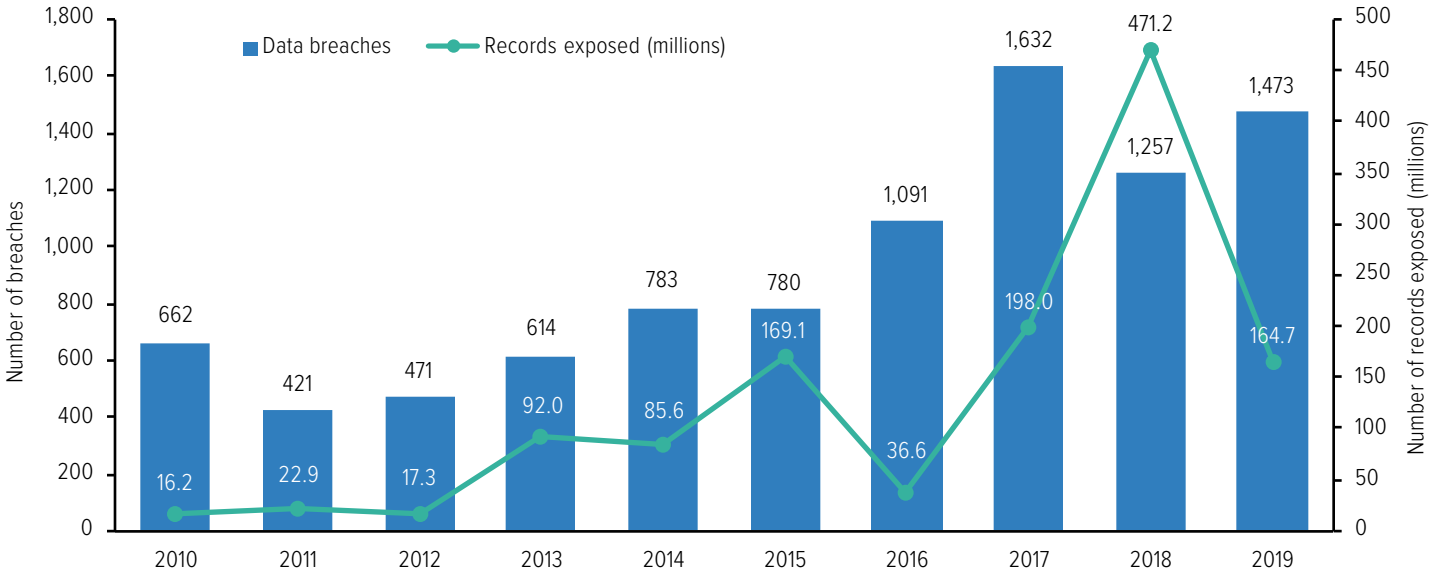
the number of breaches would only have declined by 10 percent compared with a year ago. While data breaches continue to decline, cyberattacks such as phishing, ransomware, malware and other tactics are rising, according to the ITRC, affecting companies and COVID-19 related government relief efforts such as unemployment benefits.

According to the *2020 Cost of a Data Breach Report*, sponsored by IBM Security and conducted by the Ponemon Institute, global data breaches cost companies $3.86 million per breach, on average. The study surveyed more than 500 organizations worldwide between August 2019 and April 2020. Cost factors included in the survey included legal, regulatory and technical activities related to breaches. Customers' personally identifiable information (PII) was exposed in 80 percent of the breaches that occurred in the past year. Nearly 40 percent of malicious incidents were caused by stolen or compromised credentials and cloud misconfigurations. Attackers used previously exposed emails and passwords in one out of five breaches studied, stemming from more than 8.5 billion records exposed in 2019. Businesses that experienced breaches of corporate networks through the use of stolen or compromised credentials had nearly $1 million added to data breach costs over the global average, or $4.77 million. Cloud misconfigurations were used to breach networks nearly 20 percent of the time, increasing breach costs by more than half a million dollars to $4.41 million on average. State-sponsored threat actors were the most damaging type of adversary found in the 2020 study, although they accounted for 13 percent of all attacks. The resulting breach costs averaged $4.43 million. The COVID-19 pandemic brought more risk of data breaches because remote work conditions created less controlled environments. The report found that 70 percent of companies studied that adopted telework during the pandemic expect that it would exacerbate data breach costs.

According to the Insurance Information Institute and J.D. Power 2019 *Small Business Cyber Insurance and Security Spotlight Survey*SM, 12 percent of businesses surveyed suffered one or more cyber incidents in 2019, up from 10 percent in 2018. Nearly 71 percent said they are "very concerned" about cyber incidents, up from 58 percent in 2018. Seventy-five percent said they believe the risk of being victimized by a cyberattack is growing at an alarming rate compared with 70 percent in 2018. Among the 44 percent of respondents who said they do not currently have cyber insurance and the 21 percent who said they do not know whether they do, 64 percent said they do not plan to purchase a cyber insurance policy in the next 12 months. This number is down from 70 percent in 2018. Given small companies' growing awareness and concerns about cyberrisk, insurers and agents and brokers could potentially increase their overall support of this market by addressing the issues of affordability and coverage limitations that seem to be an obstacle to purchasing.

Cyber insurance evolved as a product in the United States in the mid- to late-1990s as insurers had to expand coverage for a risk that is rapidly shifting in scope and nature. In 2019, 580 insurers reported writing cyber insurance, up from 545 in 2018, according to NAIC data sourced from S&P Global Market Intelligence. Direct premiums written totaled $2.2 billion in 2019, from companies that can report premiums for stand-alone and coverage provided as part of package policies, up from $2.0 billion in 2018. For more information on cyber insurance see Chapter 7, Commercial Lines.

Number Of Data Breaches And Records Exposed, 2010-2019



Source: Identity Theft Resource Center, *2019 End of Year Data Breach Report*.

Data Breaches and Records Exposed By Industry, 2019

Category	Number of breaches	Percent of total
Business	644	43.7%
Medical/healthcare	525	35.6
Educational	113	7.7
Banking/credit/financial	108	7.3
Government/military	83	5.6
Total	**1,473**	**100.0%**

Category	Number of records exposed (000)	Percent of total
Banking/credit/financial	100,621,770	61.1%
Medical/healthcare	39,378,157	23.9
Business	18,824,975	11.4
Government/military	3,606,114	2.2
Educational	2,252,439	1.4
Total	**164,683,455**	**100.0%**

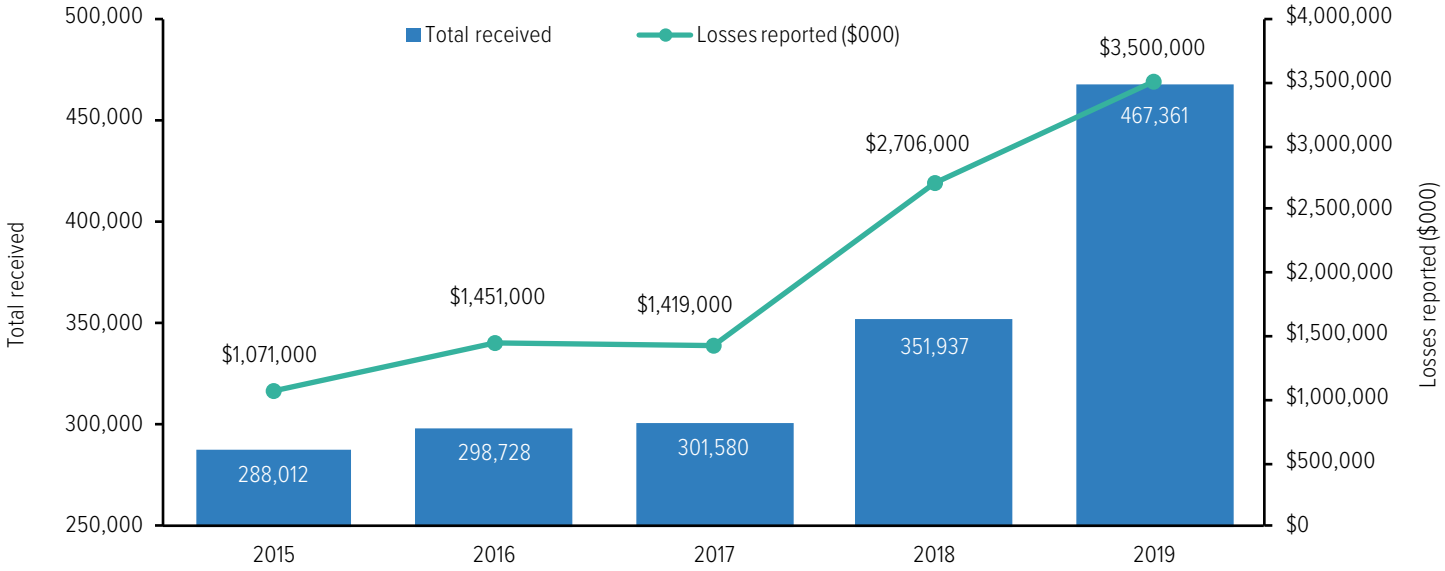
Source: Identity Theft Resource Center, *2019 End of Year Data Breach Report*.

Internet-Related Crime

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. The types of complaints the IC3 investigates are those that concern suspected internet-facilitated criminal activity. Because the IC3 is the central point for internet crime victims to report and alert the appropriate agencies to suspected criminal internet activity, the types of crimes are those that target both businesses and individuals and will encompass classes of crimes that could be classified as identity theft. The subject of identity theft is addressed by other organizations, such as the Consumer Sentinel Network from the Federal Trade Commission, as well as private companies, further in this section.

The IC3 says that 2019 complaints and dollar losses were the highest since the center began tracking cybercrime statistics in 2000. In 2019 the IC3 received and processed 467,361 complaints, and losses to individuals and businesses totaled $3.5 billion. Both the number of complaints and the losses reported rose from 2018 by about 30 percent. Business email compromise caused the most losses, with about $1.7 billion in losses, followed by confidence or romance fraud, with almost half a billion dollars in losses. Business email compromise typically involves a criminal mimicking a legitimate email address. For example, an employee might receive a message that appears to be from an executive within their company requesting a payment or wire transfer that funnels money directly to a criminal. About 24,000 people were victims of email account scams. Confidence fraud occurs when a criminal deceives a victim into believing they have a trust relationship and the victim is persuaded to send money or personal and financial information. In 2019 about 20,000 people reported confidence scams.

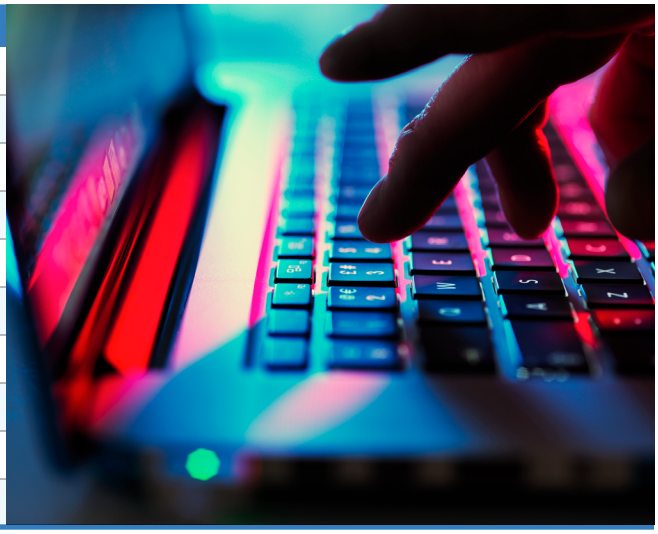
Cybercrime Complaints, 2015-2019[1]



[1]Based on complaints submitted to the Internet Crime Complaint Center.
Source: Internet Crime Complaint Center.

Top 10 States By Number Of Cybercrime Victims, 2019[1]

Rank	State	Number
1	California	50,132
2	Florida	27,178
3	Texas	27,178
4	New York	21,371
5	Washington	13,095
6	Maryland	11,709
7	Virginia	11,674
8	Pennsylvania	10,914
9	Illinois	10,337
10	Indiana	9,746



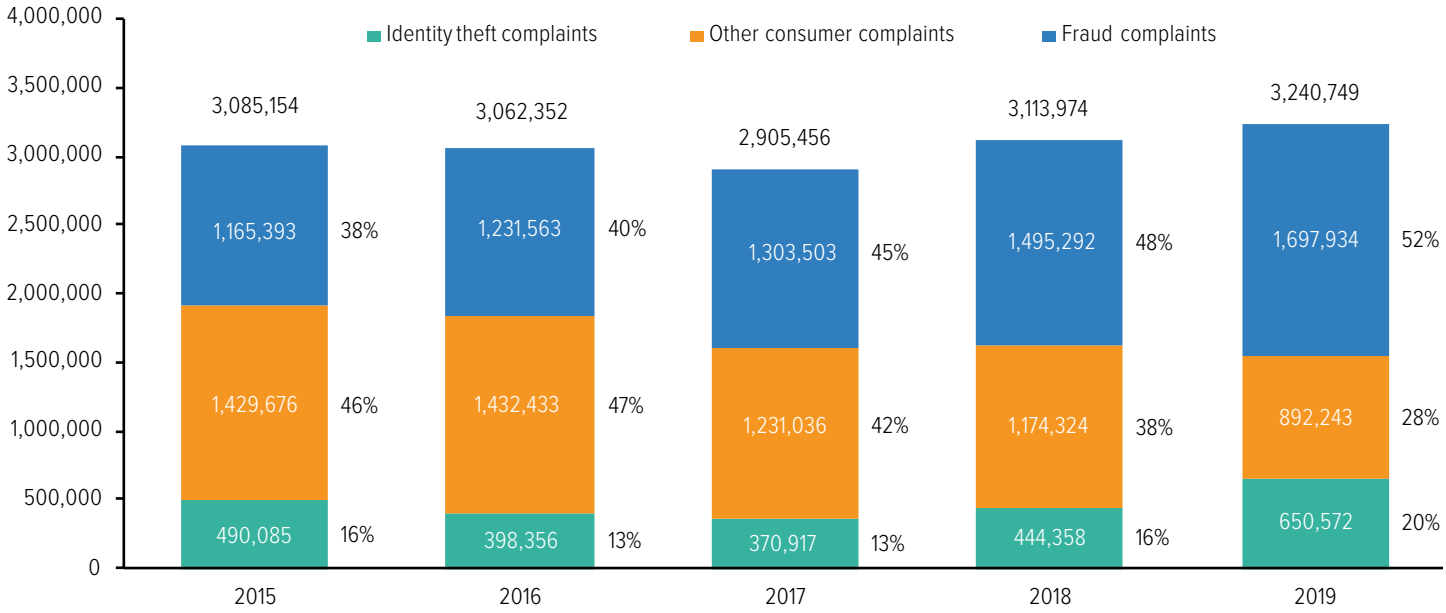
[1]Based on the total number of complaints submitted to the Internet Crime Complaint Center via its website from each state where the complainant provided state information.
Source: Internet Crime Complaint Center.

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 3.2 million identity theft and fraud reports received in 2019, 1.7 million were fraud-related, about 900,000 were other consumer complaints and about 651,000 were identity theft complaints. Of the 1.7 million fraud cases, 23 percent reported money was lost. In 2019 consumers reported losing more than $1.9 billion related to fraud complaints, an increase of $293 million from 2018. The median amount consumers paid in these cases was $320. 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 $667 million in losses.

In 2019, 650,570 or 20 percent of all complaints, were related to identity theft. Identity theft claims fell from 2015 to 2017 by 24 percent but began to increase again in 2018 and were up 46 percent from 2018 to 2019.

Identity Theft And Fraud Reports, 2015-2019[1]



[1]Percentages are based on the total number of Consumer Sentinel Network reports by calendar year. These figures exclude "Do Not Call" registry complaints.

Source: Federal Trade Commission, Consumer Sentinel Network.

Top Five Types of Identity Theft, 2019[1]

Type of identity theft	Number of reports	Percent of total top five
Credit card fraud—new accounts	246,763	45.7%
Miscellaneous identity theft[2]	166,875	30.9
Mobile telephone—new accounts	44,208	8.2
Business or personal loan	43,919	8.1
Auto loan or lease	38,561	7.1
Total, top five	**540,326**	**100.0%**

[1]Consumers can report multiple types of identity theft. In 2019, 18 percent of identity theft reports included more than one type of identity theft. [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.

Source: Federal Trade Commission, Consumer Sentinel Network.

Identity Theft By State, 2019[1]

State	Complaints per 100,000 population[2]	Number of complaints	Rank[3]
Alabama	173	8,454	15
Alaska	73	539	41
Arizona	150	10,744	19
Arkansas	150	4,525	20
California	257	101,639	3
Colorado	110	6,272	28
Connecticut	128	4,564	23
Delaware	226	2,188	7
D.C.	221	1,550	8
Florida	304	64,842	2
Georgia	427	44,888	1
Hawaii	95	1,347	33
Idaho	81	1,420	38
Illinois	182	23,139	13
Indiana	95	6,386	34
Iowa	61	1,910	45
Kansas	78	2,273	40
Kentucky	67	2,977	43
Louisiana	227	10,582	6
Maine	60	807	46
Maryland	210	12,675	10
Massachusetts	125	8,606	24
Michigan	135	13,532	22
Minnesota	80	4,499	39
Mississippi	158	4,714	17
Missouri	121	7,406	25
Montana	67	707	43
Nebraska	68	1,320	42
Nevada	256	7,757	4
New Hampshire	96	1,302	31
New Jersey	205	18,220	11
New Mexico	100	2,088	30
New York	186	36,337	12
North Carolina	179	18,584	14
North Dakota	59	448	47
Ohio	118	13,788	27
Oklahoma	94	3,706	35
Oregon	96	4,005	31
Pennsylvania	163	20,899	16
Puerto Rico	51	1,621	51
Rhode Island	108	1,146	29
South Carolina	213	10,851	9
South Dakota	47	411	52
Tennessee	158	10,664	17
Texas	256	73,553	4
Utah	149	4,702	21
Vermont	54	338	50
Virginia	121	10,284	25
Washington	94	7,110	35
West Virginia	59	1,061	48
Wisconsin	86	5,023	37
Wyoming	55	319	49

[1]Includes the District of Columbia and Puerto Rico. [2]Population figures are based on the 2018 U.S. Census population estimates. [3]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 Javelin Strategy & Research, in a report sponsored by Giact, *Identity Fraud in the Digital Age*, consumers are increasingly dependent on digital technology to solve problems and maximize their time efficiently. When they do not practice security measures, they become targets for criminals using malware attacks and other tactics designed to steal sensitive financial records. The study found that more than 60 percent of the time, consumers discover they are victims of identity fraud themselves, leaving financial service providers subject to reputation damage. The findings were from an online survey of 5,000 U.S adults conducted in October and November 2019. In 2019, 5.08 percent of consumers reported fraud incidents, down from 5.66 percent in 2018. However, the losses reported grew to $16.9 billion in 2019 from $14.7 billion in 2018. Criminal account takeover incidents grew 72 percent, leaving consumers vulnerable to significant losses. The type of accounts being taken over is changing, as criminals are targeting online, noncard accounts such as Amazon or eBay at close to takeover rates for checking or savings accounts. The researchers recommend that businesses use layers of effective fraud detection technology while using multi-factor identification where account access is granted only after the user provides two or more pieces of information.

MOTOR VEHICLES: CRASHES

According to the National Highway Traffic Safety Administration (NHTSA), 36,096 people died in motor vehicle crashes in 2019, down 2.0 percent from 36,835 in 2018. The drop in 2019 was the third consecutive annual decline, which occurred despite a 0.9 percent increase from 2018 in vehicle miles traveled. Fatalities decreased slightly in 2019 for drivers, passengers, motorcyclists, pedestrians and pedal cyclists. Fatalities involving SUVs rose 3.4 percent from 2018 and rose slightly in crashes involving large trucks. The total fatality rate, measured as deaths per 100 million vehicle miles traveled, dropped to 1.10 in 2019, from 1.13 in 2018.

NHTSA's estimate for the first half of 2020, which includes about three months of data during the COVID-19 epidemic, shows that traffic fatalities fell 2.0 percent from first half 2019, while vehicle miles traveled fell at the much faster rate of 16.6 percent, leading to an increase in the fatality rate per 100 million vehicle miles traveled to 1.25, up from 1.06 in the same period in 2018. According to Triple-I Chief Actuary James Lynch, the increase in traffic fatalities was likely caused by faster driving.

Traffic Deaths, 2010-2019

Year	Fatalities	Annual percent change	Fatality rate per 100 million vehicle miles traveled	Fatality rate per 100,000 registered vehicles
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	32,893	-2.6	1.10	12.21
2014	32,744	-0.5	1.08	11.92
2015	35,484	8.4	1.15	12.61
2016	37,806	6.5	1.19	13.13
2017	37,473	-0.9	1.17	12.90
2018	36,835	-1.7	1.13	12.31
2019	36,096	-2.0	1.10	NA

NA=Data not available.
Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

The number of passenger vehicle occupants killed in motor vehicle crashes in 2019 is estimated to have decreased by 1.2 percent from 2018.

Driver and passenger deaths are estimated to have fallen 3 percent and 4 percent, respectively, from 2018 to 2019.

Motorcyclist deaths are estimated to have fallen 1 percent and pedestrian and pedal cyclists deaths were estimated to have dropped 2 percent and 3 percent, respectively.

Motor Vehicle Crashes By Type, 2009-2018

Year	Fatal	Injury	Property damage only	Total crashes
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	34,748	2,116,000	4,670,000	6,821,000
2017	34,560	1,889,000	4,530,000	6,453,000
2018	33,654	1,894,000	4,807,000	6,734,000

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

Motor Vehicle Traffic Deaths By State, 2018-2019

State	Number of deaths		Percent change
	2018	2019	
Alabama	953	930	-2.4%
Alaska	80	67	-16.3
Arizona	1,011	981	-3.0
Arkansas	520	505	-2.9
California	3,798	3,606	-5.1
Colorado	632	596	-5.7
Connecticut	293	249	-15.0
Delaware	111	132	18.9
D.C.	31	23	-25.8
Florida	3,135	3,183	1.5
Georgia	1,505	1,491	-0.9
Hawaii	117	108	-7.7
Idaho	234	224	-4.3
Illinois	1,035	1,009	-2.5
Indiana	860	809	-5.9
Iowa	319	336	5.3
Kansas	405	411	1.5
Kentucky	724	732	1.1
Louisiana	771	727	-5.7
Maine	136	157	15.4
Maryland	512	521	1.8
Massachusetts	355	334	-5.9
Michigan	977	985	0.8
Minnesota	381	364	-4.5
Mississippi	663	643	-3.0
Missouri	921	880	-4.5
Montana	181	184	1.7%
Nebraska	230	248	7.8
Nevada	329	304	-7.6
New Hampshire	147	101	-31.3
New Jersey	563	559	-0.7
New Mexico	392	424	8.2
New York	964	931	-3.4
North Carolina	1,436	1,373	-4.4
North Dakota	105	100	-4.8
Ohio	1,068	1,153	8.0
Oklahoma	655	640	-2.3
Oregon	502	489	-2.6
Pennsylvania	1,190	1,059	-11.0
Rhode Island	59	57	-3.4
South Carolina	1,036	1,001	-3.4
South Dakota	130	102	-21.5
Tennessee	1,040	1,135	9.1
Texas	3,648	3,615	-0.9
Utah	260	248	-4.6
Vermont	68	47	-30.9
Virginia	820	831	1.3
Washington	539	519	-3.7
West Virginia	294	260	-11.6
Wisconsin	589	566	-3.9
Wyoming	111	147	32.4
United States	**36,835**	**36,096**	**-2.0**

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

Vehicles Involved In Fatal Crashes By Vehicle Type, 2009 And 2018

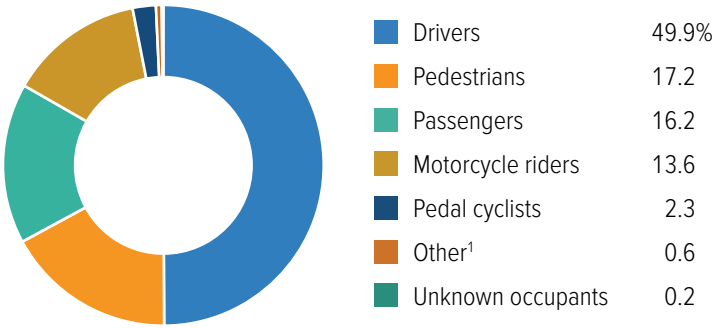
Vehicles Involved	2009	2018
Passenger cars		
Involved in crashes	18,413	20,333
Rate per 100 million vehicle miles traveled	1.22	1.45
Rate per 100,000 registered vehicles	13.42	15.30
Light trucks[1]		
Involved in crashes	17,958	19,775
Rate per 100 million vehicle miles traveled	1.60	1.32
Rate per 100,000 registered vehicles	17.60	14.00
Motorcycles		
Involved in crashes	4,603	5,115
Rate per 100 million vehicle miles traveled	22.11	25.48
Rate per 100,000 registered vehicles	58.05	59.02

[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 66 percent of traffic deaths in 2018. Pedestrians accounted for 17 percent. Motorcycle riders accounted for another 14 percent, pedal cyclists, other nonoccupants and unknown occupants accounted for the remainder.

Motor Vehicle Deaths By Activity Of Person Killed, 2018



[1]Includes other nonoccupants.

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

Sex Of Drivers Involved In Crashes, 2009-2018[1]

	Drivers in fatal crashes					
	Male		Female		Total[2]	
Year	Number	Rate[3]	Number	Rate[3]	Number	Rate[3]
2009	32,690	31.42	11,797	11.22	44,492	21.27
2010	31,897	30.62	11,796	11.18	43,697	20.84
2011	31,771	30.34	11,227	10.51	43,001	20.33
2012	33,209	31.65	11,557	10.82	44,773	21.15
2013	32,457	30.92	11,382	10.63	43,848	20.67
2014	32,462	30.66	11,250	10.40	43,721	20.43
2015	35,679	33.15	12,333	11.17	48,030	22.03
2016	37,731	34.44	13,306	11.87	51,058	23.04
2017	37,856	33.99	13,619	11.96	51,488	22.86
2018	36,895	32.81	13,212	11.48	50,126	22.03

[1]Drivers over the age of 15. Includes motorcycle riders and restricted and graduated drivers license holders in some states.. [2]Includes drivers of unknown sex. [3]Rate per 100,000 licensed drivers.

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

Teenage Drivers

Motor vehicle crashes are the second 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, 1,719 drivers between the ages of 15 to 20 died in motor vehicle crashes in 2018, down 7 percent from 1,844 in 2017. Drivers between the ages of 15 to 20 accounted for 8 percent of all drivers involved in fatal crashes in 2018. In contrast, young drivers accounted for 5.3 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 2018 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 in most states. In 2018, 49 percent of drivers ages 15 to 20 involved in accidents were found not to be using a seatbelt or other restraint (in situations where the use of restraint was known).

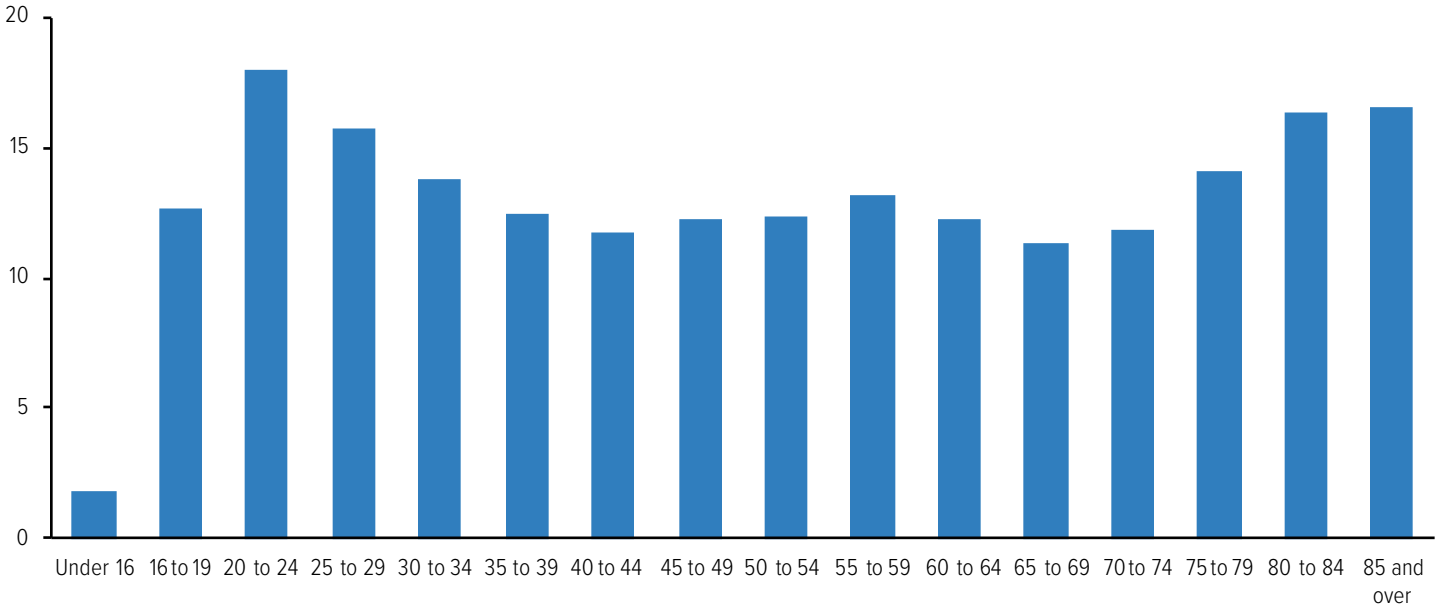
Drivers In Fatal Motor Vehicle Crashes By Age, 2018

Age group	Licensed drivers		Drivers in fatal crashes	
	Number	Percent of total drivers	Number	Involvement rate[1]
16 to 20	11,961,442	5.3%	4,061	34.0
21 to 24	14,270,243	6.3	4,777	33.5
25 to 34	40,165,221	17.7	10,738	26.7
35 to 44	37,645,683	16.5	8,110	21.5
45 to 54	38,643,003	17.0	7,863	20.4
55 to 64	39,580,799	17.4	7,261	18.3
65 to 74	28,194,118	12.4	4,218	15.0
Over 74	17,054,879	7.5	3,098	18.2
Total	**227,558,385**	**100.0%**	**51,490[2]**	**22.6**

[1]Per 100,000 licensed drivers in each age group. [2]Includes drivers under the age of 16 and 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, 2018



Source: Insurance Institute for Highway Safety.

Driver Behavior

The National Highway Traffic Safety Administration has developed a list of driver behaviors that are factors in fatal crashes. Speeding is at the top of the list of related factors for drivers involved in fatal crashes. In 2018, 8,596 drivers who were involved in fatal crashes (or almost 17 percent) were speeding. In addition, the Insurance Institute for Highway Safety (IIHS) has found that rising state speed limits over the 25 years from 1993 to 2017 have cost nearly 37,000 lives, including more than 1,900 in 2017 alone. By 2020, 42 states had maximum speed limits of 70 mph or higher. On some portion of their roads, 22 states had maximum speed limits of 70 mph, and 11 states had maximum speed limits of 75 mph. Eight states had 80 mph limits, and drivers in Texas can legally drive 85 mph on one road, according to the IIHS.

Ranking second was the influence of alcohol, drugs or medication, affecting 5,175 drivers, or about 10 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 third and fourth, with a total of about 7,500 drivers, or 14 percent of all drivers in fatal crashes exhibiting these behaviors. Distracted drivers were the fifth most likely to be involved in a fatal crash (2,688 drivers or 5 percent of all drivers in fatal crashes).

Driving Behaviors Reported For Drivers And Motorcycle Operators Involved In Fatal Crashes, 2018

Behavior	Number	Percent
Driving too fast for conditions or in excess of posted limit or racing	8,596	16.7%
Under the influence of alcohol, drugs, or medication	5,175	10.1
Failure to keep in proper lane	3,706	7.2
Failure to yield right of way	3,579	7.0
Distracted (phone, talking, eating, object, etc.)	2,688	5.2
Operating vehicle in a careless manner	2,797	5.4
Failure to obey traffic signs, signals, or officer	1,990	3.9
Operating vehicle in erratic, reckless or negligent manner	1,955	3.8
Overcorrecting/oversteering	1,617	3.1
Vision obscured (rain, snow, glare, lights, building, trees, etc.)	1,540	3.0
Driving wrong way on one-way trafficway or wrong side of road	1,243	2.4
Drowsy, asleep, fatigued, ill, or blacked out	1,221	2.4
Swerving or avoiding due to wind, slippery surface, etc.	1,176	2.3
Making improper turn	635	1.2
Other factors	5,203	10.1
None reported	9,167	17.8
Unknown	16,012	31.1
Total drivers[1]	**51,490**	**100.0%**

[1]The sum of the numbers and 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 crashes. Based on data from the U.S. Department of Transportation, National Highway Traffic Safety Administration (NHTSA), 10,511 people died in alcohol-impaired crashes in 2018. 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 in most states. According to NHTSA, alcohol-impaired crash fatalities accounted for 29 percent of all crash fatalities in 2018. There was an alcohol-impaired traffic fatality every 50 minutes in 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 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 effective laws such as mandating ignition interlocks and administrative license suspension are the most effective measures against impaired driving. See Facts + Statistics: Alcohol-impaired driving for more information on state laws.

In 2018, 10,511 people were killed in crashes in which a driver had a blood alcohol concentration (BAC) of 0.08 grams per deciliter or higher, down 3.6 percent from 10,908 in 2017, according to the National Highway Traffic Safety Administration (NHTSA).

In the three years from 2016 to 2018, 29 percent of total fatalities were alcohol-impaired, the lowest percentage since 1982 when NHTSA began reporting alcohol data.

Traffic And Alcohol-Impaired Crash Fatalities, 1985-2018

Year	Total traffic fatalities	Alcohol-impaired crash fatalities[1]	
		Number	As a percent of all crash deaths
1985	43,825	18,125	41%
1990	44,599	17,705	40
1995	41,817	13,478	32
2000	41,945	13,324	32
2005	43,510	13,582	31
2006	42,708	13,491	32
2007	41,259	13,041	32
2008	37,423	11,711	31
2009	33,883	10,759	32
2010	32,999	10,136	31
2011	32,479	9,865	30
2012	33,782	10,336	31
2013	32,894	10,110	31
2014	32,744	9,943	30
2015	35,485	10,320	30
2016	37,806	10,996	29
2017	37,473	10,908	29
2018	36,560	10,511	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 in most states.

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

Percent Of Drivers Involved In Fatal Crashes Impaired By Alcohol, By Age, 2009 And 2018[1]

Age	2009	2018	Point change
16 to 20	19%	15%	-4 pts.
21 to 24	34	27	-7
25 to 34	31	25	-6
35 to 44	26	21	-5
45 to 54	22	19	-3
55 to 64	13	15	2
65 to 74	7	10	3
Over 74	3	7	4

[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 in most states.

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

Persons Killed In Total And Alcohol-Impaired Crashes By Person Type, 2018

Person type	Total killed	Alcohol-impaired crash fatalities[1]	
		Number	Percent of total killed
Vehicle occupants			
Driver	18,250	6,022	33%
Passenger	5,915	1,761	30
Unknown occupant	56	1	1
Total	**24,221**	**7,784**	**32%**
Motorcyclists	**4,985**	**1,549**	**31%**
Nonoccupants			
Pedestrian	6,283	1,004	16%
Pedal cyclist	857	130	15
Other/unknown	214	44	21
Total	**7,354**	**1,178**	**16%**
Total	**36,560**	**10,511**	**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 greater, the legal definition of alcohol-impaired driving in most states.

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 crashes. Marijuana is prohibited under the Controlled Substances Act of 1970 (CSA), which established a schedule 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, about 36 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 about 15 states and the District of Columbia 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 crashes, 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 known to involve marijuana use occurred because of the marijuana use. This compares to roughly 85 percent of crashes 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 as the cause in a fatal crash.

Compared with marijuana, determining alcohol intoxication is relatively straightforward. Alcohol is processed at a rate that allows blood alcohol concentration (BAC) to correlate closely to 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 from 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 determine accurately when a user consumed marijuana based on the THC levels in their body, and THC detection in a user post-crash does not necessarily mean that marijuana impairment contributed to a traffic crash. Currently there is no agreed-upon impairment limit above which an individual is indisputably impaired and no breathalyzer-equivalent for marijuana impairment. (For more, please see Triple-I's Background on Marijuana and Impaired Driving.)

However, research does conclude that highway crashes have risen in states with legalized recreational use marijuana laws. In 2017 the Highway Loss Data Institute (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, HLDI estimates that the frequency of collision claims rose a combined 6 percent following the introduction of retail sales of recreational marijuana in Colorado, Nevada, Oregon and Washington, compared with the control states of Idaho, Montana, Utah and Wyoming. An Insurance Institute for Highway Safety (IIHS) 2018 study examined police-reported crashes from 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 did not 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. A 2020 study by the AAA Foundation for Traffic Safety shows that the percentage of drivers in Washington involved in fatal crashes who tested positive for marijuana increased 100 percent after the state made the drug legal for recreational use. Jacob Nelson, director of safety at AAA, said that it is reasonable to assume that more fatal crashes will involve drivers who test positive for THC but the organization's officials acknowledge that the study found a correlation, however not a causative link.

Studies involving recreational marijuana laws and their effect on motor vehicle fatalities are inconclusive. *The Journal of the American Medical Association*'s Internal Medicine published the results of two studies in June 2020. The first report studied changes in fatalities from 2014 to 2017 in Colorado and Washington State after recreational marijuana laws went into effect. Researchers found that fatalities in Colorado were higher by an average of 75 per year but had not risen in Washington. While the researchers noted that factors such as the availability of recreational cannabis stores, out-of-state cannabis tourism, and local factors in part may explain differing state results, further study is needed that incorporates the identification of policies and enforcement strategies to decrease fatalities. The second study included data from the first four states to legalize recreational marijuana—Colorado, Washington, Oregon and Alaska and concluded that legalization of recreational marijuana is associated with increased traffic fatality rates. Applying their results to national driving statistics, researchers found that nationwide legalization would be associated with 6,800 excess roadway deaths each year. The study used fatality data from 2016 to 2018, when marijuana was available commercially in the four states.

A study published in the journal *Drug and Alcohol Dependence* suggests that chronic, heavy use of recreational marijuana impairs driving skills even when the driver is not high. The researchers used a driving simulator to evaluate the potential impact of cannabis use on driving performance. The study concluded that driving impairment was significantly worse among the study participants who began using marijuana regularly before age 16. The study, conducted by researchers at Harvard Medical School's McLean Hospital, found that cannabis users hit more pedestrians, exceeded the speed limit more often, and drove through more red lights compared with non-users. At the time of the study, the marijuana users had not used for at least 12 hours and were not intoxicated.

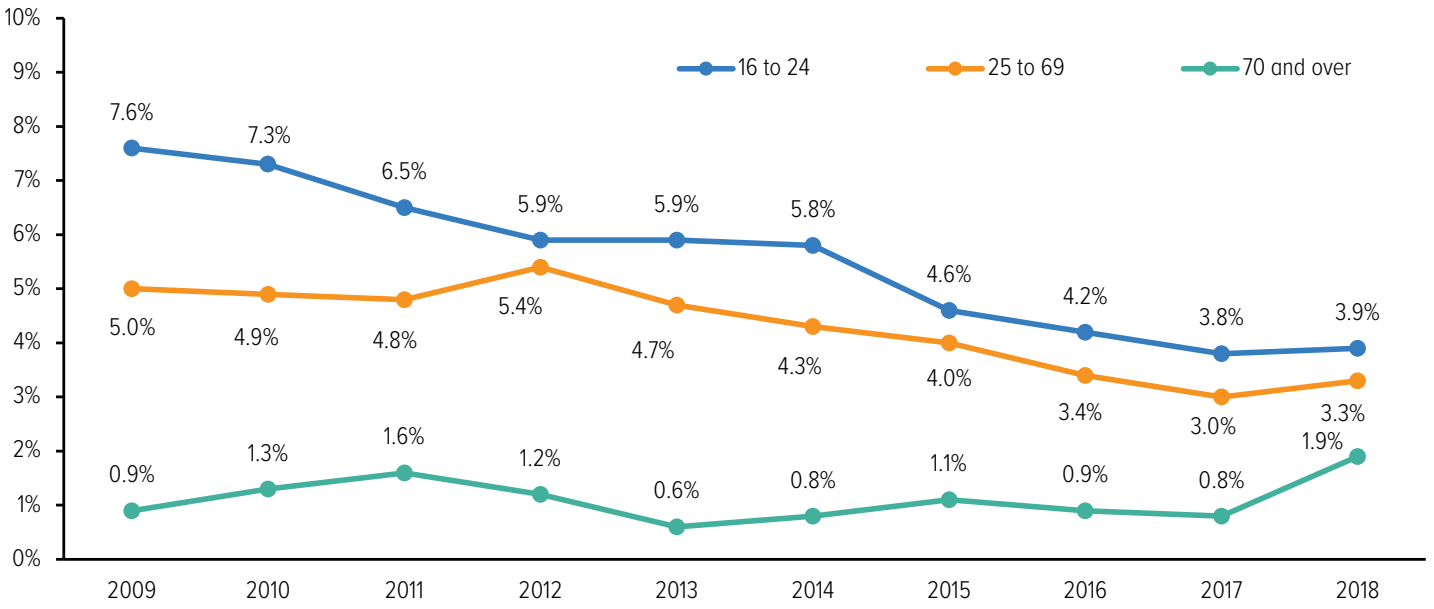
Aggressive Driving

Aggressive driving is a major factor in U.S. traffic crashes, playing a role not just in 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 2018 (almost 17 percent), followed by driving under the influence (10 percent), according to NHTSA. (See chart on p. 193, Driving Behaviors Reported For Drivers and Motorcycle Operators Involved In Fatal Crashes, 2018).

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, which focus on distractions that are most likely to result in crashes such as dialing a cellphone, texting or being distracted by another person or an outside event. In 2018, 2,841 people were killed in crashes involving distractions. There were 2,648 distraction-affected fatal crashes, accounting for 8 percent of all fatal crashes in the nation.

Driver Handheld Cellphone Use By Age, 2009-2018[1]



[1]Percent of drivers using handheld cellphones.

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

Fatal Crashes Involving Distracted Drivers, 2018

	Crashes	Drivers	Fatalities
Total fatal crashes	**33,654**	**51,490**	**36,560**
Distraction-affected fatal crashes			
Number of distraction-affected fatal crashes	2,628	2,688	2,841
Percent of total fatal crashes	8%	5%	8%
Cellphone in use in distraction-affected fatal crashes			
Number of cellphone distraction-affected fatal crashes	349	354	385
Percent of fatal distraction-affected crashes	13%	13%	14%

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

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Distraction was a factor in 8 percent of fatal crashes reported in 2018.

Cellphone use was a factor in 13 percent of all fatal distraction-affected crashes, but in only 1.0 percent of the 33,564 fatal crashes reported in 2018.

Motorcycle Helmet Use, 2000-2019[1]

Year	Percent	Year	Percent
2000	71%	2015	61%
2005	48	2016	65
2010	54	2017	65
2013	60	2018	71
2014	64	2019	71

[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.

Helmet use was highest in the West at 84 percent, about the same proportion as in 2018. In the Northeast, helmet use was 74 percent, up from 71 percent in 2018.

Helmet use was 75 percent in the South, unchanged from 2018, and 43 percent in the Midwest, down significantly from 58 percent in 2018.

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, 2017-2019 Model Years

	Claim frequency[1]	Claim severity	Overall loss[2]
Passenger cars	8.4	$6,305	$527
Pickups	6.2	6,463	398
SUVs	6.5	6,384	414
All passenger vehicles[3]	**7.2**	**$6,360**	**$457**

[1]Per 100 insured vehicle years. [2]Represents the average loss payment per insured vehicle year. [3]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 $6.4 billion was lost to motor vehicle theft in 2019. The average dollar loss per theft was $8,886. Motor vehicles were stolen at a rate of 219.9 per 100,000 people in 2019, down from 230.2 in 2018. In 2019, 721,885 vehicles were stolen, down 4.0 percent from 751,885 vehicles in 2018.

Motor Vehicle Theft, 2010-2019

Year	Vehicles stolen	Percent change
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	772,943	0.7
2018	751,904	-2.7
2019	721,885	-4.0

Source: U.S. Department of Justice, Federal Bureau of Investigation, *Uniform Crime Reports*.

Four of the top U.S. Metropolitan Statistical Area for motor vehicle theft by theft rates were in California in 2019. The other six were Kansas, Missouri, New Mexico, Texas and Washington.

Top 10 U.S. Metropolitan Statistical Areas By Motor Vehicle Theft Rate, 2019

Rank	Metropolitan Statistical Area[1]	Vehicles stolen	Rate[2]
1	Bakersfield, CA	6,538	726.28
2	Albuquerque, NM	6,399	697.05
3	St. Joseph, MO-KS	770	614.90
4	Modesto, CA	3,156	573.13
5	Odessa, TX	946	569.11
6	Topeka, KS	1,293	557.40
7	Yuba City, CA	959	546.01
8	Merced, CA	1,483	534.07
9	Yakima, WA	1,325	528.16
10	Springfield, MO	2,420	514.57

[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 2019 U.S. Census Population Estimates.

Source: National Insurance Crime Bureau.

Top 10 States With The Most And The Fewest Number Of Motor Vehicle Thefts, 2019

Most motor vehicle thefts		
Rank	State	Vehicles stolen
1	California	141,757
2	Texas	77,489
3	Florida	39,048
4	Washington	24,402
5	Georgia	23,776
6	Colorado	22,113
7	Missouri	21,072
8	Tennessee	19,180
9	Illinois	18,775
10	Ohio	18,672

Fewest motor vehicle thefts		
Rank	State	Vehicles stolen
1	Vermont	298
2	Wyoming	713
3	Maine	726
4	New Hampshire	893
5	Rhode Island	1,358
6	Idaho	1,571
7	Delaware	1,604
8	South Dakota	1,756
9	North Dakota	1,792
10	D.C.	2,333

Source: U.S. Department of Justice, Federal Bureau of Investigation, *Uniform Crime Reports*.

Top 10 Most Frequently Stolen Vehicles, 2019

All model years[1]		
Rank	Model	Thefts
1	Ford Pickup (Full size)	38,938
2	Honda Civic	33,220
3	Chevrolet Pickup (Full size)	32,583
4	Honda Accord	30,745
5	Toyota Camry	15,656
6	Nissan Altima	13,355
7	Toyota Corolla	12,137
8	Dodge Pickup (Full size)	11,292
9	GMC Pickup (Full size)	11,164
10	Honda CR-V	10,094

2019 model year vehicles only		
Rank	Model	Thefts
1	Ford Pick-Up (Full size)	1,767
2	Ram Pick-Up (Full size)	1,547
3	Jeep Cherokee/Grand Cherokee	1,110
4	Nissan Sentra	959
5	Dodge Charger	888
6	Nissan Altima	863
7	Toyota Camry	770
8	Toyota Corolla	758
9	Ford Transit	744
10	Dodge Challenger	689

[1]Includes all model years for each vehicle.
Source: National Insurance Crime Bureau.

RECREATION

Watercraft Accidents

Federal law requires owners of recreational boats and non-commercial watercraft to register them. In 2019 there were 11.9 million registered recreational watercraft, about the same as in 2018. A recreational watercraft 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 a watercraft accident than watercraft operators with zero BAC. Alcohol was a contributing factor in 330 recreational watercraft accidents in 2019 (7.9 percent of all accidents), accounting for 128 deaths (20.9 percent of all watercraft deaths) and 279 injuries (10.9 percent of all injuries). Other primary contributing factors were operator inexperience, accounting for 39 deaths, and operator inattention, resulting in 36 deaths.

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In 2019, 79 percent of fatal watercraft accident victims died by drowning, and of those, 86 percent were not wearing life jackets.

The most common types of watercraft involved in reported accidents in 2019 were open motorboats (45 percent), personal watercraft (such as Jet Skis, 19 percent) and cabin motorboats (16 percent).

Recreational Watercraft Accidents, 2015-2019[1]

Year	Accidents		Fatalities		Injuries	Property damage ($ millions)
	Total	Involving alcohol use[2]	Total	Involving alcohol use[2]		
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
2018	4,145	309	633	119	2,511	46
2019	4,168	330	613	128	2,559	55

[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 Homeland Security, U.S. Coast Guard.

Top 10 States By Recreational Watercraft Accidents, 2019[1]

Rank	State	Accidents	Deaths	People injured	Property damage ($000)
1	Florida	679	62	421	$9,232
2	California	324	39	199	7,301
3	Texas	184	43	122	2,012
4	New York	165	17	119	5,615
5	Missouri	145	18	103	1,261
6	South Carolina	141	15	108	1,287
7	Maryland	130	16	101	866
8	Michigan	128	22	74	527
8	North Carolina	128	16	72	2,418
8	Ohio	128	13	61	2,516

[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 Homeland Security, U.S. Coast Guard.

Watercraft Thefts

In 2019 there were 4,240 watercraft thefts in the United States, up 6 percent from 2018, according to an analysis of FBI data by the National Insurance Crime Bureau. Watercraft include motorboats, sailboats, personal watercraft (such as Jet Skis) and other vessels. Of these thefts, 1,745, or 41 percent, were recovered by March 2020. Personal watercraft were the most frequently stolen watercraft, with 1,049 thefts. This was followed by: runabouts (small motorboats) with 466 thefts; utility boats that have outboard power and are used for fishing or as work boats (261 thefts); cruisers; boats with inboard motors at least 25 feet long but no longer than 50 feet (193 thefts); and sailboats (45 thefts). On average, there were 12 watercraft thefts a day in 2019. By month, the highest number of reported thefts was in July (543), while December had the fewest (205).

Florida had the most watercraft stolen in 2019 (942), followed by California and Texas with 475 and 332 thefts, respectively. Rounding out the top five were North Carolina (193) and South Carolina (147). Six of the top 10 counties for watercraft theft were in California (Sacramento, Contra Costa, Los Angeles, San Diego, San Joaquin and Riverside).

Florida had the most watercraft stolen in 2019 (942); followed by California and Texas with 475 and 332 thefts, respectively. Rounding out the top five were North Carolina (193) and South Carolina (147). Six of the top 10 counties for watercraft theft were in California: Sacramento; Contra Costa; Los Angeles; San Diego; San Joaquin; and Riverside.

Top 10 States By Recreational Watercraft Theft, 2019[1]

Rank	State	Thefts[2]
1	Florida	942
2	California	475
3	Texas	332
4	North Carolina	193
5	South Carolina	147
6	Louisiana	145
7	Washington	136
8	Tennessee	135
9	Georgia	124
10	Alabama	123

[1]Through March 10, 2020. [2]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), in 2019 exercise, with or without exercise equipment, accounted for about 468,000 injuries, the most of any category of sports and recreation. Bicycling followed with about 417,000 injuries, while basketball with 404,000 injuries, and football, with 292,000 injuries, ranked third and fourth.

Concern is growing about the risks of sports-related concussions, and 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, being struck by another person or object is the leading cause of unintentional injury for teens and young adults ages 15 to 24. Sports-related concussions are a significant factor. The Brain Injury Research Institute estimates that 1.6 million to 3.8 million athletes annually suffer concussion. The Centers for Disease Control and Prevention reports that in 2016, an estimated 273,272 children (age 17 or younger) were treated in U.S. emergency departments (EDs) for nonfatal traumatic brain injuries (TBIs) related to sports and recreation. The 2016 number is down 9.8 percent from a peak of 302,966 in 2012, possibly due to prevention efforts, changes in participation and changes in how care is sought for injured children. In the years from 2010 to 2016, the CDC reports that TBIs that occurred in contact sports accounted for approximately 45 percent of all sports and recreation related TBI ED visits. Activities associated with the highest number of ED visits were football, bicycling, basketball, playground activities and soccer.

The NSC reports that there were about 191,000 swimming injuries treated in EDs in 2019, with children between the ages of five and 14 suffering about half of all injuries. A report by the Consumer Product Safety Commission found that between 2017 and 2019, 76 percent of children treated in EDs for pool related nonfatal drowning injuries were younger than five years of age.

Sports Injuries By Number of Injuries, 2019

Sport, activity or equipment	Injuries[1]	Number of injuries by age				
		Younger than 5	5 to 14	15 to 24	25 to 64	65 and older
Exercise, exercise equipment	468,315	6,266	46,926	87,189	250,747	77,187
Bicycles and accessories	417,485	12,691	113,445	58,072	191,049	42,228
Basketball	403,980	1,250	139,733	185,316	76,066	1,615
Football	292,306	429	149,149	116,946	25,131	651
Playground equipment	222,527	54,372	148,577	7,256	10,376	1,946
ATV's, mopeds, minibikes, etc.	201,847	4,407	37,831	51,686	89,833	18,090
Swimming, pools, equipment	190,743	21,811	77,296	31,309	47,457	12,871
Soccer	188,336	2,060	84,938	71,030	29,569	739
Baseball, softball	157,164	2,380	65,058	48,188	38,211	3,327
Skateboards	148,921	2,837	46,071	51,864	44,891	3,257
Trampolines	123,029	23,979	74,378	12,711	11,625	336
Lacrosse, rugby, misc. ball games	74,326	163	28,310	22,613	13,371	9,869
Skating (excl. In-line)	67,008	833	31,293	12,980	20,611	1,291
Fishing	61,932	1,926	11,987	9,542	31,028	7,449
Volleyball	51,455	32	18,479	22,652	9,674	618
Horseback riding	43,469	963	8,200	9,650	20,563	4,093
Hockey	36,885	200	12,268	14,951	9,060	407
Track and field activities, equipment	28,048	0	11,287	12,274	4,189	298
Martial arts	27,008	288	7,720	6,868	11,583	549
Racquet sports	25,844	250	3,408	4,091	9,229	8,867
Beach, picnic, camping equipment	25,728	2,803	4,391	2,526	11,797	4,212
Water skiing, tubing, surfing	18,143	98	2,186	5,932	9,389	538
Bowling	16,615	938	1,293	2,478	7,762	4,145
Boxing	16,071	23	2,001	7,000	6,976	71
Nonpowder guns, BB'S, pellets	11,995	369	3,583	4,052	3,460	530
Toboggans, sleds, snow discs, etc.	10,661	942	4,950	1,255	3,398	115

[1]Treated in hospital emergency departments.

Source: National Safety Council analysis of U.S. Consumer Product Safety Commission NEISS data. National Safety Council, *Injury Facts®*.

ATV Accidents

Children under the age of 16 accounted for 26 percent of all people injured in accidents involving all-terrain vehicles (ATVs) in 2018, 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, 2014-2018[1]

	Estimated number of deaths			Estimated number of injuries[2]		
		Younger than 16			Younger than 16	
Year	Total	Number	Percent of total	Total	Number	Percent of total
2014	588	73	12%	93,700	24,800	26%
2015	593	88	15	97,200	26,700	28
2016	591	65	11	101,200	26,800	26
2017	463	67	14	93,800	24,800	26
2018	264	27	10	81,800	21,700	26

[1]ATVs with 3, 4 or unknown number of wheels. Data for deaths for 2017 and 2018 are preliminary. [2]Emergency room-treated.
Source: U.S. Consumer Product Safety Commission.

AVIATION

There were 1,302 civil aviation accidents in 2019, down from 1,347 civil aviation accidents in 2018. However, total fatalities rose to 414 in 2019 from 379 in 2018.

In 2019 there was one fatality on a large scheduled commercial airline, same as in 2018. There were three fatalities on large nonscheduled airlines (charter airlines), breaking a five-year trend with no fatalities.

Small commuter airlines had two accidents in 2019, while there were none in 2018. There were nine fatalities in 2019 and two in 2018.

The number of small on-demand airline (air taxi) accidents fell to 34 in 2019, from 40 in 2018. There were 32 fatalities on air taxis in 2019, up from 16 in 2018.

There were 1,220 general aviation (noncommercial) accidents in 2019, down from 1,275 in 2018. 2019 accidents resulted in 414 deaths, up from 379 in 2018.

U.S. Aviation Losses

In the United States the National Transportation Safety Board compiles data on aviation flight hours, accidents and fatalities for commercial and general aviation, which is private transport and recreational flying.

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. 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 2019 about 813 million passengers flew on commercial airlines in the United States. The Federal Aviation Administration projects that about 1.3 billion people will fly on commercial airlines in the United States annually by 2040.

Aircraft Accidents In The United States, 2019[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	19,180,620	36	1	1	0.188
Nonscheduled	605,927	4	1	3	0.660
Less than 10 seats					
Commuter	415,162	9	1	2	2.168
On-demand	3,765,242	34	12	32	0.903
General aviation[3]	**21,800,689**	**1,220**	**233**	**414**	**5.592**
Total civil aviation	**NA**	**1,302**	**248**	**452**	**NA**

[1]Preliminary data. Totals do not add because of collisions involving aircraft in different categories. [2]Includes nonpassenger deaths. [3]Private transport and recreational flying. NA=Data not available.

Source: National Transportation Safety Board.

Large Airline Accidents In The United States, 2010-2019[1]

Year	Flight hours	Total accidents	Fatal accidents	Total fatalities[2]	Total accidents per 100,000 flight hours
2010	17,750,986	30	1	2	0.169
2011	17,962,965	33	0	0	0.184
2012	17,722,236	27	0	0	0.152
2013	17,779,641	22	2	9	0.124
2014	17,742,826	31	0	0	0.175
2015	17,925,780	28	0	0	0.156
2016	18,294,057	30	0	0	0.164
2017	18,581,388	33	0	0	0.178
2018	19,288,296	31	1	1	0.161
2019[3]	19,786,547	40	2	4	0.202

[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 4.5 billion people flew safely on 46.8 million flights in 2019, according to the International Air Transport Association. The global all-accident rate (including substantial damage and hull loss accidents for IATA and non-IATA jets and turboprops) fell to 1.13 in 2019, an improvement from the rate of 1.36 in 2018 and the rate for the previous 5-year period (2014-2018) of 1.56. A hull loss is an accident in which the aircraft is destroyed or substantially damaged and is not subsequently repaired. Western-built aircraft are commercial jet transport aircraft with a maximum certificated takeoff weight of more than 15,000 kg, designed and manufactured in the West. There were 53 accidents in 2019 (on Eastern- and Western-built aircraft), down from 62 in 2018.

World Aviation Accidents, 2015-2019

Year	Accidents[1]		Fatalities[1]	Accident rate[2]
	Total	Fatal		
2015	67	4	136	0.32
2016	64	8	198	0.37
2017	46	6	19	0.11
2018	62	11	523	0.18
2019	53	8	240	0.15

[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	Mt. Osutaka	Japan	JAL	520
3	Mar. 3, 1974	Ermenonville	France	Turkish Airlines	346
4	Jun. 23, 1985	Atlantic Ocean		Air India	329
5	Nov. 12, 1996	New Delhi	India	Saudi Arabian Airlines, Kazakhstan Airlines	312
6	Aug. 19, 1980	Riyahd	Saudi Arabia	Saudi Arabian Airlines	301
7	Jul. 17, 2014	Shakhtarsk	Ukraine	Malaysia Airlines	298
8	Jul. 3, 1988	Persian Gulf	Iran	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: © B3A – Ronan HUBERT – Bureau of Aircraft Accidents Archives.

Drones

Drones are unmanned aircraft systems (UAS) that are remotely controlled and include small hobbyist models and commercial and military aircraft. The number of small hobbyist drones registered in the United States totaled 1.1 million units in 2019, according to the Federal Aviation Administration (FAA). Commercial drone registrations totaled about 412,000 in 2019. Since December 2015 the FAA requires 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. Larger drones—weighing more than 55 pounds—must register using the FAA's aircraft registry.

At the end of 2019 the FAA published a proposed rule establishing requirements for the remote identification of mostly commercial drones operated in the United States. Remote identification would enable a drone in flight to provide identification and location information that people on the ground and other airspace users can receive. The FAA says that this ability is important as drone operations in all classes of airspace increases and would provide information to law enforcement and other officials that ensure public safety. This rulemaking is the first step in creating a remote identification system which would later involve a network of service suppliers operating under contract with the FAA. All drones, whether hobbyist or commercial weighing more than 0.55 pounds that currently must be registered and marked will be included under the new rule. The FAA estimates that it will take three years from the effective date of the rule for all drones to be compliant with the remote identification requirements. Companies such as Amazon and UPS have already been approved to begin unmanned package deliveries.

Homeowners: If a drone is damaged in an accident it is most likely covered under **a homeowners or renters insurance policy** (subject to a deductible).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 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 your 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 **auto insurance's** optional comprehensive insurance.

Commercial: Drones are now employed in many industries that depend on aerial imagery, such as agriculture, insurance, construction, energy and others. A handful of insurers have entered the market for drone insurance and have created coverage tailored to drones and their equipment. General liability insurance policies commonly contain exclusions for aviation activities. Commercial drone owners and operators can purchase insurance to cover **liability for bodily injury and property damage** caused by a drone, and physical damage to the drone, also known as **hull coverage**. Other coverages insure equipment, remote control systems and payloads.

WORKPLACE

Workplace Losses

According to the National Safety Council (NSC), the total cost of unintentional workplace injuries in 2018 was an estimated $170.8 billion. This figure includes wage and productivity losses of $52.4 billion, medical costs of $35.0 billion and administrative expenses of $57.6 billion. Other employer costs include uninsured losses of $12.8 billion, $4.9 billion in motor vehicle damage and fire losses of $8.2 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 NSC uses terms such as unintentional deaths and injuries and preventable deaths and injuries to mean those that do not include natural causes of death; or intentional events such as homicides and suicides. This is also to point out that preventable injuries can be avoided, and that these deaths can be eliminated. The NSC data show that the number of workplace fatalities from preventable unintentional injuries increased 2 percent in 2018 to 4,493 compared with 4,414 in 2017. In 2018 the construction industry suffered the largest number of unintentional injury deaths, followed by transportation and warehousing industries.

Workplace Losses And Deaths, 2009-2018

Year	Workers[3] (000)	Economic loss[1] ($ millions)		Fatalities[2]	
		Dollars when occurred	In 2018 dollars[4]	Number	Per 100,000 workers[5]
2009	141,102	$168,900	$197,649	4,551	2.9
2010	140,298	176,900	204,485	4,690	3.0
2011	140,298	188,900	210,710	4,692	3.0
2012	143,709	198,200	218,013	4,628	3.0
2013	145,171	206,100	222,343	4,585	2.9
2014	146,307	140,000	148,083 (5)	4,821	3.0
2015	150,031	142,500	150,472	4,836	3.0
2016	152,632	151,000	158,140	5,190	3.1
2017	154,511	161,500	166,263	5,147	3.1
2018	156,948	170,800	170,800	5,250	3.1

[1]Economic loss from unintentional injuries. These estimates are not comparable from year to year. [2]Preventable deaths 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 2018 dollars by the Insurance Information Institute using the Bureau of Labor Statistics' Inflation Calculator. [5]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: Deaths reflect National Safety Council (NSC) analysis of data from the Bureau of Labor Statistics (BLS) Census of Fatal Occupational Injuries (CFOI). Economic loss and fatalities are NSC estimates based on data from BLS. Economic loss in 2018 dollars calculated by the Insurance information Institute using the Bureau of Labor Statistics Inflation Calculator.

In 2018 the loss per worker for work injuries was $1,100, measured by the value of goods and services each worker must produce to offset the cost of work injuries, as opposed to the average cost of a work-related injury.

Top 10 Private Industry Sectors By Number Of Nonfatal Occupational Injuries And Illnesses, 2018

Rank	Industry	Number (000)	Percent of total private industry
1	Healthcare and social assistance	577.5	20.4%
2	Manufacturing	430.3	15.2
3	Retail trade	409.9	14.5
4	Accommodation and food services	278.6	9.8
5	Transportation and warehousing	221.4	7.8
6	Construction	199.2	7.0
7	Wholesale trade	160.8	5.7
8	Administrative and waste services	118.6	4.2
9	Miscellaneous services	72.7	2.6
10	Professional and technical services	70.5	2.5
	Total, top 10	**2,539.5**	**89.6%**
	Total, private industry	**2,834.5**	**100.0%**

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

The top 10 industries combined accounted for 89.6 percent of all injury and illness cases reported among private industry workplaces in 2018.

Top 10 Private Industry Occupations With The Largest Number Of Injuries And Illnesses, 2019[1]

Rank	Occupation	Number	Percent of total
1	Laborers[2]	64,160	7.2%
2	Truck drivers, heavy and tractor-trailer	47,990	5.4
3	Nursing assistants	27,590	3.1
4	Stockers and order fillers	27,390	3.1
5	Retail salespersons	24,870	2.8
6	Light truck drivers	23,070	2.6
7	General maintenance and repair workers	21,490	2.4
8	Registered nurses	20,150	2.3
9	Construction laborers	19,790	2.2
10	Janitors and cleaners	18,680	2.1
	Total, top 10	**295,180**	**33.2%**
	Total, all occupations	**888,220**	**100.0%**

[1]Nonfatal injuries and illnesses involving days off from work for private industries; excludes farms with fewer than 11 employees. [2]Laborers and freight, stock and material movers.
Source: U.S. Department of Labor, Bureau of Labor Statistics

Causes Of Workplace Deaths

According to the U.S. Department of Labor, in 2018 the highest rate of workplace fatalities was among logging workers, fishing industry workers, aircraft pilots and flight engineers, and roofers. These workers had fatality rates that were more than 10 times the all-worker rate of 3.5 deaths per 100,000 workers.

Workplace Deaths By Selected Cause, 2017-2018[1]

Cause	2017	2018	
	Number	Number	Percent of total
All transportation (includes vehicle crashes)	2,077	2,080	40%
Vehicle crashes[2]	1,299	1,276	24
Falls	887	791	15
Intentional injury by person (includes homicides)	733	757	14
Homicides	458	453	9
Contact with objects and equipment	695	786	15
Exposure to harmful substances or environments	531	621	12
Fires and explosions	123	115	2
Total workplace fatalities	**5,147**	**5,250**	**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, 2010-2019[1] ($ billions)

Year	Beginning reserve	Losses		Ending reserve[3]
		Incurred[2]	Paid	
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
2018	16.8	0.8	1.9	15.7
2019	15.7	1.1	1.7	15.1

[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 2019 incurred asbestos losses rose 33 percent to $1.1 billion from $0.8 billion in 2018.

HOME

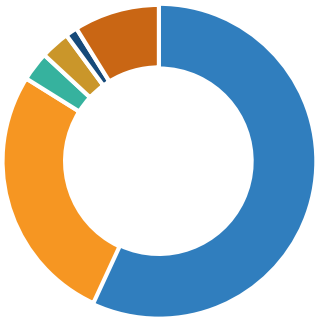
In 2018, 25 million Americans experienced an unintentional injury in the home that required aid from a medical professional, according to an analysis by the National Safety Council (NSC). Injuries requiring medical attention occur more often at home than in public places, the workplace, and motor vehicle crashes combined, according to the NSC. There were 89,300 deaths from unintentional home injuries in 2018, down 1.4 percent from 2017. The overall death rate has remained almost unchanged over the past 100 years, at 27.3 deaths per 100,000 people in 2018 from 28 deaths per 100,000 people in 1912. However, the number of unintentional home injury deaths has increased by 150 percent since 1999, largely due to increases in unintentional poisonings and falls. Drug overdoses are largely responsible for these poisoning deaths and there has been an increase in falls by older adults.

Unintentional Home Deaths And Injuries, 2018

Deaths	Medically consulted injuries	Death rate per 100,000 population	Costs
89,300	25,000,000	27.3	$320.1 billion

Source: National Safety Council estimates based on data from National Center for Health Statistics and state vital statistics departments.

Principal Types Of Home Unintentional Injury Deaths, 2018



Poisoning	50,800	56.9%
Falls	24,100	27.0
Choking[1]	2,700	3.0
Fire, flames or smoke	2,700	3.0
Drowning	1,100	1.2
Other	7,900	8.8
Total	**89,300**	**100.0%**

[1]Inhalation and ingestion of food or other object that obstructs breathing.
Source: National Safety Council estimates based on data from National Center for Health Statistics and state vital statistics departments.

CAUSES OF DEATH

Mortality risks

In February 2020 a new mortality risk emerged. The novel coronavirus disease 2019, known as COVID-19, was officially identified by the World Health Organization (WHO). The first outbreak was detected in Wuhan, China, in January 2020. Symptoms of the disease generally include mild to severe respiratory illness with fever, cough, and difficulty breathing, although some who contract the virus may be asymptomatic and contagious. By April the virus had spread to every continent except Antarctica. By the end of 2020 the WHO reported that there were 84 million cases worldwide and 1.8 million people had died from the virus. Updates from the WHO can be found here.

In the United States the first confirmed case of COVID-19 infection was reported on January 20, 2020 in Snohomish County, Washington. By April the virus was reported in all 50 states and most territories. According to the U.S. Centers for Disease Control and Prevention, by the end of 2020 there were 21 million cases of COVID-19 in the United States and the virus had claimed 350,000 lives. Daily updates are available here. The number of COVID-19 deaths in the United States is larger than the number of U.S. combat deaths during World War II.

Top 10 Major Causes of Death, 2018

Rank	Cause of death	Number of deaths	Age-adjusted death rate[1]	
			Rate	Percent change from 2017
1	Heart disease	655,381	163.6	-0.8%
2	Malignant neoplasms (tumors)	599,274	149.1	-2.2
3	Accidents (unintentional injuries)	167,127	48.0	-2.8
4	Chronic lower respiratory diseases	159,486	39.7	-2.9
5	Cerebrovascular diseases (stroke)	147,810	37.1	-1.3
6	Alzheimer's disease	122,019	30.5	-1.6
7	Diabetes	84,946	21.4	-0.5
8	Influenza and pneumonia	59,120	14.9	4.2
9	Kidney disease	51,386	12.9	-0.8
10	Intentional self-harm (suicide)	48,344	14.2	1.4
	All other causes	**744,312**	**26.2**	**NA**
	All deaths	**2,839,205**	**723.6**	**-1.1%**

[1]Per 100,000 population; factors out differences based on age.
NA=Not applicable.
Source: National Center for Health Statistics.

Heart disease was the leading cause of death in the United States, accounting for 655,381 fatalities in 2018, the latest year for which final data exist, according to the National Center for Health Statistics. Age-adjusted death rates (which factor out differences based on age) fell in 2018 compared with 2017 for eight out of the 10 leading causes of death. However, there was a significant increase in the 2018 death rate for influenza and pneumonia, which ranked eighth in 2018, with 59,120 fatalities. 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.

Gun Deaths And Injuries

The number of U.S. deaths by firearms, which are defined as the types of guns that can be carried by a person, is higher than the number of Americans killed in motor vehicle crashes. In 2018 about 39,740 people died by firearms, down 0.1 percent from 39,773 deaths in 2017. According to latest data from the National Highway Traffic Administration, 36,096 people died in U.S. motor vehicle crashes in 2019. (See data here.)

The economic cost of gun violence is significant. A 2019 report by the Joint Economic Committee of the United States Congress found that the annual cost of gun violence to the U.S. economy is $229 billion, or 1.4 percent of the gross domestic product. The study, based on data from the Giffords Law Center to Prevent Gun Violence and the U.S. Centers for Disease Control, classified the economic cost of gun violence into two parts: direct and indirect measurable costs. Direct measurable costs include lost income and spending, employer costs, police and criminal justice responses and health care treatment. Indirect costs include the reduced quality of life resulting from pain and suffering. Among the states, the three largest states, California, Texas and Florida, incurred the largest absolute costs. Rural states, notably Mississippi, Alabama, Arkansas, Louisiana and West Virginia, have the highest costs of gun violence measured as a share of their economies. 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 John 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 cost of readmissions, rehabilitation, disability, home medications or loss of work.

Deaths By Firearms, 2017 And 2018

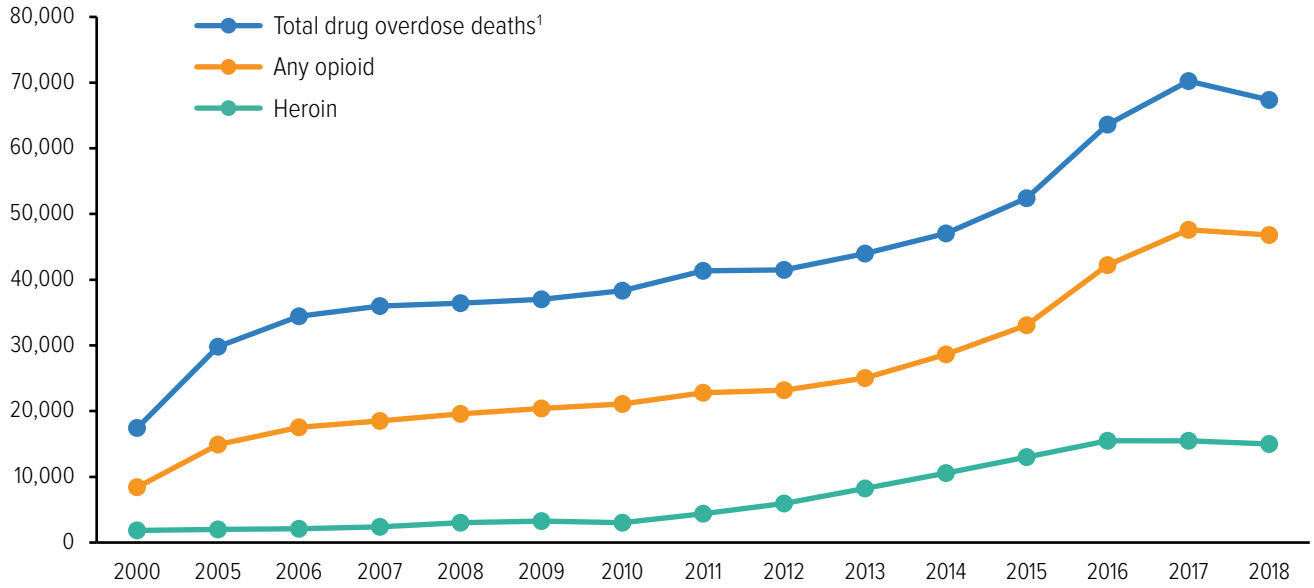
	Number		Percent of total	
Deaths caused by firearms[1]	2017	2018	2017	2018
Accidental discharge of firearms	486	458	1.2%	1.2%
Suicide by firearm	23,854	24,432	60.0	61.5
Assault (homicide) by firearm	14,542	13,958	36.6	35.1
Legal intervention	553	539	1.4	1.4
Undetermined intent	338	353	0.8	0.9
Total	**39,773**	**39,740**	**100.0%**	**100.0%**

[1]The term firearms refers to guns that can be carried by a person and does not refer to larger classes of guns.
Source: Centers for Disease Control and Prevention, National Vital Statistics Report.

The Opioid Crisis In The United States

Opioid abuse and addiction is 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 2017 deaths from drug overdoses increased four-fold from 17,415 in 2000 to 70,237 in 2017, according to the Centers for Disease Control and Prevention (CDC). In 2018 drug overdose deaths fell 4.1 percent from 2017 to 67,367. 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 2018 that proportion had grown close to 70 percent. Heroin alone accounted for 11 percent of all drug overdose deaths in 2000 and grew to 22 percent in 2018.

Number Of Drug Overdose Deaths, 2000-2018



[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. For short-duration use, the study found that 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. For long-duration use, 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 the pharmaceutical companies that they hold responsible for the current opioid epidemic. The lawsuits attempt to seek reimbursement for healthcare expenses, substance abuse treatment, social services, court and correctional expenses and other costs resulting from opioid abuse. In 2018 around 2,300 lawsuits against opioid manufacturers, distributors and pharmacies were consolidated under one federal judge. The plaintiffs included almost 200 municipal governments, all pursuing reimbursement for the costs of drug addiction and its collateral damage. One case, the State of Oklahoma v. Purdue Pharma, was settled in March 2019 as the company and its owners, the Sackler family, ultimately agreed to pay $270 million. This was the first class-action settlement related to opioid litigation. The company declared bankruptcy in September. In October 2020 Purdue Pharma pled guilty to three criminal charges brought by the U.S. Justice Department for conspiracy to defraud the United States, violate an anti-kickback law and false representation. The company faces more than $8 billion in financial penalties. In October 2019 the court of the Northern District of Ohio was set to try three consolidated Ohio lawsuits in a test case against four entities—three distributors and one manufacturer. The case was ultimately settled for $260 million, with the money designated to help fight opioid addiction.

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 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 catastrophes 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, 1990-2019[1]

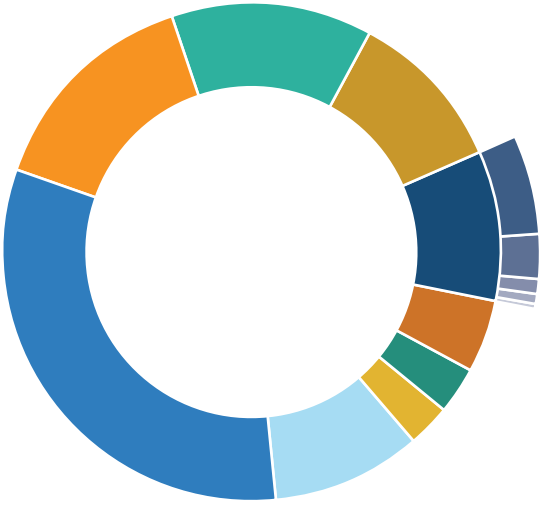
	1990	1995	2000	2005	2010	2015	2018	2019
Housing[2]	30.0%	31.7%	31.7%	31.9%	33.7%	32.1%	32.0%	32.0%
Transportation[2]	15.9	16.4	17.5	16.0	13.9	15.0	14.3	14.6
Food	15.0	14.0	13.6	12.8	12.7	12.5	12.9	13.0
Retirement[3]	8.8	8.0	7.8	10.4	10.5	10.7	11.2	10.5
Other	10.6	10.2	10.5	10.4	10.4	10.1	10.0	9.7
Total insurance	5.8	6.8	6.3	6.5	7.3	8.7	8.7	9.7
Health	2.0	2.7	2.6	2.9	3.8	5.3	5.6	5.6
Vehicle	2.0	2.2	2.0	2.0	2.1	1.9	1.6	2.5[4]
Homeowners and tenants	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	0.7	0.8
Other insurance	0.1	0.1	0.1	0.1	[5]	[5]	0.1	0.1
Entertainment	5.0	5.0	4.9	5.1	5.2	5.1	5.3	4.9
Clothing	5.7	5.3	4.9	4.1	3.5	3.3	3.0	3.0
Healthcare[2]	3.1	2.7	2.8	2.8	2.8	2.4	2.6	2.6

[1]Ranked by 2019 expenditures. [2]Excludes insurance. [3]Mostly payroll deductions for retirement purposes such as Social Security (79 percent of retirement expenditures), government and private pension plans (10 percent) and nonpayroll deposits such as IRAs (11 percent) in 2019. [4]In 2019 the Bureau of Labor Statistics changed the data source used to estimate spending on vehicle insurance from the Diary Survey to the Interview Survey after it determined that the Interview Survey provided a better measure of spending for the category. [5]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, 2019



Housing[1]	32.0%
Transportation[1]	14.6
Food	13.0
Retirement	10.5
All Insurance	9.7
Health	5.6
Vehicle	2.5
Homeowners	0.8
Life	0.8
Other	0.1
Entertainment	4.9
Clothing	3.0
Healthcare[1]	2.6
Other	9.7

[1]Excludes 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 9.7 percent of household spending in 2019, up from 8.7 percent in 2018 as the vehicle insurance share grew to 2.5 percent of household spending, up from 1.6 percent in 2018 as a result of survey changes (see footnote 4 in the chart, Insurance Expenditures As A Percent Of Total Household Spending). The share spent on health insurance remained the same: 5.6 percent of household spending in both 2018 and 2019. The share spent on life insurance rose 0.1 percentage point to 0.8 percent in 2019, while the share spent on homeowners and tenants insurance remained the same at 0.8 percent in both 2018 and 2019.

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 1.8 percent in 2019. The cost of motor vehicle insurance rose at a slower pace, 0.9 percent, while hospital services rose faster, 2.0 percent. The cost of tenants and household insurance rose 0.7 percent, and total medical care rose 2.8 percent.

Consumer Price Indices For Insurance And Related Items And Annual Rates Of Change, 2010-2019

(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
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
2018	251.1	2.4	566.0	7.4	484.7	2.0	380.5	0.1	332.2	4.4
2019	255.7	1.8	571.0	0.9	498.4	2.8	383.2	0.7	338.8	2.0
Percent change, 2010-2019		**17.2%**		**52.2%**		**28.3%**		**15.7%**		**49.1%**

Year	Motor vehicle body work		New vehicles		New cars		New trucks[2]	
	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change
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
2018	302.7	2.8	146.3	-0.5	142.0	-0.5	155.8	-0.5
2019	313.5	3.5	146.8	0.4	142.8	0.6	156.3	0.3
Percent change, 2010-2019		**23.2%**		**6.4%**		**3.4%**		**9.5%**

(table continues)

Consumer Price Indices For Insurance And Related Items And Annual Rates Of Change, 2010-2019 (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
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	6.5
2013	149.9	-0.3	135.4	3.1	206.7	4.0	311.8	2.8	197	11.4
2014	149.1	-0.5	141.9	4.8	212.4	2.8	318.5	2.1	208	5.7
2015	147.1	-1.3	146.4	3.2	220.1	3.6	323.6	1.6	224	7.5
2016	143.5	-2.5	147.7	0.9	226.3	2.8	334.5	3.4	236	5.2
2017	138.3	-3.6	148.8	0.7	239.3	5.8	346.4	3.6	249	5.6
2018	138.4	0.1	150.7	1.3	253.7	6.0	361.2	4.3	262	5.1
2019	139.8	1.0	151.8	0.7	268.7	5.9	364.8	1.0	275	4.9
Percent change, 2010-2019		**-2.4%**		**20.8%**		**47.9%**		**26.6%**		**59.0%**

[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. NA=Data not available

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 or 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 (P/C) insurance industry's incurred losses each year. Using that measure, in 2018 and 2019 P/C fraud would amount to $37 billion each year. The amount of fraud experienced in a particular year can fluctuate based on the line of business, economic conditions and other factors, such as the constantly evolving nature of fraud. Recent reports suggest that the proportion of fraud may be as much as double the 10 percent. In a FRISS study, *Insurance Fraud Report 2020: The Impacts Of COVID-19 On AI And Digitalization In Insurance,* respondents to an annual global survey believe 18 percent of all claims on average contain an element of fraud, inflation or misrepresentation. The report also found that at a 2019 International Association of Special Investigation Units (IASIU) conference, investigators believed the proportion of fraud in global insurance claims to be 22 percent. Using all three measures would point to an estimate of fraud of between $37 billion and $81 billion on average for 2018 and 2019.

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 fraud, and fosters fraud awareness, see nicb.org. The FBI says that insurance fraud (excluding health insurance) costs more than $40 billion each year, or an increase in insurance premiums of between $400 and $700 yearly for the average American family.

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 on the front lines combating insurance fraud despite the increase in the number of states that have passed laws to criminalize such fraud. By 2016 every state and Washington, D.C. had enacted laws that classify fraud as a crime at least for some lines of insurance and have instituted immunity for reporting insurance fraud. Most states and the District of Columbia have fraud bureaus or divisions where fraud can be reported, investigated and prosecuted. About two dozen states and the District of Columbia require insurers to create and implement programs to reduce insurance

fraud. Many P/C 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. See chart, Key State Laws Against Insurance Fraud in Facts + Statistics, Fraud.

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 such as using automated red flags and business rules have been augmented by predictive modeling link analysis, which examines the relationships between items like people, places and events. Artificial intelligence can be used, along with other tools, to uncover fraud before a payment is made. These 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. In search of refinement, insurers are blending tools to improve their fraud detection programs. Programs that scan many insurance claims have been enhanced by the consolidation of insurance industry claims databases, such as ClaimSearch, from the Insurance Services Office (ISO), 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.

A 2019 report published by the Coalition Against Insurance Fraud and the SAS Institute, *State of Insurance Fraud Technology*, based on an online survey of 84 mostly P/C insurers conducted in late 2018, found that nearly three-quarters of the survey participants said fraud had increased either significantly or slightly in the previous three years. About 40 percent of insurers polled said their technology budgets for 2019 would be larger, with predictive modeling and link or social network analysis the two most likely types of programs considered for investment. About 90 percent of respondents said they use technology primarily to detect claims fraud, a significant increase from 2016, and about half said they use it to combat underwriting fraud, up from 27 percent in 2016. The greatest challenges for insurers were limited IT resources, affecting about three-quarters of insurers, about the same as in 2016, followed by problems in data integration, with 76 percent reporting the problem, up from 64 percent in 2016.

The *2020 Insurer SIU Benchmarking Study* published by the Coalition Against Insurance Fraud found that insurers are increasing office investigators and using fewer field agents in their special investigating units, increasing outsourcing investigators and legal help, and focusing on larger and more complex cases. Although field investigators account for more than half of SIU personnel, the number of desk investigators grew to 16 percent of all investigators by 2019 and have likely risen during the COVID-19 pandemic and will do so post-pandemic. Expense is a factor in using desk investigators, which are about one-third less expensive than field investigators. Overall, SIUs focus more on large fraud rings that steal the most money rather than smaller scams, resulting in time and money savings. Outsourcing both surveillance and investigation has increased by 25 percent between 2017 and 2019, while outsourcing fraud-related legal services grew from 30 percent to 40 percent by 2019.

FRISS's report, *Insurance Fraud Report 2020: The Impacts Of COVID-19 On AI And Digitalization In Insurance*, says that the COVID-19 pandemic caused significant impacts to businesses. As noted by industry experts, recessions lead to higher incidence of fraud, and an increase in digital processes allows more opportunity for fraud, conditions that are

present during the current pandemic. The FRISS study found that 65 percent of the 443 respondents from 52 countries are focusing on digitalization, and one-third have increased fraud checks. FRISS also identified the top three fraud schemes occurring during the pandemic as the following: staged vehicle accidents and thefts; fraudulent procedure billing and phantom services; and faked home accidents. Even more alarming was the finding that 43 percent of respondents have reduced the funding of their operations due to the pandemic. Currently 68 percent of respondents are using automated red flags and business rules programs to combat fraud. Sixty-four percent rely on the experience of their fraud staff and 38 percent still rely on "homegrown" solutions, including instinct and manual methods to prevent and predict fraud. When asked what benefits respondents saw in adopting fraud detection software, three out of five cited improved loss ratios and half cited real-time detection. Insurers are also reviewing and adopting improved underwriting standards: about half of respondents reported introductions of new standards. The study says that most carriers are examining internal claim and policy history, and known fraud cases and lists. However less than half review loss information and payment history, which FRISS identifies as key factors of financial distress and propensity to perpetrate fraud.

Curbing Florida's Assignment of Benefits Abuse

In 2019 legislators in Florida began to tackle the assignment of benefits (AOB) issue that had been plaguing the insurance industry for many years by passing AOB reform legislation that became law on July 1, 2019. At issue was the practice where a policyholder grants a third party–an auto glass repair company, a medical practitioner, or a home contractor–permission to directly bill an insurer to settle a claim. In Florida, abuse of AOBs fueled an insurance crisis. The pre-reform legal environment 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. This mini-industry cost consumers billions of dollars as they were forced to pay higher premiums to cover needless repairs and excessive legal fees. The problem was once limited to personal injury protection (PIP) claims in personal auto insurance but then spread to homeowners insurance and auto glass coverage. There were roughly 1,300 AOB lawsuits statewide in 2000. There were more than 79,000 in 2013 and more than 153,000 in 2018, a 94 percent increase in just five years, according to the Insurance Information Institute's March 2019 report, Florida's assignment of benefits crisis.

Before the new law, insurers were forced to pay all attorney fees in a contractor's AOB suit—even when the contractor prevailed for any amount above the insurer's pre-suit offer. One of the provisions of the new law mandates that insurers no longer must pay all attorney fees in AOB suits by contractors. A sliding scale now determines attorney fees. Other provisions are a mandatory 10-day notice by contractor AOB holders before filing suit—including notifying the named insured; allowing insurers to issue certain policies containing restricted or no assignment rights; and requiring insurers to report AOB claims and settlements to the Department of Insurance to monitor the new law's impact on insurance rates and lawsuit filings, according to the Coalition Against Insurance Fraud. Although AOB litigation seems to be decreasing after the law was enacted, the legislation excluded auto glass repairs, which were the subject of more than 20,000 lawsuits in 2017.

LITIGIOUSNESS

Insurers' Legal Defense Costs

Lawsuits against businesses affect the cost of insurance and the products and services of the industries sued. Legal liability was the fourth-highest rated worry for business leaders in the United States in 2017, the same as in 2016, according to Travelers Insurance's Business Risk Index. More than half of the 1,000+ business managers surveyed indicated they worried about it somewhat or a great deal. Since 2017, fewer business managers said legal liability was in their top five business worries, especially in 2020 when COVID-19-related economic uncertainty was the greatest worry for businesses. However, litigation is recognized as a significant drain on business. 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 amount is comprised of $250 billion from general and commercial liability exposure, which includes personal injury, consumer and other litigation; $160 billion, which stems from liability related to auto accident claims; and $19 billion from medical malpractice litigation. The study also found that 57 percent of 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 from state to state, and in the most expensive states these costs 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. New York has $6,066 in tort costs per household, the highest of any state, followed by California, Florida and New Jersey. In Washington D.C., per household tort costs were even higher—$6,257. Maine, North Carolina and South Dakota have the least expensive, about $2,000 in tort costs per household.

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 2019, in addition to $1.3 billion in product liability incurred losses, insurers spent $668 million on settlement expenses, which was equivalent to 50.4 percent of the losses.

Defense Costs And Cost Containment Expenses As A Percent of Incurred Losses, 2017-2019[1] ($000)

Liability	2017		2018		2019	
	Amount	As a percent of incurred losses	Amount	As a percent of incurred losses	Amount	As a percent of incurred losses
Product liability	$645,190	68.6%	$861,155	66.4%	$668,304	50.4%
Medical professional liability	1,660,939	43.7	1,690,271	41.8	1,891,994	40.5
Other liability	3,778,162	38.2	3,966,294	35.0	4,421,983	35.7
Commercial multiple peril[2]	2,117,223	34.8	2,276,023	31.2	2,529,989	32.8
Workers compensation	2,956,635	13.6	3,065,540	14.3	2,783,923	13.2
Commercial auto liability	1,746,182	11.2	1,823,716	10.2	2,123,461	10.4
Private passenger auto liability	5,380,006	5.9	6,007,796	6.5	6,573,122	6.8
All liability lines	**$18,284,337**	**12.3%**	**$19,690,795**	**12.7%**	**$20,992,776**	**12.8%**

[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 2018 (latest data available) the median award in personal injury cases was $100,000, down from $125,000 in 2017. The average award, $1,669,340, also fell in 2018 compared with $1,825,808 in 2017. 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 in 2018 was in medical products cases ($4,002,185). In disputes concerning medical malpractice the highest median award was in childbirth cases ($2,500,000). In lawsuits involving business negligence the highest median award was against transportation industries ($670,000).

In the period from 2017 to 2018, 22 percent of all liability personal injury jury awards were for $1 million or more. Awards of $1 million or more accounted for 77 percent of all product liability injury awards during the two years, the highest proportion by type of case. Twenty-two percent of medical malpractice awards amounted to $1 million or more, followed by government negligence (49 percent), business negligence (31 percent) and personal negligence (19 percent). Premises and vehicular liability cases had the lowest proportion of $1 million or more awards, at 17 percent and 10 percent, respectively.

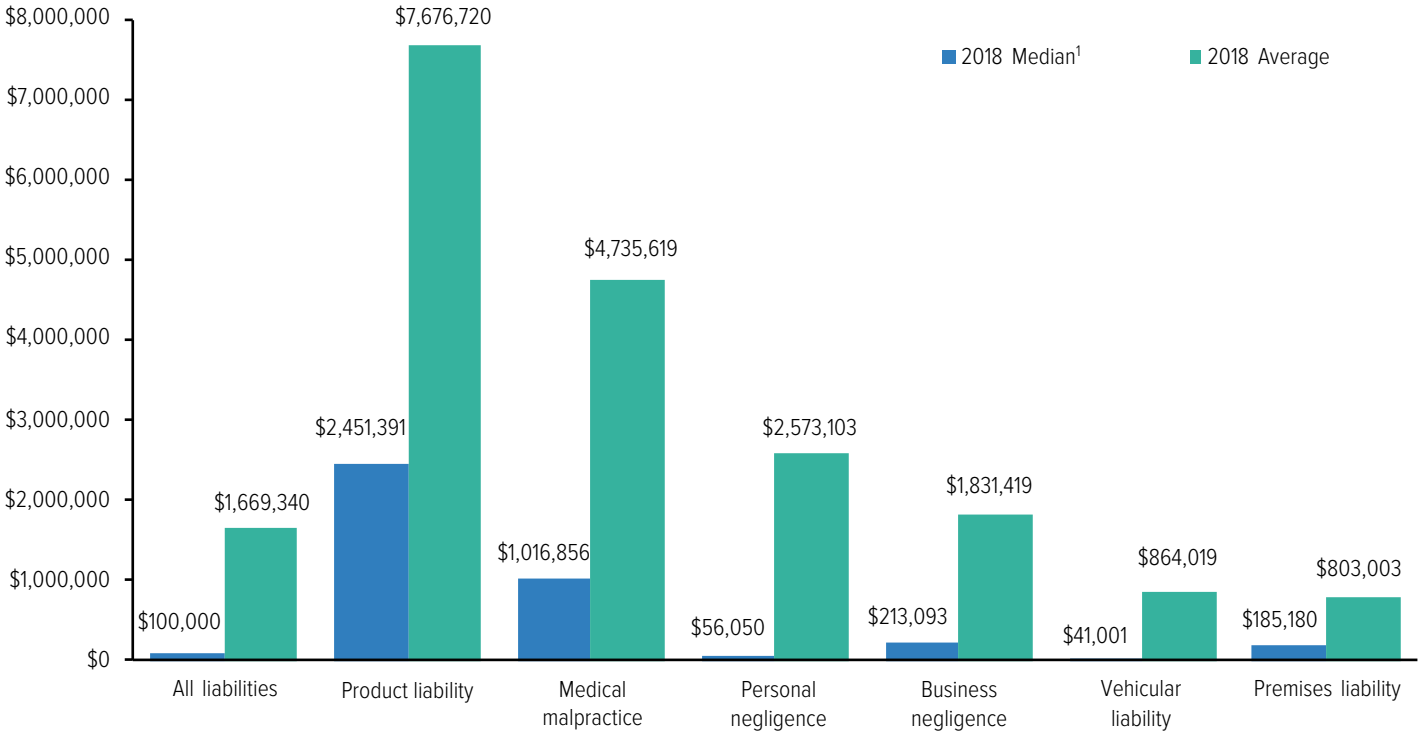
Trends In Personal Injury Lawsuits, 2012-2018[1]

Year	Award median	Probability range[2]	Award range	Award mean
2012	$75,000	$18,987 - $361,092	$1 - $155,237,000	$1,096,835
2013	70,000	16,000 - 300,000	1 - 165,972,503	1,010,202
2014	75,000	16,026 - 400,000	1 - 172,061,728	1,041,562
2015	87,705	20,000 - 486,306	1 - 88,246,000	1,139,170
2016	100,000	23,002 - 528890	1 - 115,000,000	1,353,497
2017	125,000	21,597 - 629,499	1 - 160,500,000	1,825,808
2018	100,000	21,511 - 524,069	1 - 247,000,000	1,669,340
Overall	**$87,735**	**$20,000 - $462,683**	**$1 - $247,000,000**	**$1,292,911**

[1]Excludes punitive damages. [2]The middle 50 percent of all awards arranged in ascending order, 25 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*, 59th edition.

Median And Average Personal Injury Jury Awards By Type Of Liability, 2018



[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*, 59th edition.

Directors And Liability Insurance

Directors and officers liability insurance (D&O) covers the 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. Side A coverage provides D&O coverage for personal liability when directors and officers who are accused of wrongdoing are not indemnified by the firm. Side B coverage reimburses a corporation for its loss when it indemnifies its directors and officers. Side C provides coverage for claims made specifically against the company. Corporate reimbursement coverage indemnifies directors and officers of the organization. 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.

In 2018 the D&O liability insurance sector was impacted by lawsuits concerning data breaches and privacy issues and the #MeToo movement, according to the *2019 RIMS Benchmark Survey* (latest data available) from the Risk and Insurance Management Society and Advisen. The coverage is key to ensuring that companies comply with legislation such as the Dodd-Frank Wall Street Reform Act and the Consumer Protection Act.

In 2018, 68 percent of corporations purchased D&O coverage, according to the *2019 RIMS Benchmark Survey*, which recorded responses from 570 organizations. Information technology companies were the most likely to purchase D&O coverage in 2018, with 96 percent of respondents purchasing the coverage, followed by 83 percent of banks. Education and consumer staples companies followed with 82 percent and 79 percent, respectively, purchasing D&O coverage. Advisen reported that 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 actions, derivative shareholder suits and other suits brought by shareholders, has stayed at relatively constant levels over the four years ending in 2017. Advisen noted that in 2017 alone the number of new merger objection cases rose 28 percent from 2016 and another 27 percent in the first three quarters of 2018 from the same three quarters in 2017. For more information on D&O insurance, please see Chapter 7, Commercial Lines.

Employment Practices Liability Insurance

Following the flood of high-profile sexual harassment lawsuits since 2017 spurred by the #MeToo movement, 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, hostile work environment, wrongful termination and retaliation. Other coverages include invasion of privacy, false imprisonment, breach of contract, emotional distress and wage law violations. Sexual harassment lawsuits filed with the U.S. Equal Employment Opportunity Commission (EEOC) alone rose by more than 12 percent from 2016 to 2017. In 2017, the EEOC recovered almost $70 million in victim restitution, 47 percent more than the $47.5 million it recovered in 2016. Median loss from sexual harassment case verdicts rose from about $136,800 in 2015 to about $221,000 in 2018, according to Advisen and Nationwide.

Employers currently are purchasing stand-alone EPLI policies, reversing the trend of including EPLI coverage with D&O insurance, according to the Risk and Insurance Management Society (RIMS). There are about 20 major carriers and about 20 smaller companies that offer the coverage. Insurance research firm found that U.S. companies spent an

estimated $2.2 billion on EPLI coverage in 2016 and projected the market would 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. Among women, the figure is even higher, at 41 percent.

Results from the 570 respondents to the *2019 RIMS Benchmark Survey* from the Risk and Insurance Management Society and Advisen (MarketStance latest data available) showed that the average insurance premium for EPLI rose 3 percent in 2018. Information technology companies were the most likely to purchase EPLI coverage, with 70 percent of companies saying they purchased the coverage, followed by consumer staples firms with 52 percent. Of consumer discretionary companies, 47 percent bought coverage, and banks and professional services rounded out the top five with 46 and 44 percent, respectively. American International Group was the leading writer, based on EPLI premiums written, with a 17.5 percent market share in 2018, followed by Tokio Marine Holdings Inc. with 15.4 percent. Markel Corp. ranked third with 11.2 percent, and Chubb Ltd. and Fairfax Financial Holdings Ltd. ranked fourth and fifth with 10.4 percent and 7.5 percent, respectively.

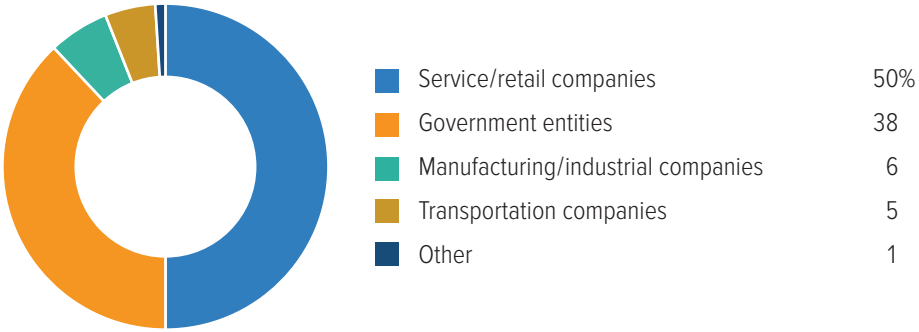
Trends In Employment Practices Liability, 2013-2019

Year	Median (midpoint) award	Probability range[1]
2013	$100,000	$15,707 - $251,623
2014	86,250	20,000 - 302,574
2015	83,000	17,839 - 347,498
2016	122,170	25,000 - 447,437
2017	126,000	25,000 - 550,000
2018	190,000	34,193 - 551,121
2019	209,191	58,083 - 636,500
Overall	**$120,000**	**$25,000 -$414,150**

[1] The middle 50 percent of all awards arranged in ascending order in a sampling, 25 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, *Employment Practice Liability: Jury Award Trends and Statistics*, 2020 edition.

Employment Practices Liability Verdicts, By Defendant Type, 2013-2019[1]



[1]Based on plaintiff and defendant verdicts rendered.

Source: Reprinted with permission of Thomson Reuters, *Employment Practice Liability: Jury Award Trends And Statistics*, 2020 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. In 2019 total new federal class-action securities filings were the highest on record and were nearly double the 1997 to 2018 average. 2019 core filings—those that exclude merger and acquisition filings—also rose to record levels. Core filings in 2019 were dominated by consumer noncyclical companies such as biotechnology, pharmaceutical and healthcare companies. Within the consumer noncyclical sector, an emerging development is the increase in filings involving companies related to the cannabis industry. In 2019 there were 13 filings involving cannabis companies, up from six in 2018.

Post-Reform Act Class-Action Filings Of Securities Lawsuits By Industry, 1997-2019[1]

Industry	Average 1997-2018	2018	2019
Core filings[2]	186	238	268
Consumer	70	96	108
Industrial	17	20	20
Financial	30	19	22
Communications	27	28	37
Technology	23	22	29
Basic materials	5	8	8
Energy	9	7	10
Utilities	3	3	5
Other[3]	2	35	29
Merger and acquisition filings	29	182	160
Total	**215**	**420**	**428**

[1]Private Securities Litigation Reform Act of 1995. Includes federal and state filings [2]Core filings exclude merger and acquistion filings. Core filings by category do not include state filings. [3]Includes state filings.

Source: Cornerstone Research and the Stanford Law School Securities Class Action Clearinghouse, *Securities Class Actions Filings-2019 Year in Review*. © 2020 by Cornerstone Research, Inc.

Total new federal class-action securities filings totaled 428 in 2019—the highest on record—up from 420 in 2018, according to Cornerstone Research.

Federal class-action securities core filings (those that exclude mergers and acquisitions filings) increased to 268 in 2019—also a record high—from 238 in 2018.

Federal filings of merger and acquisition (M&A) lawsuits fell to 160 filings in 2019, compared to 182 in 2018.

The total value of settlements in 2019 dropped to $2.0 billion, compared with $5.2 billion in 2018, according to Cornerstone Research. The median settlement was unchanged from 2018 to 2019 at $11.5 million, but was still 34 percent higher than the average for the years 1996 to 2018. Overall, median settlements are more stable than the average, which can be affected by a small number of large settlements. The average settlement also decreased, to $27.4 million in 2019, from $66.1 million in 2018.

There were four mega settlements ($100 million or more) in 2019, compared with five in 2018.

There were 14 settlements in the pharmaceutical industry sector, a record high and compares with 13 settlements in 2018. These cases accounted for 22 percent of all cases in 2019, compared with 19 percent in 2018.

Post-Reform Act Class-Action Settlements Of Securities Lawsuits, 1996-2019[1]

(2019 dollars)

Settlements	1996-2018	2018	2019
Minimum	$0.2 million	$0.4 million	$0.5 million
Median	8.8 million	11.5 million	11.5 million
Average	58.6 million	66.1 million	27.4 million
Maximum	9.2 billion	3.0 billion	390.0 million
Total settlements	**$104.0 billion**	**$5.2 billion**	**$2.0 billion**
Number of settlements	**1,775**	**78**	**74**

[1]Private Securities Litigation Reform Act of 1995; adjusted for inflation by Cornerstone Research.

Source: Cornerstone Research, *Securities Class Action Settlements–2019 Review and Analysis.* © 2020 by Cornerstone Research, Inc.

EMERGING AND EVOLVING INSURANCE ISSUES

In the year since the *2020 Insurance Fact Book* was published, the coronavirus pandemic has become the ultimate emerging and evolving issue, with implications spreading far beyond public health.

Business lockdowns and the ensuing economic downturn triggered by the spread of COVID-19 are dramatically affecting insurers and the businesses and individuals they protect. A recent Insurance Information Institute (Triple-I) report says the world's 10 largest insurance markets are cumulatively expected to see their gross domestic product (GDP) measures decrease by 4.5 percent in 2020 from 2019 because of COVID-19.

In response to reduced driving during the pandemic, U.S. auto insurers returned more than $14 billion to their customers through a combination of refunds, rate reductions and policyholder dividends. According to National Association of Insurance Commissioners (NAIC) data from Standard & Poor's Global Market Intelligence, insurers issued $4.8 billion in dividends through the second quarter of 2020, amounting to almost $3.4 billion more than the same period a year ago.

In addition, the insurance industry has provided approximately $280 million in charitable giving specifically related to the pandemic.

Triple-I Chief Actuary James Lynch says automobile claims frequency has declined sharply during the pandemic, but some coverages showed "disturbing spikes in severity." Property damage frequency, for example, was down more than 30 percent from a year earlier, but severity was up almost 20 percent.

"This was likely caused by faster driving," Lynch said. "Since the spring lockdowns have eased, customers are driving more again, but they still haven't returned to the levels of a year ago. Right now, people are driving about 12 percent fewer miles than they did a year ago."

However, there is ample evidence that drivers are still going faster than they did, particularly at rush hour.

"That's why mileage driven this year is down 12 percent, but traffic fatalities are up 4 percent," Lynch said. "The concern is that frequency patterns will return to the norm, but fast driving will keep claim severity high, putting upward pressure on rates."

Triple-I has been tracking COVID-19's diverse insurance impacts and devoted a section of its website—Coronavirus news and updates—to curating its coverage of the pandemic. The section also includes content of the Future of American Insurance & Reinsurance (FAIR) campaign, which informs the public about the impact of COVID-19 on the economy and property/casualty (P/C) insurance.

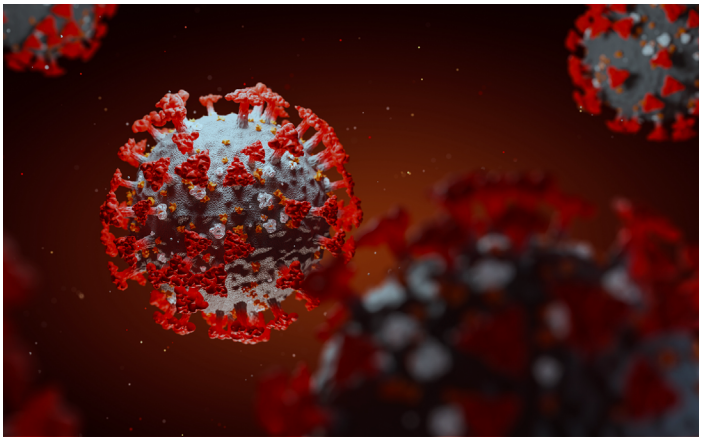
COVID-19 and Business Income (Interruption) Coverage

Whether business income (interruption) coverage (BI) in commercial property policies applies to COVID-19-related losses has become one of the dominant insurance debates during the pandemic. Lawsuits have been filed—some even before insurers have denied a claim—seeking to establish that policyholders are entitled to coverage for losses sustained during government-mandated pandemic shutdowns.

The debate often focuses on a simple phrase in the insurance policy: "direct physical loss or damage." BI coverage only applies to those losses that stem from direct physical loss or damage. Losses that do not come from direct physical damage are not covered.

Are business interruptions related to COVID-19 caused by physical damage to property? Insurers say no, arguing that damage to property requires structural alteration like one would find in a typical claim, such as if a

fire destroyed the interior of a building or wind damaged windows and furniture. The virus leaves no visible imprint and after it has been killed, whatever it was attached to is as good as before. Even if some remediation is needed—like cleaning metal surfaces—insurers might argue that this is no different from cleaning dirt off a surface. They can cite cases in which judges have ruled there is no physical damage from mold if the mold can be cleaned off.



Others depart from this common-sense, legally recognized definition. Some plaintiffs' attorneys argue that if coronavirus is not direct physical damage then insurers would not have created an exclusion for viruses in the first place.

Which introduces the second major issue involving COVID-19 and business income (interruption) coverage: most insurers excluded losses from viruses and communicable diseases from their policies after the SARS outbreak in 2003. Nevertheless, multiple initiatives are afoot to compel insurers—through litigation and legislation—to pay such claims, regardless of their being specifically excluded. Mandating such retroactive rewriting of insurance contracts not only would set a precedent with consequences that would ripple out far beyond insurance—it would bankrupt the P/C insurance industry and could make insurance itself an untenable business position, making insurers responsible for perils that they did not calculate into their pricing.

The data point invoked by those who would force property/casualty insurers to pay claims explicitly excluded from the policies they wrote is the industry's nearly $800 billion policyholder surplus. Many hear "surplus" and think of it as cash that is stashed away for emergencies.

However, policyholder surplus is much more complicated. It is not a "rainy-day fund;" it is key to making sure insurers keep their promises to pay all future claims, from those for man-made and natural disasters to routine auto and homeowners claims.

Insurers are regulated at the state level, and regulators require each insurer to hold a certain amount in reserve to pay claims based on that insurer's risk profile. The aggregation of these reserves—required by every state for every insurer doing business in those states—accounts for about half of the total industry surplus, according to Dr. Steven Weisbart, Triple-I non-resident scholar: about $400 billion.

Each company's regulator-required surplus can be thought of as that company's "running on empty" mark—the point at which alarms go off, and regulators require it to set even more aside to make sure no policyholders are left in the lurch. Weisbart says $400 billion is the amount that sets off alarms for the entire industry.

However, private rating agencies that gauge insurers' financial strength and claims-paying ability do not want to see insurer reserves get anywhere near that point. To get a strong rating from AM Best, Fitch, S&P, or Moody's, insurers must keep even more in reserve. If these additional reserves amount to about $200 billion for the industry, the nearly $800 billion surplus we started with now shrinks to about $200 billion—to cover claims by all personal and commercial policyholders in any given year without prompting regulatory and ratings agency actions that could drive up insurer costs and policyholder premiums.

For context, the Property Claim Services (PCS) unit of ISO/Verisk had designated a record number of PCS catastrophe events for the United States for 2020 by early November, including multi-billion losses from five hurricanes and 14 convective storms. Wildfires, including a record-breaking number of acres burned in California, added to the losses, as well as nationwide civil unrest that caused about $1 billion in insured losses, according to PCS. All of these losses are in addition to routine

claims, such as homeowners claims for water damage and freezing, auto claims and the myriad claims filed by businesses.

If insurers were required to pay BI claims they never agreed to cover—and, therefore, did not set aside reserves for—the cost to the industry, *related to small businesses alone* could be as high as $383 billion per month. This would bankrupt the industry, leaving many policyholders uninsured and would make insurance itself a losing business proposition.

Learn more from the *Triple-I Blog*

Trials and errors: Plaintiffs' attorneys could complicate efforts to help businesses hurt by COVID-19

NC ruling goes against prevailing judicial wisdom on COVID-19 business interruptions

Government should provide business interruption support

UK business interruption litigation seems unlikely to affect us insurers

Business interruption vs. event cancellation: What's the big difference?

Chubb CEO says business interruption policies are a good value and work as they should

US Treasury weighs in on debate surrounding business interruption insurance

Business interruption coverage: Policy language rules

Triple-I CEO among panelists discussing business interruption insurance legislation

P/C insurance group puts price tag on coronavirus business interruption

Business interruption claims related to COVID-19

COVID-19 and Workers Compensation

Workers compensation is another area affected by the pandemic, with many states changing rules for benefits payouts related to the virus, and several expanding or considering widening access to coverage beyond first responders and healthcare workers.

Workers comp provides benefits to employees who suffer work-related injuries or illnesses. It helps pay for medical care, wages from lost work and more. Benefits vary by state. (See *Insurance Fact Book,* Chapter 7, Commercial Lines.)

Questions about compensability ultimately will be answered on a state-by-state basis. Workers comp generally does not cover routine illnesses like a cold or flu because they cannot be tied to the workplace. However, some states have recognized that other conditions are employment related. Before the COVID-19 pandemic, the National Council on Compensation Insurance said that at least 18 states had policies in place that presumed firefighters' and other first responders' chronic lung or respiratory illnesses are work-related and therefore covered.

COVID-19 presents a unique situation. Workers deemed "essential"—such healthcare workers, mass transit operators and grocery store workers—are at a high risk of exposure to the virus, but this does not guarantee a COVID-19 infection would be covered in most states.

Some states have extended coverage to include first responders, healthcare workers and other essential employees. A common approach is to amend state policy so that COVID-19 infections in certain workers are presumed to be work-related. This puts the burden on the employer and insurer to prove the infection was not work-related, making it easier for workers to file successful claims.

Some employers and insurers have raised concerns that these presumption policies will increase insurance costs for employers at a time when businesses are already facing significant financial challenges.

Learn more from the *Triple-I Blog*

New CDC numbers raise concern for health, workers comp insurers

COVID-19 and workers compensation: Impact will become clearer…eventually

Wrap-Up: COVID-19 and workers comp

FAQS about COVID-19' impact on workers comp

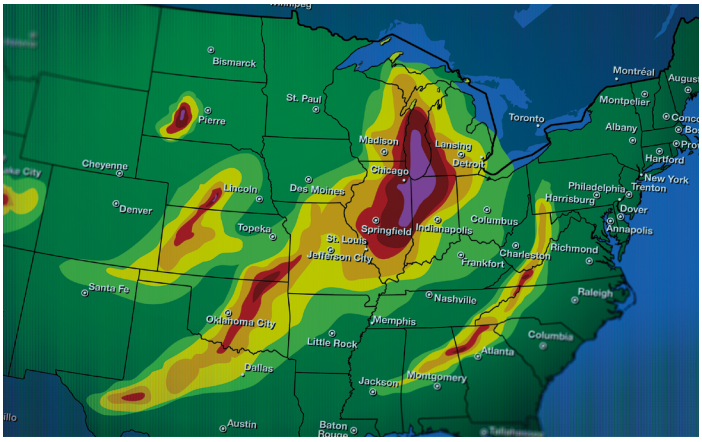
Mixed reactions to workers comp COVID-19 expansions

Workers comp premiums could soar with COVID-19 claims

Will workers comp claims for COVID-19 be paid?

COVID-19 Meets Extreme Weather

From hurricanes, tornadoes and hail to wildfires and record-setting heat and cold, extreme weather conditions and events are making headlines and show no signs of stopping. Many meteorologists have said they expect high temperatures, severe storms, wildfires and flooding to be the new normal.



The extremely active 2020 Atlantic hurricane season produced a record-breaking 30 named storms, of which 13 became hurricanes.

Convective Storms

Severe convective storms—tornadoes, hail, drenching thunderstorms with lightning, and damaging straight-line winds — are among the biggest threats to life and property in the United States. Catastrophe modeling firm RMS says the average annual insured U.S. loss from convective storms nearly equals that from hurricanes, at around $17 billion.

They were the costliest natural catastrophes for insurers in 2019, and the 2020 convective storm season turned out to be the worst in nearly a decade. According to Aon, the United States has recorded 14 billion-dollar economic loss events resulting from severe convective storms (which include tornadoes) by December 2020. Included in the tally is the August derecho in the Midwest, which Aon estimates to be the third-costliest severe convective storm in U.S history, with insured losses totaling about $3 billion.

Although there were fewer tornadoes in 2020 compared to 2019, 78 people perished in tornadoes, compared with 41 in all of 2019, according to the National Oceanic and Atmospheric Administration. This year's season struck just as COVID-19 began to emerge in the U.S. and complicate emergency preparation and response.

For a variety of reasons, it is hard to say whether convective storm activity has increased in recent years. However, as discussed in a 2020 Triple-I paper—*Severe Convective Storms: Evolving risks call for innovation to reduce costs, drive resilience*—change is underway, and one thing is clear: These storms are becoming more costly.

RMS reported that average storm-related personal lines insurance claims grew much faster than general inflation from 2001 to 2017: 11 percent per annum, versus a little over 2 percent. Population growth and economic development have contributed to increasing losses. At the same time, research suggests the geography, frequency and intensity of these storms also may be changing. (See *Insurance Fact Book*, Chapter 8, Tornadoes.)

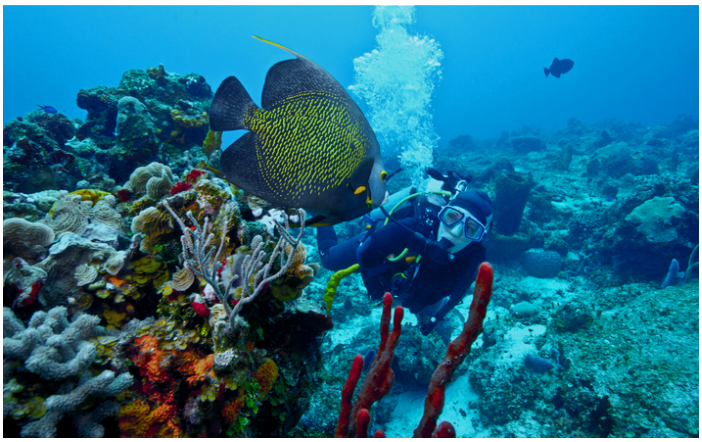
Hurricane Season: The Worst of Times

Under the best of circumstances, the Atlantic hurricane season is a challenging time. Despite improved forecasting and analytical tools, engineering and pre-storm communication, hurricane-related losses continue to climb.

But as Triple-I reported in a recent paper—*Hurricane Season: More Than Just Wind and Water*—the extremely active 2020 season did not arrive under the best of circumstances. It came on the heels of a pandemic that has not ebbed, and was accompanied by widespread civil unrest and atypical wildfire activity that complicated preparation and post-storm aid.

Hurricanes have a long history of driving losses. According to data compiled by Aon, global insured weather-related property losses have outpaced the annual rate of inflation by about 7 percent since 1950. In 2020 there were six hurricanes with multi-billion-dollar losses in a record-tying season of 30 named storms and 13 hurricanes. Nine of the 10 costliest hurricanes in U.S. history have occurred since 2004, and 2017, 2018 and 2019 represent the largest back-to-back-to-back insured property loss years in U.S. history.

While it is tempting to attribute these growing losses to climate change, the data suggest rising hurricane losses—like increasing losses related to severe convective storms—are due primarily to demographic changes: more people moving into hurricane-prone areas and building larger, more expensive homes. (See *Insurance Fact Book*, Chapter 8, Hurricanes.)



Learn more from the *Triple-I Blog*

Hurricane Delta triggered coral reef parametric insurance

Are late, wet hurricanes becoming a trend?

Mitigation matters—and Hurricane Sally proved it

Hurricane season: More than wind and water

Ordered to Evacuate Due to Hurricane Laura? You Might Have Insurance for Additional Living Expenses

Swiss Re: Katrina-like hurricane could cause up to $200 billion in damage today

Hurricane modeling: High-tech meets local insight

Hurricanes don't just affect coasts, expert say: 'Get flood insurance'

COVID-19 wrap-up: Pandemic complicates hurricane preparation

A better tool to predict impact of hurricanes?

If It Can Rain, It Can Flood

About 90 percent of natural disasters in the U.S. involve flooding. This is why experts like Dan Kaniewski—managing director for public sector innovation at Marsh & McLennan and former deputy administrator for resilience at the Federal Emergency Management Agency (FEMA)—strenuously urge property owners to buy flood insurance.

Flood damage is excluded under standard homeowners and renters insurance policies. However, flood coverage is available as a separate policy from the National Flood Insurance Program (NFIP), administered by FEMA and from some private insurers.

Flood was long considered an untouchable risk by private insurers because they did not have a reliable way to measure the risk. However, in recent years insurers have become more comfortable using sophisticated models to underwrite and price flood insurance, and modeling firms are getting better at predicting the risk. There were 41 private companies writing private flood insurance in 2019, compared with 32 in 2018, according to NAIC data compiled by S&P Global Market Intelligence.

Increasing insurance capacity made available by the private market helps spread the risk associated with flooding, and growing competition should make the coverage—especially in communities not designated as flood zones—more affordable.

"The private flood insurance market in the United States has really started to gain traction over the past few years, but there's still a large untapped opportunity out there," said Marla Schwartz-Pourrabbani, a natural catastrophe specialist with Swiss Re. "Many people—even inside designated flood zones—don't have coverage or are unaware that homeowners policies typically exclude coverage for flood damage."

A McKinsey & Co. analysis of flood insurance purchase rates in areas most affected by three Category 4 hurricanes that made landfall in the United States in 2017—Harvey, Irma, and Maria—found that as many as 80 percent of homeowners in Texas, 60 percent in Florida, and 99 percent in Puerto Rico lacked flood insurance. To make matters worse, a recent analysis by the nonprofit First Street Foundation found the United States to be woefully underprepared for damaging floods.

Plans to reform the NFIP with a shift to fully risk-based pricing are expected to be implemented by October 2021. FEMA said the program would begin to assess properties individually, instead of calculating rates based on whether a home falls in a designated flood zone. This could drive more flood risk into private reinsurance and risk markets. (See *Insurance Fact Book*, Chapter 7, Flood Insurance.)

Learn more from the *Triple-I Blog*

If it can rain, it can flood: Buy flood insurance

Ahead of Hurricane Sally's rains, many lack flood insurance

Hurricane Hanna leaves wind damage and flooding in its wake

Understanding FEMA and other flood maps

Hurricanes don't just affect coasts; Experts say: 'Get flood insurance'

Mississippi flood insurance purchases low, despite wetter rainy seasons—and they're not alone

Nearly 80 percent of homeowners in coastal Carolinas uninsured for flood

Wildfire: Atypical Activity? Of Course. It Is 2020

In 2020 there were more than 53,000 wildfires compared with 50,500 in 2019, according to the National Interagency Fire Center. About 10.0 million acres burned in 2020, compared with 4.7 million acres in 2019.

In California wildfires burned 4.2 million acres in 2020—more than any year on record. For context, according to Aon, insured losses from the three largest California fires of 2018—the Camp, Woolsey and Carr Fires—totaled $15.5 billion.

Many of these fires have been ignited by atypical lightning sieges that create so many blazes they have to be grouped in *complexes* with names like:

- The LNU Lightning Complex in the northeast Bay Area
- The CZU Lightning Complex in the western and southern Bay Area
- The SCU Lightning Complex in the eastern and southeastern Bay Area

Janet Ruiz, the California-based director of strategic communications for Triple-I, explains that many fires in recent years had been caused by human activity rather than by nature. "Authorities have worked hard and invested a lot of money to mitigate those causes," she said. "Then along comes this unpredictable, unpreventable abundance of lightning strikes." The daunting number of blazes coincides with a reduced availability of firefighters, courtesy of the pandemic. (See *Insurance Fact Book*, Chapter 8, Wildfires).

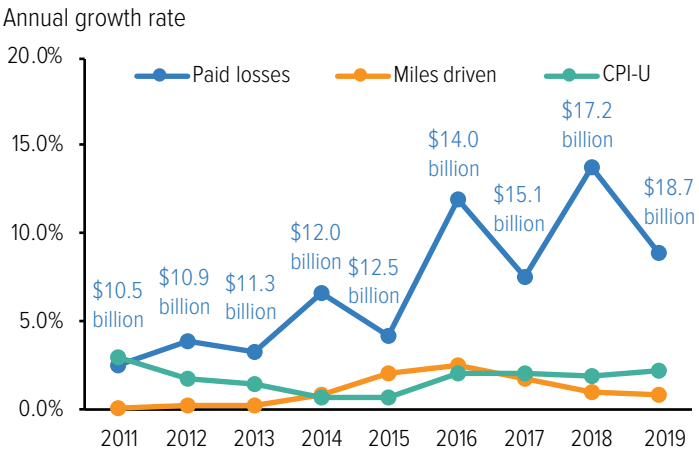
COVID-19 and Social Inflation: Double-Edged Sword

Social inflation refers to a trend of rising litigation costs and their ultimate impact on insurers' claims payments. Insurers that provide liability coverage—protection against claims by third parties—are particularly affected by it. As it has in so many other areas, COVID-19, has thrown in a new variable that could affect the overall trend.

While there is no universally agreed-upon definition, some more visible aspects of social inflation are growing jury awards, litigation funding (in which third-party investors fund lawsuits against large companies in return for a share of the settlement), and a culture of blame, amplified by the 24/7 news cycle and the rise of negative sentiment in social media.

Some have blamed social inflation for contributing to claim severity in commercial automobile insurance (see chart) and hardening in some professional liability lines.

Commercial auto insurance paid losses growing faster than miles traveled and inflation



Source: © NAIC data sourced from S&P Global Market Intelligence; Federal Highway Administration and Consumer Price Index (all urban consumers) information from St. Louis Federal Reserve Bank (FRED).

Contributing to the rate increases in professional liability have been a spike in class actions and high-profile "nuclear verdicts." Evolving factors like the #MeToo movement and the opioid crisis have implications for the directors and officers and employment practices liability lines, as well as product liability.

And then came COVID-19. If social inflation was complicated before the pandemic and subsequent economic lockdown, with some calling it a hoax, the subject must now be looked at through the additional lens of COVID-19's long-term impact on liability questions, plaintiff expectations, and juror attitudes.

AM Best said early in the crisis that COVID-19 could produce a big increase in social inflation. The reason: expectations that businesses would sue their insurers in an attempt to access their business income (interruption) coverage for losses relating to the coronavirus pandemic. Such lawsuits continue.

On the other hand, some have said court closures and administrative slowdowns related to COVID-19 may be causing some plaintiffs to become more willing to accept settlements they previously would have rejected in pursuit of larger payouts.

Learn more from the *Triple-I Blog*

Lawyers' group approves best practices to guide litigation funding

Social inflation and COVID-19

IRC study: Social inflation is real, and it hurts consumers, businesses

Florida dropped from 2020 'Judicial Hellholes' list

Florida's AOB crisis: A social-inflation microcosm

COVID-19 and Cybersecurity

Cyberrisk has been with us for decades, but its nature and potential severity have changed dramatically since the 1970s and 1980s and with increasing speed, as our work and personal lives have become intertwined via the internet. Identity theft concerns have grown as computer networks facilitated the rise of consumer credit and online transactions and, more recently, various forms of malware have taken center stage in attacks.

Cyberrisk has been further exacerbated by COVID-19 as many employees are working regularly from home for the first time.

"Anytime you're taking about employees who are not used to working from home, who may not have the correct cybersecurity posture, a virtual private network (VPN) is critically important and having two-factor authentication is critically important," Aon Senior Vice President Stephanie Snyder said.

"We are already seeing targeted phishing campaigns globally," said New Zealand Health IT Chief Executive Scott Arrol. "The cyber virus taking advantage of the biological virus." Arrol also said that hackers seeking to exploit fears of COVID-19 are sending fake ads or links with online viruses.

Cyberrisk requires continuous monitoring and mitigation. Large companies are better equipped than smaller ones than individuals to guard against the risks and soften the impact of events through insurance. As a result, smaller firms are vulnerable and increasingly targeted.

Because the threats are always evolving, cyber insurance is hard to underwrite and price with confidence due to limited standardized historical loss data. In addition to offering a range of products to address cyberperils, insurers and brokers work closely with customers to identify and address business and industry-specific risks. They also are working with third parties to address the data dearth that complicates underwriting.

Learn more from the *Triple-I Blog*

Ransomware claims rise in severity since start of pandemic

COVID-19 meets cyberrisk

Consumers lack understanding of personal cyber insurance: Triple-I/J.D. Power survey

Emerging cyber terrorism threats and the Federal Terrorism Risk Insurance Act

Cyber claims get paid; Why do many businesses believe they don't?

Life & death: Cyberattacks interrupt more than business

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