Annual Report on the Insurance Industry

FEDERAL INSURANCE OFFICE, U.S. DEPARTMENT OF THE TREASURY

Completed pursuant to Title V of the Dodd-Frank Wall Street Reform and Consumer Protection Act

SEPTEMBER 2021

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GLOSSARY

2020 Annual Report	....	FIO, *Annual Report on the Insurance Industry* (2020)
2021 Small Insurer Study	....	FIO, *Study of Small Insurer Competitiveness in the Terrorism Risk Insurance Marketplace* (2021)
A2ii	....	Access to Insurance Initiative
Accreditation Committee	....	NAIC Financial Regulation Standards and Accreditation Committee
ACRSM	....	Advisory Committee on Risk-Sharing Mechanisms
A&H	....	Accident and Health
Aggregation Method	....	A group capital methodology under development by the United States and other interested jurisdictions as an alternative to the ICS
ART	....	Alternative Risk Transfer
CISA	....	Cybersecurity and Infrastructure Security Agency
Climate-Related RFI	....	Federal Insurance Office Request for Information on the Insurance Sector and Climate-Related Financial Risks, 86 Fed. Reg. 48814 (August 31, 2021)
CLO	....	Collateralized Loan Obligation
CMBS	....	Commercial Mortgage-Backed Securities
ComFrame	....	IAIS Common Framework for the Supervision of IAIGs
Dodd-Frank Act	....	Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010
EIOPA	....	European Insurance and Occupational Pensions Authority
ExCo	....	IAIS Executive Committee
FACI	....	Federal Advisory Committee on Insurance
FAIR Plan	....	Fair Access to Insurance Requirements Plan
Federal Reserve	....	Board of Governors of the Federal Reserve System
FEMA	....	Federal Emergency Management Agency
FIF	....	IAIS Financial Inclusion Forum
FIO	....	Federal Insurance Office
FIO Act	....	Federal Insurance Office Act of 2010
FSB	....	Financial Stability Board
FSOC	....	Financial Stability Oversight Council
FSTF	....	NAIC Financial Stability Task Force
GAO	....	U.S. Government Accountability Office
GCC	....	Group Capital Calculation
GDP	....	Gross Domestic Product
GIMAR	....	IAIS Global Insurance Market Report

GME	....	IAIS Global Monitoring Exercise for the Holistic Framework
Health sector	....	Health sector includes companies licensed solely as health insurers or as health maintenance organizations
Holistic Framework	....	IAIS Holistic Framework for the Assessment and Mitigation of Systemic Risk in the Insurance Sector
IAIG	....	Internationally Active Insurance Group
IAIS	....	International Association of Insurance Supervisors
IBHS	....	Insurance Institute for Business & Home Safety
ICP	....	IAIS Insurance Core Principle
ICS	....	IAIS Insurance Capital Standard
ILS	....	Insurance-Linked Securities
IMARA	....	Insurance Marketplace Aggregate Retention Amount
InsurTech	....	The innovative use of technology in connection with insurance
IPO	....	Initial Public Offering
IPPC	....	OECD Insurance and Private Pensions Committee
ITF	....	IAIS Infrastructure Task Force
L&H	....	Life and Health
LST Framework		NAIC Liquidity Stress Testing Framework
LTCI	....	Long-Term Care Insurance
M&A	....	Mergers and Acquisitions
MitFLG	....	Mitigation Framework Leadership Group
NAIC	....	National Association of Insurance Commissioners
NBCR	....	Nuclear, Biological, Chemical, and Radiological
NCOIL	....	National Council of Insurance Legislators
NFIP	....	National Flood Insurance Program
NGFS	....	Central Banks and Supervisors Network for Greening the Financial System
NYDFS	....	New York Department of Financial Services
OECD	....	Organisation for Economic Co-operation and Development
ORSA		Own Risk Solvency Assessment
P&C	....	Property and Casualty
PCR	....	Prescribed Capital Requirement
PE	....	Private Equity
RBC	....	Risk-Based Capital
Report	....	FIO, *Annual Report on the Insurance Industry* (2021)
RILA	....	Registered Index-Linked Annuity

S&P Global	....	S&P Global Market Intelligence
SEC	....	U.S. Securities and Exchange Commission
Secretary	....	Secretary of the Treasury
SIF	....	Sustainable Insurance Forum
SMI	....	Solvency Modernization Initiative
Team USA	....	FIO, Federal Reserve, NAIC, and state insurance regulators
Treasury	....	U.S. Department of the Treasury
TRIA	....	Terrorism Risk Insurance Act of 2002, as amended
TRIP	....	Terrorism Risk Insurance Program
U.S.-EU Covered Agreement	....	Bilateral Agreement between the United States of America and the European Union on Prudential Measures Regarding Insurance and Reinsurance
U.S.-UK Covered Agreement	....	Bilateral Agreement between the United States of America and the United Kingdom on Prudential Measures Regarding Insurance and Reinsurance

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EXECUTIVE SUMMARY

Introduction: This section explains that this Report is submitted by the Federal Insurance Office of the U.S. Department of the Treasury pursuant to Section 502(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act. This section also provides a summary of Federal Insurance Office authorities and contains a roadmap to the Report.

Insurance Industry Financial Overview and Outlook: This section provides an overview of the insurance industry from a financial perspective in calendar year 2020.

Domestic Insurance Marketplace Overview: This section provides an overview of the insurance industry's financial performance and condition in 2020. The U.S. insurance industry was able to maintain its financial health in 2020. The sustained low interest rate environment continues to affect the insurance industry's performance. Despite the many impacts of the COVID-19 pandemic, the trend of annual increases in premium continued in 2020.

Financial Performance and Condition Overview: This sub-section focuses on the financial performance and condition of the 676 life & health insurers, the 2,614 property & casualty insurers, and the 1,260 health insurers licensed in the United States during 2020. Insurers in the Life & Health sector offer products in two segments: (1) life insurance and annuities; and (2) accident and health products. Insurers in the property & casualty sector offer products that generally protect against the risk of financial loss associated with damage to property or exposure to liability for individuals, families or businesses. The health sector includes companies licensed solely as health insurers or as health maintenance organizations, but is not the focus of the remainder of this Report.

Direct premiums written in 2020 for the life & health sector were approximately $767 billion, for the property & casualty sector were approximately $717 billion, and for the health sector were approximately $834 billion. At the end of 2020, the life & health sector held approximately $8.0 trillion of total assets, the property & casualty sector held approximately $2.4 trillion, and the health sector held approximately $515 billion.

The aggregate market shares of the top 10, 25, and 100 Life & Health insurance companies in 2020 were little changed compared to 2019. For both commercial lines and personal lines, there was little change in the aggregate market shares of the top 10, 25, and 100 Property & Casualty companies in 2020. The health market continued to tighten somewhat at the top, with the aggregate market share of the top 10 writers increasing nearly one-and-one-half percentage points (to 60 percent) from 2019.

Life and Health Sector: This sub-section presents additional analysis of the financial performance of the life & health sector in 2020, and then assesses this sector's overall financial condition as of December 31, 2020.

Property and Casualty Sector: This sub-section presents additional analysis of the financial performance of the property & casualty sector in 2020, and then assesses this sector's overall financial condition as of December 31, 2020.

Market Performance: In 2020, both the property & casualty and the life & health sector stock indices significantly underperformed the S&P 500. Questions related to the potential liability for pandemic-related losses such as business interruption claims weighed on property & casualty company stocks, while the combination of uncertainty around the severity of morbidity and mortality experience from the pandemic and the drop in interest rates put downward pressure on life & health insurer stocks.

Domestic Outlook: This sub-section provides some insights into near-term trends, reflecting observations from 2020 and the first half of 2021.

Capital Markets Activity: This section notes that the U.S. insurance industry continued to access the equity market for new capital throughout 2020. During the year, 17 insurance-related public equity offerings were completed, with an aggregate value of $5.5 billion. Debt markets continued to be the preferred source of additional capital for insurers in 2020.

Mergers & Acquisitions of U.S. Insurers: This sub-section notes, among other things, there were 95 merger and acquisition transactions announced in 2020 involving U.S. insurers and reinsurers, with a total value of $13.4 billion.

Changing Investment Strategies: This sub-section discusses the factors that have prompted the U.S. insurance industry to deploy new investment strategies in recent years.

Alternative Risk Transfer Insurance Products: This sub-section summarizes 2020 developments in the alternative risk transfer market—in which the outstanding amount of catastrophe bonds and insurance-linked securities instruments was approximately $46 billion at the end of 2020—and notes its continuing growth in the first half of 2021.

Private Equity-Backed Insurers: This sub-section observes that private equity-owned life insurers have continued to expand rapidly in the U.S. insurance industry and are now some of the largest providers of fixed annuities and pension risk transfers in the sector.

InsurTech Investments: This sub-section highlights how InsurTech startups continued to receive significant investments in 2020.

International Insurance Marketplace Overview and Outlook: This section concludes that the United States remained the world's largest single-country insurance market in 2020. When viewed as a single market, the combined share of the European Union (following the exit of the United Kingdom) was the next largest. China remained the second-largest single-country insurance market.

Topical Updates and FIO Activities: This section provides updates and analyses, as well as Federal Insurance Office activities, in several areas which the Federal Insurance Office has analyzed over the past year.

Pandemic-Related Updates: This section updates the Federal Insurance Office's previous preliminary observations on the impact of the COVID-19 pandemic on the insurance industry.

Climate Change, Mitigation, and Resilience: This section discusses numerous topics and activities related to U.S. insurance markets and climate change, mitigation and resilience. Among other things, it notes that U.S. insurance markets will play a vital part in achieving the goals set forth in two climate-related Executive Orders. The Federal Insurance Office highlights these Executive Orders, among other things, in its request for information on climate-related financial risks and the insurance sector, published on August 31, 2021. The request for information highlights, among other things, that traditionally underserved communities and consumers tend to have the least access to affordable insurance products and services and are disproportionately impacted by climate change. Mitigation and the availability of insurance is also among the topics addressed in the request for information, as well in this section. This section also discusses the National Flood Insurance Program, noting that flooding is one type of weather-related event that is being exacerbated by climate change. More generally, the section notes how the Federal Insurance Office continues to engage on climate-related issues with state insurance regulators and the National Association of Insurance Commissioners to learn more about their priorities and ongoing efforts to address climate-related risks. The Federal Insurance Office also has engaged on climate-related issues through coordination with international organizations.

Cyber Risks, Ransomware, and Cyber Insurance: This section focuses on the interplay between ransomware and insurance, including the impact of ransomware on the cyber insurance market, and efforts of both federal and state policymakers and regulators to develop responses to the growing threats of ransomware.

Terrorism Risk Insurance Program: This section provides updates on the Terrorism Risk Insurance Program, including its data call and study on small insurers.

Advisory Committee on Risk-Sharing Mechanisms: This section provides an update on work related to the federal advisory committee established by the Terrorism Risk Insurance Program Reauthorization Act of 2015, which provides the Federal Insurance Office with advice and recommendations related to terrorism risk insurance.

Federal Advisory Committee on Insurance: This section provides updates on the work of the advisory committee established to provide the Federal Insurance Office with nonbinding advice and recommendations and to otherwise assist it in carrying out its duties and authorities.

Personal Auto Insurance: This section provides background information on the importance of auto insurance and highlights the Federal Insurance Office's ongoing work relating to personal auto insurance, including the availability and affordability of insurance for traditionally underserved consumers and communities. It also addresses the response of insurers and state insurance regulators to the COVID-19 pandemic in the context of auto insurance.

InsurTech: This section discusses how InsurTech innovation trends have remained consistent in recent years with continued growth in investments, an emphasis on distribution and marketing, additional partnerships between startups and incumbent insurers, and a focus on artificial intelligence. It also discusses regulatory developments involving InsurTech.

Long-Term Care Insurance: This section discusses developments in the private market for long-term care insurance, in which the number of individual long-term care insurance policies sold peaked in 2002 and has decreased in nearly every year since then. The section also discusses ongoing efforts to address long-term care insurance product and market issues.

Financial Stability Oversight Council: This section discusses the involvement of the Federal Insurance Office in the Financial Stability Oversight Council, and Financial Stability Oversight Council activities over the past year.

State Initiatives on Systemic Risk and Solvency: This section discusses how, during the past year, the National Association of Insurance Commissioners has advanced (1) its Macroprudential Initiative through the efforts of its Financial Stability Task Force in connection with the development of the Liquidity Stress Testing Framework and (2) the Group Capital Calculation—the foundation for its capital stress testing regime.

International Developments: This section discusses the Federal Insurance Office's work in international contexts.

International Association of Insurance Supervisors: This sub-section provides an overview of the International Association of Insurance Supervisors, the role of the Federal Insurance Office in it, and updates on its work, including with respect to the Insurance Capital Standard which, after six years of field testing, advanced into a five-year monitoring period in 2020.

Covered Agreements: This sub-section describes and provides updates on the covered agreements with the European Union and the United Kingdom.

Insurance Dialogue Projects: This sub-section describes and provides updates on the EU-U.S. Insurance Dialogue Project, a collaborative effort among U.S. and European Union insurance authorities to increase mutual understanding and enhance cooperation between the United States and the European Union in order to promote business opportunities, consumer protection, and effective supervision, and a similar initiative with the United Kingdom.

OECD: This sub-section provides an overview of the Organisation for Economic Co-operation and Development's Insurance and Private Pensions Committee and its recent work.

Bilateral Dialogues: This sub-section notes that the Federal Insurance Office engages with its international colleagues not only through multilateral forums like the International Association of Insurance Supervisors, but also through additional formal and informal bilateral dialogues.

<u>Conclusion</u>: The Report concludes that, in the coming year, the Federal Insurance Office will continue to address climate-related financial risks, the affordability and availability of insurance products for traditionally underserved communities and consumers, the role of the insurance industry in helping to improve our nation's cybersecurity, and other relevant developments affecting the U.S. insurance industry, policyholders, and consumers.

I. INTRODUCTION

This Report is submitted by the Federal Insurance Office (FIO) of the U.S. Department of the Treasury (Treasury) pursuant to Section 502(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), which requires the annual submission by FIO of a report to the President, the Committee on Financial Services of the House of Representatives, and the Committee on Banking, Housing, and Urban Affairs of the Senate "on the insurance industry and any other information as deemed relevant by the [FIO] Director or requested by such Committees."[1]

A. Federal Insurance Office Authorities and Insurance Regulation

In the United States, the primary regulators of the business of insurance are the fifty states, the District of Columbia, and the five U.S. territories.

The federal government also plays an important role in the insurance industry, including through FIO.[2] Title V of the Dodd-Frank Act established FIO within Treasury.[3] In addition to advising the Secretary of the Treasury (Secretary) on major domestic and prudential international insurance policy issues and having its Director serve as a non-voting member of the Financial Stability Oversight Council (FSOC), FIO is authorized to:

- monitor all aspects of the insurance industry, including identifying issues or gaps in the regulation of insurers that could contribute to a systemic crisis in the insurance industry or the U.S. financial system;
- monitor the extent to which traditionally underserved communities and consumers, minorities, and low- and moderate-income persons have access to affordable insurance products regarding all lines of insurance, except health insurance;
- recommend to FSOC that it designate an insurer, including the affiliates of such insurer, as an entity subject to regulation as a nonbank financial company supervised by the Board of Governors of the Federal Reserve System (Federal Reserve);
- assist the Secretary in the administration of the Terrorism Risk Insurance Program (TRIP), as established in Treasury under the Terrorism Risk Insurance Act of 2002, as amended (TRIA);
- coordinate federal efforts and develop federal policy on prudential aspects of international insurance matters, including representing the United States, as

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[1] Federal Insurance Office Act of 2010 (FIO Act), 31 U.S.C. § 313(n)(2).

[2] The federal government also may have a significant impact on insurers through, among other things, the regulation of financial products or markets that include insurance (e.g., regulation of securities by the U.S. Securities and Exchange Commission (SEC)) and the taxation of insurers and their products.

[3] FIO Act, 31 U.S.C. § 313(a). Title V also designates the Secretary as advisor to the President on "major domestic and international prudential policy issues in connection with all lines of insurance except health insurance." *Id.* at § 321(a)(9).

appropriate, in the International Association of Insurance Supervisors (IAIS) and assisting the Secretary in negotiating covered agreements;

- determine whether state insurance measures are preempted by covered agreements;
- consult with the states (including state insurance regulators) regarding insurance matters of national importance and prudential insurance matters of international importance; and
- perform such other related duties and authorities as may be assigned to FIO by the Secretary.[4]

In addition, before the Secretary may make a determination as to whether to seek the appointment of the Federal Deposit Insurance Corporation as receiver of an insurer under Title II of the Dodd-Frank Act, the Secretary must first receive a written recommendation from the FIO Director and the Federal Reserve.[5] Also, FIO and the Federal Reserve coordinate on the performance of annual analyses of nonbank financial companies supervised by the Federal Reserve, particularly with respect to stress testing, to evaluate whether such companies have the capital, on a consolidated basis, necessary to absorb losses as a result of adverse economic conditions.[6]

In addition, FIO is authorized to collect data and information on and from the insurance sector, including through the use of subpoenas.[7] FIO is also authorized to analyze and disseminate data and information and issue reports on all lines of insurance, except health insurance.[8]

In addition to its statutory authorities, FIO has several statutorily imposed reporting obligations. Beyond the reporting requirements in the Dodd-Frank Act (including for this annual report), the Economic Growth, Regulatory Relief, and Consumer Protection Act directs the Secretary and the Federal Reserve Chairman (or their designees) to submit an annual report to Congress on their efforts with respect to global insurance regulatory or supervisory forums.[9] The Act also requires the Secretary and Federal Reserve Chairman (or their designees) to report to Congress on their efforts to increase transparency at IAIS meetings.[10] In addition, the Act requires that, before supporting or consenting to the adoption of any final international insurance capital standard, the Secretary, the Federal Reserve Chairman, and the FIO Director—in consultation with the

[4] FIO Act, 31 U.S.C. § 313(c)(1).

[5] Dodd-Frank Act, 12 U.S.C. § 5383(a)(1)(C).

[6] 12 U.S.C. § 5365(i)(1)(A).

[7] 31 U.S.C. § 313(e).

[8] 31 U.S.C. § 313(e).

[9] Economic Growth, Regulatory Relief, and Consumer Protection Act, Pub. L. No. 115-174, § 211(c)(1)(A), 132 Stat. 1296 (2018).

[10] Economic Growth, Regulatory Relief, and Consumer Protection Act, § 211(c)(4).

National Association of Insurance Commissioners (NAIC)—must complete a study and submit a report to Congress on the impact of any such standard on consumers and U.S. markets.[11]

B. The Structure of this Report

This Report begins above with an overview of FIO's statutory authorities and responsibilities.

Section II provides a discussion and analysis of the insurance industry's financial performance in calendar year 2020 and its financial condition as of December 31, 2020.

The other sections of this Report, which are less dependent on year-end financial data, generally contain analysis through the first half of the current calendar year, i.e., developments since FIO's 2020 *Annual Report on the Insurance Industry*.[12]

Section III provides topical updates and updates on FIO's activities during the past year. Supplementing the discussion in Section II, it includes additional pandemic-related updates, both domestic and international. It also addresses work on climate change, cyber insurance and ransomware, the Terrorism Risk Insurance Program, auto insurance, and several other topics. Section III concludes with a discussion of international developments, including at the IAIS and with respect to the covered agreements.

Section IV is a brief conclusion, noting areas of ongoing FIO interest.

[11] Economic Growth, Regulatory Relief, and Consumer Protection Act, § 211(c)(3)(A).

State regulation of the insurance industry is coordinated through the NAIC, a voluntary organization whose membership consists of the chief insurance regulatory officials of the 50 states, the District of Columbia, and the five U.S. territories.

[12] FIO, *Annual Report on the Insurance Industry* (2020), https://home.treasury.gov/system/files/311/2020-FIO-Annual-Report.pdf (*2020 Annual Report*).

II. INSURANCE INDUSTRY FINANCIAL OVERVIEW AND OUTLOOK

A. Domestic Insurance Marketplace Overview and Outlook

The financial analysis in this section, consistent with prior FIO annual reports, addresses the most recent calendar year, i.e., it focuses on the insurance industry's financial performance and condition through December 31, 2020, the latest date for which detailed, comprehensive, and definitive data is available.[13]

Prior to the outbreak of the COVID-19 pandemic in early 2020, the United States had been experiencing nearly 11 years (128 months in total) of economic expansion.[14] Historically low levels of unemployment and inflation below the Federal Reserve's two percent target rate characterized this period. The onset of the COVID-19 pandemic led to widespread uncertainty and market volatility, resulting in credit and liquidity stresses. In response, the Federal Reserve eased monetary policy and launched emergency actions last employed during the 2008 financial crisis. At the same time, the federal government provided substantial fiscal relief to households and businesses as economic activity plummeted from efforts to contain the viral spread. All these actions calmed markets and helped the economy to regain a measure of confidence.

The U.S. insurance industry was able to maintain its financial health in 2020. Despite increased balance sheet pressures, the life and health (L&H) sector achieved a 10-year high in its capital and surplus, boosted by decade-high growth in cash and invested assets. Steady leverage ratios and improved liquidity levels brought about increased financial flexibility in 2020, and coupled with a lower combined ratio, enabled the property & casualty (P&C) sector to grow policyholder surplus to the highest levels in a decade, despite the pandemic.

The sustained low interest rate environment continues to affect the insurance industry's performance. Both the L&H and P&C sectors exhibited declining operating margins and some deterioration in the quality of their investment portfolios in 2020. The L&H sector's underwriting performance was mainly impacted by negative premium growth. The P&C sector's reduced net investment income largely drove negative operating growth. The search for higher yields was clearly reflected in the increase in non-investment grade bond holdings and alternative investments in 2020, raising the insurance industry's exposure to market shocks and highlighting an area for continued monitoring as interest rates remain low.

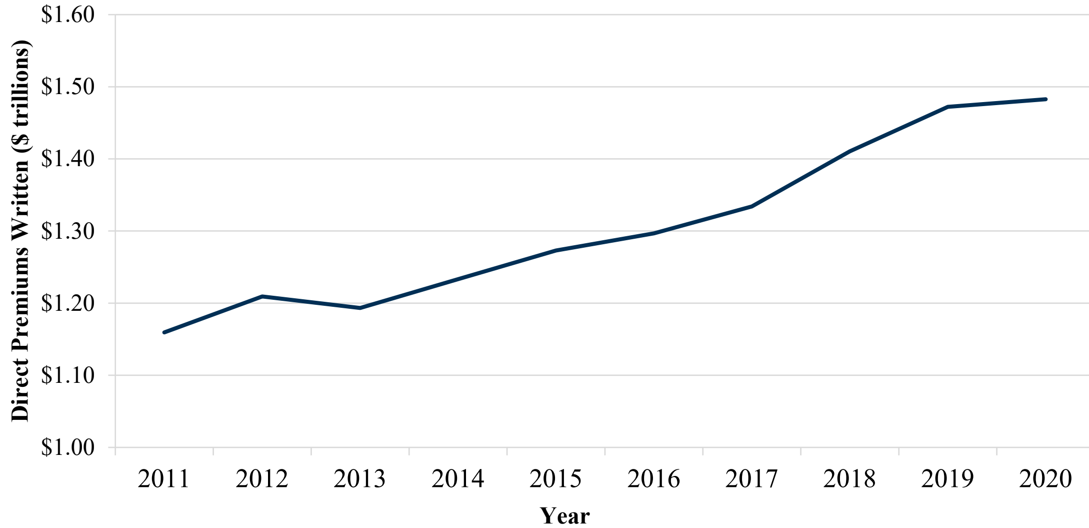
The year 2009 marked a low point for domestic insurance premiums, in response to the 2008 financial crisis. Premiums have grown in every year since 2009, except in 2013. Despite the

[13] Except as otherwise indicated, data cited in this section of the Report are as of December 31, 2020, as derived from S&P Global Market Intelligence (S&P Global) on May 12, 2021. These data are on a statutory accounting basis. S&P Global continuously updates its data for corrections in filings; 2020 data in this Report are based on updated data available as of May 12, 2021, and thus may be different in some respects from corresponding figures reported in FIO's *2020 Annual Report*. Due to certain conventions used by S&P Global for aggregation of industry data, some columns in the accompanying tables may not sum to the totals that have been separately accumulated by S&P Global from individual legal entity data. Some figures may not add to 100 percent due to rounding.

[14] "US Business Cycle Expansions and Contractions," National Bureau of Economic Research, https://www.nber.org/research/data/us-business-cycle-expansions-and-contractions.

many impacts of the COVID-19 pandemic, this trend continued during 2020 as well. In 2020, total direct premiums written for the combined L&H and P&C sectors were $1.48 trillion, increasing less than one percent from 2019 levels, but nearly 28 percent from 2011, as shown in Figure 1.

Figure 1: Total Direct Premiums Written for L&H and P&C Sectors ($ trillions)



Source: S&P Global

1. Financial Performance and Condition Overview

This section focuses on the financial performance and condition of the 676 L&H insurers, the 2,614 P&C insurers, and the 1,260 health insurers licensed in the United States during 2020.[15] Insurers in the L&H sector offer products in two segments: (1) life insurance and annuities, which generally protect against the risk of financial loss associated with an individual's death and provide income streams for retirement, respectively; and (2) accident and health (A&H) products, which cover expenses for health and long-term care or provide income in the event of disability. Insurers in the P&C sector offer products that generally protect against the risk of financial loss associated with damage to property or exposure to liability for individuals and families (personal lines) or for businesses (commercial lines).

Direct premiums written for the L&H sector were approximately $767 billion in 2020, constituting 33 percent of direct premiums written for the combined L&H, P&C, and Health sectors.[16] For the P&C sector, direct premiums written were approximately $717 billion,

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[15] S&P Global. The L&H and P&C sectors are the primary insurance sectors in the United States. The Health sector includes companies licensed solely as health insurers or as health maintenance organizations, but is not the focus of the remainder of this Report.

[16] Direct premiums written amount does not match the amount shown in Figure 2 as S&P Global uses data from different exhibits in the Annual Statements to prepare market share data. The NAIC instructions manual does not require the premiums figures across exhibits to match, as they are calculated differently.

constituting 31 percent of direct premiums written of the combined total for the three sectors. The Health sector reported $834 billion of direct premiums written for 2020, approximately 36 percent of the combined total for the three sectors.[17]

At the end of 2020, the L&H sector held approximately $8.0 trillion of total assets (including $3.0 trillion held in separate accounts), the P&C sector held approximately $2.4 trillion, and the Health sector held approximately $515 billion. As of December 31, 2020, capital and surplus in the L&H sector stood at approximately $440 billion; the P&C sector reported policyholder surplus of approximately $914 billion; and the Health sector reported approximately $244 billion.

Figure 2 and Figure 3 present snapshots of the L&H sector market, showing the 10 largest L&H insurance groups measured by direct premiums written, and market share for life insurance (including annuities and other deposit-type contracts) and for A&H lines of business, respectively. Premiums shown in Figure 2 and Figure 3 aggregate all L&H sector products and all geographies of the United States.

Figure 2: L&H Insurance Groups by 2020 U.S. Life Insurance Lines Direct Premiums Written

2019 Rank	**2020 Rank**	**Insurance Group**	2019 Direct Premiums Written ($000)	Share of Total (%)	**2020 Direct Premiums Written ($000)**	**Share of Total (%)**
1	1	MetLife	$ 95,079,321	12.99	$ 103,335,055	13.06
3	2	Equitable Holdings	44,612,694	6.09	62,688,657	7.92
2	3	Prudential Financial Inc.	56,206,131	7.68	61,913,976	7.82
4	4	New York Life	34,984,924	4.78	40,211,642	5.08
5	5	MassMutual	30,375,127	4.15	38,461,197	4.86
7	6	Principal Financial Group Inc.	27,038,400	3.69	26,439,671	3.34
6	7	Lincoln Financial	28,471,688	3.89	25,385,450	3.21
11	8	Western & Sthrn Finl Grp	20,594,041	2.81	22,920,717	2.90
10	9	Transamerica	22,360,111	3.05	22,875,109	2.89
8	10	AIG	25,684,294	3.51	22,620,803	2.86
		Combined Top 10	$ 387,869,365	52.97	$ 426,852,277	53.94
		Combined Top 25	$ 585,155,216	79.92	$ 636,498,353	80.44
		Combined Top 100	$ 722,558,422	98.68	$ 782,664,853	98.93
		Total U.S. Life Insurance Lines	$ 732,191,458		$ 791,277,958	

Source: S&P Global (includes Life Insurance (No Annuity), Annuity Considerations, Deposit-type Contracts (State Page), Other Considerations (State Page))

The data presented in Figure 2 and Figure 3 for life and annuity business, and in the comparable figures that follow for other lines of business, are aggregated at a group level from filings made with state insurance regulators by individual legal entity insurers. For example, premiums

[17] Direct premiums written show the amount paid for insurance by policyholders and are a measure of sales activity and growth.

shown for MetLife Inc. include premiums written by all of its insurance subsidiaries in the United States, but exclude business written by affiliated entities in other jurisdictions.

The aggregate market shares of the top 10, 25, and 100 companies in 2020 were little changed compared to 2019, as shown in Figure 2. Notably, Equitable Holdings passed Prudential Financial to take second place, while American International Group lost market share and fell to tenth place from eighth in 2019. The gain in market share by Equitable Holdings follows its separation from its former parent, Axa S.A., and displaced long-time second-largest writer Prudential Financial.

Figure 3: L&H Insurance Groups by 2020 U.S. A&H Lines Direct Premiums Written

2019 Rank	**2020 Rank**	**Insurance Group**	2019 Direct Premiums Written ($000)	Share of Total (%)	**2020 Direct Premiums Written ($000)**	**Share of Total (%)**
1	1	UnitedHealth Group	$ 57,985,375	28.66	$ 57,827,639	27.71
2	2	CVS Health Corp.	35,408,470	17.50	38,247,874	18.33
3	3	Cigna	19,977,156	9.87	21,422,657	10.27
4	4	MetLife	8,352,302	4.13	8,381,386	4.02
5	5	Unum Group	6,425,091	3.18	6,447,655	3.09
6	6	Aflac	5,440,830	2.69	5,450,426	2.61
7	7	Mutual of Omaha	4,648,741	2.30	4,936,066	2.37
8	8	Guardian	4,044,781	2.00	4,098,820	1.96
9	9	New York Life	3,051,851	1.51	3,154,728	1.51
10	10	Sun Life Financial	2,767,187	1.37	3,132,441	1.50
		Combined Top 10	$ 148,101,784	73.20	$ 153,099,692	73.37
		Combined Top 25	$ 178,044,995	88.00	$ 184,609,659	88.48
		Combined Top 100	$ 200,660,504	99.18	$ 207,571,764	99.48
		Total U.S. A&H Lines	$ 202,319,633		$ 208,659,497	

Source: S&P Global

Figure 3 shows A&H premiums written by insurers authorized to offer both life and health insurance; it excludes A&H premiums written by insurers authorized to offer only health insurance. Thus, for example, the data presented in Figure 3 for UnitedHealth Group do not reflect that insurer's total health insurance premiums on a consolidated basis, but only premiums written by its subsidiaries licensed to offer both life and health insurance. UnitedHealth Group also writes health insurance business through subsidiaries that offer only health insurance, and those premiums are reflected in Figure 5.

As noted above, P&C insurers underwrite a variety of products, generally categorized as either personal lines or commercial lines. Figure 4 reports market share information on a combined P&C sector basis. For both commercial lines and personal lines, there was little change in the aggregate market shares of the top 10, 25, and 100 P&C companies in 2020. Progressive replaced Allstate Corp., however, as the third-largest writer of P&C lines.

Figure 4: P&C Insurance Groups by 2020 U.S. Combined Lines Direct Premiums Written

2019 Rank	**2020 Rank**	**Insurance Group**	2019 Direct Premiums Written ($000)	Share of Total (%)	**2020 Direct Premiums Written ($000)**	**Share of Total (%)**
1	1	State Farm	$ 65,970,942	9.26	$ 66,153,063	9.23
2	2	Berkshire Hathaway Inc.	46,333,833	6.50	46,241,707	6.45
4	3	Progressive	39,222,879	5.51	41,737,283	5.82
3	4	Allstate Corp	40,036,812	5.62	39,210,020	5.47
5	5	Liberty Mutual	35,600,051	5.00	36,172,570	5.05
6	6	Travelers	28,016,966	3.93	28,786,741	4.02
8	7	USAA	23,483,080	3.30	24,621,246	3.43
7	8	Chubb	23,531,504	3.30	24,054,673	3.36
9	9	Farmers Insurance	20,643,559	2.90	20,083,339	2.80
10	10	Nationwide	18,442,145	2.59	18,499,967	2.58
		Combined Top 10	$ 341,281,771	47.90	$ 345,560,609	48.21
		Combined Top 25	$ 473,669,022	66.48	$ 481,710,617	67.20
		Combined Top 100	$ 620,724,818	87.12	$ 635,227,071	88.62
		Total U.S. P&C Sector	$ 712,471,955		$ 716,918,933	

Source: S&P Global (includes all lines of business)

As shown in Figure 5, the health market continued to tighten somewhat at the top, with the aggregate market share of the top 10 writers increasing nearly one-and-one-half percentage points (to 60 percent) from 2019. There was only a minor change in the rankings of the top ten writers of health insurance for 2020.

Figure 5: Health Insurance Groups by 2020 U.S. Health Lines Direct Premiums Written

2019 Rank	**2020 Rank**	**Insurance Group**	2019 Direct Premiums Written ($000)	Share of Total (%)	**2020 Direct Premiums Written ($000)**	**Share of Total (%)**
1	1	UnitedHealth Group	$ 108,611,866	14.21	$ 119,370,742	14.30
2	2	Anthem Inc.	76,587,373	10.02	83,901,223	10.05
3	3	Humana Inc.	63,946,708	8.37	74,178,364	8.89
4	4	Centene Corp.	63,556,714	8.32	72,861,616	8.73
5	5	HCSC	39,629,317	5.19	44,520,575	5.33
6	6	CVS Health Corp.	26,079,700	3.41	29,365,207	3.52
7	7	Kaiser Permanente	20,035,052	2.62	20,955,411	2.51
9	8	Independence Health Group Inc.	17,859,403	2.34	20,105,855	2.41
8	9	GuideWell Mutual Holding Corp.	18,661,884	2.44	19,314,053	2.31
10	10	Molina Healthcare Inc.	16,132,762	2.11	19,106,224	2.29
		Combined Top 10	$ 451,100,780	59.02	$ 503,679,270	60.36
		Combined Top 25	$ 589,073,135	77.07	$ 649,861,047	77.87
		Combined Top 100	$ 740,998,778	96.95	$ 808,738,534	96.91
		Total U.S. Health Insurance	$ 764,286,653		$ 834,517,447	

Source: S&P Global

Finally, as noted above, both the P&C and L&H sectors continue to search for higher yields in their investment portfolios, potentially increasing vulnerability to market volatility and economic shocks. For example, early in the COVID-19 pandemic, in March 2020, market reaction to the fears generated by the pandemic caused credit spreads to widen substantially as investors fled to less risky assets. Although credit losses were limited due to the U.S. emergency support measures, the actions of many insurers to enhance liquidity and capital during this period of stress highlighted the relative vulnerability of the U.S. insurance sector's fixed-income portfolio.[18] As of year-end 2020, U.S. insurance companies (L&H and P&C) held $4.4 trillion in fixed income instruments.[19]

2. Life and Health Sector

a) Performance

This section presents additional analysis of the financial performance of the L&H sector in 2020, and then assesses the L&H sector's overall financial condition as of December 31, 2020.

i. Net Premiums Written

Direct premiums written is a principal measure of the size and growth of the insurance industry. Net premiums written is the sum of direct premiums written and net ceded reinsurance premiums and is a measure of risk assumed by the industry. Figure 6 shows net premiums written, considerations, and deposits over the past five years, while Figure 7 shows the 2020 composition of net premiums and considerations. Over 2020, direct premiums written of $767 billion for the L&H sector grew by one percent, despite the economic challenges from the COVID-19 pandemic, which did not cause the increase in life insurance premiums that some observers had anticipated.[20] After reinsurance transactions, L&H sector net premiums written were $628 billion in 2020, marking an eight percent decrease from the $680 billion reported in 2019. Net ceded reinsurance swelled by 75 percent to $144 billion, the highest level in the last ten years. The sector's total net ceded reinsurance premiums were boosted by a coinsurance agreement in which Jackson National Life Insurance Co. ceded $24 billion of individual annuities to Athene Life Re.[21]

Net premiums written, which have represented on average 71 percent of total L&H sector revenues over the past 10 years, represented 73 percent in 2019 and 72 percent in 2020. Annuity premiums and deposits dropped by nearly 13 percent, while life insurance premiums decreased by almost six percent, and A&H premiums were essentially flat compared to 2019. For 2020, annuity premiums and deposits constituted 48 percent of total net premiums written, as shown in Figure 6. Sales of traditional life insurance products accounted for 22 percent of 2020 L&H

[18] "US Life/Annuity Industry Weathers the Pandemic Well in 2020," *Best's Market Segment Report*, March 8, 2021, http://www.ambest.com/multimedia/2021_031_RVPV_LA_WEB.pdf.

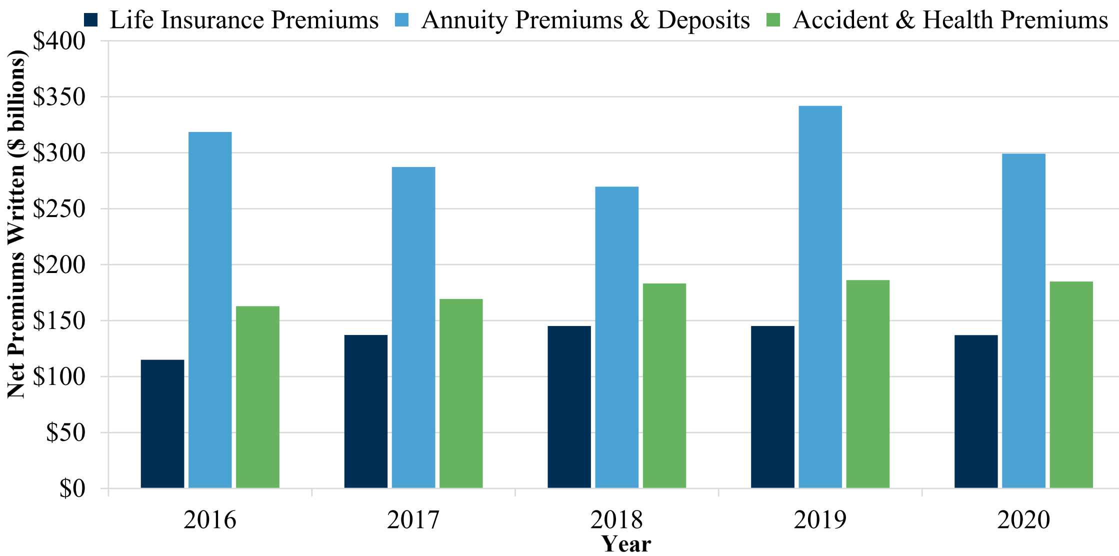
[19] S&P Global, FIO research.

[20] Rozelle Alyssa Javier and Husain Rupawala, "Despite Pandemic, Life Insurance Premiums Edge Down YOY in FY20," *S&P Global Market Intelligence*, May 3, 2021, https://platform.marketintelligence.spglobal.com/web/client?auth=inherit&ignoreIDMContext=1#news/article?id=63858722.

[21] Matthew Coppola, "First Look: 12 Month 2020 Life/Annuity Financial Results," *A.M. Best Company, Inc.*, March 24, 2021, http://www3.ambest.com/industryresearch/DisplayBinary.aspx?TY=P&record_code=306982&URatingId=2562038&AltSrc=159.

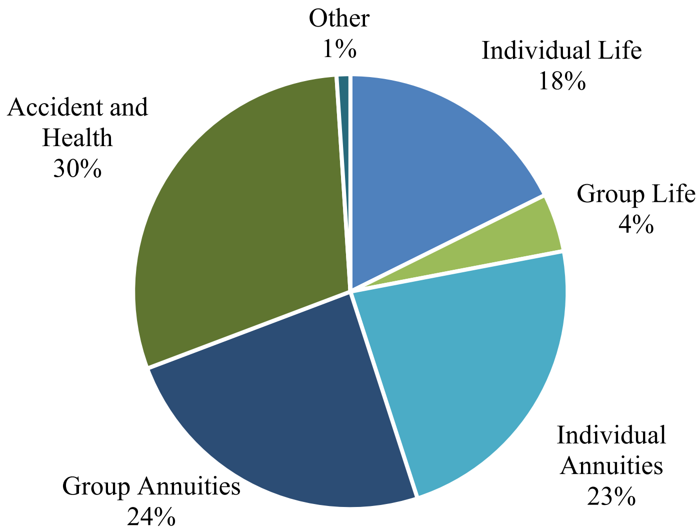
sector net premiums written, while the remaining 29 percent was comprised almost entirely of A&H sector premiums.

Figure 6: L&H Sector Net Premiums, Considerations, and Deposits ($ billions)



Source: S&P Global

Figure 7: 2020 Composition of Net Premiums and Annuity Considerations for the L&H Sector



Source: S&P Global

ii. Policyholder Contract Benefits, Surrenders, and Other Expenses

Policyholder contract benefits are claims or obligations of L&H insurers under life insurance, annuity, and other contracts and policies. Contract surrenders occur when a policyholder or contract holder elects to cancel a policy or contract before the end of its contractual term and to receive its accumulated cash value (if any). Contract benefit payments and contract surrenders comprise the majority of total expenses for L&H insurers. Non-benefit-related expenses include general administrative and overhead expenses, expenses incurred in acquiring business (particularly producer commissions), and expenses related to payments made under contractual provisions of polices, including loss verification and adjustment expenses. Figure 8 shows aggregate L&H sector benefit payments, surrenders, reserve increases, and all other expenses for recent years.

Figure 8: L&H Sector Expenses ($ thousands)

	2016	2017	2018	2019	2020
Total Benefits Payments	$ 271,355,287	$ 281,360,939	$ 289,480,982	$ 302,163,973	$ 313,789,979
Total Surrenders	265,095,216	308,928,842	350,278,913	339,640,132	323,201,785
Total Increase in Reserves	133,139,152	106,352,393	143,299,884	120,573,985	112,346,154
Total Transfers to Separate Accounts	(38,046,582)	(65,770,433)	(89,648,289)	(71,995,355)	(69,146,649)
Commissions	64,569,458	58,001,783	58,336,146	61,221,405	59,920,665
General & Administrative Expenses	62,361,327	65,850,564	65,887,312	67,868,632	66,867,246
Insurance Taxes, Licenses and Fees	10,828,050	8,814,167	10,746,370	9,307,745	11,497,569
Other Expenses	(2,709,027)	(4,129,166)	11,349,411	14,424,585	8,328,875
Total	**$ 766,592,880**	**$ 759,409,089**	**$ 839,730,729**	**$ 843,205,102**	**$ 826,805,625**

Source: S&P Global

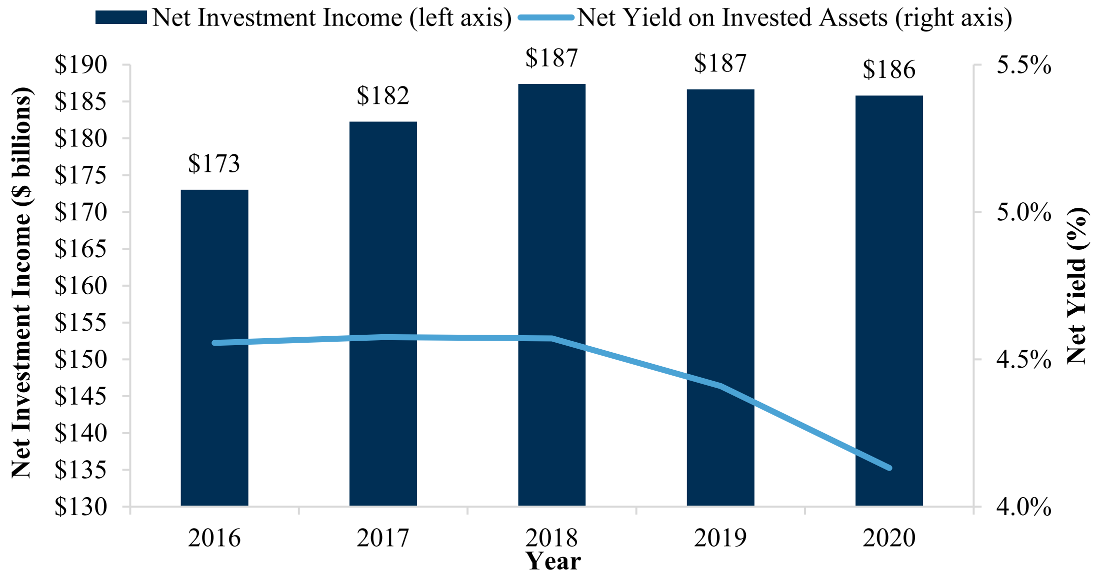
Total L&H sector expenses decreased between 2019 and 2020 by two percent. Total contract surrenders decreased five percent in 2020, and reserve increases dropped by seven percent, which combined to largely offset a four percent increase in total benefits payments. The increase in benefits payments was largely due to increased mortality from the COVID-19 pandemic.[22] A 25 percent increase in insurance taxes, licenses, and fees was also a notable unfavorable change in 2020 expenses.

iii. Investment Income

Net investment income constituted about 21 percent of aggregate L&H sector revenues in 2020, reversing the modestly declining trend of the past couple of years. Net investment income was essentially flat versus 2019, decreasing by less than one percent for the year. Figure 9 shows L&H sector net investment income from invested assets (excluding net realized gains and losses) and the net investment yield for recent years.

[22] Fitch Ratings, *U.S. Life Insurers' Statutory Capital Dashboard: April 2021* (April 2021), https://www.fitchratings.com/research/insurance/us-life-insurers-statutory-capital-dashboard-april-2021-15-04-2021.

Figure 9: L&H Sector Annual Net Investment Income ($ thousands) and Net Yield on Invested Assets (%)

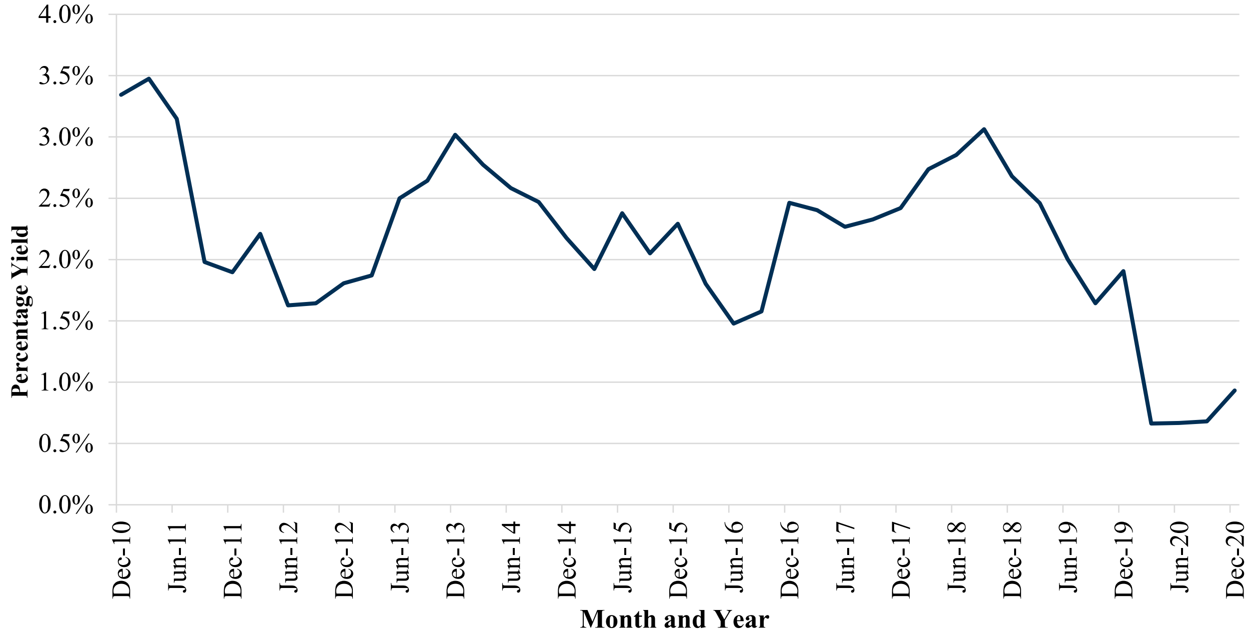


Source: S&P Global

Longer-term interest rates fell sharply to new low levels in the first quarter of 2020 as the pandemic worsened, followed by a moderate recovery in the second half of the year (see Figure 10); the net yield on invested assets fell to 4.13 percent from the 2019 result of 4.41 percent, marking the lowest level over the past ten years. The decline in net yield was primarily the result of a seven percent increase in total cash and invested assets, coupled with flat net investment income. The general interest rate environment remained near historically low levels at the end of 2020, and continued to present risks to the L&H sector.[23]

[23] *See, e.g.*, FIO, *Annual Report on the Insurance Industry* (2018), 12, https://home.treasury.gov/system/files/311/2018_FIO_Annual_Report.pdf (*2018 Annual Report*).

Figure 10: Percentage Yield on 10-Year Treasury Bonds



Source: S&P Global

In 2020, the L&H sector net realized capital losses increased to $10.8 billion from $6.9 billion in 2019, or nearly 45 percent. This followed a 45 percent decrease in realized capital losses experienced in 2018. The deterioration in 2020 appears to be due to higher realized losses on affiliated investments. Losses on derivative securities (almost exclusively used for hedging transactions) were slightly lower in 2020 than in 2019.

iv. Net Income and Return on Equity

Figure 11 presents a summary income statement for the L&H sector. Total revenues in the L&H sector were $883 billion in 2020, a decrease of four percent from the $922 billion reported in 2019. The eight percent decline in net premiums written was mitigated by an offsetting 23 percent decrease in the reinsurance allowance and a 13 percent increase in other income, and coupled with the flat net investment income, explain the decrease in total revenues. Total expenses decreased by only two percent to $827 billion, leading to a 38 percent drop in pre-tax operating income. Net income fell by 51 percent to $22 billion in 2020, largely due to the $22.9 billion decrease in the net gain from operations.

Figure 11: L&H Sector Net Income ($ thousands)

	2016	2017	2018	2019	2020
Premiums, Consideration & Deposits	599,872,141	597,051,057	603,190,697	679,875,345	627,537,539
Net Investment Income	173,025,713	182,257,219	187,381,415	186,659,375	185,804,549
Reinsurance Allowance	(16,975,046)	(25,108,912)	32,044,503	(29,719,855)	(22,808,909)
Separate Accounts Revenue	34,652,744	36,551,982	37,271,230	36,754,163	37,347,643
Other Income	61,330,223	49,163,993	44,037,925	48,754,792	54,961,158
Total Revenue	**851,905,776**	**839,915,339**	**903,925,771**	**922,323,821**	**882,841,980**
Total Expenses	766,592,880	759,409,089	839,730,729	843,205,102	826,805,625
Policyholder Dividends	18,230,320	17,498,496	18,192,333	18,111,045	18,025,447
Net Gain from Operations before FIT	67,061,448	63,004,352	46,000,675	61,007,674	38,009,944
Federal Income Tax	16,282,427	12,360,768	3,397,276	9,435,327	5,145,845
Net Income before Cap Gains	50,782,390	50,645,915	42,604,906	51,572,347	32,865,184
Net Realized Capital Gains (Losses)	(11,384,798)	(8,554,343)	(4,742,717)	(6,860,605)	(10,770,969)
Net Income	**39,397,552**	**42,094,584**	**37,865,073**	**44,711,742**	**22,098,114**

Source: S&P Global

Figure 12 shows key operating ratios for the L&H sector. The L&H sector's 2020 pre-tax operating margin decreased to 4.3 percent from 6.6 percent in 2019. The decrease in operating income, coupled with an increase in equity (discussed below), led to a decrease in the sector's pre-tax operating return on average equity to 8.8 percent, compared to the 14.8 percent recorded in 2019, and the return on average equity fell to 5.1 percent from 10.9 percent the previous year. The return on average assets fell from 0.63 percent in 2019 to 0.29 percent in 2020.

Figure 12: L&H Sector Operating Ratios

	2016	2017	2018	2019	2020
Pre-Tax Operating Margin	7.87%	7.50%	5.09%	6.61%	4.31%
Return on Average Equity	10.54%	10.85%	9.53%	10.88%	5.13%
Pre-Tax Operating Return On Average Equity	17.93%	16.24%	11.57%	14.84%	8.83%
Return on Average Assets	0.61%	0.62%	0.55%	0.63%	0.29%

Source: S&P Global

b) Condition

This section presents information on the 2020 financial condition of the L&H sector, noting certain financial indicators and trends in recent years and over the past decade, and providing insight into the sector's financial safety and soundness.

i. Capital and Surplus

Despite the effects of the pandemic on the economy in 2020, the L&H sector's capital position remained healthy. Year-over-year growth continued in 2020, as illustrated in Figure 13, and capital and surplus reached a decade high of $440.4 billion in 2020. Growth of over seven percent in general account cash and invested assets, bolstered by growth of nearly 9 percent in separate account assets, largely enhanced 2020 capital levels.

Figure 13: L&H Capital and Surplus Position ($ thousands)

	2016	2017	2018	2019	2020
Capital & Surplus	$ 380,686,099	$ 395,024,290	$ 399,896,318	$ 422,056,554	$ 440,372,377
Year-Over-Year Growth	3.7%	3.8%	1.2%	5.5%	4.3%
General Account Assets	4,117,531,087	4,301,459,820	4,358,585,783	4,583,859,688	4,917,590,663
Year-Over-Year Growth	5.3%	4.5%	1.3%	5.2%	7.3%
Capital & Surplus to General Account Assets	9.2%	9.2%	9.2%	9.2%	9.0%

Source: S&P Global

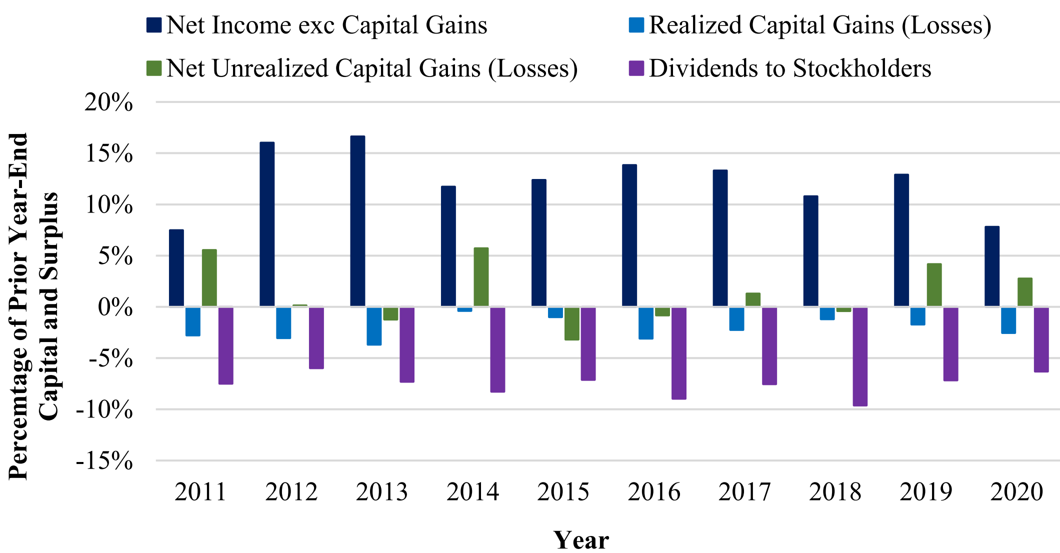
Averaging at 3.9 percent since 2011, annual growth in total general account assets has remained positive over the last 10 years. While falling to 9.0 percent in 2020, the ratio of capital and surplus to general account assets has remained relatively stable for the entire decade (2011 to 2020, inclusive), ranging between 8.8 percent and 9.4 percent, and highlighting that the L&H sector appears to be managing its excess capital to meet its financial obligations in a consistent manner.

When examining the last decade, the issuance of surplus notes by the L&H sector reached a peak in 2020 both in terms of volume and annual growth rates. In recent years, debt capital has grown sharply year-over-year compared to non-debt capital, averaging 10.2 percent from 2017 through 2020. By contrast, non-debt capital has only averaged 3.1 percent annually over the same four-year period. The significant issuance in 2020 can likely be attributed to the easing of credit conditions, facilitated by the emergency support measures launched during the pandemic. Contributing to capital and surplus, surplus notes totaled $42.7 billion at year-end 2020, increasing by 14.4 percent from year-end 2019 and raising the average annual growth rate of issuance to 3.2 percent for the decade compared to the 1.9 percent yearly average for the previous nine years. Surplus notes issued in 2020 represented 9.7 percent of aggregate capital and surplus, up from 8.9 percent at the previous year-end, so that the annual growth rate averaged 8.8 percent for the past ten years. Proceeds from surplus note issuance in 2020 were reported to be targeted largely for general corporate purposes.

Growth in the L&H sector's capital base may be observed more clearly by eliminating the effect of capital contributions in the form of surplus notes. When removing this effect, pro forma growth in capital and surplus averages slightly higher at 3.8 percent annually, compared to 3.7 percent when including this effect, and demonstrates the ability of L&H insurers to generate capital from their core operations.

The L&H sector's organic growth of its capital and surplus can be attributed largely to year-over-year positive earnings, i.e., consistent gains generated from the sector's underwriting operations, before factoring in capital gains and losses over the last decade. Despite a considerable drop in annuity premiums and deposits of over $52 billion that primarily weakened underwriting performance in 2020, post-tax operating income (before capital gains) contributed nearly 8 percent to the growth of capital and surplus from 2019. Stockholder dividends have partially offset the growth in capital and surplus. In 2020, stockholder dividends were $26.6 billion, declining from $28.6 billion in 2019 and a decade high of $38 billion in 2018. To ensure that insurers' assets adequately protect policyholders and are not distributed unfairly, all stockholder dividends are subject to review by state insurance regulators and in the case of extraordinary dividends, insurers must seek regulatory approval prior to distribution. Overall, stockholder dividends have comprised 7.6 percent of prior year-end capital and surplus on average annually since 2011. On average, net income before capital gains and losses have added 12.3 percent to the previous year's capital and surplus each year since 2011. Figure 14 presents the principal determinants of capital and surplus for the L&H sector.

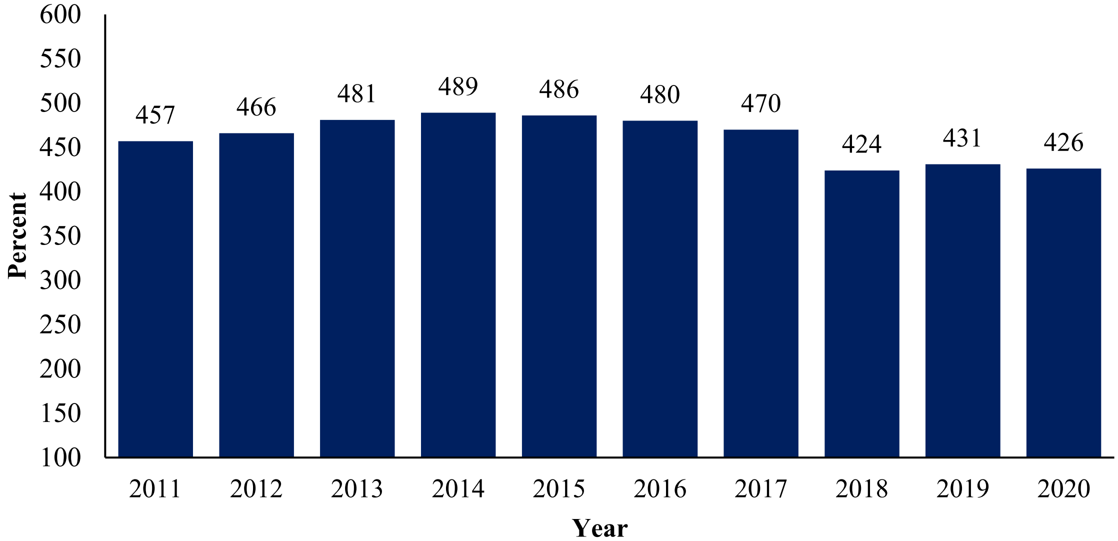
Figure 14: Leading Determinants of Capital and Surplus for the L&H Sector



Source: S&P Global

Figure 15 shows that the average risk-based capital ratio for the L&H sector declined slightly in 2020. Specifically, statutory capital and surplus was 4.26 times the level of minimum required regulatory capital on average in 2020 compared to 4.31 times the required level in 2019.

Figure 15: Average Risk-Based Capital Ratio for the L&H Sector



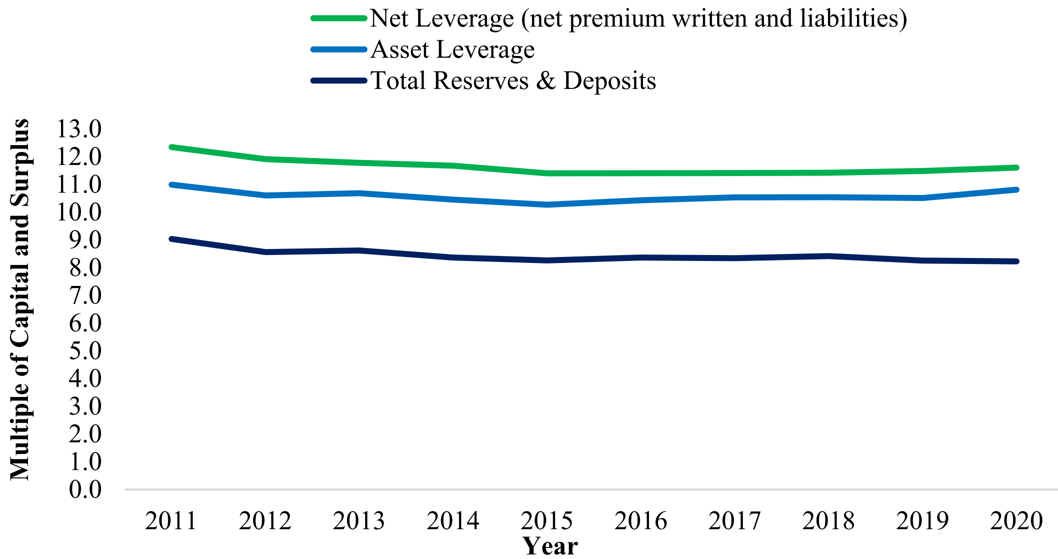
Source: ACLI Fact Book, S&P Global. Note: RBC ratios for 2019 and 2020 calculated from S&P Global data.

L&H sector net income of $22 billion in 2020 was less than one-half of 2019 levels, affecting the potential for capital generation. The sector reported a nearly 10 percent increase in death and annuity benefit expenses, which contributed to a ratio of total benefit expenses to premiums earned of 50 percent in 2020, rising substantially from 44.4 percent in 2019. According to Fitch Ratings, life insurer operating results in 2020 were largely impacted by higher claims paid, primarily due to increased mortality from COVID-19.[24]

Certain leverage ratios indicate that L&H insurers faced balance sheet pressures in 2020. The greater financial flexibility afforded by steady leverage ratios has enabled insurers to consistently fulfill policyholder obligations by: (1) returning a profit by investing the premiums received from underwriting activities; and (2) limiting the risk exposure from the policies underwritten. Insurers also employ reinsurance in order to move some of the risks off their own balance sheets and on to those of reinsurers. Figure 16 provides a view of the L&H sector's general account leverage for the last 10 years.

[24] Fitch Ratings, *U.S. Life Insurers' Statutory Capital Dashboard: April 2021*.

Figure 16: L&H Sector Leverage Ratios



Source: S&P Global

As Figure 13 illustrates, for the last five years, the L&H sector has been able to generate excess capital despite recent signs of strain. In 2020, the L&H sector experienced an uptick to 11.60 in its net leverage ratio, deviating from the trend observed for the prior five years.[25] The L&H sector reduced its underwriting exposure in 2020, evidenced in part by an almost eight percent decline in net premiums, annuities, and considerations (collectively referred to as net premiums in the net leverage ratio). Reduced net premiums, however, were eclipsed by increased general account liabilities that offset year-over-year growth in capital and surplus in 2020, placing upward pressure on the leverage metric. The COVID-19 pandemic in 2020 brought about ultra-low interest rates, market volatility, and high unemployment—all factors that apparently contributed to reduced sales of annuity products, particularly for fixed, indexed, and variable annuities, the returns of which are closely linked with stock market performance. Annuity premiums made up 47 percent of net premiums earned in 2020, down from 50 percent in 2019.

While the net retention rate decreased to 68.1 percent in 2020, cessions from the L&H sector to reinsurers rose materially. Cessions accounted for nearly 32 percent of gross premiums at year-end 2020, rising from 25.8 percent at year-end 2019 and the average of 24 percent each year over the last decade. With the average annual growth rate of reinsurance cessions sharply exceeding that of net premiums since 2011, surplus relief levels have been steadily increasing. Surplus relief has more than doubled, jumping from $10.4 billion in 2011 to $23.7 billion in 2020,

[25] Net leverage ratio is an indicator of the sector's exposure to pricing and estimation errors, determined by calculating total liabilities and net premiums, annuities, and considerations as a multiple of capital and surplus.

making up 4.6 percent of capital and surplus on average each year during that time. Since 2017, in particular, the surplus relief ratio averaged about 5.4 percent annually.[26]

Growing year-over-year at over three percent on average since 2011, total policy reserves and deposit-type contract reserves were $3.6 trillion at year-end 2020, up by four percent from $3.5 trillion at year-end 2019. The multiple of policy reserves and deposits to capital and surplus has held relatively firm since 2014, averaging at an 8.3 multiple that falls within a high of 9.03 at year-end 2011 and a decade low of 8.22 at year-end 2020. Overall, the ratio has both improved from the beginning of the decade and leveled off, as demonstrated in Figure 16, suggesting that over the ten-year period the financial resources set aside by the sector have been in line with expected claims.

The asset leverage ratio aims to measure the potential impact on the balance sheet arising from the volatility and credit quality of the sector's investment portfolio, reinsurance recoverables, and agents' balances. The ratio is calculated as the sum of cash and invested assets plus reinsurance recoverables and agents' balances to capital and surplus. In the past decade, the L&H sector's asset leverage ratio has ranged between a low of 10.26 at year-end 2015 and a high of 10.99 at year-end 2011. At year-end 2020, the multiple was 10.81, up from 10.5 at year-end 2019 and 10.53 at year-end 2018, largely due to the L&H sector's greater investment exposure. Life insurers are important investors in commercial real estate, corporate bonds, and collateralized loan obligations (CLOs), exposing them to risks stemming from sharp drops in asset prices, elevated issuer leverage, rising defaults in the corporate sector, and funding of illiquidity risks. The potential impacts upon insurers of sustained low interest rates and the potential withdrawal of the remaining economic support measures initiated since the onset of the health crisis are still unknown and may be concealing the extent of asset losses.

ii. Assets

Underpinning the strength of the L&H sector's capital base has been year-over-year growth in general account assets and investment allocations consistent with policyholder obligations. General account assets rose to $4.9 trillion in 2020 from $4.6 trillion in 2019, averaging an annual growth rate of 3.9 percent over the last decade. Rebounding from a considerable decline in 2018, separate account assets of $3.0 trillion showed substantial year-over-year growth in the last two years. The annual growth rate of separate account assets has continued to exceed that of general account assets, averaging 5.4 percent over the past decade. Total L&H sector assets, including separate accounts, were $8 trillion and $7.4 trillion for the years ending 2020 and 2019, respectively.

Figure 17 describes the composition of the L&H sector's asset portfolio and distribution of cash and investments for the last five years. Of total asset holdings, general account assets have

[26] The use of reinsurance for surplus relief is most common when an insurer begins to rapidly expand its volume of premiums written. "Surplus relief" refers to the amount of surplus not yet reported as income from commissions and expense allowances on reinsurance ceded during the current year. It captures the amounts related to A&H business as well as life and annuity business for general and separate accounts.

averaged over 62 percent of the portfolio on a yearly basis since 2016, while separate account assets have averaged close to 38 percent.

Figure 17: Composition of L&H Sector General Account Assets and Investment Portfolio

	2016	2017	2018	2019	2020
General Account Assets / Total Assets	62.3%	61.3%	63.9%	62.1%	61.8%
Separate Account Assets / Total Assets	37.7%	38.7%	36.1%	37.9%	38.2%
Bonds	73.5%	73.0%	72.5%	71.1%	70.2%
Preferred Stocks	0.2%	0.3%	0.3%	0.3%	0.3%
Common Stocks	2.2%	2.3%	2.0%	2.1%	2.2%
Mortgage Loans	11.2%	11.7%	12.6%	13.0%	12.6%
Real Estate	0.6%	0.6%	0.5%	0.5%	0.5%
Contract Loans	3.3%	3.2%	3.1%	3.0%	2.8%
Derivatives	1.6%	1.4%	1.4%	1.8%	2.6%
Cash & Short-Term Investments	2.6%	2.6%	2.5%	2.7%	3.2%
Other Investments	4.7%	5.0%	5.1%	5.3%	5.5%
Total Cash & Investments	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Share of General Account Assets	**94.5%**	**94.7%**	**94.6%**	**94.7%**	**94.7%**

Source: S&P Global

As detailed in Figure 17, the structure of the sector's investment portfolio has remained generally consistent in the last five years. Cash and invested assets of $4.7 trillion continued to make up nearly 95 percent of the general account asset portfolio at year-end 2020, mirroring previous years in the past decade. Bond holdings have consistently made up the bulk of the L&H sector's investment portfolio, reflective of the significant role that life insurers play in the corporate bond market. The predictability of cash flows from bond investments enhances insurers' ability to meet future policyholder obligations, making such investments a key feature of their business model. Of total bonds held by life insurers, at least 97 percent consistently have been long-term in nature—in line with the long-term nature of obligations assumed under life policies and contracts. This concentration of long-term assets with predictable (nominal) returns is indicative of insurer risk management practices that match asset and liability durations, aimed at mitigating the impact of interest rate fluctuations on capital and surplus and providing the ability to estimate cash flows in order to meet both debt and policyholder obligations as they become due.

Mortgage loans remain the second largest investment class held by the L&H sector, averaging at over 11 percent of cash and invested assets annually during the past decade.[27] Mortgage loans of $587.2 billion in 2020 increased from $565.5 billion in 2019, and represented a peak for the decade. At year-end 2020, they accounted for 12.6 percent of cash and invested assets, down from 13 percent at the previous year end.

Of note and as indicated in Figure 17, the L&H sector has gradually been reducing the allocation of its investment portfolio to bond holdings, dropping by more than 3 percentage points since 2016 and from a high of 75.3 percent at the start of the decade in 2011. Until recently, the L&H

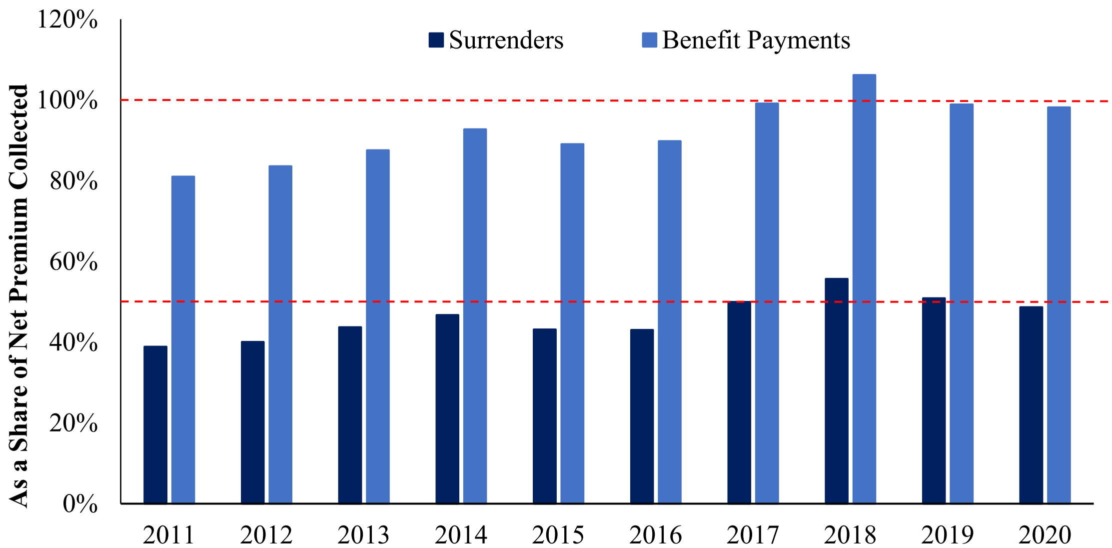
[27] L&H mortgage loans predominately consist of loans made on commercial properties.

sector had been increasing its holdings of mortgage loans year-over-year as bond investments fell. In 2020, the sector reduced its share of mortgage loan holdings, while noticeably increasing both its use of derivatives and the allocation to cash and short-term investments. Considering the market volatility in 2020 and its impact on asset valuation as well as the protracted low interest rate environment, the sector has expanded its hedging activities through derivative usage. Likewise, the uncertain operating environment caused by the pandemic has likely led insurers to enhance their balance sheet liquidity with increased cash and short-term investments.

iii. Liquidity

The L&H sector improved its liquidity position in 2020, due in part to positive net cash flows from operations that continued to boost cash and short-term investments and a firm current liquidity ratio.[28] Although stable liquidity levels have supported the sector's capacity to fulfill its ongoing business needs and policyholder obligations as they arise, certain negative trends have emerged, requiring closer monitoring, and are described in more detail later in this subsection.

Figure 18: Cash Flows from Operations for the L&H Sector



Source: S&P Global

While premiums collected net of reinsurance did not change materially in 2020, benefit payments and surrender activity have each shown a downward trajectory during the last two years, facilitating the L&H sector's ability to maintain steady cash flows from operations.[29]

[28] This liquidity analysis is based on cash inflows and outflows from operations, as reflected in the cash flow statement, and specifically refers to premiums that were collected and benefit and loss-related payments actually made during the year. By contrast, the income statement shows profitability for the year, reflecting the revenues and gains as well as the expenses and losses *incurred* during the reporting period. Timing differences differentiate the cash flow and income statements.

[29] Premiums collected net of reinsurance is the largest component of cash inflows from operations. Other cash receipts stem from net investment income and miscellaneous income.

Specifically, benefit payments totaled $652.3 billion and $660.2 billion in 2020 and 2019, respectively, compared to $667.6 billion in 2018, the peak of the 2011-2020 period. Although the ratio of benefit payments to net premiums receipts hovered close to one in 2020, the upward trend that began in 2016 through 2018 when the relationship exceeded 106 percent appears to now be reversing. On average, benefit payments have consumed 92.6 percent of net premiums collected on a yearly basis over the past decade.

As with benefit payments, surrender activity declined in 2020, continuing to improve from 2019 levels when surrenders dropped from the decade's high in 2018. Surrenders were $323.3 billion in 2020, down from $339.6 billion in 2019 and $350.3 billion in 2018. As Figure 18 demonstrates, there is a noticeable difference in surrender activity in the earlier years of the recent decade compared to the last four years. Surrenders comprised 42.6 percent of net premium receipts on average each year from 2011 through 2016 compared to 51.3 percent from 2017 through 2020. Year-over-year growth in surrenders has been averaging 4.4 percent, while the annual growth rate for net premium receipts has been averaging 1.7 percent over the past ten years. Growth in net premium receipts remained relatively flat in 2020, totaling $664.6 billion versus $667.7 billion in 2019.

One likely cause of the slowdown in surrender activity is that the Federal Reserve eased interest rates in 2019 and even further in 2020 to combat the effects of the economic downturn triggered by the COVID-19 pandemic. Life insurance claims increase during high mortality events such as the pandemic, while expected future payments on life-contingent annuities fall.[30] These offsetting effects may have contributed to the slight decline in benefit payments in 2020.

Positive cash flows from operations have been a constant over the past decade, contributing to consistent growth in cash and invested assets for the L&H sector. In particular, cash and short-term investments totaled $151 billion at year-end 2020, up by over 27 percent from the prior year end. Cash and total invested assets were $4.7 trillion at year-end 2020, rising by 7.3 percent from the prior year-end and in close tandem with the 7.6 percent year-over-year growth in general account liabilities that totaled $4.5 trillion in 2020. Annual growth in cash and invested assets in 2020 was the largest in the last decade in spite of the pandemic. The ratio of general account liabilities to cash and invested assets has not changed notably over the past decade, averaging at 96 percent annually.

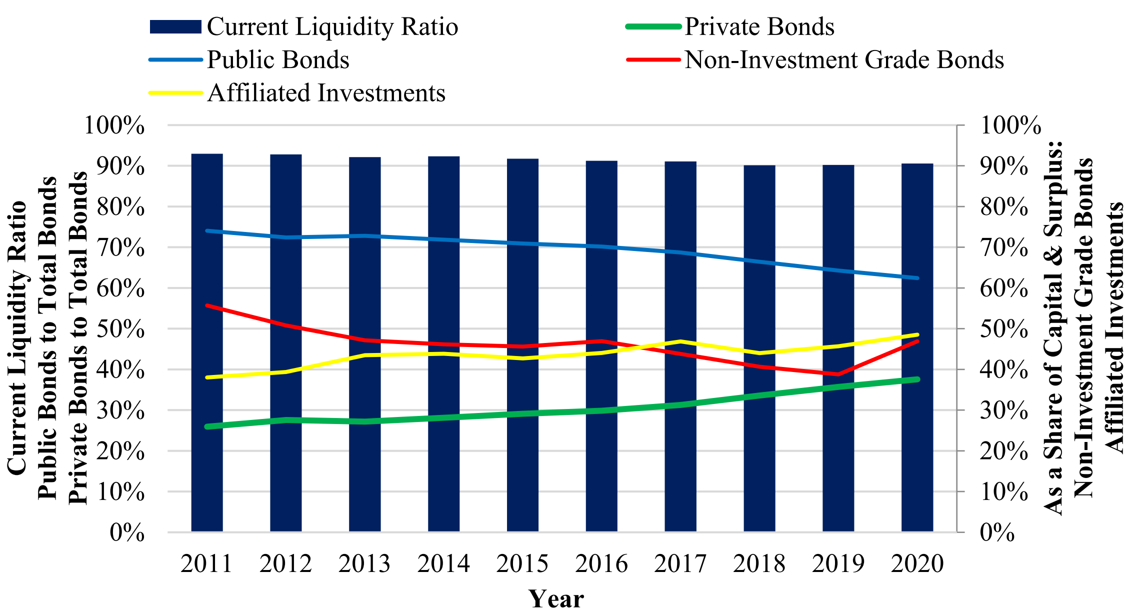
Due to their longer duration liabilities, life insurers' portfolios are often heavily weighted with fixed-income securities because of the greater certainty in the asset cash flows these instruments provide. As expected of the L&H sector, bonds have consistently made up the bulk of cash and investments, totaling $3.3 trillion at year-end 2020, up by 6.2 percent from the previous year end. Similar to year-end 2019, more than 38 percent or $1.3 trillion of the bond portfolio had maturities of 10 years or greater at year-end 2020 and of that, 55 percent had maturities in excess of 20 years. More than 28 percent of the portfolio consisted of bonds with maturities between 5 and 10 years as of year-end 2020, compared to 29.7 percent as of the prior year-end. In other words, nearly two-thirds of the entire bond portfolio has consistently been allocated to medium-

[30] Life-contingent annuities refer to immediate and annuitized policies, as opposed to annuities that are still in the build-up or accumulation phase.

to long-duration investments in each of the last 10 years, supporting the longer time horizon of a life insurer's obligations. Moreover, the L&H sector has held 94 percent of its total bonds in investment-grade debt on average each year since 2011, mitigating the sector's credit risk exposure while reinforcing its liquidity. Although the pandemic led to the credit deterioration and rating downgrades of a number of issuers in 2020, these effects were relatively contained due to the credit quality of the sector's bond portfolio.

Nevertheless, a few potentially adverse trends point to a potential weakening in the quality of the L&H sector's investment portfolio, as reflected in Figure 19. The share of the bond portfolio allocated to public bonds remains on a downward path, significantly decreasing by nearly 12 percentage points since 2011. Moreover, as sustained low interest rates have curbed investment yields, life insurers have continued to seek out investments that offer higher returns but tend to be less liquid. Additionally, non-investment grade bonds as a share of capital and surplus rose considerably at year-end 2020. Finally, affiliated investments, discussed below, have been on the rise in the last two years, accounting for a greater proportion of capital and surplus, and because such investments are inherently illiquid, these holdings can impact the overall quality of available capital.

Figure 19: A View of L&H Sector Liquidity



Source: S&P Global

Privately placed bonds have accounted for an increased share of total bond holdings for insurers during the past 10 years, reaching a decade high of 37.6 percent at year-end 2020. The degree of information and due diligence on private-placement bonds that is available to investors is limited as compared to that for public issues such as municipal bonds, the sales of which are conducted in the open market. Specifically, private placements are not required to be registered with the U.S. Securities & Exchange Commission and therefore, do not necessitate comparable disclosure requirements. To the extent these investments are offered with reduced transparency, the assessment of risk versus return is arguably more difficult to determine. Private-placement bonds have gradually risen from a 2.2 multiple of capital and surplus at year-end 2011 to 2.9 at year-end 2020.

Insurers increasingly have sought out structured securities (including asset-backed securities and CLOs) for their additional yield. Structured securities are exposed to credit, market, and inflation risks and thus are relatively susceptible to credit pressures and interest rate movements, especially in times of stress.[31] These holdings of $765.1 billion constitute more than 16 percent of the L&H sector's investment portfolio as of year-end 2020 and have been rising in volume annually since 2016. While the L&H sector has been consistently reducing its exposure to residential mortgage-backed securities year-over-year during the past ten years, this has not been the case for commercial mortgage-backed securities (CMBS), which were $193.7 billion in 2020, climbing from $190.5 billion in 2019, and increasing by 20 percent from 2011 levels. Although the carrying value of CMBS reached a high point in 2020 over the last decade, CMBS growth slowed down in 2020 from the pace observed in the previous four years. Nevertheless, they comprised 44 percent of capital and surplus at year-end 2020 compared to 45.1 percent at year-end 2019.

Investment portfolio restructuring was apparent in 2020, with a reallocation away from bond holdings with a minimum credit rating equivalent to S&P's "A."[32] In particular, S&P's "BBB"-rated bonds made up almost 37 percent of the L&H sector's bond portfolio at year-end 2020 compared to 34 percent at the end of each of the prior two years. Moreover, high-yield exposure grew sharply in 2020. Non-investment grade bond holdings (equivalent to S&P's "BB" and below) rose by 26.3 percent year-over-year to $206.7 billion, comprising nearly 47 percent of capital and surplus compared to 39 percent at year-end 2019. As they attempt to maximize returns in a low-yield environment, many insurers have increased their allocations to a variety of alternative asset classes, including hedge funds, private equity, and infrastructure. Life insurers held 4.8 percent of cash and invested assets in these holdings as of year-end 2020, up slightly from 4.7 percent as of year-end 2019.[33] The L&H sector has undertaken another type of alternative investment through its exposure to mortgage loans, the growth of which has been notable over this past decade; the value of these holdings at year-end 2020 was almost twice that at year-end 2011. Although the yields offered by these alternative asset classes are higher than those of public corporate bonds, such investments are less transparent, suggesting the potential for greater volatility.

A record level of negative rating actions and rising credit defaults resulted from the uncertainty and market stresses brought on by the onset of the COVID-19 pandemic in March 2020. S&P's

[31] The degree and scope of the risks associated with these types of securities differ, depending on their structure. They are structured in ways to meet investors' risk appetites and can range from pass-throughs to complex tranching arrangements.

[32] S&P's intermediate ratings of "+" and "-" are not segregated in the comparison. Further, migration data are not available that would provide insight on the movement of investments between different rating categories over the reporting period.

[33] NAIC, *U.S. Insurance Industry's Cash and Invested Assets Continue to Grow Amid the Pandemic* (May 12, 2021), https://content.naic.org/sites/default/files/capital-markets-asset-mix-ye-2020-final.pdf.

trailing 12-month speculative-grade corporate default rate in the United States increased to 6.3 percent in March 2021 from 3.2 percent in January 2020.[34] Many of the riskier bonds, below S&P's "A" credit rating, were downgraded to speculative or "fallen angel" status in 2020 due to the unprecedented economic dislocations triggered by the pandemic.[35] The scope of government and central bank intervention has since infused liquidity into the economy and provided support to the credit markets, decelerating rating downgrades. Nonetheless, the quality of the L&H sector's investment portfolio clearly declined in 2020.

Due to the more illiquid nature of affiliated holdings, significant growth in affiliated investments has the potential to adversely affect an entity's capital base. With the exception of 2018, the L&H sector has increased its holdings of affiliated cash and investments year-over year during the last 10 years. Annual growth of affiliated holdings has averaged 7.1 percent since 2011. Affiliated investments were $213.7 billion as of year-end 2020, compared to $192.8 billion and $176.0 billion for the years ending 2019 and 2018, respectively. Affiliated cash and invested assets made up 48.5 percent of capital and surplus as of year-end 2020, up from 45.7 percent as of year-end 2019 and 44 percent as of year-end 2018. The composition of the affiliated investment portfolio was not materially different from that of the previous three years, with common stock accounting for about 30 percent of the L&H sector's affiliated portfolio at year-end 2020, while other investments made up another 48 percent.[36] Affiliated bonds made up the third largest concentration of affiliated investments.

Though the recent negative trends in liquidity described above suggest the need for continued monitoring, they are at present mitigated by the L&H sector's overall positive financial profile. First, annual growth in cash and invested assets has been healthy, averaging close to four percent over the past decade, tending to enhance the sector's liquidity profile and contributing to a current liquidity ratio that has remained above 90 percent in each of the last 10 years. This suggests that the L&H sector has been able to anticipate and fulfill its policyholder and operational needs on an ongoing basis. Second, publicly traded bonds have continued to largely consist of investment-grade bonds, averaging close to 96 percent of the entire bond portfolio annually since 2011.[37] While structured investments have trended upward over the past decade, the share of these assets that make up of total capital and surplus has trended down, amounting to a multiple of 1.74 at year-end 2020 compared to 2.23 at year-end 2011. Third, the deterioration

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[34] Nick W. Kraemer, *et al*., "Default, Transition, and Recovery: The U.S. Speculative-Grade Corporate Default Rate Could Fall to 4% By March 2022," *S&P Global Ratings Comments,* May 26, 2021, https://www.spglobal.com/ratings/en/research/articles/210526-default-transition-and-recovery-the-u-s-speculative-grade-corporate-default-rate-could-fall-to-4-by-march-11972018.

[35] "Fallen angel" refers to investment-grade companies downgraded to speculative grade.

[36] "Other" affiliated investments include, but are not limited to: surplus notes, limited partnerships, joint ventures, hedge funds, private equity funds, and direct investments.

[37] Both publicly traded bonds and private placements can be assigned NAIC designations. Investment securities rated by one or more nationally recognized statistical rating organizations are mapped by insurers to equivalent NAIC designations. Such securities are exempt from filing with the NAIC's Securities Valuation Office, which is responsible for the day-to-day credit quality assessment of securities owned by state regulated insurance companies and may produce and assign NAIC designations for investment securities not rated by a nationally recognized statistical rating organizations.

in the quality of the L&H sector's bond holdings in 2020 may in part be attributable to the COVID-19 pandemic, and may therefore be temporary. Fourth, affiliated cash and investments have averaged only 4.2 percent of total cash and invested assets annually since 2011. Moreover, the bulk of unaffiliated investments is aligned with the L&H sector's asset/liability matching philosophy, with bonds dominating more than three-quarters of unaffiliated holdings on average each year. Unaffiliated cash and invested assets were $4.5 trillion at year-end 2020, up by 7.2 percent from $4.2 trillion at year-end 2019 and growing at an annual pace of 3.7 percent on average. The ratio of total general account liabilities to unaffiliated cash and invested assets has remained at a multiple of one in each of the last 10 years, while the contribution of unaffiliated investments to capital and surplus has remained steady and substantial. The volume of unaffiliated investments has been nearly 10 times that of capital and surplus on average annually since 2011, further reinforcing the L&H sector's ability to support its policyholder and funding commitments as they come due.[12]

Box 1: Registered Indexed-Linked Annuities:
Addressing Longevity Risk Through Annuities

Annuity sales decreased nine percent in 2020 (after record growth in 2019) with the notable exception of sales growth in registered index-linked annuities (RILAs).[38] FIO has been monitoring the growth in sales of RILAs, a type of variable annuity with features common to a fixed indexed annuity, which offers tax-free build up like other life and annuity products that include a savings feature. A RILA offers investors a variety of pay out plans such as a lump sum or fixed payments over a specified period (e.g., fixed number of years, a minimum number of years, or the remainder of the investor's life). RILA account returns are linked to changes in a specified security index such as the S&P 500. RILAs expose the annuity provider, usually an insurance company, to fluctuations in equity market returns. These fluctuations require insurer hedging or the ability to absorb losses arising from the boundary or buffer features in the RILAs. When an insurance company hedges with equity derivatives transactions, such arrangements generates interconnectedness with other firms in the financial sector.

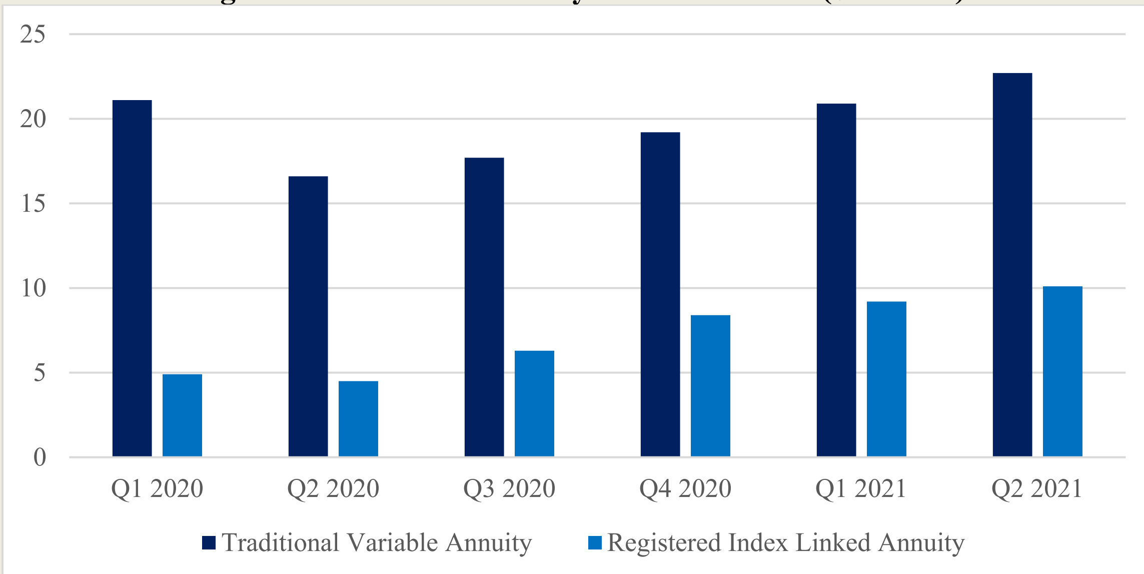
RILAs typically are classified as either "floor" or "buffer" annuities. "Floor" RILAs limit the investor's maximum potential loss in the event of a market downturn, often combined with a ceiling that limits the potential upside gains as well.[39] "Buffer" RILAs absorb a certain amount of losses on the downside, although investors are exposed to losses that exceed the buffer. While offering protection against specific levels of losses, buffer RILAs limit returns on the market upside, thus protecting investors from small fluctuations in market returns as measured by a security index, but leaving them exposed to large changes in returns.[40]

[38] *See* LIMRA, "Secure Retirement Institute Annuity Sales Estimates," fact sheet, January 26, 2021, https://www.limra.com/siteassets/newsroom/fact-tank/sales-data/2020/q4/2011-2020-annuity-sales-final.pdf.

[39] Economically, a RILA investor is buying a put and selling a series of call options on the index.

[40] *See, e.g.*, Karen Hube, "Annuities Can Help Your Portfolio Stay Afloat. Here Are the 100 Best Ones Right Now," *Barron's*, July 19, 2020, https://www.barrons.com/articles/the-best-annuities-51595028594?mod=bol-social-tw.

Figure 20: Variable Annuity and RILA Sales ($ billions)



Source: LIMRA Secure Retirement Institute

Although RILAs represent a small portion of variable annuity sales, life insurers have significantly increased RILA sales over the past six quarters, particularly as compared to other variable annuity products (see Figure 20). Investors driving RILA sales growth appear to be interested in capturing recent gains in equity markets and acquiring protection-focused products generally.[41] RILA sales appear likely to continue to grow in light of ongoing life sector restructuring.[42] FIO will continue to monitor RILA-related issues.

3. Property and Casualty Sector

This section presents additional analysis of the financial performance of the P&C sector in 2020, and then assesses the P&C sector's overall financial condition as of December 31, 2020.

a) Performance

i. Direct and Net Premiums Written

Figure 21 shows the 2020 composition of P&C sector direct premiums written by lines of business. Figure 22 shows a longer-term view of the amount and composition of direct premiums written by major lines of business.

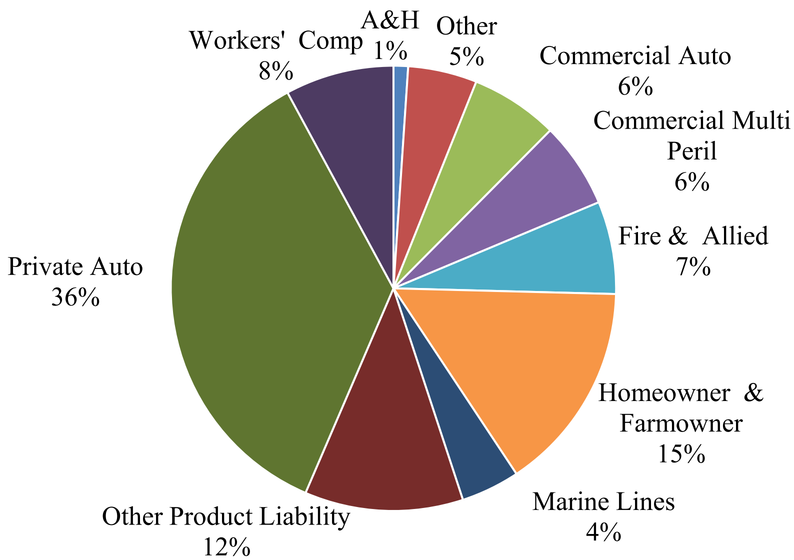
For 2020, total P&C sector direct premiums written reached a record level at $717 billion, marking a one percent increase over 2019 levels, and continuing the slowing growth pattern

[41] LIMRA, "Secure Retirement Institute: Total Annuity Sales Fall 9% in 2020," news release, March 9, 2021, https://www.limra.com/en/newsroom/news-releases/2021/secure-retirement-institute-total-annuity-sales-fall-9-in-2020/.

[42] For more information on life sector restructuring, see Box 2.

experienced after 2018. Premium growth occurred despite the economic challenges of the COVID-19 pandemic and the associated premium reductions and/or return of premiums in several major personal lines of business. Direct premiums written for personal lines of business were flat compared to 2019, while direct premiums written for commercial lines of business increased by three percent. Net reinsurance premiums ceded decreased by four percent, following a strong increase in 2019. Net premiums written were also a record in 2020 at $647 billion, and increased by one percent. Insurer responses to reduced economic activity and other changes in consumer behaviors associated with the COVID-19 pandemic likely had the most influence on the growth in direct premiums written. One estimate puts the amount of overall premium relief provided to insureds from rate reductions at policy renewal, premium credits, and policyholder dividends at $11.5 billion.[43] Workers' compensation premiums were also lower as many companies closed, laid off employees, or reduced working hours. Increases in premiums for homeowners' and other liability lines offset the reduction in personal auto insurance and workers' compensation premiums.[44]

Figure 21: P&C Sector Composite of Direct Premiums Written

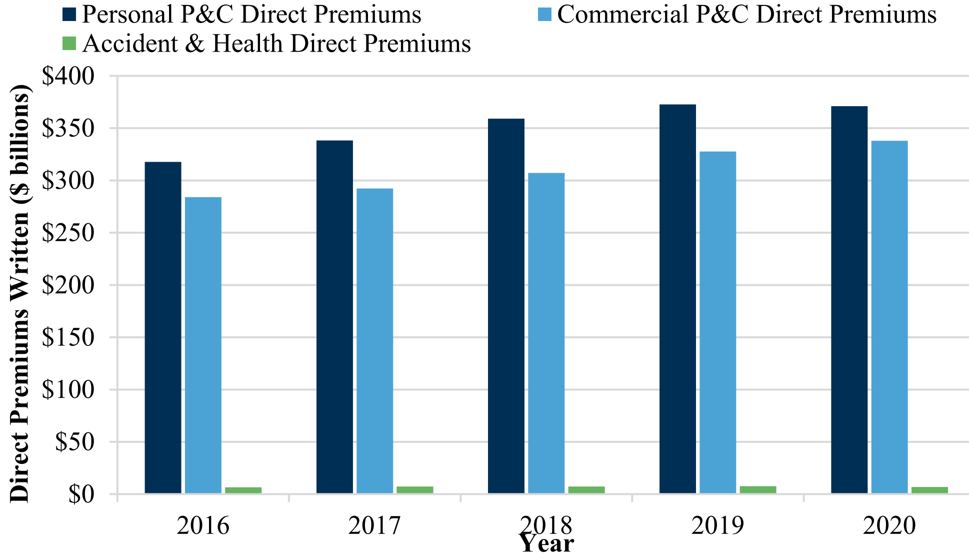


Source: S&P Global

[43] American Property Casualty Insurance Association (APCIA), "Property/Casualty Insurers Finish 2020 Marked by Global Pandemic and Unprecedented Catastrophic Events," news release, May 27, 2021, https://www.apci.org/media/news-releases/release/66939/. For more discussion of the COVID-19 pandemic and the U.S. insurance industry, see Section III.A.

[44] A.M. Best, *U.S. Property/Casualty – 2020 Direct Premiums Written by Line* (August 2021), http://news.ambest.com/articlecontent.aspx?pc=1009&AltSrc=108&refnum=310909.

Figure 22: P&C Sector Direct Premiums Written ($ billions)



Source: S&P Global

ii. Underwriting Results

Figure 23 shows the P&C sector combined operating ratio and its construction for the past several years.[45]

Figure 23: P&C Sector Combined Operating Ratios

	2016	2017	2018	2019	2020
Loss Ratio	60.68	64.14	60.71	60.05	59.36
Loss Adjustment Expense Ratio	11.61	11.76	10.70	10.98	10.83
Loss and Loss Adjustment Expense Ratio	**72.29**	**75.91**	**71.42**	**71.03**	**70.19**
Net Commission Ratio	10.41	10.29	11.26	11.00	11.21
Salaries & Benefits Ratio	8.32	7.91	7.38	7.40	7.46
Tax, License & Fees Ratio	2.51	2.47	2.39	2.34	2.31
Administrative & Other Expense Ratio	6.68	6.67	6.25	6.45	6.47
Expense Ratio	**27.92**	**27.34**	**27.28**	**27.20**	**27.45**
Policyholder Dividend Ratio	0.56	0.61	0.62	0.78	1.14
Combined Ratio	**100.76**	**103.85**	**99.32**	**99.01**	**98.78**

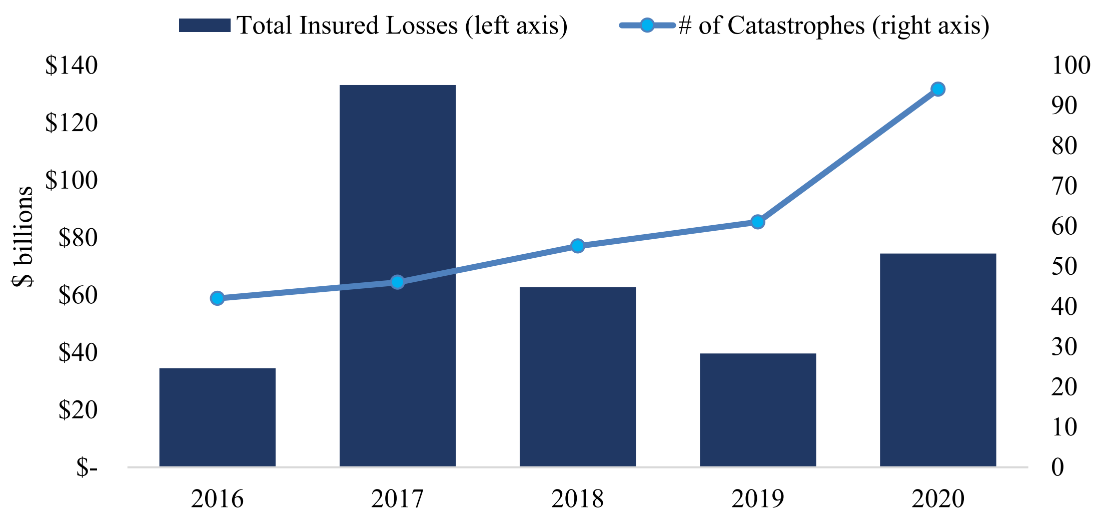
Source: S&P Global

The combined ratio for the P&C sector decreased to approximately 98.8 percent in 2020 from 99.0 percent in 2019, reflecting an improvement in underwriting profit. A combined ratio of greater than 100 percent indicates that premiums did not cover losses and expenses in a given period (i.e., underwriting operations made a negative contribution to net income) and, therefore,

[45] S&P Global ratios include the policyholder dividend ratio for transparency to the public and investors because dividends represent a cash outlay.

that a company did not generate an underwriting profit. Investment income, realized capital gains/losses, and income taxes are not considered in the combined operating ratio. Catastrophe losses of $61 billion in 2020 were notably more severe than in 2019, with a record number of catastrophic events in the United States in 2020.[46] Despite the more severe catastrophic event losses, lower losses in personal and commercial auto and workers' compensation lines kept total loss and loss adjustment expenses flat from 2019 to 2020. Reserve development was again favorable in 2020, adding to underwriting profits. Figure 24 shows losses from catastrophic events in the United States since 2016, and Figure 25 shows reserve development over the same period.[47] The expense ratio decreased very slightly from 2019 to 2020.

Figure 24: Estimated Insured Property Losses, U.S. Catastrophic Events



Sources: Insurance Information Institute; Property Claim Services, a unit of ISO, a Verisk Analytics Company; U.S. Bureau of Economic Analysis. Note: Losses are adjusted for inflation through 2020 by the Insurance Information Institute using the Gross Domestic Product (GDP) implicit price deflator.

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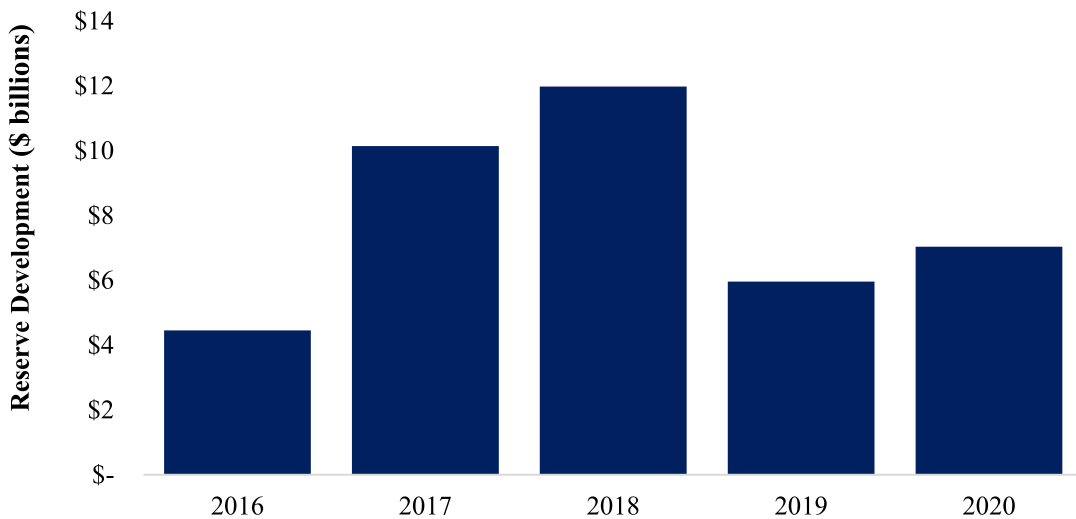
[46] *See, e.g.*, APCIA, "Property/Casualty Insurers Finish 2020 Marked by Global Pandemic and Unprecedented Catastrophic Events," news release; David Blades, "U.S. P/C Insurers Perform Well Despite COVID-19," *A.M. Best Company, Inc.*, April 16, 2021, http://www3.ambest.com/industryresearch/DisplayBinary.aspx?TY=P&record_code=307689&URatingId=2562038&AltSrc=159. For more information on catastrophic events, see Section III.B.

[47] Favorable reserve development occurs when the current year actuarial estimates of losses arising from business written in previous years are less than the previous estimates, thereby freeing reserves to contribute to the insurer's bottom line.

Figure 25: Total One Year Reserve Development for the P&C Sector ($ billions)

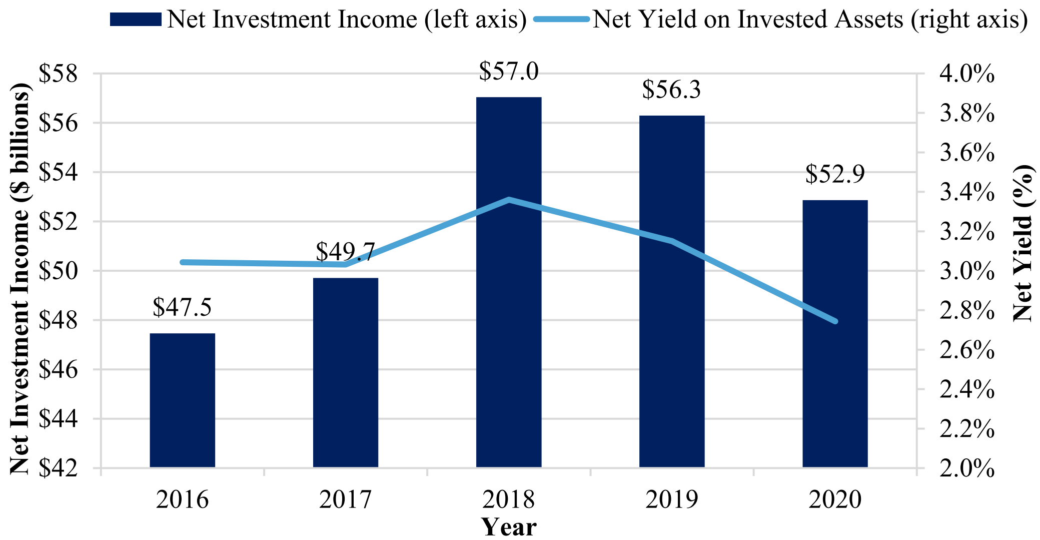


Source: S&P Global. Reflects total incurred net loss development for all accident years.

iii. Investment Income

Net investment income for the P&C sector declined by six percent to $56 billion in 2020, while cash and invested assets balances increased by six percent to $2.0 trillion. As a result, the net yield on invested assets declined to 2.74 percent in 2020 from 3.15 percent in 2019. Figure 26 depicts a longer-term view of the trend in net investment income and net yield on invested assets for the P&C sector. Realized capital gains and losses are reported separately and are not a component of net investment income. P&C insurers are less dependent than L&H insurers on net investment income to fund losses and expenses, and net investment income accounted for about eight percent of total P&C sector revenues in 2020, a measure lower than the ten-year historical average of nine percent.

Figure 26: P&C Sector Annual Net Investment Income ($ billions) and Net Yield on Invested Assets (%)



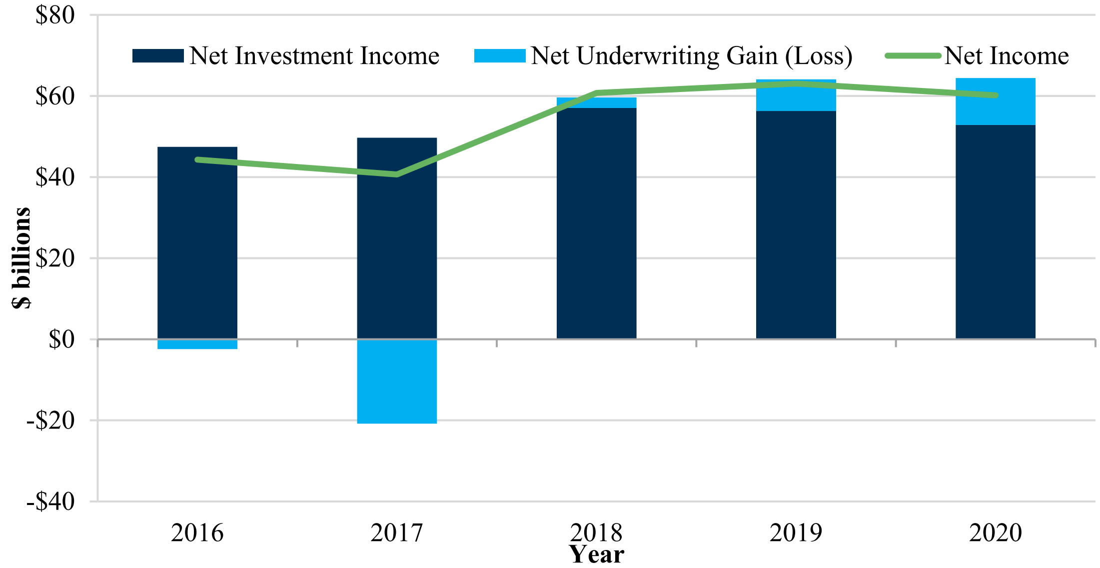
Source: S&P Global

Realized capital gains on investments declined by eight percent, but remained positive despite volatile capital markets, and contributed to profitability in 2020; the P&C sector recorded net realized capital gains of $10 billion, down from $11 billion in 2019. Lower gains on common stocks were the main driver of the decrease in net realized capital gains.

iv. Net Income

The P&C sector's net income decreased by five percent in 2020 to $60 billion from the $63 billion reported in 2019, as shown in Figure 27. Consistent with improvements in the combined ratio (noted above), underwriting profit grew by 48 percent in 2020, rising to $11.6 billion from $7.8 billion in 2019. The expansion in underwriting profit was muted, however, by the decrease in net investment income and a significant increase in policyholder dividends. Pre-tax operating income decreased by four percent to $69 billion in 2020 from $72 billion in 2019. A small increase in federal income taxes contributed to the decline in net income of nearly five percent.

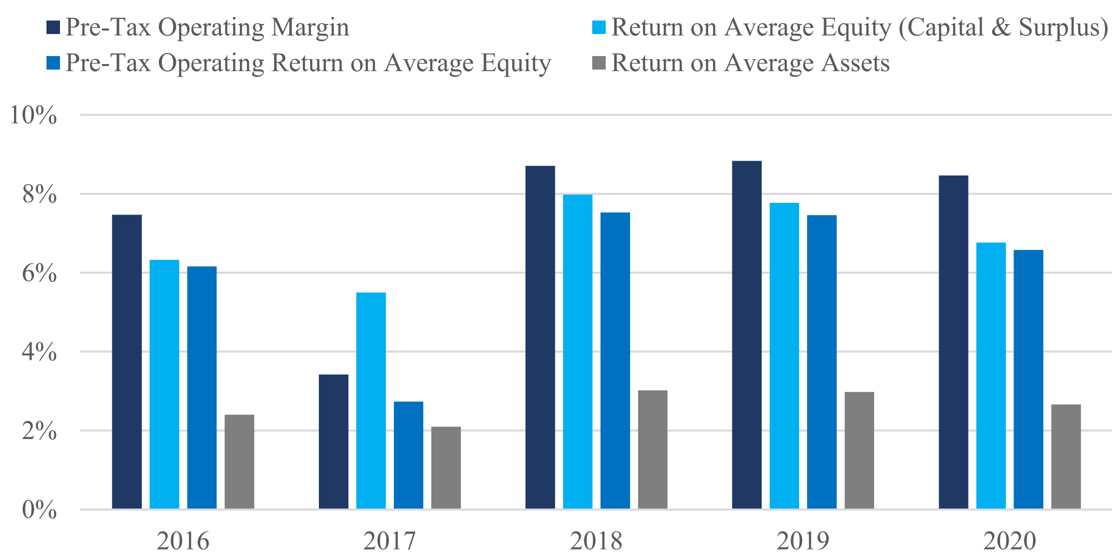
Figure 27: P&C Sector Net Income ($ billions)



Source: S&P Global

Figure 28 displays key measures of returns for the P&C sector. The 2020 pre-tax operating margin decreased to 8.5 percent from 8.8 percent in 2019. The 2020 return on average equity of 6.8 percent was below the 7.8 percent mark for 2019, and below the average of nine percent for the past 10 years.

Figure 28: P&C Sector Operating Ratios (%)



Source: S&P Global

b) Condition

This section analyzes the financial condition of the P&C sector at the end of 2020, focusing on surplus, assets, and liquidity.

i. Surplus as Regards Policyholders

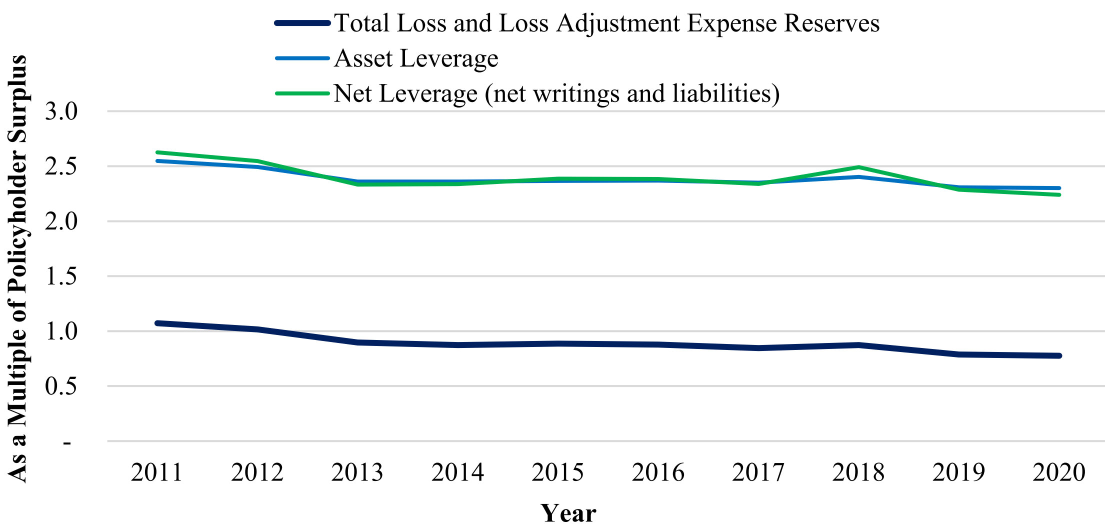
As with the L&H sector, the financial safety and soundness of the P&C sector remained intact and the insurance industry demonstrated resilience despite the COVID-19 pandemic in 2020. Net income of nearly $61 billion and an increase in net unrealized capital gains of $40 billion were key to raising the sector's capital base to a new decade high of $929.7 billion in 2020. Policyholder surplus levels reflected a 7.4 percent year-over-year increase from 2019, resulting in an annual growth rate averaging 5.3 percent over the past decade.

Even with the elimination of capital infusions in the form of surplus notes, the average annual growth rate in policyholder surplus in the last decade did not materially change, and demonstrated the strength of the sector's core business. Organic surplus growth for the P&C sector can be attributed mainly to positive earnings including net realized and unrealized capital gains, partially offset by stockholder dividends. The P&C sector paid stockholder dividends of $46.1 billion and $35.7 billion in 2020 and 2019, respectively. Stockholder dividends reached a decade high in 2020 and led to a dividend pay-out ratio of 76 percent at year-end 2020, rising considerably from 56.7 percent at the prior year-end. Included in stockholder dividends in 2020 were premium refunds and rebates from insurers to policyholders—including personal auto policies—during the COVID-19 pandemic.[48] As a share of prior year-end policyholder surplus, stockholder dividends have averaged 4.9 percent annually over the last decade, less than the L&H sector average due to the P&C sector's larger surplus base. Unlike stockholder dividends, net realized capital gains have consistently contributed to generating capital for the P&C sector, adding 1.7 percent on average annually to prior year-end policyholder surplus over the last ten years.

As shown in Figure 29, reduced leverage ratios in 2020 enhanced the P&C sector's financial capacity. The recent improvement can be attributed primarily to the annual pace at which policyholder surplus grew in 2020 relative to the year-over-year growth rates of the variables that represent the numerators of the leverage ratios under examination. All three leverage ratios—total loss and loss adjustment expenses reserves, asset leverage, and net leverage—achieved decade lows in 2020 as a result.

[48] For more on the pandemic's impact on the insurance industry, see Section III.A generally; for more on premium rebates to U.S. policyholders, see Section III.A.1.b.

Figure 29: P&C Sector Leverage Ratios



Source: S&P Global

Though they measure different exposures, the asset and net leverage ratios presented in Figure 29 generally have mirrored each other for the P&C sector. Balance sheet strength can be affected by the volatility and credit quality of the investment portfolio, reinsurance recoverables, and agents' balances.[49] The steadiness of the asset leverage ratio since 2013 reflects the financial flexibility that has enabled the P&C sector to use its capital more efficiently in mitigating such potential risk exposures as investment, interest rate, and credit. Over the past decade, the asset leverage ratio has ranged between a high of 2.55 in 2011 to a low of 2.30 in 2020, with an annual average of 2.39 over the 10 years.

The net leverage ratio is an indicator of the P&C sector's ability to handle above average losses and fulfill debt and policyholder obligations. Since 2011, the net leverage ratio has generally declined, indicating enhanced sector capacity to support its business.[50] In particular, liabilities (the larger component in the ratio's numerator) of $1.4 trillion were 1.53 times policyholder surplus at year-end 2020 compared to 1.55 at year-end 2019 and 1.84 at year-end 2011. Net premiums written were $655.1 billion in 2020, up from $639.5 billion in 2019, making up 70 percent and 74 percent of policyholder surplus for the same two years, respectively.

Because reinsurance activity remained relatively flat, annual growth in direct premiums written affected the net premiums written component of the net leverage ratio in 2020. Direct writings

[49] Agents' balances refer to net admitted uncollected premiums and agents' balances in the course of collection, including direct and group billed uncollected premiums; amounts collected but not yet remitted to home office; accident and health premiums due and unpaid; life insurance premiums and annuity considerations uncollected on in-force business (less premiums on reinsurance ceded and less loading); and title insurance premiums and fees receivable. Reinsurance balances payable are not deducted.

[50] All the ratios experienced an uptick in 2018 due to a decline in surplus combined with heightened exposures.

were $727.9 billion in 2020, increasing by 2.2 from $712.5 billion in 2019. Net reinsurance premiums resulted in cessions of $72.8 billion and $72.9 billion in 2020 and 2019, respectively.

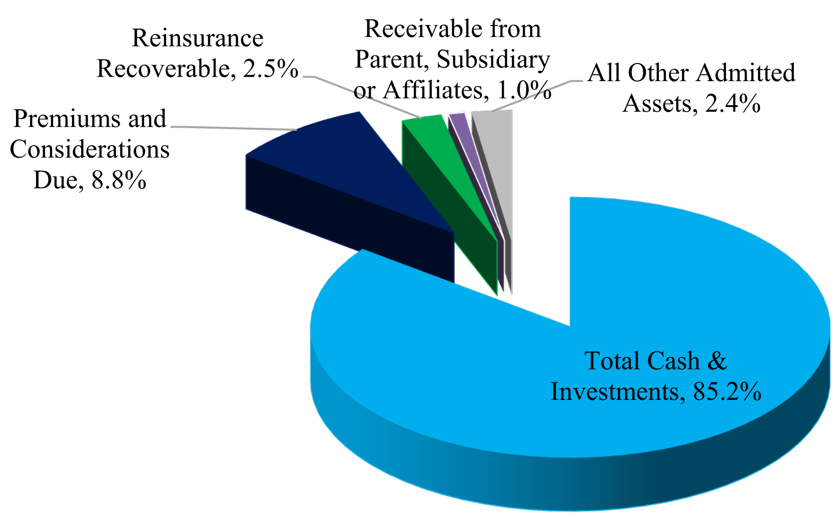
At year-end 2020, the ratio of loss and loss adjustment reserves to policyholder surplus was 0.78, not materially changed from 0.79 at year-end 2019. Loss and loss adjustment expense reserves were $721.4 billion and $681.2 billion in 2020 and 2019, respectively. This ratio has averaged less than one annually over the last 10 years, demonstrating that the P&C sector in the aggregate has remained consistent in its estimation of reserves to cover potential liabilities arising from claims made on policies underwritten.

ii. Assets

Consistent year-over-year growth and the composition of asset holdings underlie the robustness of the P&C sector's capital position over the last decade. Total assets of $2.4 trillion as of year-end 2020—increasing by nearly seven percent from the previous year-end—have been growing at an annual rate of 4.3 percent on average over the last decade, enabling the sector to maintain a stable capital position. The P&C sector retained 39.5 percent in available policyholder surplus as of year-end 2020, improving slightly from 39.3 percent as of year-end 2019. In each of the last 10 years, the P&C sector has maintained nearly 38 percent in excess capital on average to meet unexpected losses, contributing to its financial wherewithal.

The configuration of the P&C sector's asset portfolio has remained nearly constant for the last decade, with the bulk of holdings allocated to cash and investments. Figure 30 illustrates the composition of the P&C sector's assets at year-end 2020, which largely mirrors the distribution of assets in previous years.

Figure 30: Composition of Asset Portfolio for P&C Sector



Source: S&P Global

Averaging nearly 85 percent annually, cash and invested assets have been the largest component of total assets, followed by premiums and considerations due with almost nine percent over the decade. As Figure 31 details, the P&C sector reduced its investment allocation in bonds, while raising cash, short-term investments and other holdings in 2020.[51] While bonds made up 64 percent of the P&C sector's investment portfolio on average in each year during the first half of the decade, that allocation averaged about 58 percent annually in the latter half. Common stock investments have remained the second largest holding, averaging 22 percent of the P&C sector's investment portfolio since 2011, with a significant uptick in the last two years.

Figure 31: Composition of P&C Sector's Investment Portfolio

	2016	2017	2018	2019	2020
Bonds	61.3%	57.9%	60.3%	57.1%	55.3%
Preferred Stocks	0.7%	0.3%	0.3%	0.8%	0.8%
Common Stocks	21.7%	24.2%	22.9%	25.8%	25.9%
Mortgage Loans	0.9%	1.0%	1.2%	1.2%	1.2%
Real Estate	0.8%	0.8%	0.8%	0.7%	0.7%
Contract Loans	0.0%	0.0%	0.0%	0.0%	0.0%
Derivatives	0.0%	0.0%	0.0%	0.0%	0.0%
Cash & Short-Term Investments	5.8%	6.9%	6.0%	6.2%	7.0%
Other Investments	8.7%	8.9%	8.5%	8.2%	9.1%
Total Cash & Invested Assets	**100%**	**100%**	**100%**	**100%**	**100%**

Source: S&P Global

This composition of investment holdings aligns with the risk management practices employed by the P&C sector to address both the shorter-term obligations of some P&C lines (such as auto liability) as well as longer-tailed liabilities (such as medical malpractice and workers' compensation). Annual growth in total bond holdings has accelerated in recent years, averaging 3.2 percent in the last five years, up from an average annual growth rate of 1.7 percent from 2011 to 2015. Yearly growth in common stocks has remained constant over the decade at 10 percent on average. Total bonds, both short-term and long-term combined, were $1.2 trillion at year-end 2020, up by 4.5 percent from the previous year-end. Of the entire bond portfolio, at least 93 percent has consistently been comprised of long-term bonds in each of the last five years. More than 51 percent had maturities that fell between less than one and five years, while bonds with durations ranging between five and 10 years averaged at 33 percent of the bond portfolio on a yearly basis since 2016.

While publicly traded bonds continue to make up the majority of the sector's investment portfolio, a shift from publicly held bonds to private placements has become increasingly evident. Private placements comprised 17.8 percent of the aggregate bond portfolio at year-end 2020, climbing from 16.3 percent at year-end 2019 and rising by 2.3 times from year-end 2011. Moreover, the share of the sector's investment portfolio allocated to equities reached a decade high of 25.9 percent in 2020. Common stock investments were $519.5 billion and $483.7 billion in 2020 and 2019, respectively. Between year-end 2011 and year-end 2020, bond holdings as a

[51] Other holdings include long-term investments and receivables for securities.

share of cash and investments declined by 12 percentage points, while common stock holdings rose by nine percentage points. Figure 31 displays this trend between 2016 and 2020.

Though still a small percentage of total cash and invested assets, mortgage loans have shown consistent year-over-year growth in P&C insurers' portfolios since 2011. Total mortgage loans were $23.7 billion as of year-end 2020, accounting for 1.2 percent of cash and invested assets but 4.8 times the value of mortgage loan holdings of $5.0 billion at year-end 2011. As with the L&H sector, the P&C sector has been gradually repositioning its investment holdings, which can be attributed to both market performance and the reach for yield. The effects of a prolonged low interest rate environment are driving insurers to move away from more traditional bond and equity holdings and increasingly toward alternative investments that not only are less correlated with their fixed-income portfolios but can also provide the potential for increased returns (although with potential implications for liquidity).

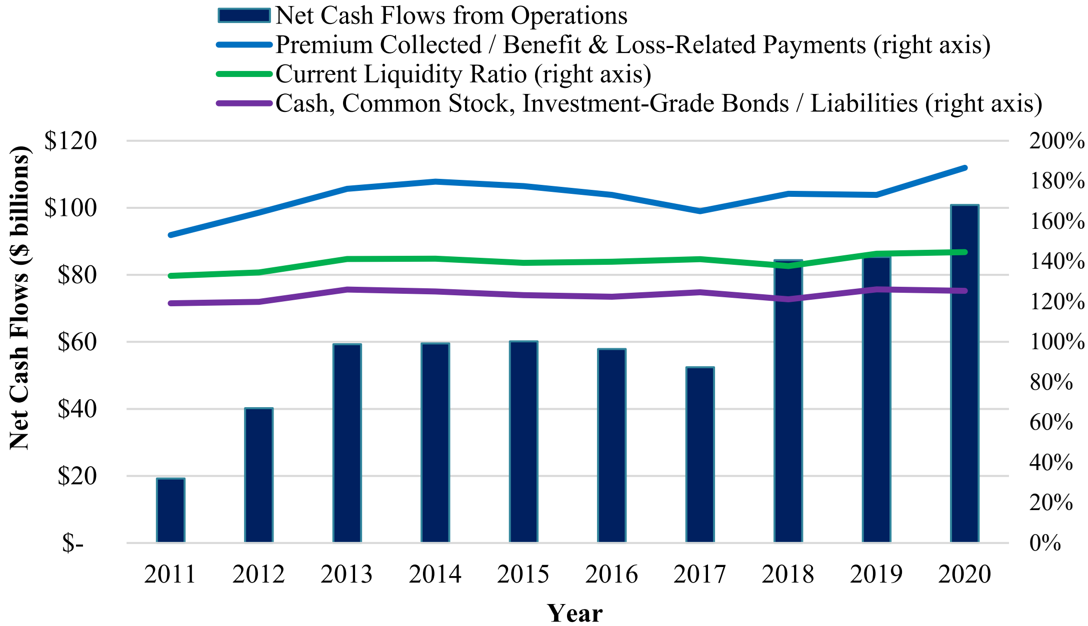
iii. Liquidity

The effects of the COVID-19 pandemic in 2020 demonstrated the ability of the P&C sector to manage its operational needs in times of stress. Increased liquidity levels were apparent in 2020 compared to previous years, which in part may be due to ongoing pandemic-related uncertainties. With benefits and loss-related payments consuming significantly less of net premiums collected annually, the sector has reported positive net cash flows from operations in each of the last 10 years. Recent net cash flows from operations were $100.9 billion and $85.3 billion in 2020 and 2019, respectively. On a cash basis, the annual growth rate of net premium receipts has averaged 4.3 percent, covering benefit and loss-related payments by 1.7 times on average each year since 2011. As Figure 32 illustrates, premiums collected, net of reinsurance, exceeded benefit and loss-related payments by 87 percent and 73 percent for the years ending 2020 and 2019, respectively. Moreover, the ratio of net premiums collected to benefit and loss-related payments attained a new decade high in 2020, as did the current liquidity ratio of 144.6 percent.[52]

[52] The liquidity analysis here is based on cash inflows and outflows—premiums that were collected as well as benefit and loss-related payments made during the year. This contrasts with the income statement analysis that refers to premiums earned and written, and captures dividends and incurred loss and loss adjustment expenses, among other items.

Current liquidity is used to determine the amount of liabilities that can be covered with liquid assets. It is calculated as follows: the numerator equals net admitted cash and investments less the sum of net admitted first lien real estate loans, net admitted real estate loans less first liens, net admitted occupied properties, net admitted income generating properties, net admitted properties held for sale, affiliated long-term bonds, and affiliated preferred stock; the denominator equals total liabilities less ceded reinsurance premiums payable.

Figure 32: A View of P&C Sector Liquidity



Source: S&P Global

Positive year-over-year net cash flows from operations have contributed to an average annual growth rate of 5.8 percent in cash and short-term investments over the last 10 years, expanding the P&C sector's financial flexibility. Liquid assets (the numerator of the current liquidity ratio) have been at least 2.1 times the level of aggregate policyholder surplus each year since 2011.

The P&C sector maintained a strong liquidity position in 2020; however, the sector's investment portfolio has seen an evolution in certain concentrations of risk. As observed for the L&H sector, the P&C sector has been addressing the effects of a sustained low interest rate environment by reaching for higher yield. Within the bond portfolio, private-placement bonds have been taking up an increasing share of policyholder surplus over the last 10 years. The percentage stood at a high of almost 23 percent at year-end 2020, up from 21.5 percent at year-end 2019 and 13 percent at year-end 2011. Annual growth in private placements averaged 14.3 percent over the past decade, while yearly growth in publicly traded bonds averaged one percent.

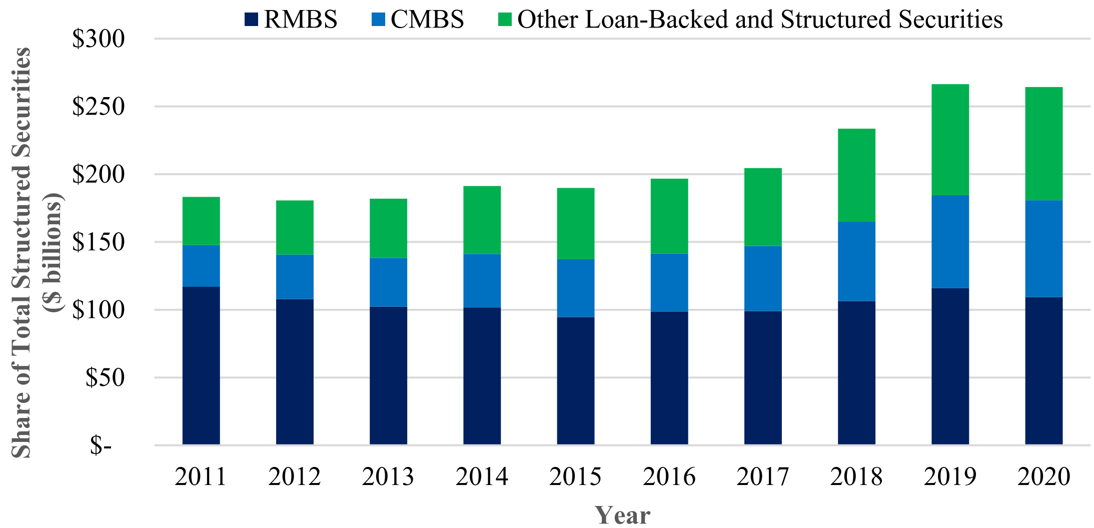
Since 2011, and particularly over the last four years, the P&C sector has gradually reduced its holdings of securities issued by U.S. federal, state, and local governments, while raising its exposure to revenue bond investments. Nearly 70 percent of all bond holdings consisted of some form of revenue bond investments at year-end 2020, including special revenue and industrial revenue bonds, while U.S. government bonds accounted for another 26 percent. By comparison, revenue bonds and U.S. government securities made up 65 percent and 30 percent, respectively, of the sector's bond portfolio at year-end 2011. While revenue bonds can often be issued by local or municipal governments, the debt service is tied to the specific revenues generated from a project and not backed by the full faith and credit of the municipality. Thus, the credit risk exposure for these types of bond holdings is heightened for the bondholder, i.e., repayment becomes a risk exposure to the insurer if the entity responsible for repayment becomes financially distressed. As of year-end 2020, revenue bond holdings totaled $832.8 billion, rising from $784.9 billion as of year-end 2019. Revenue bond investments by the P&C sector grew at a yearly rate of 3.3 percent on average in the last decade, while government bond holdings averaged 0.4 percent.

While investment-grade bond investments have grown each year during the past ten years, that growth generally has been less than the growth in non-investment grade bond holdings. Specifically, year-over-year growth in non-investment grade bonds averaged nearly 20 percent in 2020 and 2019, while growth in investment-grade bonds averaged 4 percent annually during those same years. Non-investment grade bonds of $61.3 billion accounted for 6.6 percent of policyholder surplus at year-end 2020, up from $49.8 billion and 5.8 percent at year-end 2019. Of the non-investment grade bond portfolio, bonds at or near default spiked substantially, with an average growth rate of almost 16 percent in the last two years, totaling $519.5 billion and 483.7 billion in 2020 and 2019, respectively, compared to holdings of $227.3 billion in 2011.

Averaging an annual growth rate of over 4 percent in the past decade, structured securities represent a significant share of policyholder surplus. As noted above with respect to L&H sector holdings, structured securities can be exposed to credit, market, and interest rate risks and thus are vulnerable to market pressures.[53] Total structured securities held by the P&C sector were $264.3 billion in 2020 compared to $266.4 billion and $233.6 in 2019 and 2018, respectively. While holdings of residential mortgage-backed securities declined by nearly 6 percent in 2020, they still comprised over 41 percent of the P&C sector's structured securities portfolio. By contrast, CMBS investments continue to show year-over-year growth, averaging 10 percent on a yearly basis since 2011. CMBS holdings of $71.5 billion in 2020 were 2.3 times 2011 levels and constituted 27 percent of all structured securities held. Other loan backed and structured securities of $83.5 billion in 2020 have more than doubled from $35.6 billion in 2011, thus following a similar trend as CMBS in the last ten years. Figure 33 illustrates the shift in the P&C sector's structured securities portfolio since 2011.

[53] The degree and scope of the risks associated with these types of securities differ, depending on their structure. They are structured in ways to meet investors' risk appetites and can range from pass-through securities to complex tranching arrangements.

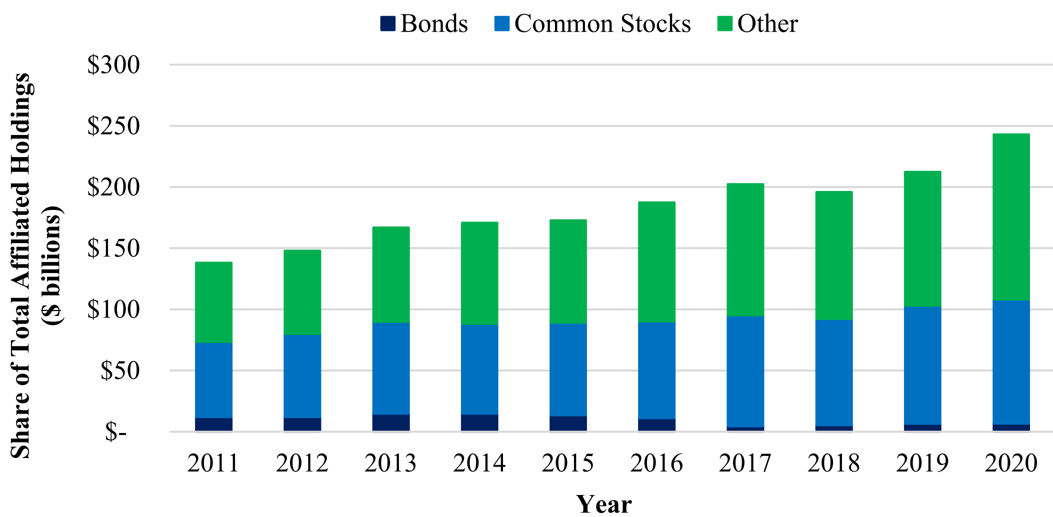
Figure 33: P&C Sector Structured Securities Holdings



Source: S&P Global

Affiliated holdings spiked considerably in the last two years. In 2020, affiliated investments were $243.1 billion, a significant increase from $212.5 billion and $195.9 billion in 2019 and 2018, respectively. Apart from 2018, the P&C sector has shown positive year-over-year growth in affiliated holdings during the past decade, exposing the sector to another source of liquidity risk. In particular, the interconnectedness of these types of investments may have adverse implications for the holder. Affiliated cash and investments constituted 12.1 percent of total cash and invested assets at year-end 2020, up from 11.4 percent at year-end 2019, and represented a high point for the decade. Figure 34 shows the growth and shift in the composition of affiliated investments over the past decade.

Figure 34: P&C Sector's Affiliated Exposures



Source: S&P Global

The "other investments" in Figure 34 include affiliated preferred stock, mortgage loans, and cash and short-term investments in addition to other types of affiliated investments such as surplus notes, limited partnerships, joint ventures, hedge funds, private equity funds, and direct investments. They totaled $135 billion and $109.5 billion in 2020 and 2019, respectively. These types of investments have come to dominate affiliated holdings, making up 55.5 percent of total affiliated investments at year-end 2020. Other affiliated holdings have more than doubled in value since year-end 2011, growing by 10.4 percent on average year-over-year in the past five years alone.

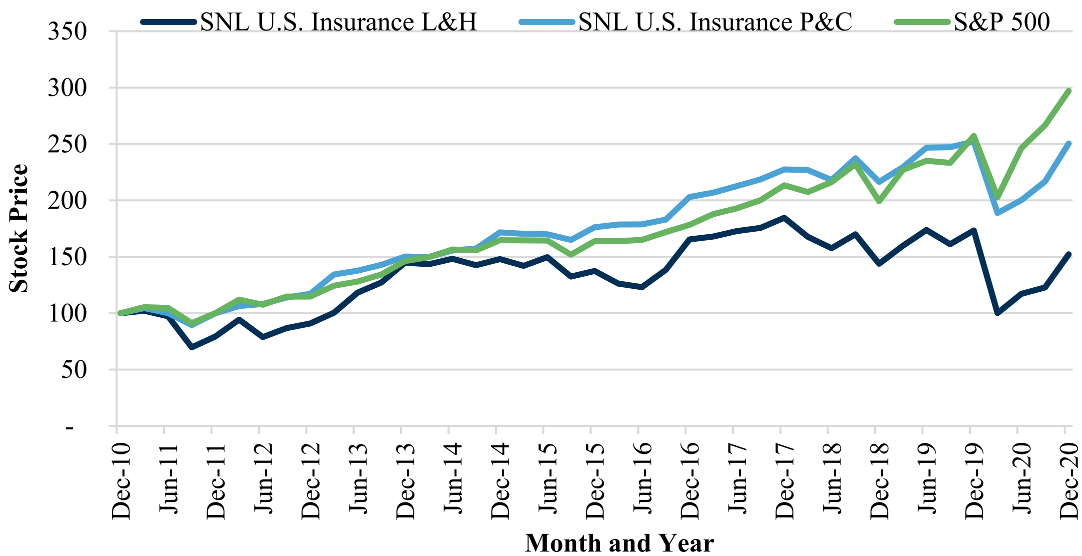
Several factors mitigate the P&C sector's potential vulnerability to risk exposures under stressed conditions. First, high quality bonds continue to make up the bulk of the sector's portfolio of fixed-income securities. Investment-grade bonds have comprised at least 95 percent of the P&C sector's bond portfolio in each year over the last decade and over 62 percent of cash and invested assets on average annually. The ratio of investment-grade bonds to policyholder surplus has been at a 1.4 multiple on average each year, illustrating the sector's quality of capital. Second, while substantial growth has occurred recently in bond holdings at or near default, they comprised less than 0.8 percent of policyholder surplus at year-end 2020. Third, the P&C sector has consistently maintained close to three-quarters of its portfolio of mortgage-backed and other structured securities in publicly traded holdings, which tend to be relatively liquid and subject to less market volatility. Fourth, unaffiliated cash and invested assets have been twice the level of policyholder surplus each year since 2011, mitigating concerns of elevated affiliated investment exposures. Additionally, unaffiliated bond holdings have accounted for more than 67 percent of the unaffiliated investment portfolio on average each year in the last decade, providing stable cash flows against underwriting results. All of these factors help to mitigate any present concerns regarding the sector's potential exposures to heightened liquidity risk.

4. Market Performance

Stock price movements are indicators of investors' perceptions about the recent financial results and future financial prospects of a firm, an industry sector, or in a broader context, the general economy. The discussion that follows considers the price performance of stock indices for the L&H and P&C sectors, as compared to the performance of the S&P 500.

The P&C sector ultimately underperformed the S&P 500 over the 10-year period ending December 31, 2020, with a long period of outperformance that ran from mid-2014 to 2019, followed by a down-turn during 2020 as shown in Figure 35. On the other hand, the L&H sector stock index consistently underperformed the S&P 500 during this ten-year period. Since the end of 2010, the P&C stock index gained 151 percent and the L&H stock index increased 52 percent; over the same period, the S&P 500 nearly tripled, gaining 197 percent. In the short-term, for 2020 both the P&C and the L&H stock indices significantly underperformed the S&P 500, losing 0.7 percent and 12.2 percent, respectively, versus a 15.5 percent gain for the S&P 500. Questions related to potential liability for COVID-19 pandemic-related losses such as business interruption claims weighed on P&C company stocks, while the combination of uncertainty around the severity of morbidity and mortality experience from the pandemic and the drop in interest rates put downward pressure on L&H insurer stocks.

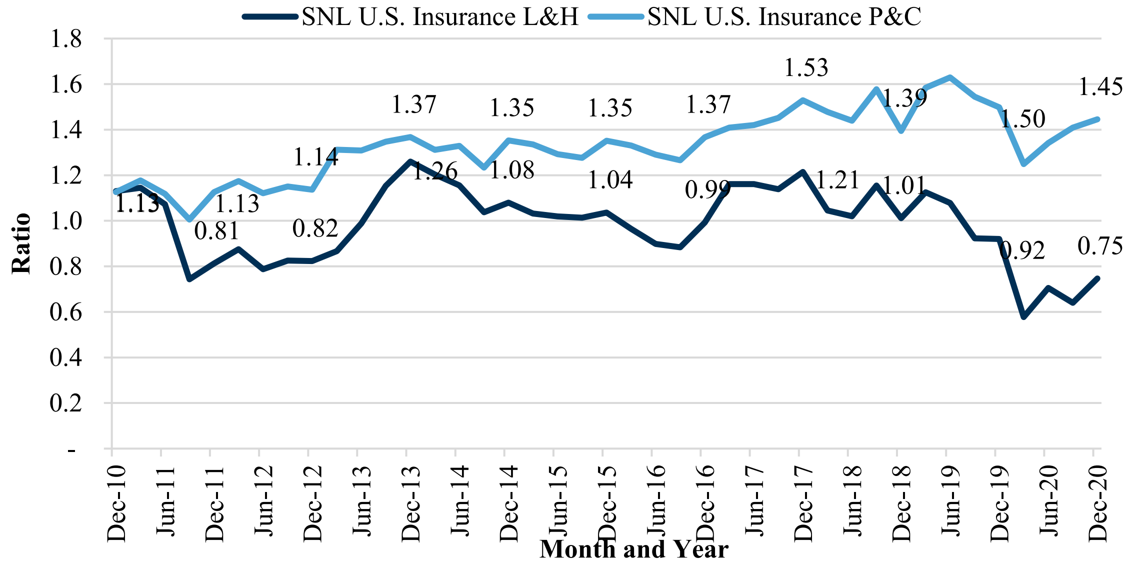
Figure 35: Insurance Industry Stock Price vs. S&P 500



Source: S&P Global

The price-to-book value multiple, which compares on a per share basis the market value of a firm to its book value (i.e., reported stockholders' equity on its balance sheet), is a popular metric by which to measure valuation. If a share of an insurer's stock is selling for less than its book value per share, the market is valuing the firm at less than its assets minus its liabilities (net worth); the opposite is true if the stock is trading at a premium to its book value. Figure 36 compares L&H and P&C sector price-to-book value ratios from year-end 2010 through year-end 2020. At the end of 2020, the index of stocks of P&C insurers retained its historical premium at 1.45 times book value, while the index of stocks of L&H insurers slid to a considerable discount at 0.75 times its book value.

Figure 36: Insurer Price/Book Value Ratios



Source: S&P Global

5. Domestic Outlook

Full year 2021 insurance industry results will be reviewed by FIO in next year's *Annual Report on the Insurance Industry*. Based on financial results reported by insurers through the first half of 2021, the outlook for the U.S. insurance industry points to some pressures for growth and profitability. Results for the first half of 2021 (the most recently available data) for the L&H sector showed deterioration in underwriting performance with a pre-tax operating margin of 3.1 percent compared to 24.7 percent for the same period in 2020. While the L&H sector's capital and surplus rose from year-end 2020, increased strains are evident with a ratio of net premiums written to capital and surplus of 159.1 percent as of June 30, 2021, up from 136.4 percent as of year-end 2020 and up from 118.9 percent as of June 30, 2020. Although the P&C sector's profitability and policyholder surplus improved through the second quarter of 2021, net yields on invested assets continued to decline, potentially contributing to increased non-investment grade bond holdings at the end of the second quarter 2021.

Though mid-year financial results cannot portend the outcome for the rest of 2021, challenges remain for the U.S. insurance industry over the next several months. The industry faces a variety of obstacles, including persistently low interest rates, mounting inflation risk, and a potential realization of unknown asset losses.

The sustained low interest rate environment continues to affect the insurance industry, with near to medium term implications for certain products and investment strategies. The key benchmark interest rate, the Federal Funds rate, is expected to be held close to zero until 2023. For annuities and many non-term life insurance products, declining interest rates have historically triggered a reduction in benefits offered, affecting sales. Furthermore, investment portfolios are demonstrating an ongoing shift to alternative asset classes such as infrastructure, private equity funds, venture capital, and hedge funds. The industry has consistently raised its share of these holdings, comprising 6.1 percent of its investment portfolio at year-end 2020 compared to 5.8 percent at year-end 2019 and 5.6 percent at year-end 2018.[54] In addition to potentially earning higher yields that alleviate investment return pressures, these investments help to diversify portfolios due to their low correlations with traditional asset classes while reducing the duration mismatch in insurer balance sheets. On the other hand, alternative investments are less transparent, creating challenges for investors and analysts in performing appropriate due diligence on these assets. As such, the continued shift to these holdings may raise insurers' credit and liquidity risks, potentially amplifying market shocks in the event of an abrupt price correction.

Market participants have also noted rising inflation risk as another near to medium term concern for the insurance industry. With the reopening of the economy, the demand for goods and services has increased significantly as many consumers have started to return to pre-pandemic activities, refueling the economy with funds received from government relief programs and savings accumulated during the shutdown. At the same time, there have been supply shortages of some goods, due in part to supply-chain interruptions from the COVID-19 pandemic and the difficulties faced by some businesses in returning to pre-pandemic employment levels. Longer-tailed business lines like workers compensation and medical malpractice may be impacted more sharply by sustained inflation. Specifically, if inflation is higher than the rate built into loss reserves, then future payments may be greater than expected. FIO will continue to assess any potential inflationary pressures on the insurance industry and its implications.

Another potential issue to monitor through 2021 is the extent to which the availability of forbearance programs and government fiscal support during the COVID-19 pandemic could be masking the magnitude of potential future losses on residential and commercial mortgage loans. Life insurers are significant participants in the commercial mortgage market, as the long-term nature of such assets is a good match for the long-duration liabilities that make up the business. Due to regulatory forbearance actions in 2020, however, losses on commercial mortgages may not fully materialize until later. Additionally, CMBS holdings by the L&H sector totaled $193.7 billion at year-end 2020, comprising 44 percent of capital and surplus, with annual growth averaging over 5 percent since 2016. In a recent study, Fitch Ratings reported that the cumulative default rate for CMBS rose sharply to 18.2 percent in 2020, achieving a new peak. Hotel and retail loans, in particular, experienced the largest share of defaults since 2009 due to the social distancing and lockdown measures caused by the pandemic.[55] Though the sector's financial position at year-end 2020 will help to cushion the impact of any losses realized in 2021, FIO will continue to monitor closely the L&H sector's exposure to this asset class. Given the continued uncertainty with the COVID-19 pandemic, however, the financial and operating implications for the insurance industry are still to be determined.

[54] NAIC, *U.S. Insurance Industry's Cash and Invested Assets Continue to Grow Amid the Pandemic*.

[55] Fitch Ratings, *U.S. CMBS 2020 Loan Default Study* (April 2021), https://www.fitchratings.com/research/structured-finance/us-cmbs-2020-loan-default-study-defaults-surge-to-new-high-during-pandemic-26-04-2021.

B. Capital Markets Activity

The U.S. insurance industry continued to access the equity market for new capital throughout 2020. During the year, 17 insurance-related public equity offerings were completed, with an aggregate value of $5.5 billion.[56] This is about the same number of deals as in 2019 (16), but the 2020 activity level was somewhat lower in terms of the aggregate value compared to 2019 ($7.8 billion). Of the offerings in 2020, four transactions—valued at $1.3 billion—were initial public offerings (IPOs), marking fewer transactions, but a significant increase in aggregate value from the five IPOs valued at $259 million in 2019. The IPOs in 2020 were primarily by InsurTech companies and included $724 million raised by Root, Inc., and $367 million raised by Lemonade, Inc.[57] An additional $5.9 billion was raised in 11 preferred stock offerings over 2020.

Debt markets continued to be the preferred source of additional capital for insurers in 2020, consistent with the steep decline in interest rates over the first half of the year, followed by a slight rebound in the fourth quarter. During the year, U.S. insurers raised an aggregate $92.7 billion in 164 separate debt offerings.[58] Debt issuance decreased slightly from the $105 billion raised in 159 offerings in 2019. The largest single debt offering was a $3.5 billion issue sold by Centene Corp. However, Cigna Corp. was the largest issuer of debt, selling $14.2 billion in 23 separate offerings across 2020. Centene Corp., which sold $13.2 billion in six separate offerings, was the second-largest issuer of debt in 2020. In the aggregate, the funds raised by the top five issuers of debt accounted for 53 percent of the 2020 industry total.

1. Mergers & Acquisitions of U.S. Insurers

In 2020, there were 95 merger and acquisition (M&A) transactions announced involving U.S. insurers and reinsurers, with a total value of $13.4 billion.[59] The number of deals was more than the 84 transactions in 2019, but the aggregate value of the 2020 deals was less than the $17.2 billion aggregate value total in 2019. The largest transaction in 2020 was signaled by the July announcement of the acquisition of Global Atlantic by KKR & Co. Inc., a deal valued at approximately $4.7 billion. The second-largest deal announced in 2020 was the sale of MetLife's P&C operation to Farmers Group Inc., valued at $3.9 billion.[60] Another notable deal

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[56] All data in this section with respect to capital markets and mergers and acquisitions are sourced from S&P Global, as collected and calculated by FIO. The data include Bermuda-based holding companies for which primary insurance underwriting subsidiaries are domiciled in the United States.

[57] FIO defines "InsurTech" as "the innovative use of technology in connection with insurance." For more on InsurTech investments, see Section II.B.5. For more on InsurTech generally, see Section III.G.

[58] Foreign currency-denominated transactions converted to U.S. dollars by S&P Global.

[59] Transactions were announced between January 1, 2020 and December 31, 2020, and were either completed during the year or remained pending at the end of 2020. S&P Global did not report transaction values for all deals. Transactions include acquisitions of whole companies, assets, or minority interests in instances where a U.S-domiciled insurer was either the buyer or seller.

[60] The Farmers Group is a wholly owned subsidiary of Zurich Financial Services.

announced in 2020 was Lincoln Benefit Life's assumption from an unnamed insurer of $1.5 billion in fixed annuity reserves via a reinsurance transaction.[61]

Box 2: Life Sector Restructuring

The current macroeconomic environment with its low interest rates, plus the acceleration of the digital economy, is reshaping the business model of the U.S. life insurance sector.

Traditionally, life insurance companies with capital intensive products (e.g., fixed annuities and universal life secondary guarantee policies) were primarily focused on providing policyholders with various guarantees. In recent years, the life insurance sector has undergone a strategic transformation that has centered on a shift to lower capital-intensive products in response to the sustained low interest rate environment. The low interest rate environment presents significant challenges to the profitability and solvency of the U.S. life insurance sector and has forced many life insurers to simplify products and implement various product strategies on new business to manage interest rate exposure. This has led life insurance companies to shift towards more capital efficient product offerings. Life insurance companies generate earnings and profit from a mix of premiums, fees and spreads. Generally, new product offerings have centered around fee-based products and services, such as asset management businesses, which are thought to have natural synergies with the sector's core competencies and changing longevity risk considerations.[62] In 2020, several insurers announced the discontinuation of variable annuity sales with living income guarantees while other life insurance companies reduced their participation in the traditional fixed annuities lines, where declining interest rates have caused spread compression, in favor of less rate sensitive annuity offerings such as RILAs.[63] In addition, new product strategies have also targeted less capital-intensive non-medical health insurance products and other voluntary benefits such as pet insurance.[64] The forecasts for a prolonged period of low interest rates also have led life insurers to sell or reinsure (via risk-transfer deals) in-force blocks of business. In 2020, several transactions involved life insurers divesting or executing risk-transfer deals on capital-intensive business in an effort to free up capital from underperforming business segments. Increased M&A activity among life insurance companies has been fueled by the expansion of private capital into the life insurance sector, which has largely enabled life insurers to shed interest rate sensitive legacy businesses.[65]

Recent advances in digital tools and services have influenced the life insurance sector's views on the effectiveness of traditional distribution business models and required investments in technology to meet changes in consumer demand. U.S. life insurance business transformation

[61] Lincoln Benefit Life Company is a wholly subsidiary of Kuvare US Holdings, Inc.

[62] *See*, McKinsey & Company, *The Future of Life Insurance* (September 2020), 16, https://www.mckinsey.com/industries/financial-services/our-insights/the-future-of-life-insurance-reimagining-the-industry-for-the-decade-ahead.

[63] For information on RILAs, see Box 1.

[64] See, e.g., Metlife, "Metlife to Acquire U.S. Pet Heath Insurance Administrator, PetFirst," new release, December 5, 2019, https://www.metlife.com/about-us/newsroom/2019/december/metlife-to-acquire-u-s-pet-health-insurance-administrator-petfirst/.

[65] For more on private equity and the expansion of private capital into the life insurance sector, see Section II.B.4.

has centered on enhancing digital capabilities across the customer acquisition value chain. Recent notable M&A transactions of several prominent life insurers have involved the acquisition of direct-to-consumer platforms intended to expand their markets.[66]

2. Changing Investment Strategies

Several factors have prompted the U.S. insurance industry to deploy new investment strategies in recent years. Challenging economic conditions, tighter investment spreads and the low interest rate environment have curtailed investment portfolio returns and pressured the profitability of insurance companies by reducing investment income. Developments in the capital markets and other structural shifts in the financial landscape also have forced insurance companies to adopt unconventional approaches towards investing. These factors have led insurers to reallocate a sizeable portion of their investment portfolios away from traditional products, increase asset leverage, and adopt more tactical investment strategies to drive profitability going forward.

a) Life Insurers

Collectively, the U.S. life insurance industry is among the largest institutional investors, holding nearly $5 trillion in cash and investments at year-end 2020.[67] Since the 2008 financial crisis, however, the prolonged low interest rate environment has introduced new challenges for the U.S. life insurance industry. The persistent low interest rate environment and increased correlations between financial assets from the commoditization of the investment grade-rated public debt markets (e.g., indexation, exchange-traded funds, open-ended mutual funds) has made it difficult for life insurance companies to generate excess returns from traditional investment approaches. To combat the difficult investment environment, insurance companies have begun to branch out into a variety of different asset classes and consider new asset-liability matching approaches. For example, life insurers are transitioning towards investing in less liquid assets in order to enhance portfolio yields and capture the illiquidity premium. From 2015 to 2020, life insurance companies' holdings of commercial mortgage loans and alternative asset classes increased 45 percent and 47 percent, respectively.[68] Life insurance companies also have sought to generate higher returns by allocating more capital toward private credit, including private label structured securities that, due to the complexity of the instruments, typically trade at wider spreads versus comparable investments. Additionally, the life insurance industry's holdings of asset-backed

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[66] *See,* e.g., Prudential Financial, "Prudential Financial to Acquire Assurance IQ, Inc., a Leading Consumer Solutions Platform for Health and Financial Wellness Needs, for $2.35 Billion," new release, September 5, 2019, https://news.prudential.com/prudential-financial-to-acquire-assurance-iq-inc-leading-consumer-solutions-platform-for-health-and-financial-wellness-needs-for-235-billion.htm. For more on InsurTech, see Section III.G.

[67] S&P Global.

[68] S&P Global and FIO research. Commercial mortgage loans and alternatives (defined as those assets included on Schedule BA of the NAIC's annual report regulatory filings) cannot be readily sold or exchanged for cash. The largest asset classes reported on Schedule BA include private equity, hedge funds, and real estate. NAIC, *U.S. Insurance Industry's Cash and Invested Assets Continue to Grow Amid the Pandemic*.

securities, including CLOs, have increased significantly in recent years due to the attractive return characteristics of these securities.[69]

b) P&C Insurers

Income generated from investments are the single largest profit driver for P&C insurance companies, with investment income representing approximately two-thirds of the industry's earnings.[70] During periods of underwriting losses, investment income can be the sole driver of profitability for P&C insurance companies. Compared to life insurance companies, P&C insurers' investment portfolios reflect a more conservative approach in terms of having more liquidity and higher credit quality. However, because P&C insurers' investments have shorter durations, the level of interest rates impacts returns and profits of P&C insurance companies more rapidly than life insurance companies. Some P&C insurance companies have therefore embraced non-traditional and riskier investment strategies in response to the long-term decline in investment yields, a trend that has put significant pressure on the sector's investment income.[71] From 2015 to 2020, P&C insurance holdings of unaffiliated common stock and alternatives increased 69 percent and 45 percent, respectively, reflecting the industry's need for higher investment returns.

3. Alternative Risk Transfer Insurance Products

By using the capital and derivatives markets to attract investors from outside the insurance industry, alternative risk transfer (ART) markets increase the capacity for reinsurance and retrocession, and thereby increase the U.S. insurance industry's ability to supply insurance. ART financial instruments include catastrophe bonds ("cat bonds"), collateralized reinsurance, industry loss warranties, reinsurance sidecars, longevity swaps, catastrophe futures, and other insurance-linked securities (ILS).[72]

The assets under management in the ART market at year-end 2020 were approximately $94 billion, as compared to $91 billion at the end of 2019.[73] One market observer noted, however, that "[s]ome of the assets supporting collateralized reinsurance contracts are trapped, due to the

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[69] From 2015 to 2020, the U.S. insurance industry holdings of other loan-backed securities increased more than 50 percent, according to data from S&P Global and FIO research. The NAIC defines other loan-backed securities as pass-through certificates, collateralized mortgage obligations, and other "securitized" loans not included in structured securities. NAIC*, Statutory Issue Paper No.43: Loan-Backed and Structured Securities* (1998), https://content.naic.org/sites/default/files/inline-files/ip043_revised.pdf.

[70] S&P Global and FIO research. Note: P&C insurance companies utilize less asset leverage versus life insurers.

[71] NAIC, *U.S. Property & Casualty and Title Insurance Industries: 2019 First Half Results* (2019), https://content.naic.org/sites/default/files/inline-files/2Q19%20Mid-Year%20Industry%20Report%20%281%29.pdf.

[72] Although often called ILS, these financial instruments are not all securities within the meaning of the Securities Act of 1933. For more detailed descriptions of ILS and other ART instruments, see FIO, *2018 Annual Report*.

[73] *See, e.g.*, Aon, *Aon's Reinsurance Aggregate: Results for the Year to December 31, 2020* (April 2021), 2, http://thoughtleadership.aon.com/Documents/ARA_FY_20210415.pdf; Aon, *Reinsurance Market Outlook* (July 10, 2020), 3, http://thoughtleadership.aonbenfield.com/Documents/20200710-re-analytics-reinsurance-market-outlook-junejuly.pdf.

ongoing uncertainty surrounding the ultimate extent of recent major losses, now including COVID-19. As a result, the funds available for deployment are somewhat lower than the headline figures suggest."[74]

Within the ART market, the outstanding amount of cat bonds and other ILS instruments was approximately $46 billion at the end of 2020.[75] Property cat bonds in particular saw significant growth in 2020, with $11 billion of property cat bond limits placed—a 104 percent increase over the $5.4 billion in 2019.[76] Overall annual cat bond and ILS issuances in 2020 reached $16.4 billion, a new record (beating the previous record set in 2018 by more than $2.6 billion).[77]

Initial data from 2021 indicate that the ART market continues to grow and may set new records for issuances by the end of 2021.[78]

4. Private Equity-Backed Insurers

Over the past year there has been continued and significant expansion of private equity (PE)-owned life insurers, i.e., life insurers that have holding structures indicating a material percentage of ownership by a PE firm. Today, the PE-owned life insurance market encompasses some of the largest providers of fixed annuities and pension risk transfers in the sector. Growing from almost no presence ten years ago, the cash and invested assets of PE-owned life insurers amount to over $471 billion as of year-end 2020, constituting roughly 11 percent of the U.S. life insurance industry's total cash and invested assets.[79] Augmenting this market presence, FIO estimates that over $137 billion in cash and investments (as of year-end 2020) are associated with offshore reinsurance affiliates of PE firms, as well as a substantial amount of non-affiliated insurance assets managed on a third-party basis by PE firms.[80] Several notable transactions in

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[74] Aon, *Reinsurance Market Outlook: January 2021* (May 2021), 11, available through http://thoughtleadership.aon.com/Pages/Home.aspx?ReportYear=2021.

[75] *See* "Catastrophe Bond & Insurance-Linked Securities Deal Directory," Artemis, https://www.artemis.bm/deal-directory/; Artemis, *Q4 2020 Catastrophe Bond & ILS Market Report*, 16, https://www.artemis.bm/wp-content/uploads/2021/01/q4-2020-catastrophe-bond-ils-report.pdf?utm_source=ReportsPage&utm_medium=Link&utm_content=Q42020Report&utm_campaign=Report.

[76] Aon, *Insurance-Linked Securities: Aon Securities Q4 2020 Update* (2021), 3, 16, http://thoughtleadership.aon.com/Documents/280121_aon_securities_ils_q4_update.pdf.

[77] Artemis, *Q4 2020 Catastrophe Bond & ILS Market Report*, 3.

[78] *See* Aon, *Reinsurance Market Outlook: July 2021* (July 2021), 9, available through http://thoughtleadership.aon.com/Pages/Home.aspx?ReportYear=2021 (noting first-half issuance in 2021 is "just shy of the record set in 2017" and "positive market momentum … could lead to record issuance volume for the full year.").

[79] *See* NAIC, *Private Equity-Owned U.S. Insurer Investments as of Year-End 2020* (2021), https://content.naic.org/sites/default/files/capital-markets-special-report-private-equity-owned-2020.pdf. At the end of 2020, the NAIC identified 117 PE-owned U.S. insurers. *Id.*

[80] *See, e.g.*, Athene, *Athene Holding Ltd. 4Q'20 and FY '20 Financial Supplement* (February 2021), https://irathene.q4cdn.com/886888837/files/doc_financials/2020/q4/ATH-Q4-2020-Financial-Supplement-Final.pdf; Fortitude Group Holdings, LLC, *Consolidated Financial Statements and Supplemental Information As of December 31, 2020 and 2019 and for the Years Ended December 31, 2020, 2019 and 2018* (2021), https://fortitude-re.com/wp-content/uploads/2021/05/Fortitude-Group-Holdings-LLC-2020-GAAP-Financial-Statements.pdf.

this space occurred or were announced during the past 15 months. In June 2020, KKR & Co. Inc. announced the acquisition of Global Atlantic Financial Group Limited, one of the largest fixed and indexed annuity providers. In January 2021, Allstate announced that Blackstone Group Inc. had agreed to buy Allstate Life Insurance Co. for $2.8 billion, and also in that month Talcott Resolution announced that Sixth Street Partners had agreed to buy it for $2 billion.[81]

The increased participation of PE firms in the insurance sector has supported the interest of a growing number of life insurers seeking to divest interest rate sensitive and low returning long-term liability businesses (predominately annuity blocks) as a result of the prolonged low interest rate environment and potentially mispriced liabilities.[82] PE firms have entered and expanded in the U.S. life insurance sector through a combination of M&A or risk transfer transactions, often targeting the business blocks of insurance companies that have been constrained by the macro environment. After such transactions, PE firms may use the acquired life insurance company's annuity, institutional, and reinsurance platforms to drive new business to the firm and generate capital for it to invest. Indeed, the growth strategies of several PE-owned life insurers do not contemplate policy-generating activities. The so-called "permanent capital base" resulting from such transactions can be used by a firm to scale its fee-based businesses—for example, by deploying insurance assets into various in-house credit strategies. In addition, some PE firms are earning fees from managing the general accounts of their owned-insurance entities., which has increased concerns about conflicts and governance. For example, Apollo, owner of Athene, has come under scrutiny for its high investment management fees and corporate governance structure related to life insurance business.[83] This resulted in Apollo's proposal to acquire its remaining stake in Athene in March of 2021, to alleviate shareholders' concerns.[84]

Such business models have the potential to affect the risk profile of the PE-owned life insurance business in various ways. For example, PE-owners may use investment strategies for their owned insurance entities that have heightened credit and liquidity risk profiles as compared to other market participants.[85] As another example, PE-owned insurers tend to hold a more significant proportion of investments in alternative or non-traditional insurance assets that are associated with illiquidity and complexity premiums. Such investments, which provide a higher-yielding alternative to insurer investments in plain-vanilla bonds, are concentrated in obligations

[81] *See* S&P Global; Allstate, "Allstate Announces Agreement to Sell Allstate Life Insurance Company," news release, January 26, 2021, https://www.businesswire.com/news/home/20210126006128/en/Allstate-Announces-Agreement-to-Sell-Allstate-Life-Insurance-Company; Talcott Resolution, "Sixth Street to Acquire Talcott Resolution," news release, January 20, 2021, https://www.prnewswire.com/news-releases/sixth-street-to-acquire-talcott-resolution-301211628.html.

[82] *See* Box 2 for more information on life insurance sector restructuring.

[83] Mark Vandevelde and Sjeet Indap, "Apollo Accused of 'Looting' Affiliate Insurer Athene," *Financial Times*, June 27, 2019, https://www.ft.com/content/06438914-9926-11e9-8cfb-30c211dcd229.

[84] David French and Chibuike Oguh, "Apollo Global to Buy Insurance Affiliate Athene for $11 Billion," *Reuters*, March 8, 2021, https://www.reuters.com/article/us-athene-hldg-m-a-apollo-global/apollo-global-to-buy-insurance-affiliate-athene-for-11-billion-idUSKBN2B0192.

[85] Fitch Ratings, *Further Penetration of Insurance by Alt IMs Expected Due to Scale, Diversification Benefits* (June 3, 2021), https://www.fitchratings.com/research/insurance/further-penetration-of-insurance-by-alt-ims-expected-due-to-scale-diversification-benefits-03-06-2021.

from private issuers. They also may include loans to businesses, collateralized loan obligations, asset-backed securities, and residential mortgages, all of which may exhibit enhanced sensitivity to downturns in the credit cycle or may be characterized by reduced liquidity that could diminish the insurer's ability to meet unexpected cash demands. In addition, reliance on offshore captive reinsurers and complex affiliated sidecar vehicles in the PE-owned enterprise may be used to maximize capital efficiency and introduce complexities into the group structure. FIO will continue to monitor the growth and activities of PE in the life insurance sector, as well as regulatory treatment by the states.

5. InsurTech Investments

Under FIO's definition, InsurTech is the "the innovative use of technology in connection with insurance." FIO's *2019 Annual Report* provides an overview of the InsurTech market; this section provides an update on developments in that market in 2020.[86]

InsurTech startups continued to receive significant investments in 2020. While funding dropped sharply initially in 2020, the fourth quarter in 2020 produced 103 investment rounds with a total value of $2.1 billion invested.[87] For the entire year, 2020 produced 377 investment rounds with a total of $7.1 billion invested.[88] The trend has continued, with InsurTech investments in the first quarter in 2021 reaching an all-time high with 146 investment rounds with a total value of $2.6 billion invested, a 22 percent increase from the preceding quarter.[89]

Increasingly, InsurTech investments are expanding to other countries. While the share of investments in U.S. InsurTech companies grew to 48 percent in the first quarter of 2021, investors are also looking at other countries' InsurTech start-ups for investments, including start-up companies in Bangladesh, Brazil, and Nigeria.[90] InsurTech companies from 38 different countries raised money in 2020, up from 29 countries in 2016.[91] P&C-focused investments continue to be most of the investment activity, comprising 69 percent of the funding rounds, with life and health comprising 31 percent of funding.[92]

[86] *See* FIO, *Annual Report on the Insurance Industry* (2019), 71-77, https://home.treasury.gov/system/files/311/2019_FIO_Annual_Report.pdf (*2019 Annual Report*). For more information on InsurTech generally, see Section III.G.

[87] Willis Tower Watson, Quarterly Insurtech Briefing: Q4 2020 & Year in Review, https://www.willistowerswatson.com/en-US/Insights/2021/01/quarterly-insurtech-briefing-q4-2020.

[88] Willis Tower Watson, *Quarterly Insurtech Briefing: Q4 2020 & Year in Review*, 6.

[89] Willis Tower Watson, *Quarterly InsurTech Briefing: Q1 2021*, 6, https://www.willistowerswatson.com/en-US/Insights/2021/04/quarterly-insurtech-briefing-q1-2021.

[90] Willis Tower Watson, *Quarterly InsurTech Briefing: Q1 2021*, 6.

[91] Willis Tower Watson, *Quarterly InsurTech Briefing: Q1 2021*, 6.

[92] Willis Tower Watson, *Quarterly InsurTech Briefing: Q1 2021,* 6.

C. International Insurance Marketplace Overview and Outlook

The United States remained the world's largest single-country insurance market in 2020, with a 40 percent market share of global direct premiums written (see Figure 37).[93] This market share increased by approximately 0.8 percent compared to 2019, and is a nearly two percentage point increase over that of 2018. When viewed as a single market, the combined share of the EU (following the exit of the United Kingdom from the EU) of global direct premiums written (18 percent) is the next largest. China remains the second-largest single-country insurance market, with 10 percent of global direct premiums written. Globally, direct premiums written were essentially flat (in real terms, adjusted for inflation) in 2020, despite growth in non-life premiums in advanced economies.[94] Growth in global non-life premiums of 1.5 percent balanced out the 4.4 percent decrease in life premiums, while global GDP contracted by 3.7 percent in 2020.[95] Although non-life premium growth slowed compared to 2019, it far outpaced the decline in global GDP.

Consistent with the past several years, emerging markets fared better than advanced markets, in total and in the life sector. World life premiums, in real terms, contracted by 4.4 percent, mainly due to a 5.7 percent drop in advanced economies; emerging markets eked out a very slight 0.3 percent increase in life premiums.[96] On the non-life side, premium growth in real terms was approximately equal between advanced and emerging markets at about 1.5 percent. Much of the growth in premiums in emerging markets in both sectors was due to continued strong growth in China. Absent the expansion in China, emerging markets premiums declined in both sectors.[97]

[93] Daniel Staib, *et al.*, *sigma 4/2020: World Insurance: Riding Out the 2020 Pandemic Storm* (July 10, 2020), https://www.swissre.com/institute/research/sigma-research/sigma-2020-04.html (*sigma 4/2020*). Swiss Re sigma examines insurance and macroeconomic data from 147 countries sourced through Swiss Re Institute. Growth rates are presented in real terms, i.e., adjusted for inflation as measured by local consumer price indices. Swiss Re sigma separates the insurance industry into "life" and "non-life" sectors according to standard EU and OECD conventions; under these conventions, the "non-life" sector includes health insurance. Beginning with 2019, data retrospectively include A&H business written by health insurers in the United States to align with practice in other regions. In 2019, premiums from this line of business were $912 billion. Because of this change in methodology, market shares from prior years are not comparable. Figures shown for 2018-2020 have been adjusted for this change.

[94] *See* Staib, *sigma 4/2020*, 2.

[95] Staib, *sigma 4/2020*, 2.

[96] Staib, *sigma 4/2020,* 2.

[97] Staib, *sigma 4/2020*, 2.

Figure 37: World Market Share 2018 – 2020 for Top Twenty Markets ($ millions)

2020 Rank	Country	2018 Premium Volume ($ millions)	2018 World Market Share (%)	2019 Premium Volume ($ millions)	2019 World Market Share (%)	2020 Premium Volume ($ millions)	2020 World Market Share (%)	2020/2019 Premium Volume Change (%)
1	United States	2,368,305	38.5%	2,485,326	39.5%	2,530,570	40.3%	1.8%
2	PR China	574,890	9.3%	617,399	9.8%	655,874	10.4%	6.2%
3	Japan	438,412	7.1%	427,580	6.8%	414,805	6.6%	(3.0%)
4	United Kingdom	380,350	6.2%	364,352	5.8%	338,321	5.4%	(7.1%)
5	Germany	244,755	4.0%	249,207	4.0%	258,566	4.1%	3.8%
6	France	266,275	4.3%	260,457	4.1%	231,347	3.7%	(11.2%)
7	South Korea	180,386	2.9%	179,018	2.8%	193,709	3.1%	8.2%
8	Italy	170,273	2.8%	167,881	2.7%	161,973	2.6%	(3.5%)
9	Canada	129,364	2.1%	134,339	2.1%	143,468	2.3%	6.8%
10	Taiwan	121,908	2.0%	117,823	1.9%	113,304	1.8%	(3.8%)
11	India	97,342	1.6%	107,893	1.7%	107,993	1.7%	0.1%
12	Netherlands	86,474	1.4%	84,179	1.3%	87,529	1.4%	4.0%
13	Hong Kong	63,781	1.0%	70,696	1.1%	73,131	1.2%	3.4%
14	Spain	75,274	1.2%	70,982	1.1%	66,323	1.1%	(6.6%)
15	Australia	78,801	1.3%	68,688	1.1%	62,840	1.0%	(8.5%)
16	Switzerland	59,164	1.0%	58,868	0.9%	62,669	1.0%	6.5%
17	Ireland	72,478	1.2%	58,645	0.9%	58,089	0.9%	(0.9%)
18	Brazil	72,174	1.2%	73,388	1.2%	57,623	0.9%	(21.5%)
19	Belgium	36,854	0.6%	41,372	0.7%	41,236	0.7%	(0.3%)
20	Sweden	39,116	0.6%	38,026	0.6%	40,939	0.7%	7.7%
	World	6,149,020		6,284,360		6,287,044		

Source: Swiss Re sigma, *World Insurance*

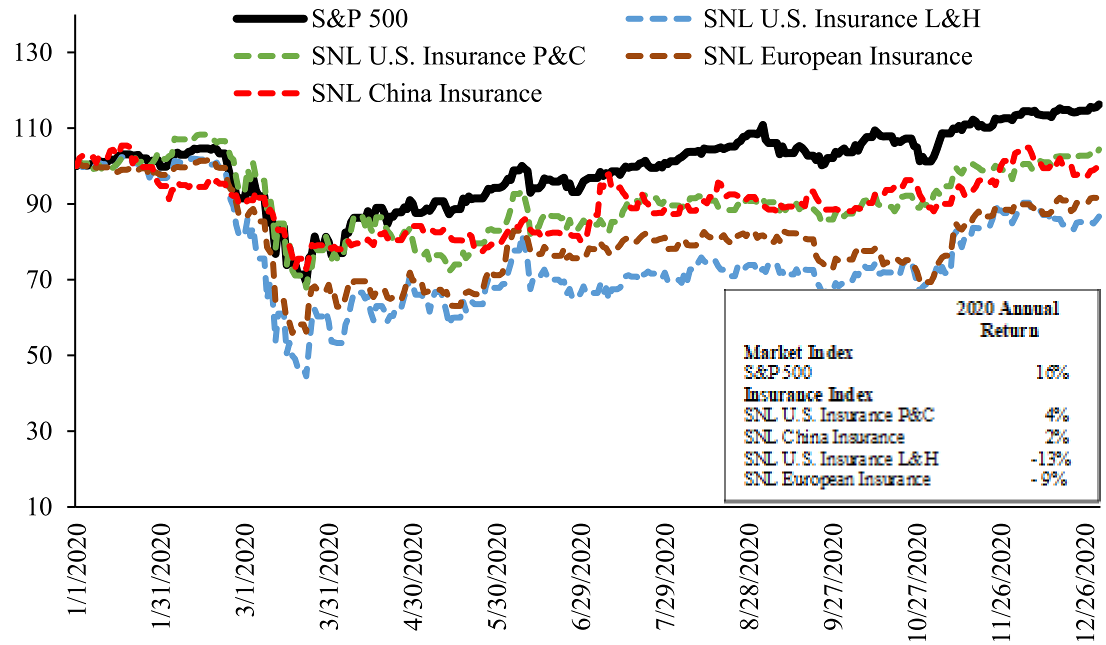
Most insurance indices in major insurance markets finished in negative territory in 2020 and underperformed their respective broader benchmarks, in most cases by a wide range. Among the indices FIO tracked (see Figure 38), S&P P&C Insurance composite was the best performing, increasing roughly four percent in 2020. The outperformance of U.S. P&C equities could be a result of the defensive characteristics of the publicly traded U.S. P&C insurers and because investors expected companies to benefit from a favorable pricing environment in the commercial lines.[98] The SNL U.S. Insurance Life & Health Index finished down 16 percent for the year, a reversal from the strong gains recorded in 2019.[99] The Index's underperformance was likely related to investors' revised expectations for low interest rates, a result of the monetary policy

[98] Telis Demos, "Firmer Pricing Gives Insurers a Lift," *The Wall Street Journal*, February 5, 2020, https://www.wsj.com/articles/firmer-pricing-gives-insurers-a-lift-11580931877.

[99] S&P Global. In 2020, the SNL U.S. Insurance L&H Index increased 21 percent.

response to the COVID-19 pandemic. Historically, the performance of U.S. life insurance stocks has been strongly correlated with interest rates.[100]

Figure 38: Performance of Global Insurance Indices as Compared to Broader Market Average (S&P 500)



Source: S&P Global

[100] Joel Salomon, "Understanding the Interest Rate Sensitivity of Insurance Companies," *Factset,* January 28, 2020, https://insight.factset.com/understanding-the-interest-rate-sensitivity-of-insurance-companies.

III. TOPICAL UPDATES AND FIO ACTIVITIES

This section provides updates and analyses, as well as FIO activities, in several areas that FIO has analyzed over the past year. Section III.A supplements the discussion of the COVID-19 pandemic's impact on the insurance industry's financial condition with pandemic-related updates on the following topics: insurance and insurance regulator operations; policyholder relief; coverage for business interruption; workers compensation; proposals for future pandemic risk; and international responses to the pandemic with respect to the insurance sector (excluding health insurance). Next, Section III.B looks at climate change, mitigation and resilience. Section III.C examines cyber risks, ransomware, and the cyber insurance market. Section III.D. provides an overview of TRIP activities, while Section III.E highlights advisory committee activities, including recommendations of the Advisory Committee on Risk Sharing Mechanisms (ACRSM) and Federal Advisory Committee on Insurance (FACI). Section III.F summarizes recent work on personal auto insurance. Section III.G provides a brief update on InsurTech developments, while Section III.H does the same for Long-Term Care Insurance. Section III.I discusses recent FSOC work. Section III.J examines state initiatives on systemic risk and solvency, and specifically the NAIC's Macroprudential Initiative and Group Capital Calculation (GCC). Section III.K discusses FIO's international work, including at the IAIS and specifically with respect to the Insurance Capital Standard. Section III.K also discusses the U.S.-EU and U.S.-UK Covered Agreements. It also touches upon FIO's work with its insurance dialogue projects with the EU and UK, at the Organisation for Economic Co-operation and Development (OECD), and in bilateral dialogues.

FIO also continues to provide insurance expertise to a variety of federal agencies on numerous topics. Among other things, FIO continues to work with the U.S. Department of Veterans Affairs on issues arising under the Servicemembers' Group Life Insurance Program and other life insurance programs for the benefit of servicemembers, veterans, and their families. In addition, FIO continues to coordinate with state insurance regulators and the NAIC and to monitor state-level developments in various other areas.

A. Pandemic-Related Updates

This section updates FIO's previous preliminary observations on the impact of the COVID-19 pandemic on the insurance industry.[101] In addition to its financial impacts, the pandemic has also significantly affected how the insurance industry operates, both in terms of business operations and regulation.[102] In some cases, the pressures of the COVID-19 pandemic have accelerated pre-existing trends, and in some respects the pandemic may be leading to more fundamental shifts in the insurance industry. Such changes affect both domestic and international insurance markets.

[101] FIO, *2020 Annual Report*, 9-42.

[102] For more information on the pandemic's financial impact on the insurance industry, see Section II.

1. Domestic

a) Remote Operations

As in other areas of the economy, the COVID-19 pandemic has resulted in the adoption and expanded use of digital and remote working options by the U.S. insurance industry. After the onset of the pandemic, insurers accelerated the adoption of remote claims processes, for example.[103] Particularly in view of the large number of insurance professionals working in the U.S. economy, such changes are significant shifts in business operations for insurers.[104]

As a result of the logistical issues presented by the pandemic, state insurance regulators increasingly have permitted or confirmed the use of digital signatures for the execution of documents.[105] Regulators also have allowed virtual examinations and inspections in lieu of in-person requirements. State regulatory processes require the production of many filings in support of rate and form requirements, as well as data reporting to permit effective supervisory oversight of insurers. Given the restrictions due to the COVID-19 pandemic, many states began permitting digital filing in lieu of hard copy filings, or permitted delays in the provision of hard copy filings.[106] Many states also modified in-person requirements relating to insurance licensing for producers, adjustors, agents and other insurance professionals.[107] Such changes included the

[103] *See, e.g.*, "COVID-19: Claim Guidance," Travelers, https://www.travelers.com/about-travelers/covid-19-claim-guidance (noting the availability of virtual claim inspection tools, expanded for safety reasons during the COVID-19 pandemic); "Special Announcement: Claims Service During COVID-19," Farmers Insurance, https://www.farmers.com/claims/technology/ (identifying virtual inspection and claims mechanisms implemented in some cases during the COVID-19 pandemic).

[104] Overall, the insurance industry employed about 2.9 million people in 2020. *See* "Facts + Statistics: Industry Overview," Insurance Information Institute, https://www.iii.org/fact-statistic/facts-statistics-industry-overview (citing Bureau of Labor Statistics data). Insurance professionals are a significant proportion of these employees. For example, licensed insurance professionals in California alone number more than 420,000 individuals and represent the second largest profession in California. *See* California Department of Insurance, "Department of Insurance Launches Remote Licensing Exams that Will Help Increase Employment Opportunities," news release, August 24, 2020, http://www.insurance.ca.gov/0400-news/0100-press-releases/2020/release078-2020.cfm.

[105] *See, e.g.*, Texas Department of Insurance, Commissioner's Bulletin # B-0035-20 (August 26, 2020), https://www.tdi.texas.gov/bulletins/2020/B-0035-20.html (discussing electronic transactions and signatures on surety bonds).

[106] *See, e.g.*, Massachusetts Division of Insurance, Bulletin 2020-24 (July 20, 2020), https://www.mass.gov/doc/bulletin-2020-24-continued-flexibility-in-compliance-with-regulatory-filing-requirements-issued/download; New Hampshire Insurance Department, Bulletin No. 21-007-AB (February 3, 2021), https://www.nh.gov/insurance/media/bulletins/2021/documents/ins-21-007-ab.pdf.

[107] NAIC, *NAIC COVID-19 Report for 2020* (February 2021), 33, https://content.naic.org/sites/default/files/naic-covid-19-report-update3-eoy-2020.pdf (identifying 47 jurisdictions that adopted some sort of licensing changes in connection with P&C insurance).

suspension of license expirations,[108] allowance of remote examinations to satisfy licensing requirements,[109] and provision of remote course work without monitoring.[110]

b) Policyholder Relief

State insurance regulators took varied steps over the past year to provide relief to policyholders on account of the economic dislocations brought about by the pandemic. For example, recognizing that some policyholders might find it difficult to make timely premium payments, regulators required or encouraged insurers to maintain flexibility on the timing of premium payments; extended grace periods for making of payments; mandated broader non-cancellation requirements; and postponed rate increases.[111] State insurance regulators in some instances mandated (or encouraged) substantial personal auto insurance rate rebate measures, while some insurers voluntarily provided rate rebates. Some state insurance regulators question and are continuing to evaluate the rebates' sufficiency.[112] Rebates or other credits were also required or provided in other lines, such as workers' compensation, where claim frequency declined on account of the pandemic.[113] Regulators also cautioned insurers to take into account the effects of the COVID-19 pandemic when making rate submissions, and to analyze and assess the impacts

[108] *See, e.g.*, New York Department of Financial Services, Insurance Circular Letter No. 9 (March 25, 2020), https://www.dfs.ny.gov/industry_guidance/circular_letters/cl2020_09 (suspending the expiration of licenses for all individual producers for the next 60 days and waiving any associated late fees).

[109] *See, e.g.*, New Jersey Department of Banking and Insurance, "NJ Department of Banking & Insurance Launches Remote Licensing Exams for Insurance Producers & Public Adjusters," news release, September 11, 2020, https://www.state.nj.us/dobi/pressreleases/pr200911.html.

[110] *See, e.g.*, Nebraska Department of Insurance, Notice (October 1, 2020), https://doi.nebraska.gov/sites/doi.nebraska.gov/files/doc/WaiverofProctorRequirementsExtendedThroughDec31.pdf (extending waiver of proctor requirements for continuing education self-study online courses).

[111] *See, e.g.*, Massachusetts Division of Insurance, Bulletin 2020-30 (December 29, 2020), https://www.mass.gov/doc/bulletin-2020-30-continued-flexibility-in-the-administration-of-insurance-during-the-covid-19/download (continuing flexibility in the issuance and administration of insurance during the COVID-19 pandemic); West Virginia Insurance Commissioner, Emergency Order, Emergency Proceeding No. 20-EO-02 (March 18, 2020), https://www.wvinsurance.gov/Portals/0/pdf/20-EO-02_Emergency_Order.pdf?ver=2020-03-19-084523-047 (prohibiting cancellation associated with the COVID-19 pandemic and otherwise mandating flexibility in matters respecting premium payment obligations); District of Columbia Department of Insurance Securities and Banking, Bulletin No. 20-IB-3-11/23 (November 23, 2020), https://disb.dc.gov/sites/default/files/dc/sites/disb/publication/attachments/DISB_Bulletin%20Temporary%20Postponement%20of%20Rate%20Increase.pdf (temporarily postponing P&C rate increases during the COVID-19 public health emergency).

[112] For more information on auto insurance rebates and state insurance regulatory responses, see Section III.F.

[113] *See, e.g.*, Michigan Department of Insurance and Financial Services (DIFS), "Michigan Department of Insurance and Financial Services Orders to Result in Michigan Drivers and Businesses Saving Nearly $97 Million," news release, July 27, 2020, https://www.michigan.gov/difs/0,5269,7-303-13222_13250-534890--,00.html (noting rebating effect of DIFS orders requiring "insurers offering worker's compensation or automobile insurance policies to file plans with DIFS to issue adjustments, credits, endorsements, or refunds, as appropriate, due to reduced utilization during COVID-19").

of the pandemic on specific insurance products and address how these have been accounted for in filings.[114]

c) Insurer Relief

State insurance regulators have also taken steps to relieve insurers from potential unintended consequences of existing financial rules and requirements that might unduly burden insurers, given the background of the COVID-19 pandemic and the steps taken to provide policyholder relief. In the area of insurance accounting standards, in April 2020 the NAIC adopted three accounting standard interpretations for use in connection with reporting requirements that could be affected by the economic dislocations resulting from the pandemic.[115] These modifications would "allow insurance reporting entities to respond to policyholder needs for premium payment delays, and address mortgage loan modification and forbearance requests, while mitigating insurance reporting entity concerns on the impact to statutory financial statements."[116] In addition to changes in standards, timing allowances were made to extend filing due dates to allow more time for the collection of premium before having to report the payments as late in statutory filings.[117]

d) Workers' Compensation

Many states changed laws or regulations to deem COVID-19 to be an occupational disease subject to compensation under workers' compensation laws for at least certain categories of employees, as noted in FIO's *2020 Annual Report*.[118] Although at that time it was not possible

[114] *See, e.g.*, Pennsylvania Insurance Department, Notice 2021-04 (April 24, 2021), http://www.pacodeandbulletin.gov/Display/pabull?file=/secure/pabulletin/data/vol51/51-17/652.html&search=1&searchunitkeywords=2021-04 (noting the need to assess pandemic impacts in P&C rate filings).

[115] *See generally* "Statutory Accounting Principles (E) Working Group," NAIC, https://content.naic.org/cmte_e_app_sapwg.htm. These interpretations are: Interpretation 20-02, https://content.naic.org/sites/default/files/inline-files/INT%2020-02%20-%20Extend%2090%20Day%20Rule%20for%20Covid-19_5.pdf (providing for a temporary, one-time extension of the 90-day rule for uncollected premium receivables); Interpretation 20-03, https://content.naic.org/sites/default/files/inline-files/INT%2020-03%20%20-%20TDR%20for%20COVID-19.pdf (addressing troubled debt restrictions due to the COVID-19 pandemic, which aligned accounting requirements with the provisions of the April 7, 2020 Interagency Statement on Loan Modifications and Reporting for Financial Institutions Working with Customers Affected by the Coronavirus, and the provisions of the Coronavirus Aid, Relief, and Economic Security (CARES) Act in determining whether the modification shall be reported as a troubled debt restructuring); and Interpretation 20-04, https://content.naic.org/sites/default/files/inline-files/INT%2020-04%20%20-%20Impairment%20for%20Covid-19_5.pdf (permitting deferral of assessments of impairment of bank loans, mortgages, and other investments that may be affected by forbearance or modifications in response to the COVID-19 pandemic). Interpretations 20-02 and 20-04 expired in the third quarter of 2020; Interpretation 20-03 remains in effect through the fourth quarter of 2021.

[116] NAIC, *NAIC COVID-19 Report for 2020*, 35.

[117] NAIC, *NAIC COVID-19 Report for 2020*, 21.

[118] FIO, *2020 Annual Report*, 24-25. *See also* "State Activity: COVID-19 WC Compensability Presumptions," National Council on Compensation Insurance (NCCI),

to predict the likely COVID-19-related losses in the workers' compensation sector, and some predictions suggested that losses would increase in response to new legislative and regulatory initiatives, more recent information indicates that these losses have been manageable, with most claims resolved for relatively modest amounts.[119] Accordingly, although workers' compensation premiums declined in 2020, on account of a combination of rate reductions and the reduction in covered payrolls (upon which workers' compensation premiums are based), the sector remains profitable and has not sustained unmanageable losses associated with the COVID-19 pandemic.[120]

e) Business Interruption Issues

Coverage for business interruption losses remains a significant issue within the insurance industry. As noted in the *2020 Annual Report*, many U.S. businesses sustained losses on account of pandemic-related shutdowns and overall reduced demand, and submitted claims for business interruption coverage under property insurance policies.[121] Various estimates have placed monthly shutdown losses during the height of the pandemic at hundreds of billions of dollars—sums which, if covered under responsive policies, could quickly deplete the total surplus of the P&C industry.[122]

Insurers have identified two principal policy provisions that they assert will typically preclude coverage for business interruption losses associated with a pandemic: (1) property damage provisions requiring a physical loss in connection with claimed business interruption, and (2) virus exclusions. A data call conducted by the NAIC found (based upon 2020 policy information) that 98 percent of all business interruption policies require a physical loss in connection with a claim, and that 83 percent of all business interruption policies have exclusions

https://www.ncci.com/Articles/Documents/II_Covid-19-Presumptions.pdf (summarizing state provisions presuming compensability of COVID-19 as of December 31, 2020).

[119] *See, e.g.*, "2021 State of the Line Guide: COVID-19 Losses," NCCI, https://www.ncci.com/SecureDocuments/SOLGuide2021.html#covid-19_losses (reporting, in connection with the states in which NCCI operates, $260 million in losses spread over approximately 45,000 claims, with an average claim cost of $6,000).

[120] "2021 State of the Line Guide: WC Results," NCCI, https://www.ncci.com/SecureDocuments/SOLGuide2021.html#wc_results (reporting a combined ratio for private insurers in the NCCI states of 87 percent); "2021 State of the Line Guide: WC Premiums," NCCI, https://www.ncci.com/SecureDocuments/SOLGuide2021.html#wc_premium (reporting a 10 percent decrease in net premium written from 2019 to 2020, largely resulting from the decline in employment during 2020 and noting declines in rate/loss costs levels as approved in the NCCI states as contributing to the decline in premium).

[121] FIO, *2020 Annual Report*, 22-24. However, business interruption coverage "is comparatively expensive, and not all U.S. policyholders take up the coverage." FIO, *2020 Annual Report*, 22 and note 98 (citing survey information).

[122] Alwyn Scott and Suzanne Barlyn, "Some Question Insurers' Estimates of Coronavirus Business Interruption Clams, *Insurance Journal*, June 12, 2020, https://www.insurancejournal.com/news/national/2020/06/12/572004.htm (noting industry loss estimates of $255 billion to $431 billion per month). Other insurer organizations have put the issue in terms of premium, contending that it would take 150 years of collecting business interruption premiums to absorb the estimated COVID-19-related losses on a worldwide basis. Geneva Association, *An Investigation into the Insurability of Pandemic Risk* (October 2020), 6, https://www.genevaassociation.org/sites/default/files/research-topics-document-type/pdf_public/insurability_report_web.pdf.

for viruses, bacteria, and pandemics.[123] In the data call, insurers reported receiving over 210,000 claims, the vast majority of which (over 85 percent) were closed without payment by insurers.[124] As of November 2020, P&C insurers had paid a total of $419.7 million for business interruption losses—less than a third of the $1.3 billion in case incurred losses and a small fraction of the estimated COVID-19-related economic losses sustained by U.S. businesses.[125]

Numerous coverage disputes in connection with COVID-19-related business interruption losses have been brought in the courts, and many remain pending.[126] Some courts have agreed with the insurers' position that coverage is precluded by the lack of COVID-19-related physical damage at the policyholders' premises, or by explicit virus exclusions in the policies.[127] In some decisions, courts have permitted cases to proceed past the summary judgment phase to allow policyholders to present evidence in support of allegations that COVID-19 physically damaged their premises.[128] The ultimate outcome of many of these lawsuits, including appeals, remains to be seen.

Various state legislative initiatives proposed early in the COVID-19 pandemic to retroactively expand coverage for COVID-19-related business interruption losses—notwithstanding existing

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[123] NAIC, *NAIC COVID-19 Report for 2020*, 23.

[124] NAIC, *COVID-19 Property & Casualty Insurance Business Interruption Data Call, Part 2: Claim and Loss Information* (November 2020), https://content.naic.org/sites/default/files/inline-files/COVID-19%20BI%20Nat%27l%20Claims%20Aggregates_Nov.pdf.

[125] *COVID-19 Property & Casualty Insurance Business Interruption Data Call, Part 2.* One estimate made early in the pandemic was that U.S. businesses were incurring approximately $1 trillion per month in business interruption losses. *See* Robert Hartwig and APCIA, *Uninsurability of Mass Market Business Continuity Risks from Viral Pandemics* (2020), http://www.pciaa.net/docs/default-source/default-document-library/apcia-white-paper-hartwig-gordon.pdf. *See also* Committee on Capital Markets Regulation, *Pandemic Business Interruption Insurance* (July 2021), 5-6, https://www.capmktsreg.org/wp-content/uploads/2021/07/CCMR-Pandemic-Insurance-07.01.2021.pdf (discussing estimated losses and further noting "the total number of claims and cases filed, as well as the dollar value of total property and casualty claims made in relation to the COVID-19 pandemic—$1.3 billion—is low. The small dollar value of claims filed suggests that few policyholders are sufficiently confident that their policies cover pandemic losses to file claims").

[126] As of May 24, 2021, almost 1,900 cases had been filed in the state and federal courts, of which approximately 1,500 remained pending as of that time. "Covid Coverage Litigation Tracker," University of Pennsylvania Carey Law School, https://cclt.law.upenn.edu/.

[127] *See, e.g.*, *Select Hospitality LLC v. Strathmore Ins. Co.*, 2021 WL 1293407 (D. Mass. April 7, 2021), *3 ("The COVID-19 virus does not impact the structural integrity of property in a manner contemplated by the Policy and thus cannot constitute 'direct physical loss of or damage to' property."); *Diesel Barbershop LLC v. State Farm Lloyds*, 2020 WL 4724305 (W.D. Tex. August 13, 2020), *7 ("While there is no doubt that the COVID-19 crisis severely affected Plaintiffs' businesses, State Farm cannot be held liable to pay business interruption insurance on these claims as there was no direct physical loss, and even if there were direct physical loss, the Virus Exclusion applies to bar Plaintiffs' claims.").

[128] *See Studio 417, Inc. v. Cincinnati Ins. Co.*, 478 F. Supp. 3d 794, 802 (W.D. Mo. 2020) (denying summary judgment because, *inter alia*, plaintiffs "have plausibly alleged that COVID-19 particles attached to and damaged their property, which made their premises unsafe and unusable").

(and state-approved) policy language[129]—failed to pass in any jurisdiction.[130] However, some states have enacted legislation prospectively addressing the provision of business interruption coverage associated with a pandemic. For example, New Jersey legislators imposed new requirements on insurers about policy coverage disclosures, including requiring a one page summary of common insurance clauses in commercial insurance policies about coverage for the loss of use and occupancy of a commercial property and business interruption with specified statements such us "[y]our policy may not cover pandemics or viruses."[131]

f) Pandemic Risk Insurance Proposals

Treasury previously addressed the initial proposals that emerged in the wake of the COVID-19 pandemic to provide a mechanism to ensure the availability of insurance—for business interruption and other risks—for future pandemics.[132] A bill to create a Pandemic Risk Insurance Program was introduced in Congress in May 2020 and was the subject of a November 2020 hearing before the Subcommittee on Housing, Community Development and Insurance of the House Financial Services Committee; as of June 30, 2021, the bill has not been reintroduced in the current Congress.[133] Proposals advanced by individual P&C insurers, policyholder coalitions, and trade associations also remain under discussion.[134] The proposals generally contemplate substantial financial participation by the federal government, either on a direct or reinsurance basis. The proposals vary in terms of the lines of insurance addressed, as well as the extent of actual risk-bearing by private insurers for different types of pandemic-related coverage, in some cases depending upon the size of the policyholder. FACI analyzed many of these proposals and presented information on them to FIO.[135] The NAIC adopted a policy position in October 2020 supporting a federal mechanism for pandemic business interruption insurance coverage that would be wholly funded by the federal government.[136] FIO will continue to

[129] FIO, *2020 Annual Report*, 23 and note 104.

[130] In Washington State, legislation has been introduced that, while not retroactively extending coverage, seeks to codify certain judicial rulings supporting the provision of business interruption coverage associated with the COVID-19 pandemic; the draft legislation remained pending as of June 1, 2021. *See* Wash. St. SB 5351, https://app.leg.wa.gov/billsummary?BillNumber=5351&Year=2021&Initiative=false.

[131] N.J. P.L. 2021, c.98 (May 12, 2021), https://www.njleg.state.nj.us/bills/BillView.asp?BillNumber=A4805.

[132] FIO, *2020 Annual Report*, 24.

[133] H.R. 7011, 116th Congr., https://www.congress.gov/bill/116th-congress/house-bill/7011/related-bills. *See Insuring against a Pandemic: Challenges and Solutions for Policyholders and Insurers, Subcommittee on Housing, Community Development and Insurance, House Financial Services Committee*, 116th Cong. (November 19, 2020), https://financialservices.house.gov/calendar/eventsingle.aspx?EventID=406957.

[134] Summaries of the various proposals and their principal features and differences were presented to the Federal Advisory Committee on Insurance at its December 3, 2020 Meeting. *See* "Federal Advisory Committee on Insurance (FACI)," Treasury, https://home.treasury.gov/policy-issues/financial-markets-financial-institutions-and-fiscal-service/federal-insurance-office/federal-advisory-committee-on-insurance-faci (presentations available as part of the December 2020 meeting material).

[135] For more information on FACI and its recommendations, *see* Section III.E.2.

[136] *See* NAIC, *NAIC COVID-19 Report for 2020*, 23.

evaluate potential policy proposals and engage with stakeholders on addressing the role of insurers in pandemic risk and related policy proposals.

2. International

The *2020 Annual Report* outlined how international supervisory responses reflect that COVID-19-related impacts have manifested in a variety of forms in different jurisdictions due to variations in demographics, economies, markets, and supervisory structures.[137] This section provides updates on the responses of two international standard setting bodies—the IAIS and the Financial Stability Board (FSB)—and that of the European Union's insurance regulatory body, the European Insurance and Occupational Pensions Authority (EIOPA).

a) IAIS Response

The IAIS completed multiple initiatives in response to the pandemic.[138] These initiatives included the launch of an enhanced IAIS non-public COVID-19 database that captures insurance supervisory and regulatory measures in response to the COVID-19 pandemic. To assess the pandemic's effects on the insurance sector, the IAIS repurposed the Global Monitoring Exercise (GME) in 2020, including both the individual insurer and sector-wide data collections, by requesting COVID-19 targeted GME reporting on a quarterly basis. The IAIS reported the GME outcomes in its 2020 Global Insurance Market Report (GIMAR), which contained analysis of the impact of the COVID-19 pandemic on the global insurance sector.[139] In addition, the IAIS issued a joint note with the Financial Stability Institute examining measures taken by insurance supervisors to help them adapt to remote working and the accelerated digitalization demands during the COVID-19 pandemic.[140] The IAIS is now initiating a project to help its members address the pandemic protection gap exposed by the COVID-19 pandemic.

b) FSB Response

The FSB has continued to provide guidance for national responses to the COVID-19 pandemic, discouraging unilateral actions that could lead to market fragmentation.[141] The FSB provided a report to the G20 monitoring the international policy response, including insurance supervision

[137] FIO, *2020 Annual Report*, 38-41.

[138] For more on the IAIS generally, see Section III.K.1.

[139] IAIS, *Global Insurance Market Report [GIMAR]: COVID-19 Edition* (December 2020), https://www.iaisweb.org/file/94221/iais-global-insurance-market-report-2020.

[140] Farzana Badat, *et al*., *Redefining Insurance Supervision for the New Normal* (April 2021), https://www.iaisweb.org/page/supervisory-material/other-supervisory-papers-and-reports/file/96483/iais-fsi-note-on-redefining-insurance-supervision-for-the-new-normal.

[141] FSB, "COVID-19 Pandemic: Financial Stability Impact and Policy Responses," news release, November 17, 2020, https://www.fsb.org/2020/11/covid-19-pandemic-financial-stability-impact-and-policy-responses/.

and responses to the COVID-19 pandemic, as well as assessing, relative to the pandemic's impact, the effectiveness of the G20 financial reforms of the past decade.[142]

c) EIOPA Response

EIOPA completed a consultation on the Supervisory Statement on the Own Risk Solvency Assessment (ORSA) in the context of the COVID-19 pandemic, in an effort to promote convergence by guiding insurers (also called "undertakings") through common supervisory expectations, and in the belief that the current situation calls for an ad-hoc/non-regular ORSA.[143] Building on a prior paper on shared resilience solutions for pandemics, EIOPA published a paper on measures to improve the insurability of business interruption.[144] Utilizing new powers from a revised regulation (Art. 29 (a)), EIOPA identified business model sustainability and adequate product design, in the context of the COVID-19 pandemic and the prolonged low-yield environment, as two EU-wide strategic supervisory priorities relevant for national competent authorities when developing their work programs.[145] In addition, EIOPA and other European Supervisory Authorities issued a joint risk assessment report warning of an expected deterioration of asset quality due to the pandemic.[146] EIOPA also launched its 2021 stress test focusing on a prolonged COVID-19 pandemic scenario,[147] and published a risk dashboard concluding that European insurers' risk levels remain broadly stable.[148]

B. Climate Change, Mitigation, and Resilience

1. Climate-Related Risks and Catastrophic Events

In recent decades, the United States and the world have experienced a significant increase in the frequency and severity of climate-related disasters and the corresponding increase in economic

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[142] FSB, *Lessons Learnt from the COVID-19 Pandemic from a Financial Stability Perspective: Interim Report* (July 13, 2021), https://www.fsb.org/wp-content/uploads/P130721.pdf.

[143] "Consultation on the Supervisory Statement on ORSA in the Context of COVID-19," EIOPA, https://www.eiopa.europa.eu/content/consultation-supervisory-statement-orsa-context-of-covid-19_en.

[144] EIOPA, *EIOPA Staff Paper on Measures to Improve the Insurability of Business Interruption Risk in Light of Pandemics* (2021), https://www.eiopa.europa.eu/sites/default/files/publications/eiopa-staff-paper-on-measures-to-improve-insurability.pdf.

[145] EIOPA, "Business Model Sustainability and Adequate Product Design Identified as New Strategic Supervisory Priorities for National Supervisors," news release, February 19, 2021, https://www.eiopa.europa.eu/content/business-model-sustainability-and-adequate-product-design-identified-new-strategic_en.

[146] European Securities and Markets Authority, "EU Financial Regulators Warn of an Expected Deterioration of Asset Quality," news release, March 31, 2021, https://www.esma.europa.eu/press-news/esma-news/eu-financial-regulators-warn-expected-deterioration-asset-quality.

[147] "Insurance Stress Test 2021," EIOPA, last updated July 20, 2021, https://www.eiopa.europa.eu/insurance-stress-test-2021_en.

[148] EIOPA, "Risk Dashboard: European Insurers' Risk Levels Remain Broadly Stable," news release, May 6, 2021, https://www.eiopa.europa.eu/content/risk-dashboard-european-insurers-risk-levels-remain-broadly-stable_en.

losses caused by such disasters.[149] As the Intergovernmental Panel on Climate Change noted: "Human-induced climate change is already affecting many weather and climate extremes in every region across the globe. Evidence of observed changes in extremes such as heatwaves, heavy precipitation, droughts, and tropical cyclones, and, in particular, their attribution to human influence, has strengthened since [2013]."[150] The United States had 22 billion-dollar climate-related disasters (i.e., each event caused at least $1 billion in losses) in 2020, the most on record.[151] This was the seventh consecutive year in which 10 or more billion-dollar climate-related disasters impacted the United States.[152] During the first six months of 2021, there already have been eight billion-dollar U.S. climate-related disasters, which cumulatively resulted in 331 deaths.[153] Economic growth combined with changing socioeconomic trends, such as urbanization and migration patterns to areas at higher risk of such climate-related disasters, are increasing the financial risks associated with the effects of climate change.

Insurance is a critical financial resource for recovery from catastrophic events, including climate-related disasters, by providing direct benefits to policyholders.[154] By one estimate, total insured losses from catastrophic events in the United States were $73 billion (out of a total $119 billion economic losses), 76 percent of insured losses worldwide.[155]

Insurance losses from catastrophic events are substantial, and not all losses are covered by insurance. The U.S. protection gap (that is, the portion of total economic losses from catastrophic events that is not covered by insurance) was $45 billion (38 percent) of the U.S.

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[149] *See, e.g.*, Lucia Bevere and Andreas Weigel, *sigma 1/2021 – Natural Catastrophes in 2020: Secondary Perils in the Spotlight, But Don't Forget Primary-Peril Risks* (March 30, 2021), 19, https://www.swissre.com/institute/research/sigma-research/sigma-2021-01.html (*sigma 1/2021*); Adam B. Smith, "2010-2019: A Landmark Decade of U.S. Billion-Dollar Weather and Climate Disasters," *NOAA climate.gov Blog*, January 8, 2020, https://www.climate.gov/news-features/blogs/beyond-data/2010-2019-landmark-decade-us-billion-dollar-weather-and-climate. FIO is using the term "climate-related disasters" to mean the type of weather-related events (like wildfires, floods, hurricanes, etc.) that may be produced or exacerbated by climate change, as distinct from non-weather related natural disasters (like earthquakes and tsunamis). References to "catastrophic events" may include both weather-related and non-weather-related events; similar (or synonymous) terms used by the insurance industry include "natural catastrophes" and "natural disasters."

[150] Intergovernmental Panel on Climate Change, *Climate Change 2021: The Physical Science Basis - Summary for Policymakers* (August 7, 2021), SPM-10, https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf.

[151] "Billion-Dollar Weather and Climate Disasters: Overview," NOAA National Centers for Environmental Information, https://www.ncdc.noaa.gov/billions/.

[152] "Billion-Dollar Weather and Climate Disasters: Overview.

[153] "Billion-Dollar Weather and Climate Disasters: Overview."

[154] *See, e.g.*, FIO, *2019 Annual Report*, 26.

[155] Aon, *Weather, Climate and Catastrophe Insight: 2020 Annual Report* (2021), 39, available through https://www.aon.com/global-weather-catastrophe-natural-disasters-costs-climate-change-2020-annual-report/index.html?utm_source=prnewswire&utm_medium=mediarelease&utm_campaign=natcat21 (*Aon 2020 Climate Report*). By another estimate, global insured losses from catastrophic events in 2020 were $81 billion (out of total $202 billion in economic losses); the 10-year average annual insured losses is $74 billion. Lucia Bevere and Andreas Weigel, *sigma 1/2021*.

catastrophe-related economic losses for 2020.[156] The global protection gap in 2020 was even greater, with over $163 billion (60 percent) of the global climate-related economic losses uninsured, which was three times the global protection gap associated with climate-related events in 2019.[157] The protection gap, both globally and in the United States, is likely to grow in the future if steps are not taken to address it. One study found that if global economic losses due to climate-related disasters and insurance coverage trends seen over the last 40 years are projected forward, the global protection gap as a percentage of global gross domestic product will more than double over the next 30 years.[158]

The impact of the growing protection gap is already visible as some U.S. insurance consumers are increasingly unable to find affordable and available property insurance coverage in certain insurance markets, such as those in areas affected by wildfires and hurricanes.[159] The protection gap may also disproportionately affect traditionally underserved communities and consumers, minorities, and low- and moderate-income persons because those segments of the population tend to have the least access to affordable insurance products and services and are disproportionately impacted by climate change.[160] Those consumers and businesses that fall into the protection gap lose the potential benefits that insurance can provide to address climate-related risks. Further declines in available and affordable insurance could exacerbate the inequities that these communities and persons already face.[161]

Box 3: Residual Markets

Residual markets are instrumental in addressing the availability of insurance in the United States. "Residual" markets for insurance generally serve as a source of last resort for insurance coverage for consumers (whether individuals or businesses) rejected by the voluntary market.[162] Residual markets for property insurance differ across states. In total, 34 states and the District of

[156] Aon, *Aon 2020 Climate Report*, 39, .

[157] *Aon 2020 Climate Report*, 5 & 9. In 2020, global economic losses from climate-related disasters totaled $258 billion, of which only 36.8 percent or $95 billion were insured losses. *Id.*

[158] Autorité de Contrôle Prudentiel et de Resolution, *A First Assessment of Financial Risks Stemming from Climate Change: The Main Results of the 2020 Climate Pilot Exercise* (2021), 60, https://acpr.banque-france.fr/sites/default/files/medias/documents/20210602_as_exercice_pilote_english.pdf.

[159] *See, e.g.*, Christopher Flavelle, "Wildfires Hasten Another Climate Crisis: Homeowners Who Can't Get Insurance," *New York Times*, September 2, 2020, https://www.nytimes.com/2020/09/02/climate/wildfires-insurance.html; Emma Kerr, "Here's How You're Already Paying for Climate Change," *U.S. News & World Report*, June 10, 2021, https://money.usnews.com/money/personal-finance/spending/articles/heres-how-youre-paying-for-climate-change.

[160] *See, e.g.*, Alexa Jay, *et al.*, "Overview" in *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment* (2018), 36, https://nca2018.globalchange.gov/downloads/NCA4_Ch01_Overview.pdf.

[161] Rachel Morello-Frosch, *et al.*, *The Climate Gap: Inequalities in How Climate Change Hurts Americans & How to Close the Gap* (2018), 17, https://dornsife.usc.edu/assets/sites/242/docs/ClimateGapReport_full_report_web.pdf.

[162] *See, e.g.*, "Glossary: Residual Market," IRMI, https://www.irmi.com/term/insurance-definitions/residual-market. The "voluntary" market consists of insurers writing policies in a competitive market where they retain the right to accept or reject the applications for insurance coverage. *See, e.g.*, "Glossary: Voluntary Market," IRMI, https://www.irmi.com/term/insurance-definitions/voluntary-market.

Columbia offer some sort of residual market for property owners.[163] The vast majority of these plans are Fair Access to Insurance Requirements (FAIR) Plans. FAIR plans generally provide basic coverage to eligible properties that are uninsurable on the private market, though states have different rules and regulations for their FAIR Plans. In California, for example, the Insurance Commissioner issued an order mandating broader coverage options for consumers within the FAIR plan, not just "fire only" coverage; in July 2021, a state court upheld his authority to do so while ruling that the Commissioner needed to revise his order.[164] Additionally, five states have Beach plans. Beach plans function similarly to FAIR Plans, except they cover properties located on or near the coast. Florida and Louisiana have state-run organizations that manage their residual markets.[165]

After decreasing in the 2010s, the number of policies and amount of premiums within the residual market has begun to climb.[166] Florida Citizen Property Insurance Corporation, for example, reported in July 2021 that it was seeing more than 5,000 new policies per week and company officials expected that the total policy count would rise above 750,000 by year-end.[167] The creation and expansion of insurers of last resort highlights the increasing protection gap.

2. Responding to Climate-Related Executive Orders

U.S. insurance markets will play a vital part in achieving the goals set forth in two climate-related Executive Orders.[168] The President's May 20, 2021 Executive Order on Climate-Related Financial Risk recognizes this and instructs the Secretary to task FIO "to assess climate-related issues or gaps in the supervision and regulation of insurers, including as part of FSOC's analysis

[163] Insurance Information Institute (III), *A Firm Foundation: How Insurance Supports the Economy – Residual Markets*, https://www.iii.org/publications/a-firm-foundation-how-insurance-supports-the-economy/a-50-state-commitment/residual-markets (*Residual Markets*).

[164] *See, e.g.*, California Department of Insurance, "Court Upholds Insurance Commissioner Lara's Order to Expand FAIR Plan 'Last Resort' Coverage to Better Protect Homeowners," news release, July 20, 2021, http://www.insurance.ca.gov/0400-news/0100-press-releases/2021/statement073-2021.cfm; California FAIR Plan Association, "California FAIR Plan Association Issues Statement on Recent Court Ruling Setting Aside California Department of Insurance Commissioner's Order," news release, 2021, https://www.cfpnet.com/california-fair-plan-association-issues-statement-on-recent-court-ruling/.

[165] *See, e.g.*, "Who We Are," Citizens Property Insurance Corporation, https://www.citizensfla.com/who-we-are; "Company Overview," Louisiana Citizens Property Insurance Corporation, https://www.lacitizens.com/AboutUs/CompanyOverview.

[166] *See, e.g.*, III, *Residual Markets*; III, *2021 Insurance Fact Book*, 98-100, https://www.iii.org/sites/default/files/docs/pdf/insurance_factbook_2021.pdf (providing data for 2010-2019); California Department of Insurance, *Data on Insurance Non-Renewals, FAIR Plan, and Surplus Lines (2015-2019)* (2020), http://www.insurance.ca.gov/0400-news/0100-press-releases/2020/upload/nr104Charts-NewRenewedNon-RenewedData-2015-2019-101920.pdf.

[167] Ezra Amacher, "Florida's Citizens Insurance Seeks Rate Increase as Policy Count Skyrockets," *Insurance Journal*, July 15, 2021, https://www.insurancejournal.com/news/southeast/2021/07/15/622841.htm.

[168] Exec. Order No. 14,008, 86 Fed. Reg. 7619 (January 27, 2021), https://www.federalregister.gov/documents/2021/02/01/2021-02177/tackling-the-climate-crisis-at-home-and-abroad; Exec. Order No. 14,030, 87 Fed. Reg. 27967 (May 20, 2021), https://www.federalregister.gov/documents/2021/05/25/2021-11168/climate-related-financial-risk.

of financial stability, and to further assess, in consultation with States, the potential for major disruptions of private insurance coverage in regions of the country particularly vulnerable to climate change impacts."[169] The May 20 Executive Order complements the President's January 27, 2021 Executive Order which puts the climate crisis at the center of U.S. foreign policy and national security and seeks to "put the United States on a path to achieve net-zero emissions, economy-wide, by no later than 2050."

Treasury has implemented a range of actions to address climate-related financial risks and to implement the President's climate-related Executive Orders. In April 2021, for example, Treasury announced a coordinated climate policy strategy as well as the creation of a new Climate Hub, with the appointment of a Climate Counselor to coordinate and lead Treasury's actions to address climate change.[170] As directed in the President's May 20 Executive Order, the Secretary is engaging with FSOC on a range of activities, including an upcoming FSOC report on climate to which FIO is contributing.[171]

FIO intends for its climate-related work to not only respond to the President's May 20 Executive Order, but also provide an insurance-specific focus within Treasury's broader climate work, including working with Treasury's Climate Hub. FIO issued a public request for information (Climate-Related RFI) on August 31, 2021 that sought public feedback on FIO's climate-related work.[172] In the Climate-Related RFI, FIO provides background information on the insurance sector and climate-related risk, including FIO's authorities, and FIO's current engagements on climate-related issues. FIO identifies three initial climate-related priorities for its work:

1. Insurance Supervision and Regulation: Assess climate-related issues or gaps in the supervision and regulation of insurers, including their potential impacts on U.S. financial stability.
2. Insurance Markets and Mitigation/Resilience: Assess the potential for major disruptions of private insurance coverage in U.S. markets that are particularly vulnerable to climate change impacts; facilitate mitigation and resilience for disasters.
3. Insurance Sector Engagement: Increase FIO's engagement on climate-related issues; leverage the insurance sector's ability to help achieve climate-related goals.

FIO currently is seeking public comment on its proposed priorities, as well as on a series of related questions, through the Climate-Related RFI. The responses to this Climate-Related RFI will help inform FIO's assessment of the implications of climate-related financial risks for the insurance sector. It also will help FIO better understand (1) which data elements are necessary to accurately assess climate risk; (2) which data elements remain unavailable; and (3) how FIO

[169] Exec. Order No. 14,030.

[170] Treasury, "Treasury Announces Coordinated Climate Policy Strategy with New Treasury Climate Hub and Climate Counselor," news release, April 19, 2021, https://home.treasury.gov/news/press-releases/jy0134.

[171] For more information on FSOC, see Section III.I.

[172] Federal Insurance Office Request for Information on the Insurance Sector and Climate-Related Financial Risks, 86 Fed. Reg. 48814 (August 31, 2021), https://www.federalregister.gov/documents/2021/08/31/2021-18713/federal-insurance-office-request-for-information-on-the-insurance-sector-and-climate-related (*Climate-Related RFI*).

could collect this data and make it available to stakeholders as needed.[173] Going forward, FIO plans to increase its engagement on climate-related issues and take a leadership role in analyzing how the insurance sector may help mitigate climate-related risks.

3. Mitigation and the Mitigation Framework Leadership Group

Mitigation—the reduction of risk—improves resilience for more efficient, effective, and rapid recovery from disasters.[174] Risk reduction (and risk transfer, including through the purchase of insurance) has measurable benefits.[175] FIO therefore has and will continue to emphasize the importance of insurance and mitigation, both before and after disasters, including ongoing support of efforts to improve the availability and take-up of insurance.

Treasury, through FIO, participates in the Mitigation Framework Leadership Group (MitFLG), a national structure to coordinate mitigation efforts across the federal government and with state, local, tribal, and territorial representatives, chaired by the Federal Emergency Management Agency (FEMA).[176] In June 2021, FACI received a presentation from FEMA on earthquakes and the Unreinforced Masonry Risk Reduction Strategy, a pilot project for the MitFLG's National Mitigation Investment Strategy.[177] FIO continues to work closely with MitFLG to implement the National Mitigation Investment Strategy, engage with stakeholders on these issues, and coordinate with state insurance regulators and legislators in their efforts to improve national resilience to catastrophic events.

Many states and insurers have also recognized the value of mitigation. In June 2021, for example, Louisiana enacted a law providing for discounts and insurance rate reductions for residential and commercial buildings built to, or retrofitted to, reduce the threat of loss due to windstorm events and that otherwise meet the Insurance Institute for Business & Home Safety (IBHS) FORTIFIED construction standards.[178] IBHS also helped produce a paper, *Application*

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[173] *Climate-Related RFI*.

[174] MitFLG, *National Mitigation Investment Strategy* (August 2019), 1, https://www.fema.gov/sites/default/files/2020-10/fema_national-mitigation-investment-strategy.pdf.

[175] *See, e.g.*, FIO, *2020 Annual Report*, 57-58.

[176] "Mitigation Framework Leadership Group (MitFLG)," FEMA, last updated March 22, 2021, https://www.fema.gov/emergency-managers/national-preparedness/frameworks/mitigation/mitflg.

[177] Sean McGowan, FEMA, "Earthquakes at Altitude" (presentation, FACI, Washington, DC, June 2, 2021), https://home.treasury.gov/system/files/311/FACI-Presentation-FEMA-6-21.pdf. *See also* FEMA, *et al*., *Wasatch Front Unreinforced Masonry Risk Reduction Strategy* (March 2021), https://www.fema.gov/sites/default/files/documents/fema_wasatch-front-urm-risk-reduction-strategy.pdf; MitFLG, *National Mitigation Investment Strategy*.

[178] Louisiana H.B. 451 (signed June 1, 2021), http://www.legis.la.gov/legis/BillInfo.aspx?s=21RS&b=HB451&sbi=y.

of Wildfire Mitigation to Insurance Property Exposure, that explored the economic benefits of wildfire resilience strategies in select communities in western states.[179]

4. National Flood Insurance Program

Flooding is one type of weather-related event that is being exacerbated by climate change. In 2020, flooding events comprised 14 of the 22 billion-dollar climate-related disasters.[180] The National Flood Insurance Program (NFIP) is the federal flood insurance and risk management program that helps to address these losses. FIO continues to assist FEMA on reinsurance and alternative risk transfer instruments in connection with the NFIP, as it has since FEMA's 2016 pilot reinsurance program.[181] The 2021 traditional reinsurance placement provides $1.153 billion in coverage for a portion of NFIP losses above $4 billion caused by a single flooding event; 32 reinsurers provided the 2021 coverage for $195.8 million in premiums.[182] In 2021, FEMA again obtained collateralized reinsurance through its issuance of FloodSmart Re cat bonds in U.S. capital markets. It was the largest issuance yet for FEMA and provided $575 million in coverage over three years for losses in excess of $6 billion, at a cost of $79.44 million per year unless and until a loss event is triggered.[183]

5. State Climate-Related Efforts and Response to Catastrophic Events

FIO continues to engage on climate-related issues with state insurance regulators and the NAIC. The NAIC has indicated that it considers climate risk and resilience to be a priority.[184] FIO

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[179] NAIC & the Center for Insurance Policy Research (CIPR), RMS, and IBHS, *Application of Wildfire Mitigation to Insurance Property Exposure* (November 2020), https://content.naic.org/sites/default/files/cipr_report_wildfire_mitigation.pdf.

[180] "Billion-Dollar Weather and Climate Disasters: Overview," NOAA National Centers for Environmental Information, https://www.ncdc.noaa.gov/billions/.

[181] The NFIP is subject to reauthorization by Congress, and has received several short-term extensions over the past few years. FEMA posts the NFIP's reauthorization status on its website. *See* "Congressional Reauthorization," FEMA, last updated May 4, 2021, https://www.fema.gov/flood-insurance/rules-legislation/congressional-reauthorization. For more information on the NFIP's reinsurance components as part of its federal flood insurance and risk management program, *see, e.g.*, FIO, *2020 Annual Report*, 60-61.

[182] FEMA, "FEMA Announces Reinsurance Program to Manage Future Flood Risk in 2021," news release, January 5, 2021, https://www.fema.gov/press-release/20210105/fema-announces-reinsurance-program-manage-future-flood-risk-2021.

[183] "Public Notice for Capital Market Reinsurance Placement - February 2021," FEMA, https://www.fema.gov/fact-sheet/public-notice-capital-market-reinsurance-placement-february-2021; "National Flood Insurance Program's Reinsurance Program," FEMA, last updated September 9, 2021, https://www.fema.gov/flood-insurance/work-with-nfip/reinsurance.

[184] *See, e.g.*, David Altmaier, Presidential Address (speech, NAIC Spring 2021 Opening Session, April 12, 2021), https://content.naic.org/article/notice_spring_2021_opening_session_prepared_remarks.htm. In July 2020, the NAIC created a Climate and Resiliency Task Force, which aims to build on NAIC's previous climate-related activities, such as the Insurer Climate Risk Disclosure Survey, and to examine how to integrate consideration of climate-related risks into other areas, such as the ORSA and the P&C RBC formula. *See, e.g.*, NAIC, "NAIC Levels Up on Climate & Resiliency," news release, July 17, 2020, https://content.naic.org/article/news_release_naic_levels_climate_resiliency.htm; "Climate Risk and Resiliency Resource Center," NAIC, https://content.naic.org/climate-resiliency-resource.htm.

intends to continue to monitor and report on the work of the U.S. states and NAIC on climate-related issues.

Only a few states have implemented consideration of climate-related risks into their regulatory frameworks and, with the exception of New York, none has yet done so in a comprehensive way. As part of New York's framework, the New York State Department of Financial Services (NYDFS) issued guidance in September 2020 stating its expectation for "all New York insurers to start integrating the consideration of the financial risks from climate change into their governance frameworks, risk management processes, and business strategies."[185] In March 2021, the NYDFS issued Proposed Guidance for New York Domestic Insurers on Managing the Financial Risks from Climate Change, which includes the expectation that insurers would "[e]xplicitly consider climate risks (like other material risks) in risk management processes, including in enterprise risk reports and ORSA Summary Reports, and in the decision-making processes of senior management."[186] Several other states, such as Connecticut and Vermont, are in the process of implementing laws or regulations that would require their state insurance regulators and insurers domiciled in their states to integrate climate-related risks into their risk management strategies. In July 2021, Connecticut enacted a law that requires the Connecticut Insurance Department to issue a biennial report that will describe its progress to integrate climate-related risks into its solvency requirements such as, for example, its risk-based capital (RBC) and ORSA requirements.[187] In June 2021, Vermont's Department of Financial Regulation announced that, among other things, it intended to: (1) apply to join the United Nations' Sustainable Insurance Forum (SIF); (2) develop guidance to address climate-related financial risk; (3) support the development and marketing of innovative insurance products and services that support a reduction in greenhouse gas emissions; and (4) provide written and electronic resources to Vermont consumers on climate-related risks and insurance policy limitations (e.g., common exclusions).[188]

Insurance solvency regulation is another area in which a few states have incorporated consideration of climate-related financial risks. The only current RBC formula that indirectly addresses climate-related financial risks is the property/casualty RBC formula calculating the required capital for hurricane risk, which is only applicable to insurers operating in states and

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[185] NYDFS, Insurance Circular Letter No. 15 (September 22, 2020), https://www.dfs.ny.gov/industry_guidance/circular_letters/cl2020_15.

[186] NYDFS, *For Public Comment: Proposed Guidance for New York Domestic Insurers on Managing the Financial Risks from Climate Change* (March 25, 2021), 7, https://www.dfs.ny.gov/system/files/documents/2021/03/proposed_ins_climate_guidance_2021_public_comment_1.pdf.

[187] *See* Claire Wilkinson, "Connecticut Bill Calls for Regulation of Insurers' Climate Risks," *Business Insurance*, June 17, 2021, https://www.businessinsurance.com/article/20210617/NEWS06/912342605/Connecticut-bill-calls-for-regulation-of-insurers%E2%80%99-climate-risks.

[188] State of Vermont Department of Financial Regulation, "DFR Releases Report Examining the Impacts of Climate Change on Vermont's Insurance Industry," news release, June 28, 2021, https://dfr.vermont.gov/press-release/dfr-releases-report-examining-impacts-climate-change-vermonts-insurance-industry.

territories affected by hurricanes.[189] The RBC formula, however, does not apply such a charge to other perils that may be affected by climate change, such as wildfires or floods. The NAIC is currently studying the development of a similar RBC charge for wildfires. With the exception of New York, no state insurance regulator explicitly requires insurers to analyze climate-related financial risks as part of their ORSAs.[190] Nevertheless, some insurers already voluntarily include in their ORSAs climate-related financial risks because they are intertwined with other risks that they are required to evaluate such as underwriting, credit, market, and operational risks.

As of July 2021, insurance climate risk disclosures will be required in 14 states and the District of Columbia. Between 2010 (when the NAIC adopted the Insurer Climate Risk Disclosure Survey) and 2020, no more than eight states have required that certain insurers operating in their jurisdictions disclose high-level information about their climate-related financial risks and activities.[191] In recent years, the survey respondents in states with disclosure requirements (California, Connecticut, Minnesota, New Mexico, New York, and Washington) have represented insurers with approximately 70 percent of the U.S. insurance market in terms of direct premiums written.[192] More states will collect disclosure data beginning in 2021 (for reporting year 2020): Delaware, the District of Columbia, Maine, Maryland, Massachusetts, Oregon, Pennsylvania, Rhode Island, and Vermont.[193] In addition, the California and Washington State insurance commissioners have expressly urged insurers to report their climate risks in alignment with the Task Force on Climate-Related Financial Disclosures.[194]

No federal authority is collecting climate-related financial data specific to the insurance sector.[195]

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[189] RBC is a means of measuring whether an insurer has the minimum amount of capital appropriate to support its overall business operations given its size and risk profile.

[190] An ORSA is an internal process through which an insurer evaluates the adequacy of its risk management and its current and prospective solvency positions under normal and severe stress scenarios. As part of an ORSA, an insurer must analyze all reasonably foreseeable and materially relevant risks (e.g., underwriting, credit, market, operational, liquidity, litigation, etc.) affecting its ability to meet its obligations to its policyholders. ORSA requirements apply to medium- and large-size insurers. *See, e.g.*, "Own Risk and Solvency Assessment (ORSA)," NAIC, last updated April 9, 2021, https://content.naic.org/cipr_topics/topic_own_risk_and_solvency_assessment_orsa.htm.

[191] NAIC CIPR, *Assessment of and Insights from NAIC Climate Risk Disclosure Data* (November 2020), 1, 6, https://content.naic.org/sites/default/files/cipr-report-assessment-insights-climate-risk-data.pdf (*Survey Assessment*).

[192] NAIC CIPR, *Survey Assessment*, 6.

[193] Memorandum from State of Washington Office of Insurance Commissioner (July 22, 2021), https://www.insurance.wa.gov/sites/default/files/documents/climate-risk-disclosure-survey-reporting-year-2020-commissioner-kreidler-letter.pdf.

[194] California Department of Insurance, "Commissioners Kreidler, Lara Urge Insurers to Report Climate Risks Through International Financial Stability Framework," news release, June 8, 2021, http://www.insurance.ca.gov/0400-news/0100-press-releases/2021/release058-2021.cfm.

[195] SEC disclosures may apply to (but are not limited to) the insurance industry. Insurers, insurance regulators, and insurance trade associations all responded to the SEC's invitation for public comment on climate change disclosures. *See* SEC, "Public Input Welcomed on Climate Change Disclosures," news release, March 15, 2021, https://www.sec.gov/news/public-statement/lee-climate-change-disclosures; "Comments on Climate Change Disclosures," SEC, https://www.sec.gov/comments/climate-disclosure/cll12.htm.

In the past year, two states have issued reports addressing climate-related risks for the insurance industry. In June 2021, NYDFS released a report on New York insurers' exposure to risks from the transition to a low-carbon economy as well as climate change opportunities.[196] Vermont issued a report examining the climate change impacts on its state insurance industry.[197]

States in regions that are experiencing particularly severe increases in the frequency and severity of climate-related disasters are considering actions aimed at addressing the impacts of those disasters. California, for example, is considering over 30 laws, regulatory actions, and proposals to address the risks posed by wildfires through mitigation incentives, penalties, funding, and cancellations.[198]

State insurance regulators also provide consumer education and consumer protection in connection with all types of catastrophic events. Regulators routinely provide consumer guidance on the need for insurance, storm preparation, and tips for consumers affected by disasters. California has launched a database listing "green" insurance products.[199]

6. International Work

FIO has also engaged on climate-related issues through coordination with international organizations.[200] As a member of the Executive Committee at the IAIS, FIO is closely involved with the IAIS's sustainability-related policy determinations and workstreams. FIO also is a member of the OECD's Insurance and Private Pensions Committee (IPPC), which is increasingly focused on climate-related issues. In March 2021, FIO became a member of SIF and FIO contributed to the SIF/IAIS paper on insurance supervision of climate-related risks published in May 2021.[201] FIO also is discussing climate-related issues with insurance authorities in both the United States and the European Union through the EU-U.S. Insurance Project.

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[196] NYDFS and 2 Degrees Investing Initiative, *An Analysis of New York Domestic Insurers' Exposure to Transition Risks and Opportunities from Climate Change* (June 10, 2021), https://www.dfs.ny.gov/system/files/documents/2021/06/dfs_2dii_report_ny_insurers_transition_risks_20210610.pdf.

[197] Vermont Department of Financial Regulation, *The Impact of Climate Change on Vermont's Insurance Industry* (June 2021), https://dfr.vermont.gov/sites/finreg/files/doc_library/dfr-report-climate-change-insurance-final.pdf.

[198] A.M. Best, *Weather Conditions Portend Another Destructive Year of Wildfire Losses* (July 9, 2021), 6. *See also* California Department of Insurance, "Wildfire Survivors Now Covered by New Insurance Protections," news release, July 27, 2021, http://www.insurance.ca.gov/0400-news/0100-press-releases/2021/release078-2021.cfm.

[199] California Department of Insurance, "Commissioner Lara Launches First-Ever Database of Green Insurance Products," news release, July 14, 2020, http://www.insurance.ca.gov/0400-news/0100-press-releases/2020/release065-2020.cfm.

[200] For more on FIO's international work, see Section III.K.

[201] IAIS and SIF, *Application Paper on the Supervision of Climate-Related Risk in the Insurance Sector* (2021), https://www.iaisweb.org/page/supervisory-material/application-papers/file/97146/application-paper-on-the-supervision-of-climate-related-risks-in-the-insurance-sector.

C. Cyber Risks, Ransomware, and Cyber Insurance

This section focuses on the impact of ransomware on the cyber insurance market, and efforts of both federal and state policymakers and regulators to develop responses to the growing threats of ransomware.[202]

1. The Cyber Insurance Market and Ransomware's Impact

"Cyber insurance" does not have a single definition but generally includes insurance designed to cover businesses for risks arising from electronic data and its transmission, and related technology services and products.[203] Cyber insurance can help policyholders respond to lawsuits and loss, and provide associated mitigation services, arising in a variety of situations such as data loss, cloud outage, distributed denial-of-service attacks, malware, and associated ransomware extortion. The scope of cyber insurance coverage depends upon a policy's terms and conditions; there is no single accepted policy form for cyber insurance coverage. Cyber insurance typically is provided in the form of (1) "package" policies, wherein cyber risk coverage is included within a policy that also covers non-cyber losses, such as a cyber coverage endorsement on a general liability policy; or (2) "stand-alone" cyber insurance products, which only provide coverage for specified cyber risks. In addition, so-called "non-affirmative" or "silent" cyber risk coverage may in some instances apply under the terms of an insurance policy that neither expressly grants nor excludes coverage for such risk.[204]

U.S. insurers continued to report growth in the cyber insurance market (package and stand-alone policies) in 2020, with approximately $3.0 billion in direct premiums written, a 20.6 percent increase over 2019's $2.5 billion. However, this still amounts to less than one percent of the total P&C market.[205] This year-over-year growth from 2019 to 2020 nearly doubles 2019's growth (11.1 percent) and may indicate growing interest in cyber insurance products as

[202] For additional background on these topics, *see, e.g.*, FIO, *2020 Annual Report*, 68-73.

[203] *See, e.g.*, FIO, *2021 TRIP Small Insurer Study*, 32; "Glossary: Cyber and Privacy Insurance," IRMI, https://www.irmi.com/term/insurance-definitions/cyber-and-privacy-insurance. *See also* Marsh, "Cyber Insurance Update" (presentation, NCOIL, virtual summer meeting, July 17, 2021), http://ncoil.org/wp-content/uploads/2021/07/NCOIL-2021.pdf.

[204] For more discussion of the concerns around non-affirmative cyber risk, *see, e.g.*, FIO, *2019 Annual Report*, 40-41; FIO, *2020 Annual Report*, 70-71.

[205] *Compare* Section II.A.3.a (providing P&C sector premium figures). Since 2018, Treasury has collected data on cyber premiums in TRIP-eligible lines of insurance. Cyber insurance market figures in this section of the Report, however, are based on data from S&P Global (which are derived from data reported to state insurance regulators) in order to facilitate comparability with other market data figures in Section II. Insurers have reported larger cyber premiums to Treasury than they have to state insurance regulators, possibly because they include in the TRIP data call premiums from affiliated surplus lines insurers that are not included in state data. *See, e.g.*, FIO, *Report on the Effectiveness of the Terrorism Risk Insurance Program* (2018), 54-55, https://www.treasury.gov/initiatives/fio/reports-and-notices/Documents/2018_TRIP_Effectiveness_Report.pdf. For more on TRIP, see Section III.D.

enterprises have become more aware of their exposure to damaging cyber losses.[206] The average paid loss per cyber claim increased to $358,000 in 2020, up from $145,000 in 2019.[207] Reports vary, but some observers saw market premium increases of up to 50 percent over the past year, while others saw average cyber insurance premiums decline.[208]

Over 780 insurers provided cyber insurance in 2020, based upon those who reported any non-zero amount of premiums written.[209] Overall, however, as shown in Figure 39, the cyber insurance market remains concentrated, with the top 10 cyber writers holding a combined market share of 63.3 percent in 2020, down slightly from 64.1 percent in 2019. The top 25 cyber writers combined hold nearly 85 percent of the cyber insurance market.

[206] Cyber insurance take-up rates appear to have increased over the past five years, but less than half of U.S. businesses appear to have cyber insurance coverage. *See* GAO, *Cyber Insurance: Insurers and Policyholders Face Challenges in an Evolving Market* (May 2021), 5-6, https://www.gao.gov/assets/gao-21-477.pdf.

[207] Fitch Ratings, "Cyber Insurance Losses Spark Rate Increases," *Fitch Non-Rating Action* Commentary, May 26, 2021, https://www.fitchratings.com/research/insurance/cyber-insurance-losses-spark-rate-increases-26-05-2021.

[208] *See, e.g.*, Fitch, "Cyber Insurance Losses Spark Rate Increases" (noting renewal pricing on cyber coverage increased an average 18 percent in the first quarter of 2021); Steve Hallo, "2021 Cyber Insurance Market Update," *PropertyCasualty360*, July 30, 2021, https://www.propertycasualty360.com/2021/07/30/2021-cyber-insurance-market-update/ ("There is a wide range of rate activity by segment, industry class and risk quality…. However, the broader market is seeing premium increases between 20% and 50%."); Steve Hallo, "How Revenue & Data Influence Cyber Premiums," *PropertyCasualty360*, April 29, 2021, https://www.propertycasualty360.com/2021/04/29/how-revenue-data-influence-cyber-premiums/ ("overall cyber insurance premiums actually declined slightly…. The drop was primarily driven by 'the most expensive insurers reducing rates or dropping out of the market.'").

[209] When looking only at those who provided more than *de minimis* coverage, however, the number of insurers drops to about 600—which is still a substantial increase over the roughly 300 insurers in this market in 2015.

Figure 39: P&C Insurance Groups by U.S. Cyber Direct Premiums Written

2019 Rank	**2020 Rank**	**Insurance Group**	2019 Direct Premiums Written ($000)	Share of Total (%)	**2020 Direct Premiums Written ($000)**	**Share of Total (%)**
1	1	Chubb	$ 356,881	14.4	$ 404,197	13.5
3	2	AXA SA	229,680	9.3	293,025	9.8
2	3	AIG	233,237	9.4	233,642	7.8
4	4	Travelers	202,777	8.2	230,629	7.7
5	5	Beazley plc	150,943	6.1	177,746	5.9
6	6	AXIS	97,305	3.9	133,550	4.5
7	7	CNA	94,722	3.8	119,612	4.0
10	8	Fairfax Financial	65,095	2.6	108,530	3.6
11	9	The Hartford	57,537	2.3	102,867	3.4
9	10	BCS Insurance Co.	76,062	3.1	86,583	2.9
		Combined Top 10	$ 1,586,925	64.1	$ 1,890,381	63.3
		Combined Top 25	$ 2,077,297	83.9	$ 2,512,091	84.1
		Combined Top 100	$ 2,439,098	98.5	$ 2,940,049	98.4
		Total U.S. Cyber Premiums	$ 2,477,099		$ 2,987,512	

Source: S&P Global

Cyber insurance market developments led Congress to task the U.S. Government Accountability Office (GAO) with studying this market. After consultation with FIO and the NAIC, which both provided technical comments on the draft report, the GAO released its study on May 20, 2021, describing (1) key trends in the market for cyber insurance, and (2) challenges faced by the cyber insurance market and options to address them.[210] Key trends highlighted by the GAO include increasing take-up, price increases, and lower coverage limits. GAO also notes that the "cyber insurance industry faces multiple challenges" and specifically flags as challenges the limited historical data on losses and that cyber policies lack common definitions.

The cyber insurance market continues to evolve, and structural challenges remain.[211] Challenges include the ability of insurers to sustainably price cyber risk products in an ever-changing market. In this regard ransomware is increasingly problematic because malicious actors may demand unpredictably large ransoms. This and other market attributes have caused some insurers to express hesitation about offering or expanding their cyber insurance product lines.[212] On the demand side, growing awareness of ransomware threats may increase the demand for

[210] GAO, *Cyber Insurance: Insurers and Policyholders Face Challenges in an Evolving Market*.

[211] *See, e.g.*, "Insurers Must Totally Reassess Approach to 'Grim' Cyber Insurance Market: AM Best," *Insurance Journal*, June 4, 2021, https://www.insurancejournal.com/news/national/2021/06/04/617250.htm. *Compare* Pascal Millaire, "Ransomware Losses Are Not Undermining the Sustainability of Cyber Insurance," *Cybercube.com*, July 27, 2021, https://insights.cybcube.com/ransomware-losses-are-not-undermining-the-sustainability-of-cyber-insurance.

[212] *See, e.g.*, Jeff Stone, "Demand for Cyber Insurance Grows as Volatility Scares Off Some Providers," *CyberScoop*, July 29, 2019, https://www.cyberscoop.com/cyber-insurance-demand-cost-2019/. *See also* Swiss Re, *Cyber Insurance* (2020), https://corporatesolutions.swissre.com/dam/jcr:1bcae23d-a8af-49f5-bad3-12faad9ce8fc/cyber-insurance.pdf.

such products. Cyber insurance policy benefits that could respond to a ransomware intrusion may include, for example, loss mitigation, cyber liability protection, extortion coverage, and incident response services, giving companies valuable additional resources during and after the intrusion.

2. The Threat of Ransomware

The severity, frequency, effectiveness, and sophistication of ransomware intrusions continue to increase across various sectors.[213] Ransomware actors have targeted organizations small and large, public and private, around the globe, with several recent high-profile examples in the United States, including, notably, Colonial Pipeline in May 2021.[214] The insurance industry itself faced attacks, including a well-publicized case involving CNA (which reportedly paid a $40 million ransom in connection with a March 2021 attack).[215] These attacks against insurance industry participants have been both direct and indirect (for example, through vendors).[216]

More generally, as the COVID-19 pandemic dramatically increased work online, cyber criminals have exploited higher computer usage and new vulnerabilities resulting from this paradigm shift. The U.S. Department of Homeland Security announced in July 2021 that about $350 million in ransom was paid in 2020, a more than 300 percent increase from 2019.[217] Data from one insurer showed a 100 percent increase in the average ransom demands faced by its policyholders between 2019 and the first quarter of 2020, with another 47 percent increase between the first and second quarters of 2020.[218] More recent reports suggest that ransom payments have been declining in 2021.[219] The full scope of ransomware incidents is likely unknown; an official from

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[213] *See, e.g.*, Fitch Ratings, "Ransomware Attacks a Growing Global Security and Financial Threat," *FitchWire*, May 17, 2021, https://www.fitchratings.com/research/insurance/ransomware-attacks-growing-global-security-financial-threat-17-05-2021.

[214] Nicole Perlroth, "Colonial Pipeline Paid 75 Bitcoin, or Roughly $5 Million, to Hackers," *New York Times*, May 13, 2021, https://www.nytimes.com/2021/05/13/technology/colonial-pipeline-ransom.html.

[215] Kartikay Mehrotra and William Turton, "CNA Made a $40 Million Ransom Payment Following March Cyber Attack," *Carrier Management*, May 21, 2021, https://www.carriermanagement.com/news/2021/05/21/221039.htm.

[216] *See, e.g.*, Mark Hollmer, "GIS 2021: The Next Big Cyber Target is Insurers Themselves," *Carrier Management*, June 30, 2021, https://www.carriermanagement.com/news/2021/06/30/223002.htm; Lyle Adriano, "Thousands of Insurance Applications Exposed," *Insurance Business America*, July 20, 2021, https://www.insurancebusinessmag.com/us/news/cyber/thousands-of-insurance-applications-exposed-291764.aspx (discussing breach at BackNine, an InsurTech company that creates back-office software for insurers); Ryan Smith, "Renaissance Reveals Vendor's Cyber Breach," *Insurance Business America*, August 3, 2021, https://www.insurancebusinessmag.com/us/news/cyber/renaissance-reveals-vendors-cyber-breach-301064.aspx.

[217] U.S. Department of Homeland Security, "United States Government Launches First One-Stop Ransomware Resource at StopRansomware.gov," news release, July 14, 2021, https://www.dhs.gov/news/2021/07/14/united-states-government-launches-first-one-stop-ransomware-resource.

[218] Coalition Inc., *Cyber Insurance Claims Report* (2020), https://info.coalitioninc.com/rs/566-KWJ-784/images/DLC-2020-09-Coalition-Cyber-Insurance-Claims-Report-2020.pdf.

[219] Coveware, *Q2 Ransom Payment Amounts Decline as Ransomware Becomes a National Security Priority* (July 23, 2021), https://www.coveware.com/blog/2021/7/23/q2-ransom-payment-amounts-decline-as-ransomware-becomes-a-national-security-priority.

the Cybersecurity and Infrastructure Agency (CISA) has testified that only about a quarter of ransomware intrusions are reported.[220]

3. U.S. Cybersecurity and Ransomware Responses

As the frequency and scale of ransomware attacks have increased, federal, state, and insurance industry actors have responded in various ways relevant to the insurance industry.[221]

a) Federal Efforts

On July 15, 2021, the U.S. Departments of Homeland Security and Justice launched StopRansomware.gov, a new website facilitating access to advice and resources to assist U.S. firms in combatting the threat of ransomware.[222] The website is designed to be a central hub with relevant information, including preventive and responsive resources, to address ransomware threats.[223] The resource website will also provide sector-specific guidance for the sixteen critical infrastructure sectors vital to the United States, which includes financial services.[224]

Other federal efforts encourage the reporting of malicious cybersecurity actors. For example, the U.S. Department of State has established a Rewards for Justice program, in which it offers a reward of up to $10 million for information leading to the identification or location of a person who participates in cyber-intrusions, including ransomware, against U.S. critical infrastructure.[225]

On August 25, 2021, the President hosted a summit with the private sector to discuss opportunities to bolster the nation's cybersecurity capabilities, including how the cyber insurance market could be leveraged to combat rising ransomware threats.[226]

Congress has increasingly demonstrated concern regarding cybersecurity threats. Recent hearings of the House Committee on Oversight and Reform on cybersecurity preparedness and

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[220] Gerrit De Vynck, "Many Ransomware Attacks Go Unreported. The FBI and Congress Want to Change That," *Washington Post*, July 27, 2021, https://www.washingtonpost.com/technology/2021/07/27/fbi-congress-ransomware-laws/.

[221] For more on international insurance supervision and cyber risks, see Section III.K.1 (discussing IAIS activities) and Section III.K.3.a (discussing EU-US Insurance Dialogue Project).

[222] U.S. Department of Homeland Security, "United States Government Launches First One-Stop Ransomware Resource at StopRansomware.gov."

[223] "Stop Ransomware," U.S. Department of Homeland Security, https://www.cisa.gov/stopransomware.

[224] "Stop Ransomware." *See also* Presidential Policy Directive 21 (February 12, 2013), https://obamawhitehouse.archives.gov/the-press-office/2013/02/12/presidential-policy-directive-critical-infrastructure-security-and-resil.

[225] U.S. Department of State, "Rewards for Justice – Reward Offer for Information on Foreign Malicious Cyber Activity Against U.S. Critical Infrastructure," news release, July 15, 2021, https://www.state.gov/rewards-for-justice-reward-offer-for-information-on-foreign-malicious-cyber-activity-against-u-s-critical-infrastructure/.

[226] *See, e.g.*, "What Insurance Firms Promised at the White House Cybersecurity Summit," *Insurance Journal*, August 26, 2021, https://www.insurancejournal.com/news/national/2021/08/26/628904.htm.

of the Senate Homeland Security and Governmental Affairs Committee on prevention and recovery in federal cybersecurity, for example, explored ongoing cybersecurity threats impacting the private sector that may lead to relevant legislation.[227] FIO will continue to work collaboratively within Treasury and across the federal government on issues related to ransomware and insurance.

b) State Efforts

On June 30, the NYDFS issued guidance in a letter to financial services entities (including insurers) under its jurisdiction to address the increasing threats of ransomware.[228] The guidance includes nine security controls that it expects regulated companies to implement where possible under the state's cybersecurity regulation.[229] In addition, the NYDFS issued a Cyber Insurance Risk Framework in an effort to foster a robust cyber insurance market that maintains financial stability and protects consumers.[230] The Framework calls on insurers to, among other actions, establish a formal cyber risk strategy, evaluate and measure systemic risk, and require victims to report cyber-attacks to law enforcement.[231]

The NYDFS has also continued to bring enforcement actions against insurers under its cybersecurity regulation. For example, it addressed insurers' failing to "implement Multi-Factor Authentication ... without implementing reasonably equivalent or more secure access controls."[232] It also entered into a consent order with an insurer that not only failed to implement Multi-Factor Authentication but also failed to report data breaches as required under the cybersecurity regulation.[233] These are encouraging examples of state enforcement.

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[227] *See U.S. Cybersecurity Preparedness and H.R. 7331, the National Cyber Director Act, House Committee on Oversight and Reform*, 116th Cong (July 15, 2020), https://oversight.house.gov/legislation/hearings/hr-7331-the-national-cyber-director-act-1; *Prevention, Response, and Recovery: Improving Federal Cybersecurity Post-SolarWinds, Senate Homeland Security and Government Affairs Committee*, 117th Cong. (March 11, 2021), https://www.hsgac.senate.gov/hearings/prevention-response-and-recovery-improving-federal-cybersecurity-post-solarwinds.

[228] NYDFS, "Superintendent Lacewell Announces DFS Issues New Guidance on Ransomware Prevention," news release, June 30, 2021, https://www.dfs.ny.gov/reports_and_publications/press_releases/pr202106302.

[229] NYDFS, "Ransomware Guidance," June 30, 2021, https://www.dfs.ny.gov/industry_guidance/industry_letters/il20210630_ransomware_guidance.

[230] NYDFS, Insurance Circular Letter No. 2 (February 4, 2021), https://www.dfs.ny.gov/industry_guidance/circular_letters/cl2021_02.

[231] NYDFS, Insurance Circular Letter No. 2.

[232] NYDFS, "DFS Superintendent Lacewell Announces Cybersecurity Settlement with First Unum and Paul Revere Life Insurance Companies," news release, May 13, 2021, https://www.dfs.ny.gov/reports_and_publications/press_releases/pr202105131.

[233] NYDFS, "DFS Superintendent Lacewell Announces Cybersecurity Settlement with Licensed Insurance Company," news release, April 14, 2021, https://www.dfs.ny.gov/reports_and_publications/press_releases/pr202104141; Consent Order, *In the Matter of National Securities Corporation*, April 12, 2021, https://www.dfs.ny.gov/system/files/documents/2021/04/ea20210412_national_securities_corp.pdf.

Some state insurance regulators also have proactively advised insurers of cyber threats. NYDFS, for example, issued a cyber fraud alert in 2021; flagged vulnerabilities in Microsoft Exchange; and released a report on a specific cyber incident (the SolarWinds attack) and institutions' responses to it.[234] Other state regulators have brought federal recommendations to the attention of insurers within their state.[235]

Insurer data security—and cybersecurity more generally—are national policy issues that require coordination and uniformity among federal and state public sector entities, as well as partnership between the public and private sectors. In 2017, Treasury called for prompt and uniform adoption of the Data Security Model Law by the states, and suggested that if this did not occur within five years then Congress should act.[236] Four years later, while the current landscape is characterized by rising cybersecurity threats to the insurance industry, less than a third of the states have adopted differing versions of the Data Security Model Law.[237] The NAIC has not included the Data Security Model Law in its accreditation requirements.

D. Terrorism Risk Insurance Program

The September 11, 2001 terrorist attacks resulted in insurance industry losses of more than $45 billion (in 2019 dollars), which at the time was the largest insurance industry loss in history.[238] Following those attacks, insurers and reinsurers largely withdrew from the terrorism risk insurance market, threatening planned construction, property acquisition, business projects, and

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[234] NYDFS, "Department of Financial Services Announces Cybersecurity Fraud Alert," news release, February 16, 2021, https://www.dfs.ny.gov/reports_and_publications/press_releases/pr202102161; NYDFS, "Department of Financial Services Issues Cybersecurity Alert to Regulated Entities Concerning Microsoft Exchange Email Server," news release, March 9, 2021, https://www.dfs.ny.gov/reports_and_publications/press_releases/pr202103092; NYDFS, "DFS Issues Report on the Solarwinds Supply Chain Attack," news release, April 27, 2021, https://www.dfs.ny.gov/reports_and_publications/press_releases/pr202104271.

[235] *See, e.g.*, New Hampshire Insurance Department, "New Hampshire Insurance Department Warns Insurers of Possible Ransomware Attacks," news release, June 11, 2021, https://www.nh.gov/insurance/documents/20210611-ransomware-attacks.pdf (citing the May 12, 2021 Executive Order on Improving the Nation's Cybersecurity and providing the "U.S. Government's recommended best practices."); West Virginia Offices of the Insurance Commissioner, Bulletin No. 21-05 (June 24, 2021), https://www.wvinsurance.gov/Portals/0/21-05_Cybersecurity_Alert.pdf?ver=2021-06-24-122710-810 (aiming to "increase awareness to ever-growing cybersecurity threats" and addresses what is ransomware, how is ransomware spread, and possible solutions, while citing CISA's Reduce the Risk of Ransomware Campaign).

[236] Treasury, *A Financial System that Creates Economic Opportunities: Asset Management and Insurance* (November 2017), 117, https://www.treasury.gov/press-center/press-releases/Documents/A-Financial-System-That-Creates-Economic-Opportunities-Asset_Management-Insurance.pdf.

[237] As of July 30, 2021, at least sixteen states have adopted some form of the Model Law: Alabama, Connecticut, Delaware, Hawaii, Indiana, Louisiana, Maine, Michigan, Minnesota, Mississippi, New Hampshire, Ohio, South Carolina, Tennessee, Virginia, and Wisconsin. Not every state that has adopted the Data Security Model law has done so uniformly, nor is the law yet effective in all of the above states. *See, e.g.*, "Privacy Regulatory Trends: Your Guide to The NAIC Insurance Data Security Model Law," *RadarFirst Blog*, June 24, 2021, https://www.radarfirst.com/blog/privacy-regulatory-trends-guide-to-naic-insurance-data-security-model-law/.

[238] *See* FIO, *Report on the Effectiveness of the Terrorism Risk Insurance Program* (2020), 3, https://home.treasury.gov/system/files/311/2020-TRIP-Effectiveness-Report.pdf (*2020 Program Effectiveness Report*).

other economic activity.[239] In response, Congress enacted TRIA, creating TRIP within Treasury.[240] TRIP is a federal backstop for insurance losses arising from a certified act of terrorism, under which Treasury may reimburse insurers for a portion of their losses once certain financial thresholds have been met. TRIP was established primarily to incentivize the private market to offer insurance for terrorism risk, while providing a transitional period for the private market to resume pricing terrorism risk and build capacity to absorb future insurance losses.[241] TRIP is currently authorized through December 31, 2027.[242] FIO assists the Secretary in the administration of TRIP.[243]

1. TRIP Data Collection

Under TRIA, Treasury is required to collect terrorism risk insurance information annually from insurers in order to analyze the overall effectiveness of TRIP.[244] Since the 2015 Reauthorization Act, FIO has conducted six data calls—a voluntary data call in 2016 and five mandatory data calls from 2017 through 2021, subject to a number of limited reporting exemptions for certain insurers.[245] FIO collects certain data elements through third-party workers' compensation rating bureaus to minimize the burden on reporting insurers, and uses multiple reporting templates based on classification of the insurer's size and operations.[246]

Beginning with the 2018 data call, Treasury has coordinated with state insurance regulators and the NAIC to develop a consolidated data call—with the same information reported to Treasury as well as to state regulators—in order to reduce the burden on participating insurers.[247] FIO

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[239] TRIA § 101(a)(5). Because the provisions of TRIA appear in a note (15 U.S.C. § 6701 note), instead of references to sections of the U.S. Code, this Report identifies TRIA references by the sections of the act.

[240] Terrorism Risk Insurance Act of 2002, Pub. L. No. 107-297, 116 Stat. 2322 (2002). For purposes of this Report, TRIP refers to the program as it is administered through current Treasury regulations. *See* Terrorism Risk Insurance Program, 31 CFR pt. 50 (2020) (Program Rules).

[241] TRIA § 101(b).

[242] Terrorism Risk Insurance Program Reauthorization Act of 2019, Pub. L. No. 116-94, 133 Stat. 2534 (2019) (2019 Reauthorization Act). In June 2021, Treasury finalized certain rule changes to conform the Program Rules to the 2019 Reauthorization Act. *See* Terrorism Risk Insurance Program; Updated Regulations in light of the Terrorism Risk Insurance Program Reauthorization Act of 2019, Public Law 116-94, 133 Stat. 2534, and for other purposes, 86 Fed. Reg. 30537 (June 9, 2021), https://www.federalregister.gov/documents/2021/06/09/2021-12014/terrorism-risk-insurance-program-updated-regulations-in-light-of-the-terrorism-risk-insurance.

[243] FIO Act, 31 U.S.C. § 313(c)(1)(D). The Report discusses the TRIP advisory committee, the ACRSM, in Section III.E.1.

[244] TRIA § 104(h).

[245] *See* 2021 Terrorism Risk Insurance Program Data Call, 86 Fed. Reg. 14179 (March 12, 2021), https://www.federalregister.gov/documents/2021/03/12/2021-05171/2021-terrorism-risk-insurance-program-data-call.

[246] FIO, *2020 Program Effectiveness Report,* 9-10.

[247] Terrorism Risk Insurance Program 2018 Data Call, 82 Fed. Reg. 56328 (November 28, 2017), https://www.federalregister.gov/documents/2017/11/28/2017-25402/terrorism-risk-insurance-program-2018-data-call.

estimates that an extremely high percentage of insurers required to participate in the annual data calls provide the requested data.[248]

2. Small Insurer Study

TRIA requires Treasury to conduct a study, and submit a report to Congress, every other year concerning the competitiveness of small insurers in the terrorism risk insurance marketplace.[249] For the report that Treasury submitted to Congress on June 30, 2021, FIO relied principally upon information from the 2019, 2020, and 2021 TRIP data calls, as well as on qualitative research and comments and information submitted by interested parties.[250]

In the *2021 TRIP Small Insurer Study*, FIO concluded that small insurers are significant participants in the market for terrorism risk insurance in the United States. FIO found that the market share of small insurers in the terrorism risk insurance market has stabilized over the last five years after declines in the 2011-2015 period, as compared to larger insurers. In some areas (for example, coverage provided to places of worship) they may have a significant percentage of market share. The Study details numerous market differences between small and larger (non-small) insurers, including their coverage of cyber risk.[251] The Study notes how the mandatory availability requirement affects small insurers, and addresses how the Program Trigger requirement, in some circumstances, could prevent small insurers that have met their individual insurer deductibles from receiving the federal share of compensation.[252] FIO also observed that the potential risk of unreimbursed losses faced by small insurers is most significant in connection with the workers' compensation line of insurance. While coverage in the lines of insurance subject to TRIP generally remains concentrated in larger, non-small insurers, small insurers continue to play a significant role for some policyholder segments and in many areas of the country.

[248] For example, the non-small insurer response rate in the 2020 TRIP data call was at least 97.5 percent, and the small insurer response rate was at least 79.7 percent. *See* FIO, *Study of Small Insurer Competitiveness in the Terrorism Risk Insurance Marketplace* (June 2021), 13, https://home.treasury.gov/system/files/311/2021TRIPSmallInsurerReportJune2021.pdf (*2021 Small Insurer Study*).

[249] TRIA § 108(h). TRIA also requires Treasury to submit to Congress a report on the effectiveness of the Program every other year beginning in 2016; the next Program Effectiveness Report under TRIA is due June 30, 2022. TRIA § 104(h)(2).

[250] FIO, *2021 Small Insurer Study*.

[251] For more on cyber insurance, see Section III.C.

[252] The Program Trigger, now $200 million, is the minimum amount of insurance industry aggregate insured losses resulting from certified act(s) of terrorism that must occur in a calendar year before any federal payments can be made under TRIP. *See* FIO, *2021 Small Insurer Study*, 10.

E. FIO Advisory Committees

1. Advisory Committee on Risk-Sharing Mechanisms

The ACRSM is a federal advisory committee established by the Terrorism Risk Insurance Program Reauthorization Act of 2015.[253] It provides FIO with advice and recommendations with respect to (1) the creation and development of non-governmental, private market risk-sharing mechanisms for protection against losses arising from acts of terrorism; and (2) FIO's administration of TRIP.[254]

In May 2020, the ACRSM adopted its first report providing recommendations to FIO.[255] In the report, the ACRSM made short-term recommendations addressing cyber risk, NBCR risk, and certification under TRIA, as well as long-term recommendations covering the Insurance Marketplace Aggregate Retention Amount (IMARA), recoupment, alternative carrier mechanisms, facilitation of risk transfer to private markets, and the availability and affordability of terrorism risk insurance for non-profit entities generally.[256] During the past year, FIO sought comments from the public concerning issues identified by the ACRSM in connection with certification, cyber, and captive participation in TRIP.[257] FIO, which assists the Secretary in the administration of TRIP, continues to evaluate the issues identified by the ACRSM.[258] FIO will continue to work with the ACRSM and to engage with stakeholders as it proceeds with its evaluation and work in these areas.

2. Federal Advisory Committee on Insurance

FACI was established in 2011 to provide FIO with nonbinding advice and recommendations and to otherwise assist FIO in carrying out its duties and authorities. FACI includes a cross-section of members who represent the views of those having an interest in FIO's duties and authorities,

[253] Pub. L. 114-1, 129 Stat. 3 (2015).

[254] *See* 2015 Reauthorization Act § 110; "Advisory Committee on Risk-Sharing Mechanisms (ACRSM)," Treasury, https://home.treasury.gov/policy-issues/financial-markets-financial-institutions-and-fiscal-service/federal-insurance-office/terrorism-risk-insurance-program/advisory-committee-on-risk-sharing-mechanisms-acrsm.

[255] ACRSM, *Initial Report of the Committee* (May 11, 2020), https://home.treasury.gov/system/files/311/5-20-ACRSM-Report-Final.pdf (*ACRSM Report*).

[256] *ACRSM Report*, 6; see also FIO, *2020 Program Effectiveness Report*, 80-81.

[257] *See* Terrorism Risk Insurance Program; Updated Regulations in light of the Terrorism Risk Insurance Program Reauthorization Act of 2019, and for Other Purposes, 85 Fed. Reg. 71588, 71591 (November 10, 2020), https://www.federalregister.gov/documents/2020/11/10/2020-24522/terrorism-risk-insurance-program-updated-regulations-in-light-of-the-terrorism-risk-insurance; see also https://www.regulations.gov/document/TREAS-TRIP-2020-0022-0001/comment (collecting comments).

[258] For example, in 2021, FIO commenced a public procurement for terrorism risk insurance modeling services, which will allow FIO to better project exposures in connection with TRIP, and evaluate ways in which private sector sharing of terrorism risk can be maximized. *See* "Terrorism Risk Insurance Program (TRIP) for Terrorism Risk Modelling," Request for Quotation No. 2032H321Q0058 (published June 23, 2021), https://sam.gov/opp/edc434f6ffff450883b5c4ea81284362/view.

including state insurance regulators, industry experts, and consumer advocates.[259] FACI has held four virtual public meetings since June 2020: on September 29, 2020; December 3, 2020; February 18, 2021; and June 2, 2021. These meetings addressed a variety of topics, including recommendations and status updates on FACI's work on pandemic protection, disaster mitigation and resilience, and various international issues.[260] This fall, FACI is disbanding the COVID-19 subcommittee formed in 2020, while continuing the subcommittees formed in 2019: the Availability of Insurance Products; FIO's International Work; and Addressing the Protection Gap Through Public-Private Partnerships and Other Mechanisms.

Over the past year, the COVID-19 subcommittee examined what lessons for the insurance industry and regulation could be gleaned from the pandemic; it also analyzed numerous proposals to address insurance for future pandemics.[261] In December 2020, FACI adopted a series of recommendations proposed by the COVID-19 subcommittee, including recommendations related to deeming insurance an essential service; preparing for future pandemics; studying the use of e-delivery in the insurance sector; encouraging the use of e-signatures and electronic regulatory filings; and encouraging online/remote training and examination options for producer licensing.[262]

The Subcommittee on the Availability of Insurance Products had three workstreams in 2020: long-term care insurance (LTCI), data privacy, and disparate impact/systemic racism.[263] In September 2020, FACI adopted recommendations from the subcommittee concerning LTCI.[264] For 2021, the subcommittee has prioritized continuing review of a disparate impact methodology and standard for unfair discrimination in insurance; developing recommendations for updating FIO's analysis of availability and affordability in personal lines auto insurance and in other lines of insurance; and considering NFIP reforms to promote greater availability and affordability of flood insurance.[265] In June 2021, FACI adopted the subcommittee's recommendation that FIO

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[259] *See* "Federal Advisory Committee on Insurance (FACI)," Treasury; "FACI Members," Treasury, https://home.treasury.gov/policy-issues/financial-markets-financial-institutions-and-fiscal-service/federal-insurance-office/federal-advisory-committee-on-insurance-faci/faci-members.

[260] Presentations and other meeting materials are available on the FACI website: "Federal Advisory Committee on Insurance (FACI)," Treasury.

[261] *See e.g., FACI Minutes – September 29, 2020*, https://home.treasury.gov/system/files/311/FACI-Minutes-9-20.pdf; *FACI Minutes – December 3, 2020*, https://home.treasury.gov/system/files/311/FACI-Minutes-12-20.pdf.

[262] "FACI Recommendations," Treasury, https://home.treasury.gov/policy-issues/financial-markets-financial-institutions-and-fiscal-service/federal-insurance-office/federal-advisory-committee-on-insurance-faci/faci-recommendations (FACI Recommendations). The subcommittee also provided a draft document that included background and additional detail on each recommendation, pre-amendment language, and proposals not adopted by FACI. *See* FACI, *COVID-19 Pandemic – Preparedness Subcommittee Meeting* (December 3, 2020), https://home.treasury.gov/system/files/311/FACI-Recommendations-COVID-Preparedness-12-20.pdf.

[263] *See FACI Minutes – September 29, 2020*.

[264] *See* FACI Recommendations. For more on LTCI, see Section III.H. Combination and limited LTCI products may be discussed in greater detail in future annual reports.

[265] *See FACI Minutes – February 18, 2021*, https://home.treasury.gov/system/files/311/FACI-Minutes-2-21.pdf.

(1) prioritize an update on its 2017 study on auto insurance affordability, and (2) study the availability and affordability of residential property insurance.[266]

In 2020, the International Subcommittee focused on market access and level playing fields that impact U.S. insurers as they operate abroad, with a secondary focus on continuing to monitor developments occurring from a regulatory standpoint in the international arena, especially with respect to IAIS.[267] In December 2020, FACI adopted five recommendations presented by the subcommittee relating to international market access.[268] At its February 2021 meeting, FACI adopted the subcommittee's additional market access recommendation.[269] In 2021, the subcommittee discussed the responses to FIO's request for information for its study on the International Capital Standard, reflecting its pivot away from market access and more towards IAIS and FSB initiatives.[270]

The Subcommittee on Addressing the Protection Gap turned its attention to the impact of wildfires on the availability of private market insurance, and an evaluation of recommendations for how FIO could use its convening authority to identify how the insurance industry could better support the National Mitigation Investment Strategy.[271]

Box 4: Initiatives on Diversity and Inclusion

The FIO Act recognized the importance of diversity and inclusion within the insurance sector by explicitly authorizing FIO to monitor the accessibility and affordability of insurance for traditionally underserved communities and consumers, minorities, and low- and moderate-income persons.[272] To help FIO fulfill this function, FACI has two subcommittees that address issues of diversity and inclusion: (1) the Availability of Insurance Products Subcommittee and (2) the Addressing the Protection Gap through Public-Private Partnerships and Other Mechanisms Subcommittee. In June 2021, FACI approved subcommittee recommendations that FIO should update its 2017 study on auto insurance affordability as well as study the

[266] *See* FACI Recommendations. For more on FIO's work on auto insurance, see Section III.F. For more on affordability and availability of home insurance in the context of climate-related risk and catastrophic events, see Section III.B.

[267] *See FACI Minutes – September 29, 2020*.

[268] *See* FACI Recommendations.

[269] *See* FACI Recommendations. The international subcommittee provided additional background and detail on its recommendation through a white paper and a dissenting member opinion. FACI International Subcommittee, *Market Access/Level Playing Field: Key Challenges for International Insurers* (December 2020), https://home.treasury.gov/system/files/311/faci-white-paper-market-access-12-20.pdf; Center for Economic Justice, *Dissenting View of Birny Birnbaum – FACI International Subcommittee Recommendations* (February 16, 2021), https://home.treasury.gov/system/files/311/FACI-Dissent-Birnbaum-2-21.pdf.

[270] *See FACI Minutes – February 18, 2021*. For more on the Insurance Capital Standard, see Section III.K.1.b.

[271] For more on the National Mitigation Investment Strategy, see Section III.B.3.

[272] FIO Act, 31 U.S.C. §313(c)(1)(B).

affordability and availability of residential property insurance.[273] In view of these recommendations, FIO is proceeding with work on both homeowners and auto insurance.[274]

On the international front, FIO participates in the IAIS Financial Inclusion Forum (FIF). FIF works to have the IAIS Insurance Core Principles and other supervisory standards applied to support the regulation and supervision of inclusive insurance markets and financial inclusion.[275] FIF discussions in 2021 have focused on inclusive insurance regulation, as well as microinsurance frameworks and proportionality. Through the IAIS, FIO also works with the Access to Insurance Initiative (A2ii).[276] A2ii works closely with insurance supervisors and provides guidance regarding how to implement standards for improving access to insurance.[277]

In 2020, the NAIC and the National Council of Insurance Legislators (NCOIL) created committees to examine issues affecting diversity and inclusion within the insurance sector. In July 2020, the NAIC Executive Committee announced the creation of the Special Committee on Race and Insurance to serve as the NAIC's coordinating body on issues of diversity and inclusion within the insurance sector.[278] In September 2020, NCOIL created a Special Committee on Race in Insurance Underwriting to study race-related issues in insurance underwriting before disbanding in July 2021.[279] The committee examined the definition of "proxy discrimination" and the use of special rating factors in underwriting, such as zip code and level of education, and produced for NCOIL's consideration resolutions on the use of certain rating factors, the use of artificial intelligence in underwriting, and insurance score transparency.[280]

F. Personal Auto Insurance

FIO's statutory authorities include, among other things, monitoring the extent to which traditionally underserved communities and consumers, minorities, and low-and moderate income persons have access to affordable insurance products for all lines of insurance (except health insurance).[281] FIO previously examined the affordability and availability of personal auto

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[273] For more information on FACI, see Section III.E.2.

[274] For more information on homeowners' insurance, see Section III.B; for more auto insurance, see Section III.F.

[275] The IAIS has defined "financial inclusion" as "a state in which all working age adults have effective access to credit, savings, payments, and insurance from formal providers." IAIS, *Application Paper on Regulation and Supervision Supporting Inclusive Insurance Markets* (October 2012), 7, https://www.iaisweb.org/file/34110/application-paper-on-regulation-and-supervision-supporting-inclusive-insurance-markets.

[276] "About A2ii: Our Story," Access to Insurance Initiative, https://www.a2ii.org/en/about-a2ii/all.

[277] A2ii, *Factsheet: 2020* (2020), 1, https://a2ii.org/sites/default/files/2021-01/a2ii_factsheet2020.pdf.

[278] NAIC, "NAIC Announces Special Committee on Race and Insurance," news release, July 23, 2020, https://content.naic.org/article/news_release_naic_announces_special_committee_race_and_insurance.htm.

[279] "Special Committee on Race in Insurance Underwriting," NCOIL, http://ncoil.org/special-committee-on-race-in-insurance-underwriting-2/.

[280] "Special Committee on Race in Insurance Underwriting," NCOIL.

[281] *See* 31 U.S.C. § 313(c)(1)(B).

insurance, publishing a study on that topic in 2017.[282] More recently, personal auto insurance has attracted increasing attention from Congress, consumer advocates, and state legislatures and insurance regulators, questioning the propriety and accuracy of the industry's underwriting and pricing processes. This section highlights FIO's ongoing work relating to personal auto insurance.

This section begins by explaining the importance of auto insurance and discussing the evolution of the auto insurance market, including the impact of the COVID-19 pandemic. It also highlights some of FIO's prior work on personal auto insurance. This section next discusses FIO's current work, with a focus on the comments received in response to FIO's May 2021 Request for Information. Analyzing auto insurance affordability and accessibility is a priority for FIO, and its work in this area is ongoing.

1. Background

a) The Importance of Auto Insurance and the Market's Evolution

Affordable auto insurance is a significant matter because access to this insurance product promotes financial security for individuals and families. Repair and medical expenses from a serious auto accident can easily cost thousands of dollars—and yet a recent survey found that only 41 percent of those surveyed had enough savings to cover even a $1,000 expense.[283] In addition, auto ownership is associated with greater opportunity for economic well-being, including better access to employment opportunities.[284] Every state except New Hampshire requires a driver or motor vehicle owner to have automobile liability insurance, either at the time of registering a motor vehicle, or while operating a motor vehicle.[285] Whether or not auto insurance is affordable to consumers, and whether auto insurance has become more or less affordable over time, are important questions about which stakeholders may disagree.[286]

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[282] FIO, *Study on The Affordability of Automobile Insurance* (2017), https://home.treasury.gov/system/files/311/FINAL%20Auto%20Affordability%20Study_web.pdf (*2017 Auto Insurance Study*).

[283] *See, e.g.*, Mark Fitzpatrick, "What Happens if You are Caught Driving Without Car Insurance," *ValuePenguin*, August 6, 2021, https://www.valuepenguin.com/what-happens-if-you-are-caught-driving-without-car-insurance; Amanda Dixon, "Survey: Nearly 4 in 10 Americans Would Borrow Money to Cover a $1K Emergency," *BankRate*, January 22, 2020, https://www.bankrate.com/banking/savings/financial-security-january-2020/.

[284] *See, e.g.*, FIO, *2017 Auto Insurance Study*, 3 (citing Clifford Winston, "On the Performance of the U.S. Transportation System: Caution Ahead*," Journal of Economic Literature* (2013), 805).

[285] *See, e.g.*, "Background On: Compulsory Auto/ Uninsured Motorists," III, last updated March 25, 2021, http://www.iii.org/issue-update/compulsory-auto-uninsured-motorists.

[286] *See, e.g.*, FIO, *2017 Auto Insurance Study*; Insurance Research Council, *Trends Indicate Auto Insurance is Becoming More Affordable for All Income Groups* (August 25, 2015), http://www.insurance-research.org/sites/default/files/downloads/Trends%20in%20Auto%20Insurance%20Affordability%20NR_FINAL.pdf.

Stakeholders also disagree about how policymakers, including U.S. state insurance regulators, should address affordability concerns.[287]

The affordability and availability of auto insurance is impacted by the evolution of the domestic personal auto insurance market. New consumer preferences and technological innovations have led to changes in nearly all aspects of the business. Developments in the sharing economy (such as ridesharing and delivery services) and new entrants into the sector (such as vehicle manufacturers), as well as self-driving cars, are likely to further reshape the business in the future. Some states already have begun revising their insurance laws and regulations to reflect the changing landscape.[288] The COVID-19 pandemic has accelerated some of these changes.

b) COVID-19 Pandemic Response

In 2020, auto insurers benefited from lower claim frequency due to stay at home orders and the adoption of work-from-home policies by many employers in response to the COVID-19 pandemic. Many insurers responded to the reduction in miles driven by providing premium relief to their customers, sometimes after encouragement by state regulators.[289] As the pandemic has continued into 2021, insurers' responses have diverged with, for example, some insurers extending premium credits, some adjusting rates as they saw an increase in driving and claims, and some resuming policy cancellations for non-payment (except where state prohibitions remained in place).[290] Consumer advocates have criticized the range of the price adjustments and have encouraged states to ensure insurers are adopting uniform, risk-based responses in issuing premium refunds.[291]

Several state insurance regulators have questioned whether auto insurers provided sufficient premium relief to policyholders. The California Insurance Department, for example, announced in March 2021 that, between March and September 2020, auto insurance groups returned on average nine percent of auto premiums when "the Department's analysis found that they should

[287] *See, e.g.*, California Department of Insurance, "Commissioner Lara Issues Revised Draft Regulation to Expand Auto Insurance Group Discounts to Lower-Income Drivers," news release, February 18, 2021, http://www.insurance.ca.gov/0400-news/0100-press-releases/2021/release021-2021.cfm. *Compare* APCIA, "Now Is Not the Time to Limit Insurance Discounts for California Drivers," news release, February 23, 2021, https://www.apci.org/media/news-releases/release/65347/.

[288] *See, e.g.*, Georgia House Bill 337 (enacted July 29, 2020) (establishing insurance requirements for peer-to-peer car sharing, among other things).

[289] *See, e.g.*, FIO, *2020 Annual Report*, 26, 31-32.

[290] *See, e.g.*, Tim Zawacki, "Auto Insurer's New Round of COVID-19 Relief Highlights Uneven Carrier Response," *S&P Global Market Intelligence*, January 5, 2021, https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/auto-insurer-s-new-round-of-covid-19-relief-highlights-uneven-carrier-response-61975618; Jennifer Bradley Franklin, "How COVID-19 Is Impacting Home, Auto Insurance Payments," *Bankrate*, May 10, 2021, https://www.bankrate.com/insurance/coronavirus-and-insurance-payments/.

[291] *See, e.g.*, Mark Williams, "Rate Relief: Consumer Group Pushes for Insurers to Cut Rates More for Drivers," *The Columbus Dispatch*, January 20, 2021, https://www.cantonrep.com/story/business/2021/01/19/consumer-group-pushes-insurers-cut-rates-drivers/6644558002/.

have refunded nearly double that amount—17 percent—over the seven-month period."[292] The California Insurance Commissioner therefore directed auto insurers to "[d]o more to return additional premium relief from March 2020 forward, and report these additional premium returns to the Department."[293] Citing California's example, the Washington Insurance Commissioner announced that he too was seeking auto insurance claims and rebate data from insurers operating in Washington state.[294] The New Mexico Superintendent of Insurance also asked personal auto insurers to "review their 2020 loss experience and determine whether additional premium refunds are warranted."[295]

While state insurance regulators are continuing to collect data, the long-term impact of the COVID-19 pandemic on personal automobile insurance rates remains to be seen. As of May 2021, driving patterns appear to be returning to pre-pandemic levels, but people are still driving fewer miles than before the pandemic.[296] According to one survey, 55 percent of consumers think that their driving miles will remain lower for a significant time following the pandemic.[297] Continued reduction in miles driven (such as from an increase in permanent work-from-home job arrangements) could have a lasting impact on insurance auto rates as fewer miles driven could lead to fewer accidents and claims.

c) FIO's Prior Work and Ongoing Interest in Auto Insurance

FIO has conducted significant prior work monitoring and analyzing the auto insurance market and related affordability issues. Among other things, FIO has solicited public comment on auto insurance on multiple occasions.[298] In 2016, FIO also issued a request for information on a

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[292] California Department of Insurance, "Commissioner Lara Finds Auto Insurance Companies Overcharged Drivers as Accidents Plummeted During the Pandemic," news release, March 11, 2021, https://www.insurance.ca.gov/0400-news/0100-press-releases/2021/release030-2021.cfm.

[293] California Department of Insurance, Bulletin 2021-03 (March 11, 2021), http://www.insurance.ca.gov/0250-insurers/0300-insurers/0200-bulletins/bulletin-notices-commiss-opinion/upload/Bulletin-2021-03-Premium-Refunds-Credits-and-Reductions-in-Response-to-COVID-19-Pandemic.pdf. *See also* "COVID 19 Premium Refund Reporting," California Department of Insurance, http://www.insurance.ca.gov/0250-insurers/0300-insurers/0100-applications/rsb-forms/2020/Covid19PremRefndRprtngSepToDec2020.cfm.

[294] Office of the Washington State Insurance Commissioner, "Kreidler Requests Auto Insurance Claims and Rebate Data from Insurers in Washington," news release, July 7, 2021, https://www.insurance.wa.gov/news/kreidler-requests-auto-insurance-claims-and-rebate-data-insurers-washington.

[295] State of New Mexico Office of Superintendent of Insurance, Bulletin 2021-012 (July 14, 2021), https://www.osi.state.nm.us/wp-content/uploads/2021/07/Bulletin-2021-012.pdf.

[296] *See* Maria Sassian, "Here's What's Happening to Your Auto Insurance Costs," *The Triple-I Blog*, May 13, 2021, https://www.iii.org/insuranceindustryblog/heres-whats-happening-to-your-auto-insurance-costs/.

[297] *See* Kyle Schmitt, J.D. Power, *Auto Insurance During COVID-19: Premium Relief: Consumer Impact and Outlook* (April 16, 2020) https://cdn2.hubspot.net/hubfs/4239280/Files/COVID-19/20200416_PULSE%20Insurance%20During%20COVID19_Distribution.pdf.

[298] *See, e.g.*, Monitoring Availability and Affordability of Auto Insurance, 79 Fed. Reg. 19969 (April 10, 2014), https://www.federalregister.gov/documents/2014/04/10/2014-08100/monitoring-availability-and-affordability-of-auto-insurance; Monitoring Availability and Affordability of Auto Insurance, 80 Fed. Reg. 38277 (July 2, 2015), https://www.federalregister.gov/documents/2015/07/02/2015-16333/monitoring-availability-and-affordability-of-

potential future auto insurance data call.[299] In 2017, FIO published its study on the *Affordability of Personal Automobile Insurance* (*2017 Auto Insurance Study*) providing quantifiable information on auto insurance affordability for low and moderate income persons.[300] FIO's annual reports also have addressed auto insurance issues such as financial results, telematics, usage-based insurance, and pandemic impacts; the annual reports also have highlighted emerging technologies such as blockchain and artificial intelligence.[301] In June 2021, FACI considered personal auto insurance issues and recommended that FIO prioritize and update the *2017 Auto Insurance Study*.[302]

2. FIO's Current Work on Auto Insurance

FIO published a Request for Information on May 27, 2021, seeking public comment on the data analysis and potential updates to the *2017 Auto Insurance Study*; non-driving related factors in personal auto insurance underwriting and pricing; and structural market changes in personal auto insurance.[303] FIO received 19 submissions in response.[304] FIO is continuing to analyze these responses as it moves forward with its work in this area.

Box 5: The Use of Credit Scores in Insurance Underwriting

Insurers have long used credit scores as an underwriting component for personal lines business, most prominently for automobile coverage.[305] Consumer groups have raised challenges to such use of credit scores, on grounds of fairness and transparency.[306] The NAIC has taken note of the

auto-insurance; Monitoring Availability and Affordability of Auto Insurance, 81 Fed. Reg. 45372 (July 13, 2016), https://www.federalregister.gov/documents/2016/07/13/2016-16536/monitoring-availability-and-affordability-of-automobile-insurance.

[299] Proposed Collection; Comment Request, 81 Fed. Reg. 45381 (July 13, 2016), https://www.federalregister.gov/documents/2016/07/13/2016-16537/proposed-collection-comment-request.

[300] *See* FIO, *2017 Auto Insurance Study.*

[301] *See, e.g.*, FIO, *Annual Report on the Insurance Industry* (2017), 35-36, 64, 71-72, https://home.treasury.gov/system/files/311/2017_FIO_Annual_Report.pdf; FIO, *2018 Annual Report*, 62; FIO, *2019 Annual Report*, 77, 86-87, 89; FIO, *2020 Annual Report*, 21,25-27, 31-32, 35.

[302] *See* FACI Recommendations.

[303] Monitoring Availability and Affordability of Auto Insurance; Assessing Potential Evolution of the Auto Insurance Market, 86 Fed. Reg. 28681 (May 27, 2021), https://www.federalregister.gov/documents/2021/05/27/2021-11167/monitoring-availability-and-affordability-of-auto-insurance-assessing-potential-evolution-of-the.

[304] *See* "Monitoring Availability and Affordability of Auto Insurance RFI," Regulations.gov, https://www.regulations.gov/document/TREAS-DO-2021-0010-0001/comment.

[305] FICO estimates that more than 80 percent of insurers use credit data in connection with auto and homeowners insurance underwriting. Clint Proctor, "Do Insurance Companies Use Credit Data?" *myFICO*, October 21, 2020, https://www.myfico.com/credit-education/blog/insurance-and-credit-scores.

[306] *See, e.g.*, "Credit Scoring in Insurance: An Unfair Practice," United Policyholders, https://uphelp.org/buying-tips/credit-scoring-in-insurance-an-unfair-practice/.

issue.[307] Some state regulators have taken action to curb the role of credit scores in insurance underwriting. The Washington State Insurance Commissioner, for example, announced in March 2021 the issuance of an emergency rule "[t]emporarily prohibiting the use of credit history to determine premiums and eligibility for coverage in private automobile, homeowners, and renter's insurance products."[308] The Commissioner noted "insurers charge good drivers with low credit scores nearly 80 percent more for mandatory auto insurance."[309] Some other states already bar outright, or limit to varying degrees, the use of consumer credit scores by insurers.[310]

Insurers have expressed concerns with such reforms. One trade association, for example, has stated that "underwriting freedom is critical" in setting prices and maintaining solvency, and that insurers "should be able to use ... credit-based insurance scoring, to more accurately reflect risk."[311] Not all insurers agree with this view. Recently, Root Insurance explained that it does not consider credit scoring in pricing decisions because it "disproportionately harms certain groups and reinforces the much bigger problem of inherent bias."[312]

Attention to these issues is growing. Legislative activity focusing on similar restrictions on credit-related information has occurred in other states, including Illinois, Louisiana, Maryland, Oklahoma, and West Virginia.[313]

G. InsurTech

As FIO has previously reported, InsurTech innovation trends have remained consistent in recent years with continued growth in investments, an emphasis on distribution and marketing, additional partnerships between startups and incumbent insurers, and a focus on artificial intelligence.[314] The COVID-19 pandemic illustrated the importance of technology in bolstering

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[307] *See* "Credit-Based Insurance Scores," NAIC, last updated May 7, 2021, https://content.naic.org/cipr_topics/topic_creditbased_insurance_scores.htm.

[308] Office of the Washington State Insurance Commissioner, "Kreidler Issues Emergency Rule Banning Credit Scoring for Three Years," news release, March 23, 2021, https://www.insurance.wa.gov/news/kreidler-issues-emergency-rule-banning-credit-scoring-three-years. *See also* "Credit Scoring Ban," Office of the Washington State Insurance Commissioner, https://www.insurance.wa.gov/credit-scoring-ban.

[309] Washington State Insurance Commissioner, "Kreidler Issues Emergency Rule."

[310] Such states include California, Hawaii, Maryland, Michigan, Massachusetts, Oregon, and Utah. *See, e.g.*, "Credit-Based Insurance Scores," NAIC.

[311] "Our Positions: Credit-Based Insurance Scoring," National Association of Mutual Insurance Companies, https://www.namic.org/Issues/credit-based-insurance-scoring.

[312] "Drop the Score," Root Insurance, https://www.joinroot.com/drop-credit-scores-from-insurance-rate-pricing/. *See also* Root Insurance, *Credit Scores and Car Insurance: How Unfair Pricing Practices Discriminate Against Millions of Drivers*, https://cdn.brandfolder.io/5S4BNCY2/at/698pbtczrh95kf8p8gkgcr5/RootInc_DroptheScore_ConsumerReport.pdf.

[313] *See* Jerry Theodorou, "Credit-Based Insurance Scores – The Battle Heats Up," *Insurance Journal*, May 20, 2021, https://www.insurancejournal.com/blogs/2021/05/20/615231.htm.

[314] FIO provided a comprehensive overview of innovation trends in the insurance industry in its 2019 and 2020 Annual Reports. *See* FIO, *2019 Annual Report*, 75-98; FIO, *2020 Annual Report*, 96-99.

the insurance industry's response to the pandemic. Since the onset of the pandemic, for example, insurers have leveraged technology to accelerate adoption of remote claims processes.[315]

InsurTech likely will continue to grow, and states are continuing to take steps to promote the use of technology in the insurance sector. For example, to foster innovation, West Virginia adopted legislation creating a regulatory sandbox that is "designed to encourage and welcome new and innovation insurance business."[316] Further, the Pennsylvania Insurance Department announced the creation of "Keystone Smart Launch," a forum for regulated and non-related entities to discuss "innovative products, programs, or service ideas."[317]

As investments in the InsurTech sector continue to grow, FIO has continued to analyze the InsurTech market.[318] FIO has collaborated with the IAIS, the NAIC, and U.S. states in efforts to further engage with and analyze the InsurTech sector. FIO is a member of the IAIS FinTech Forum, which shares technical expertise, challenges, and insights into InsurTech sector.[319]

As the InsurTech sector matures, its technology developments may have significant impacts on the insurance market, which brings both benefits and challenges. Innovative developments in InsurTech may improve fraud identification, facilitate streamlined underwriting, and allow for more tailored insurance products, which in turn may lead to reduced premiums for consumers.[320] Potential challenges include increasing cybersecurity risks and potential bias in artificial intelligence/machine learning and the underlying data sets.[321] With the assistance of FACI, FIO continues to explore both the potential benefits of new technology as well as its challenges, including the potential negative consequences of disparate impact and bias.[322]

Some state regulators and legislators continue to focus on bias in the use of technology. The Connecticut Insurance Department reminded insurers in May 2021 that they are expected to

[315] For more information on the pandemic's impact on the insurance industry, see Section III.A.

[316] West Virginia Offices of the Insurance Commissioner, "West Virginia Welcomes Insurance Innovators Into Its Regulatory 'Sandbox,'" news release, July 12, 2021, https://www.wvinsurance.gov/Portals/0/pdf/pressrelease/Announcement-Insurance-Innovation-Process-07-12-2021.pdf?ver=2021-07-12-152707-837.

[317] Pennsylvania Insurance Department, "Pennsylvania Insurance Commissioner Announces New Program to Support Innovative Insurance Products," news release, June 17, 2021, https://www.media.pa.gov/Pages/Insurance-Details.aspx?newsid=454.

[318] For more information on InsurTech investments, see Section II.B.5.

[319] IAIS, *2020-2021 Public Roadmap* (January 2020), 5, https://www.iaisweb.org/page/about-the-iais/public-roadmap/file/92425/2020-2021-iais-public-roadmap-version-3.

[320] *See, e.g.*, "Tech Trends That Will Transform the Insurance Industry in 2021," *Insurance Business Canada*, April 1, 2021, https://www.insurancebusinessmag.com/ca/news/breaking-news/tech-trends-that-will-transform-the-insurance-industry-in-2021-251194.aspx; David A. Teich, "Machine Learning Can Help The Insurance Industry Throughout The Process Lifecycle," *Forbes*, March 2, 2021, https://www.forbes.com/sites/davidteich/2021/03/02/machine-learning-can-help-the-insurance-industry-throughout-the-process-lifecycle/?sh=62192d5c7afc.

[321] *See, e.g.*, Nick Frank and Wei Ke, "Insurers Must Address Bias in AI," *Digital Insurance*, February 10, 2021, https://www.dig-in.com/opinion/insurers-must-address-bias-in-ai.

[322] *See also* Section III.F.

ensure that their use of big data and artificial intelligence is not discriminatory, and that insurers must be proactive and "take steps to avoid proxy discrimination" against protected classes.[323] In July 2021, Colorado's Governor signed Senate Bill 169, which directs the Colorado Insurance Commissioner to adopt rules to require insurers to test their algorithms, predictive models, and information sources to ensure that they do not unfairly discriminate against protected classes.[324]

H. Long-Term Care Insurance

The private market for traditional LTCI has continued its steep, nearly 20-year decline. The number of individual LTCI policies sold peaked in 2002 and has decreased in nearly every year since then.[325] Following a slight uptick in 2019, the downward sales trend continued in 2020, as annualized new premium for individual LTCI policies fell nine percent to $152 million; similarly, the estimated number of new policies sold fell to a record low of 49,000, an 11 percent decrease from 2019.[326]

As an alternative to stand-alone LTCI policies, some insurers and consumers have turned to "combination" products, which combine a traditional life insurance policy or annuity with a long-term care benefit. These products offer protection from several financial risks and address the "use or lose" nature of stand-alone LTCI. After posting strong results in 2019, sales of life combination products slowed significantly in 2020.[327] Combination products generated $4.8 billion and $3.7 billion in premiums in 2019 and 2020, respectively, likely reflecting the difficulty of selling complex products during the COVID-19 pandemic.[328] Over the longer term, the outlook for combination products may be brighter: A recent survey suggested that the pandemic increased consumer interest in life combination products.[329] In early 2021, 26 percent of consumers surveyed said they were very likely to consider purchasing a life combination product, up from 17 percent in a 2019 survey.[330] Consumers who experienced challenges providing care to adult relatives or children were the most likely to consider them.[331]

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[323] Connecticut Insurance Department, "CT Insurance Department Reviewing Artificial Intelligence Use in Insurance," news release, May 24, 2021, https://portal.ct.gov/CID/News-Releases/Press-Releases/Press-Releases-20210524.

[324] Colorado Senate Bill 169 (signed July 6, 2021), https://legiscan.com/CO/text/SB169/2021.

[325] Treasury, *Long-Term Care Insurance: Recommendations for Improvement of Regulation – Report of the Federal Interagency Task Force on Long-Term Care Insurance* (August 11, 2020), 15, https://home.treasury.gov/system/files/136/Report-Federal-Interagency-Task-Force-Long-Term-Care-Insurance.pdf (*LTCI Task Force Report*).

[326] LIMRA, *U.S. Individual Long-Term Care Insurance (2020 Annual Review)*.

[327] LIMRA, *2020 Individual Life Combination Products Annual Review*; LIMRA*, 2019 Individual Life Combination Products Annual Review*.

[328] LIMRA.

[329] LIMRA, *Interest in Life Combination Products Shifts* (May 19, 2021).

[330] LIMRA.

[331] LIMRA.

While experience differed among individual LTCI carriers, in the short run they generally benefitted in 2020 through reduced claim losses resulting from (1) increased mortality among insureds due to the COVID-19 pandemic (obviating further claims on LTCI benefits), (2) migration of some insureds from care facilities to private homes, due to challenges faced by such institutions during the pandemic, and (3) election by some eligible insureds to defer use of paid long-term care services.[332] The pandemic's longer-term impacts on the LTCI market are more difficult to assess. The impact of COVID-19 on the health of policyholders (e.g., "long COVID") could lead to more of the insured population needing long-term care services for longer periods.[333]

The financial performance and viability of in-force blocks of LTCI policies remains an important issue for the insurance industry, investors, regulators, and policyholders. Older, legacy blocks of business continue to face problems such as high loss rates, inadequate reserves, and challenges faced by most carriers in obtaining regulatory rate relief from state insurance regulators.[334] Uncertainty about the profitability of in-force legacy business is likely to persist, although the NAIC and U.S. states are beginning to take steps to revise the regulatory environment for insurers with LTCI policies, particularly with respect to rate increase filings. However, it is important that regulators also consider the scope of intended and unintended regulatory effects on policyholders.

The NAIC identified the regulation of LTCI as a top regulatory priority in 2019 and formed the Long-Term Care Insurance Task Force, noting that the LTCI environment posed significant issues to both consumers and the state-based system of insurance regulation.[335] In 2020, the Task Force formed three subgroups: (1) the LTCI Multistate Rate Review Subgroup, tasked with developing a consistent national approach for reviewing LTCI rates that results in actuarially appropriate increases being granted by the states in a timely manner and eliminates cross-state rate subsidization; (2) the LTCI Reduced Benefit Options Subgroup, tasked with further evaluating and/or recommending options to help consumers manage the impact of rate increases; and (3) the LTCI Financial Solvency Subgroup, tasked with exploring restructuring options and techniques to address potential inequities among policyholders in different states, and techniques to mitigate risks to state guaranty funds, including states' pre-rehabilitation

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[332] Allison Bell, "COVID-19 Fogs Long-Term Care Claim Forecasts: ILTCI Virtual Conference," *ThinkAdvisor*, April 14, 2021, https://www.thinkadvisor.com/2021/04/14/covid-19-fogs-long-term-care-claim-forecasts-iltci-virtual-conference/.

[333] Allison Bell, "COVID-19 Fogs Long-Term Care Claim Forecasts."

[334] *See, e.g.*, Jason Wobelen, "Direct Loss Ratios Exceed 200% on Some Older Blocks of Individual LTC Policies," *S&P Global Market Intelligence*, May 24, 2021, https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/direct-loss-ratios-exceed-200-on-some-older-blocks-of-individual-ltc-policies-64390799#; Jason Wobelen, "Long-Term Care Rates Continue to Rise as Genworth, Manulife Hike in Q1," *S&P Global Market Intelligence*, May 12, 2021, https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/long-term-care-rates-continue-to-rise-as-genworth-manulife-hike-in-q1-64095300.

[335] "Long-Term Care Insurance (EX) Task Force," NAIC, https://content.naic.org/cmte_ex_ltci_tf.htm. *See also* NAIC, "NAIC Releases Request for Proposal for an Actuarial Consultant to Conduct LTCI Data Call," news release, November 11, 2019, https://content.naic.org/article/news_release_naic_releases_request_proposal_actuarial_consultant_conduct_ltci_data_call.htm.

planning options.[336] In August 2021, the Task Force released the report of LTCG Actuarial Consulting Group, which the NAIC had hired to conduct an LTCI Data Call. The consultant's work included input from 19 insurers and confirmed the existence of significant cross-state rate subsidizations in LTCI.[337] Also in 2021, the LTCI Multistate Rate Review Subgroup began the public exposure process to finalize and adopt a new Multistate Actuarial Framework.[338] FIO will continue to monitor developments in this area, focusing on cross-state rate subsidizations, the finalization of the Multistate Actuarial Framework, reduced benefits, and potential solvency issues for LTCI carriers.

In recent years, FIO has commented on the growing social need for long-term care and the decline of the private LTCI market.[339] Among other things, FIO participated in the work that led to Treasury's issuance of the August 2020 report by the Federal Interagency Task Force on Long-Term Care Insurance presenting recommendations for improving the regulation of LTCI in the United States.[340] FIO continues to monitor the implementation of the recommendations in the LTCI Task Force Report.

I. Financial Stability Oversight Council

Pursuant to the Dodd-Frank Act, the purposes of FSOC are to: (1) identify risks to the financial stability of the United States; (2) promote market discipline; and (3) respond to emerging threats to the stability of the U.S. financial system.[341] The Dodd-Frank Act designated the FIO Director as a non-voting member of FSOC.[342] Among other things, the role of the FIO Director in regard to FSOC includes the authority to recommend to FSOC that it designate an insurer, including the

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[336] *See* NAIC, *Long-Term Care Insurance Task Force: Meeting Summary Report* (August 7, 2020), https://content.naic.org/sites/default/files/national_meeting/LTCI%28EX%29TF%20Summary_1.pdf (discussing subgroup formation). For 2021 subgroups' membership and charges, see "Long-Term Care Insurance Multistate Rate Review (EX) Subgroup," NAIC, https://content.naic.org/cmte_ex_ltci_mrr_tf.htm; "Long-Term Care Insurance Reduced Benefit Options (EX) Subgroup," NAIC, https://content.naic.org/cmte_ex_ltci_rbo_tf.htm; "Long-Term Care Insurance Financial Solvency (EX) Subgroup," NAIC, https://content.naic.org/cmte_ex_ltci_fs_tf.htm.

[337] NAIC, *Long-Term Care Insurance (EX) Task Force: Meeting Agenda* (August 13, 2021), https://content.naic.org/sites/default/files/national_meeting/LTCI%28EX%29TaskForce_081321_Materials.pdf.

[338] Ad Hoc Drafting Group of the NAIC Long-Term Care Insurance (EX) Task Force, *Long-Term Care Insurance Multi-State Rate Review Framework* (draft April 9, 2021), https://content.naic.org/sites/default/files/inline-files/MSA%20Framework%20Operations%20040921%20Exposure%20Draft.pdf (operational sections); *Long-Term Care Insurance Multi-State Rate Review Framework* (draft June 10, 2021), https://content.naic.org/sites/default/files/inline-files/MSA%20Framework%20Actuarial%20061021%20for%20Exposure.pdf (actuarial sections).

[339] *See, e.g.*, FIO, *2018 Annual Report*, 59-61; FIO, *2019 Annual Report*, 71-74; FIO, *2020 Annual Report*, 88-91.

[340] Treasury, *LTCI Task Force Report*.

[341] 12 U.S.C. § 5322(a)(1).

[342] There are two other insurance-related FSOC members: a state insurance commissioner designated by the state insurance commissioners, who serves a two-year term, and an independent member having insurance expertise who is appointed by the President and confirmed by the Senate for a six-year term. The latter is a voting member, and the former is a non-voting member.

affiliates of such insurer, as an entity subject to regulation as a nonbank financial company supervised by the Federal Reserve.[343]

Since FIO's last Annual Report, FIO has participated in various FSOC activities. These include meetings of the Systemic Risk Committee and the FSOC Deputies Committee, as well as meetings of the FSOC (all of which during this period were attended by the FIO Director). As directed in the Executive Order on Climate-related Financial Risk, the Secretary is engaging with FSOC on a range of activities, including producing an FSOC report addressing, among other topics, efforts by its member agencies to integrate consideration of climate-related financial risks in their policies and programs. FIO is involved with this work as well.[344]

Each year FSOC produces an Annual Report.[345] For the 2020 report, and in cooperation with NAIC staff (who support the state insurance commissioner appointed to FSOC), FIO contributed to the sections of that report regarding insurance companies and state regulatory developments.[346]

J. State Initiatives on Systemic Risk and Solvency

Since FIO's last Annual Report, the NAIC has continued its efforts to advance its Macroprudential Initiative. The NAIC's work is being conducted through its Financial Stability Task Force (FSTF) in connection with the development of the Liquidity Stress Testing Framework (LST Framework) and the GCC—the foundation for the NAIC's capital stress testing regime.[347] On December 9, 2020, the NAIC adopted amendments to the Insurance Holding Company System Regulatory Act (#440) that included the LST Framework and the GCC and added both as accreditation standards.[348] The LST Framework and the GCC are each addressed in turn below.

[343] There are presently no such designated insurers.

[344] *See* Exec. Order No. 14,030, at § 3(a). More information regarding FIO's climate-related activities, including those relative to Section 3(b)(i) of the Executive Order on Climate-related Financial Risk (which directly tasks FIO), can be found in Section III.B.

[345] *See, e.g.*, FSOC, *Annual Report* (December 3, 2020), https://home.treasury.gov/system/files/261/FSOC2020AnnualReport.pdf *(2020 FSOC Annual Report*).

[346] FSOC, *2020 FSOC Annual Report*, §§ 3.5.2.7 and 4.3.5.

[347] For more on the Macroprudential Initiative, see FIO, *2020 Annual Report*, 46-48.

[348] Memorandum from the Financial Condition (E) Committee to the Financial Regulation Standards and Accreditation (F) Committee (March 8, 2021), 1, https://content.naic.org/sites/default/files/inline-files/Holding%20Company%20Revisions%20-%20GCC%20and%20LST.pdf.

1. Macroprudential Initiative and Liquidity Stress Testing Framework

The NAIC adopted the 2020 version of the LST Framework on May 12, 2021 and expects to develop related lead state guidance over the next few months.[349] LST Framework testing results are due on September 30, 2021 from the 23 companies that fall within its scope.[350]

The LST Framework's primary goal is to help regulators understand how asset fire sales from insurers under prescribed stressed scenarios impact the financial markets.[351] The LST Framework is also intended to assist regulators in the prudential oversight of insurance entities and groups. The LST Framework's objective is to complement other group supervisory modernization initiatives and supplement, not replace, an insurer's internal liquidity risk management requirements.[352]

The LST Framework applies a cash-flow based approach to assessing liquidity under two separate hypothetical stress scenarios: (1) an adverse liquidity stress for insurers, and (2) a disintermediation stress that involves an interest rate spike.[353] The scenarios are determined by the NAIC and incorporate both prescribed and internal company assumptions for modeling purposes. In addition, the LST Framework requests an insurer-specific most adverse scenario. Entities that fall within the scope of the LST Framework include holding companies, life insurance entities, and material non-insurance entities.[354] However, legal entity asset managers, mutual funds, and banks within an insurance group are excluded unless liquidity stress testing, conducted by the lead state regulator, determines that these entities are a source of liquidity risk to the entities that fall within the scope criteria, in which case specific disclosures on the related results will be required.[355] Under the LST Framework, life insurers may use their own models and assumptions to model cash outflows from liabilities. Additionally, some commenters have noted that the scenarios do not consider increased demands on the liabilities or take into account

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[349] NAIC, *Financial Stability (E) Task Force Virtual Meeting Minutes* (May 12, 2021), https://content.naic.org/sites/default/files/call_materials/FSTF%20Minutes%20051221_Final.pdf.

[350] *See* NAIC, *NAIC 2020 Liquidity Stress Test Framework for Life Insurers Meeting the Scope Criteria* (May 2021), 9, https://content.naic.org/sites/default/files/inline-files/Final%202020%20LST%20Framework_0.pdf. In developing scope criteria for determining which life insurance groups would be subject to the liquidity stress testing, the NAIC identified six life insurance activities that are assumed to be correlated with liquidity risk. However, the scope criteria were limited to the availability of data in statutory reporting.

[351] NAIC, *NAIC 2020 Liquidity Stress Test Framework for Life Insurers Meeting the Scope Criteria*, 8.

[352] Memorandum from the NAIC and CIPR to the Financial Condition (E) Committee (February 22, 2021), 4.

[353] The first scenario follows market conditions prescribed by the Federal Reserve for its 2017 Supervisory Scenarios for Annual Stress Tests required under the Dodd-Frank Act, stress testing rules and the Capital Plan Rule, with modifications. The second stress scenario focuses on an interest rate shock that resembles the rapidly rising interest rates and corresponding inflationary period experienced during the late 1970s and early 1980s, with modifications. *See* NAIC, *2020 NAIC Liquidity Stress Test Framework for Life Insurers Meeting the Scope Criteria.*

[354] The definition of materiality could be contingent on an insurer's ORSA. *See* NAIC, *Draft Minutes of NAIC Financial Stability (EX) Task Force* (December 9, 2019), in *Financial Stability Task Force Summer National Meeting Mate*rials (August 5, 2020), 3, https://content.naic.org/sites/default/files/national_meeting/Materials_23.pdf.

[355] *See* NAIC, *NAIC 2020 Liquidity Stress Test Framework for Life Insurers Meeting the Scope Criteria*, 13-15.

other issues that may affect liquidity needs. For example, unexpected cash demands from policyholders from credit downgrades, collateral calls, and reputational damage are not considered.[356]

The LST Framework is a first step in an iterative process for state regulators to better understand a life insurance group's solvency in a stress environment, as well as the potential effects on the financial markets from a related fire-sale of assets. FIO will continue to monitor the development of the LST Framework and its implementation by the U.S. states, including: (1) its effectiveness for life insurance entities and as a macroprudential tool, (2) its scope, and (3) the transparency of company-specific assumptions.

2. Group Capital Calculation

Group supervision of insurance holding companies has been described as regulators taking a "windows and walls" approach: "windows" to scrutinize group activity and assess its potential impact on the ability of the insurer to pay claims and "walls" to protect the capital of the insurer by requiring the insurance commissioner's approval of material related-party transactions.[357] After the 2008 financial crisis, the impact upon U.S. insurers of the AIG holding company system's near collapse caused the NAIC to re-evaluate its group supervisory framework. Beginning in 2008, as part of the NAIC Solvency Modernization Initiative (SMI), the NAIC reviewed lessons learned from the financial crisis and studied the potential impact of non-insurance operations on insurance companies in the same group. Through SMI, the NAIC adopted revisions to group supervision, maintaining the "walls" while enhancing the "windows" of the system.[358]

The NAIC began development of the GCC in 2015. The NAIC considered the GCC to be an extension of the SMI, intended to provide additional analytical information for lead states to use in assessing group risks and capital adequacy of a holding company group since no consistent or coherent analytical framework then existed for evaluating such information and monitoring trends.[359] The GCC uses a bottom-up aggregation approach to both the minimum required regulatory capital and available capital based on the valuation of assets and liabilities of the various corporate entities, including insurers, financial, and non-financial businesses. The GCC and related financial reporting is intended to provide comprehensive accounting and transparency, making risks more easily identifiable and quantifiable. It is designed to

[356] *See* Letter from American Academy of Actuaries to Liquidity Assessment (EX) Subgroup (February 6, 2020), https://www.actuary.org/sites/default/files/2020-02/Academy_MPTF_Comment_Letter_on_LST_Framework_02062020.pdf. *See also* Memorandum from Risk & Regulatory Consulting, LLC, to Liquidity Assessment (EX) Subgroup (February 6, 2020), https://www.riskreg.com/pdfs/comments/LSTF-Exposure-Draft-Liquidity-Comment-2-06-2020.pdf.

[357] *See* "NAIC Group Supervision," NAIC, last updated on October 1, 2019, https://content.naic.org/cipr_topics/topic_group_supervision.htm.

[358] Concepts addressed in the SMI include communication between regulators and supervisory colleges, access to and collection of information from groups, enforcement measures, and group capital assessment.

[359] *See* "NAIC Group Capital Calculation," NAIC, last updated April 8, 2021, https://content.naic.org/cipr_topics/topic_group_capital_calculation.htm.

complement existing group supervisory tools such as Form F Enterprise Risk Reports, ORSA, and Form B Holding Company Filings. The GCC is also designed to deliver information that will facilitate earlier engagement by insurance regulators with company management regarding potential areas of concern, as well as communication with other insurance regulators. The GCC could be used by regulators to evaluate the capital position of a group and provide information on available and required capital of the material entities in the group, which would assist in understanding how capital is distributed across an entire group.

The NAIC adopted the GCC in December 2020 through revisions to the Insurance Holding Company System Model Act and supporting Insurance Holding Company System Model Regulation.[360] These revisions provide regulatory authority for a confidential filing process and include provisions addressing which groups must file the GCC. The GCC, as adopted, reflects revisions made after field testing in 2019 with more than 30 U.S.-based firms and subsequent industry consultation. These revisions include: (1) a reduced calibration level; (2) an increased additional debt allowance limit; (3) removal of the Pure Relative Scalar Option for some foreign jurisdictions; and (4) removal of certain captive adjustments from the sensitivity analysis.[361]

As of June 30, 2021, no state had adopted the revised model law and model regulation provisions with the GCC. The NAIC's goal, however, is to have all revisions enacted in all states by November 2022 as the first formal GCC filings are expected that year.

Box 6: Risk-Based Capital for Bonds and Real Estate

The NAIC adopted revisions to the RBC/C1 (default risk) factors for bonds and real estate on June 30, 2021, after spending several years developing improvements to existing measures.[362]

Bonds: In developing the RBC factor revisions for bonds (i.e., corporate securities, private placements, municipals, and sovereigns), the NAIC used data and methodologies in an attempt to have the RBC factors more appropriately reflect economic risks. A focus of this work was to better assess insolvency risks and help identify potentially weakly capitalized insurers.[363] The

[360] *See* Memorandum from the Financial Condition (E) Committee to the Financial Regulation Standards and Accreditation (F) Committee.

[361] *Compare* "NAIC Group Capital Calculation Post Field Testing Staff Input" (May 19, 2020), https://content.naic.org/sites/default/files/call_materials/GCCWG%205.19.2020%20Materials.pdf *with* "NAIC Group Capital Calculation Instructions" (adopted November 17, 2020), https://content.naic.org/sites/default/files/inline-files/Attachment%2014-2020%20GCC%20Instructions.pdf.

[362] *See* NAIC, *Capital Adequacy (E) Task Force: RBC Proposal Form* (adopted June 30, 2021), https://content.naic.org/sites/default/files/inline-files/2021-11-L%20RBC%20Proposal.pdf (bond RBC factors); NAIC, *Capital Adequacy (E) Task Force: RBC Proposal Form* (adopted June 30, 2021), https://content.naic.org/sites/default/files/inline-files/2021-06-L%20RBC%20Proposal.pdf (real estate RBC factors).

[363] Moody's Analytics, *Preliminary Proposed Updates to RBC C1 Bond Factors for Discussion with Life Risk-Based Capital (E) Working Group* (April 22, 2021), https://content.naic.org/sites/default/files/call_materials/Agenda%20%26%20Materials%20LRBC%204-22-21_0.pdf.

newly adopted RBC factors for bonds are applied in a 20-category framework, replacing the existing NAIC six categories to achieve additional granularity.

Real Estate: The revised RBC factors for real estate are based on an analysis of historical real estate investment performance data. When RBC was adopted for real estate in 2000, limited experience on the default and loss for commercial real estate was available; however, increased access to more recent data sources provides potentially more meaningful analysis and information for development of RBC factors. The new base factor for real estate reported on Annual Statement Schedule A is 11 percent and was developed by adding a margin of conservatism to real estate performance between 1978 and 2020. For assets with the characteristics of real estate (e.g., partnership or other structure) reported on Annual Statement Schedule BA, a higher factor of 13 percent is used to account for these structures' lower levels of transparency.

FIO will continue monitoring how the recalibration of and expansion in the RBC factors for bonds and the reductions in the RBC factors for real estate will affect the investment allocations of insurers.

K. International Developments

1. IAIS

Pursuant to the Dodd-Frank Act, FIO represents the United States at the IAIS, working with the other U.S. members of the IAIS.[364] The IAIS mission is "to promote effective and globally consistent supervision of the insurance industry in order to develop and maintain fair, safe and stable insurance markets for the benefit and protection of policyholders, and to contribute to global financial stability."[365] The IAIS is the international standard-setting body responsible for developing and supporting the implementation of principles, standards, and guidance for the supervision of the insurance industry.[366]

Figure 40 illustrates the IAIS organizational structure in 2020.[367] FIO is a permanent member of the IAIS's Executive Committee (ExCo), and is a member of each of the parent committees that report to ExCo, and of various working groups and task forces (collectively, subcommittees) across the organization.[368] FIO's *2020 Annual Report* discussed several of the subcommittees

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[364] The U.S. members of the IAIS—FIO, the Federal Reserve, the NAIC, and the state and territory insurance regulators who represent the individual sovereign jurisdictions within the United States—are informally known, collectively, as Team USA. For more background information on the IAIS, see FIO, *2020 Annual Report*, 74-76.

[365] IAIS, *IAIS Annual Report 2018* (2019), 8, https://www.iaisweb.org/page/about-the-iais/annual-report/file/87195/iais-2018-annual-report-single-page.

[366] *See* IAIS, *IAIS Annual Report 2018*, 6.

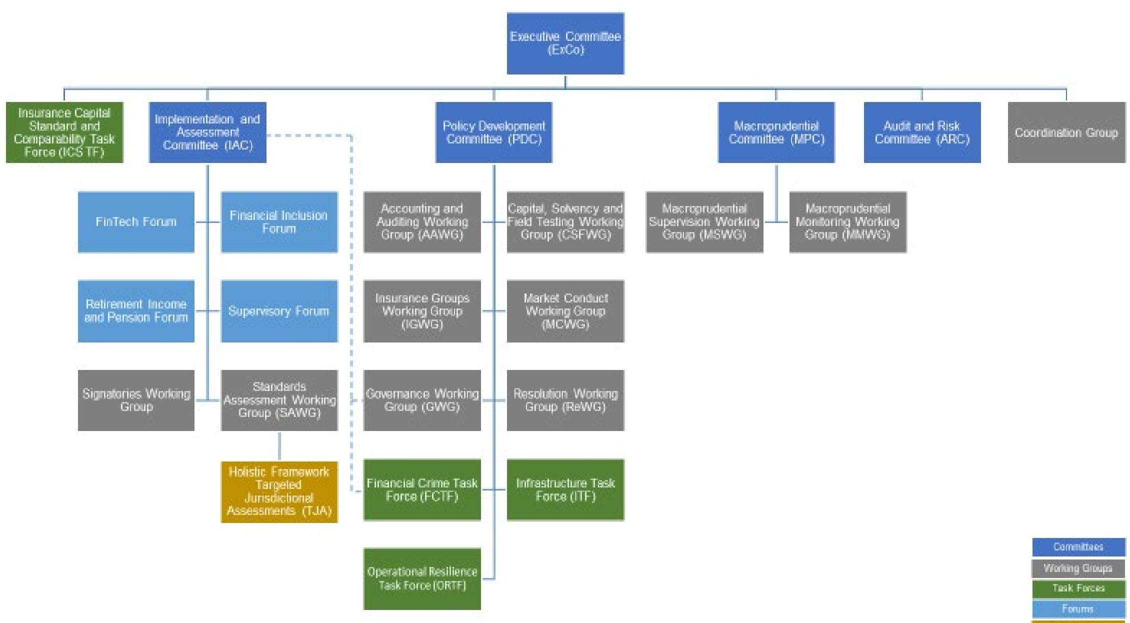
[367] Figure does not include all workstreams and expert teams. *See also* "Organisational Structure," IAIS, https://www.iaisweb.org/page/about-the-iais/organisational-structure.

[368] For additional details, see FIO, *2020 Annual Report*, 75-76.

formed early in 2020.[369] In addition, the IAIS formed expert teams to support the baseline assessment and targeted jurisdictional assessment for the Holistic Framework, as well as two task forces: (1) the Infrastructure Task Force, in order to help refine the ICS framework; and (2) the Operational Resilience Task Force, to examine insurance sector operational resilience as it relates to third-party outsourcing and cyber resilience.[370] FIO joined the expert teams and both task forces.

Over the last several years, the IAIS had been more focused on developing and refining standards—namely, the Insurance Core Principles (ICPs), the Common Framework for the Supervision of Internationally Active Insurance Groups (ComFrame), and the Holistic Framework—as part of the reforms arising from the 2008 financial crisis.[371] In line with its 2020-2024 Strategic Plan and Financial Outlook, the IAIS has increased its focus on assessing the implementation of standards and applying best practices, as well as increasing its efforts to help its members understand the challenges posed by climate risk, cyber risk, technological innovation, and sustainable development.[372]

Figure 40: IAIS Organizational Structure in 2021



Source: FIO

[369] FIO, *2020 Annual Report*, 75 (discussing formation of Macroprudential Supervision Working Group and the Macroprudential Monitoring Working Group).

[370] For more information on the Insurance Capital Standard, see Section III.K.1.b. For more information on cyber risk, see Section III.C.

[371] For more information on the ICPS and ComFrame, see FIO, *2020 Annual Report*, 76-78.

[372] *See* IAIS, *The IAIS Strategic Plan 2020-2024* (June 2019), https://www.iaisweb.org/page/about-the-iais/strategic-plan/file/82533/2020-2024-strategic-plan.

a) Holistic Framework

The IAIS also has continued work on its Holistic Framework for the Assessment and Mitigation of Systemic Risk in the Insurance Sector (Holistic Framework) and its three key elements: (1) supervisory material, (2) a GME, and (3) an implementation assessment of related supervisory material.[373]

The onset of the COVID-19 pandemic in March 2020 led the IAIS to make some modifications in key projects, including the Holistic Framework.[374] Among other things, the IAIS repurposed the 2020 GME to be focused on the COVID-19 pandemic.[375] In 2021, the IAIS intends to collect regular GME data for both year-end 2019 and year-end 2020. In November 2020, the IAIS published its first of two public consultation documents pertaining to the development of a liquidity monitoring metric. Development of the metrics continues with an additional consultation planned for publication in 2021. In addition, the IAIS continues to monitor the insurance sector more broadly and is conducting research pertaining to the insurance sector's investment exposures to climate-related risks as the 2021 GIMAR special topic.

The Holistic Framework implementation assessment by the IAIS is proceeding in two phases. The IAIS completed the first phase, a "baseline assessment," with an aggregate report on the implementation of supervisory materials by 26 jurisdictions.[376] This year, the IAIS launched phase two—a more intensive, targeted assessment of ten jurisdictions including certain U.S. states—with a series of thematic questionnaires and a planned on-site component.

b) Insurance Capital Standard

The IAIS advanced the ICS for internationally active insurance groups (IAIGs) into a five-year monitoring period in 2020, following six years of field testing by volunteer insurance groups.[377] The current 2020-2024 monitoring period will be followed by a second phase in 2025 when the ICS will be implemented as a prescribed capital requirement (PCR). The IAIS also aims to be in a position by the end of the monitoring period to assess whether the Aggregation Method (development of which is being led by the United States) provides comparable outcomes to the ICS. If the Aggregation Method produces similar outcomes, the IAIS would consider the

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[373] For more background and information on the Holistic Framework, see FIO, *2020 Annual Report*, 53-55. *See also* "Financial Stability," IAIS, https://www.iaisweb.org/page/supervisory-material/financial-stability.

[374] *See, e.g.*, IAIS, *2021-2022 Roadmap* (adopted February 22, 2021), www.iaisweb.org/page/about-the-iais/public-roadmap//file/95571/2021-2022-iais-public-roadmap (describing the IAIS 2020-24 Strategic Objectives, summarizing the IAIS response to the pandemic, and listing key projects and activities for 2021-22).

[375] For more information on the IAIS response to the pandemic, see Section III.A.2.a.

[376] IAIS, *Aggregate Report on the Results of the Holistic Framework Baseline Assessment* (June 2021), https://www.iaisweb.org/page/supervisory-material/implementation-and-capacity-building/assessments/file/97461/aggregate-report-on-the-results-of-the-holistic-framework-baseline-assessment-public.

[377] For additional background on the ICS, see FIO, *2020 Annual Report*, 49-50.

Aggregation Method to be an outcome-equivalent approach for implementation of the ICS as a PCR.[378]

The launch of the ICS monitoring period in January 2020 initiated the start of annual confidential reporting of the ICS by volunteer insurance groups and additional reporting at the option of group-wide supervisors.[379] The COVID-19 pandemic, however, reduced project participation and limited supervisory college discussions. To address the effects of the pandemic in the first year of the monitoring period, the IAIS provided operational relief to supervisors and firms by delaying the deadline for data submissions and allowing firms to continue reporting on a best-efforts basis (similar to the field testing phase). During 2020, the IAIS began to receive feedback from supervisors and firms, including insight about the appropriateness and performance of the reference ICS relative to existing capital standards—one of the main goals of the monitoring period towards improving the ICS framework. In addition, the pandemic provided the IAIS with a view of ICS performance in a period of global stress. Thirty-nine insurance groups participated in the ICS confidential reporting exercise in 2020, six of which were from the United States.[380]

To further refine the design of the ICS with regard to infrastructure and strategic equity investments, the IAIS formed the Infrastructure Task Force (ITF) in March 2020. The ITF's mandate is to recommend whether the IAIS should pursue a differentiated capital treatment under the ICS for infrastructure and/or strategic equity investments. Toward that end, the ITF launched two stock-take surveys in September 2020—one targeted to IAIS members and the second to the public.[381] The surveys were intended to gain an overview of the treatment of infrastructure and strategic equity investments in existing supervisory frameworks and of potential data sources that could support a potential calibration exercise. Included in the IAIS

[378] IAIS, *Implementation of ICS Version 2.0* (November 2, 2017), https://www.iaisweb.org/file/69796/implementation-of-ics-version-20. The Aggregation Method is an alternative group capital approach to the ICS, under development by the United States and other interested jurisdictions.

[379] The purpose of the monitoring period is to monitor the performance of the ICS over a period of time, and not to monitor the capital adequacy of IAIGs. IAIGs are not expected to manage their businesses to the ICS during this time and as a result no supervisory actions will be taken if ICS coverage ratios fall below 100 percent. Furthermore, the monitoring period is intended to be a period of stability for the reference ICS and additional reporting. This does not preclude possible clarifications/refinements and correction of major flaws or unintended consequences identified during the monitoring period to improve the ongoing development of the ICS. *See* IAIS, *Explanatory Note on the Insurance Capital Standard (ICS) and Comparability Assessment* (November 2019), https://www.iaisweb.org/page/news/press-releases//file/87173/explanatory-note-on-the-ics-and-comparability-assessment.

Optional reporting for the ICS can include ICS results based on an alternative valuation methodology (Generally Accepted Accounting Principles with Adjustments or GAAP Plus) and other methods of calculating the ICS capital requirement including with the use of internal models and dynamic hedging.

[380] *See* IAIS, "Successful First Year of Monitoring of the Global Insurance Capital Standard (ICS) on Route to Adoption in 2024," news release, March 8, 2021, https://www.iaisweb.org/news/press-release-successful-first-year-of-monitoring-of-the-global-insurance-capital-standard-ics-on-route-to-adoption-in-2024.

[381] *See* "Stock-Take Questionnaire on Infrastructure and Strategic Equity," IAIS, https://www.iaisweb.org/page/consultations/closed-consultations/2020/stock-take-questionnaire-on-infrastructure-and-strategic-equity.

surveys were strawman proposals on definitions and criteria, aimed at enabling comparisons with existing regulatory frameworks and assist with advancing views from stakeholders.

As ICS monitoring entered its second year in 2021, the comparability work with regard to the Aggregation Method also continued to progress, including through a public consultation issued in November 2020.[382] After receiving public comments, the IAIS published the final definition of comparable outcomes and high-level principles in May 2021.[383] The definition and principles will govern the development of the criteria that will be used in the comparability assessment of the Aggregation Method to the ICS scheduled for 2023. Along with the NAIC and the Federal Reserve, FIO is a member of the IAIS drafting group, which is tasked with developing appropriate criteria to carry out the comparability assessment. The IAIS intends to release the draft criteria or public consultation during the fourth quarter 2021.[384]

In the second half of 2023, the IAIS plans to issue a public consultation on the ICS as a PCR and initiate an economic impact assessment intended to identify incentives and unintended consequences of ICS implementation.[385] The aim of the IAIS public consultation and economic impact assessment is to address any findings in the final form of the ICS before implementation of the ICS as a PCR.[386] FIO will maintain its strong engagement and leadership role at the IAIS on the ICS and the comparability assessment for the Aggregation Method during the monitoring period.

Moreover, FIO will continue to work collectively with other U.S. members of the IAIS and shape the ICS in a manner that better accommodates U.S. insurance markets and consumers. To that end, FIO published a Request for Information on the ICS in October 2020, seeking views on potential effects to the U.S. insurance markets from implementation of the ICS, including the implications for insurer competitiveness and product cost and availability for consumers.[387] FIO intends to continue its work on the ICS through a study that can be used to inform the further refinement of the ICS and plans to collaborate with the U.S. members of the IAIS on this work.

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[382] "Public Consultation on the Draft Definition and High-Level Principles to Inform the Criteria that Will Be Used to Assess Whether the Aggregation Method Provides Comparable Outcomes to the Insurance Capital Standard," IAIS, https://www.iaisweb.org/page/consultations/closed-consultations/2021/draft-definition-of-comparable-outcomes-and-high-level-principles.

[383] IAIS, "IAIS Completes Key Milestone in Aggregation Method (AM) Comparability Assessment Project," news release, May 4, 2021, https://www.iaisweb.org/page/news/press-releases/file/96815/4-may-2021-press-release-iais-completes-key-milestone-in-am-comparablity-assessment.

[384] IAIS, *Work Plan and Timeline 2020-24* (November 2019), https://www.iaisweb.org/page/supervisory-material/insurance-capital-standard/file/87285/work-plan-and-timeline-2020-24.

[385] IAIS, *Work Plan and Timeline 2020-24*.

[386] IAIS, "Explanatory Note on the Insurance Capital Standard (ICS) and the Comparability Assessment," news release, November 14, 2019, https://www.iaisweb.org/page/news/press-releases//file/87173/explanatory-note-on-the-ics-and-comparability-assessment.

[387] Federal Insurance Office Study on the Insurance Capital Standard, 85 Fed. Reg. 64228 (October 9, 2020), https://www.federalregister.gov/documents/2020/10/09/2020-22384/federal-insurance-office-study-on-the-insurance-capital-standard.

c) Implementation Initiatives

FIO is actively engaged on the implementation initiatives at the IAIS, participating in the various activities that facilitate effective supervision of the insurance sector on a national level across the United States. The IAIS assesses implementation of ICPs through a peer review process and member assessment process. In 2021, the IAIS published an aggregate report on implementation of ICP 19 (Conduct of Business).[388] It currently is conducting a peer review process on ICP 9 (Supervisory Review and Reporting) and ICP 10 (Preventive Measures, Corrective Measures, and Sanctions).[389]

d) Other IAIS Work

With respect to cyber risk, the IAIS published a report on cyber risk underwriting in December 2020.[390] The IAIS formed the Operational Resilience Task Force in response to the increasing significance of cyber risk. This Task Force will develop supervisory guidance and material on information technology, third-party outsourcing, and insurance sector cyber resilience; it may also look at integrating lessons on ensuring business continuity over an extended period into supervisory guidance.[391]

The IAIS is expanding its work on issues related to climate risk and sustainability.[392] In addition to publishing an application paper on the topic,[393] the IAIS has begun to form a dedicated, senior-level steering group that will coordinate the IAIS's climate-related work and represent the IAIS on climate issues at international organizations such as the FSB, SIF, and the Central Banks and Supervisors Network for Greening the Financial System (NGFS). The IAIS, SIF, and NGFS announced in July 2021 a "Climate Training Alliance," which will establish a dedicated online portal for global training on climate risks for central banks and insurance supervisors.[394]

The IAIS continues to develop supervisory materials on a variety of topics, including application papers (to help guide the practical application of supervisory material) and issues papers (to

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[388] IAIS, *Aggregate Report of PRP on ICP 19* (June 2021), https://www.iaisweb.org/page/supervisory-material/implementation-and-capacity-building/assessments/file/97846/aggregate-report-of-prp-on-icp-19.

[389] *See* IAIS, *Questionnaire PRP ICPs 9 and 10* (August 2021), https://www.iaisweb.org/page/supervisory-material/implementation-and-capacity-building/assessments/file/98326/draft-questionnaire-prp-icps-9-and-10.

[390] IAIS, *Cyber Risk Underwriting: Identified Challenges and Supervisory Considerations for Sustainable Market Development* (December 2020), https://www.iaisweb.org/page/supervisory-material/other-supervisory-papers-and-reports/file/94255/cyber-risk-underwriting-identified-challenges-and-supervisory-considerations-for-sustainable-market-development. For more on cyber risk, see Section III.C.

[391] IAIS, *2021-2022 Roadmap*.

[392] For more on climate-related risks, see Section III.B.

[393] IAIS and SIF, *Application Paper on the Supervision of Climate-Related Risk in the Insurance Sector*.

[394] IAIS, *et al*., "International Financial Organisations Unite with the Central Bank and Financial Supervisory Community to Launch the Central Banks' and Supervisors' Climate Training Alliance (CTA) Ahead of COP26," news release, July 9, 2021, https://www.sustainableinsuranceforum.org/international-financial-organisations-unite-with-the-central-bank-and-financial-supervisory-community-to-launch-the-central-banks-and-supervisors-climate-training-alliance-cta-ahea/.

provide topical background, current practices, examples, or studies and/or identify related regulatory and supervisory issues and challenges). In the past year, the IAIS published: *Application Paper on the Supervision of Climate-related Risks in the Insurance Industry* (May 2021); *Application Paper on Resolution Powers and Planning* (June 2021) (developed by the Resolution Working Group); and *Application Paper on Supervision of Control Functions* (June 2021).[395] The IAIS continues its effort to promote transparency by publishing draft papers and other materials for public comment through consultations. Since the developments noted in FIO's *2020 Annual Report*, IAIS consultations have also included: Request for Feedback on the Impact of COVID-19 (comment deadline September 4, 2020); Development of Liquidity Metrics: Phase 1 – Exposure Approach (comment deadline February 7, 2021); Draft Application Paper on Macroprudential Supervision (comment deadline May 7, 2021); Revised Draft Application Paper on Combating Money Laundering and Terrorist Financing (comment deadline July 17, 2021); Draft Issues Paper on Insurer Culture (comment deadline August 23, 2021); and Revised Draft Application Paper on Supervisory Colleges (comment deadline August 24, 2021).[396]

2. Covered Agreements

The Bilateral Agreement between the United States of America and the European Union on Prudential Measures Regarding Insurance and Reinsurance, generally known in the United States as the U.S.-EU Covered Agreement, was signed by the parties in September 2017.[397] It entered into force on April 4, 2018.[398] In anticipation of the withdrawal of the United Kingdom from the European Union, in 2018 the United States and the United Kingdom entered into a substantively similar agreement, known as the U.S.-UK Covered Agreement.[399] The U.S.-UK Covered Agreement entered into force on December 31, 2020.[400]

[395] "Application Papers," IAIS, https://www.iaisweb.org/page/supervisory-material/application-papers.

[396] *See* "Consultations," IAIS, https://www.iaisweb.org/page/consultations.

[397] Treasury, "Treasury, USTR Sign Covered Agreement on Prudential Insurance and Reinsurance Measures with the European Union," news release, September 26, 2017, https://home.treasury.gov/news/press-releases/sm0164. For the agreement text, see "Bilateral Agreement between the United States of America and the European Union on Prudential Measures Regarding Insurance and Reinsurance," https://www.state.gov/18-404/. Background information, both covered agreements, and a collection of related documents are accessible on Treasury's website: "Covered Agreements," Treasury, https://home.treasury.gov/policy-issues/financial-markets-financial-institutions-and-fiscal-service/federal-insurance-office/covered-agreements.

[398] *See Notice Concerning the Entry into Force of the Bilateral Agreement between the European Union and the United States of America on Prudential Measures Regarding Insurance and Reinsurance*, 2018 O.J. (L 91), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.091.01.0001.01.ENG&toc=OJ:L:2018:091:TOC.

[399] Bilateral Agreement between the United States of America and the United Kingdom on Prudential Measures Regarding Insurance and Reinsurance (December 18, 2018), Treasury, https://home.treasury.gov/policy-issues/financial-markets-financial-institutions-and-fiscal-service/federal-insurance-office/covered-agreements/us-uk-covered-agreement. *See also* FIO, *2019 Annual Report*, 56-57 (comparing the two agreements).

[400] *See* Entry into Force Correspondence, https://home.treasury.gov/system/files/311/US-UK-Covered-Agreement-Entry-Into-Force-Letters.pdf.

A "covered agreement" is an international bilateral or multilateral agreement on insurance or reinsurance that "relates to the recognition of prudential measures" and that "achieves a level of protection for insurance or reinsurance consumers that is substantially equivalent to the level of protection achieved" under U.S. state-based regulation.[401] FIO is authorized under the Dodd-Frank Act to assist the Secretary in negotiating covered agreements.[402] The U.S.-EU Covered Agreement was the first ever entered into by the United States and the U.S.-UK Covered Agreement is the only other covered agreement that the United States has entered into to date.

FIO discussed the background and purpose of these agreements in prior reports.[403] In general, the agreements address three areas of prudential insurance supervision: group supervision; reinsurance, including reinsurance collateral; and exchange of information between supervisory authorities. These agreements resolve on a national basis longstanding concerns arising from both the prudential approach to credit for reinsurance of U.S. states for U.S. insurers that cede business to EU and UK reinsurers, and the prudential approach of the EU member states and the UK to U.S. insurance groups with operations in those jurisdictions.[404]

a) Federal Preemption

Because the business of insurance in the United States is largely regulated by the U.S. states, successful implementation of these covered agreements on a national basis contemplates action by each of the U.S. states to conform relevant laws and regulations to the provisions of the agreements, particularly regarding the conditions for elimination of collateral requirements applicable to EU and UK reinsurers accepting business from U.S. ceding insurers. If such state action does not occur within the implementation periods set out in the agreements, state insurance measures that are inconsistent with the agreements may be subject to preemption, pursuant to a preemption determination made by the FIO Director in accordance with the FIO Act.[405]

Under Article 9, Paragraph 4 of both agreements, the United States is obligated to begin evaluating state insurance measures for potential preemption not later than the first day of the month, 42 months after the date the agreement was signed, i.e., by March 1, 2021.[406] Further,

[401] FIO Act, 31 U.S.C. § 313(r)(2).

[402] The authority is exercised jointly with the United States Trade Representative.

[403] *See* FIO, *2018 Annual Report*, 41-55; FIO, *2019 Annual Report*, 54-64.

[404] *See* FIO, *2018 Annual Report*, 41-45. "Credit for reinsurance" describes the degree to which, under U.S. statutory insurance accounting, ceding insurers are permitted to recognize transfers of risk to reinsurers as reductions of policy liabilities or as assets, thereby freeing up regulatory capital to support new and existing business. FIO, *The Breadth and Scope of the Global Reinsurance Market and the Critical Role Such Market Plays in Supporting Insurance in the United States* (2014), 11, https://www.treasury.gov/initiatives/fio/reports-and-notices/Documents/FIO%20-Reinsurance%20Report.pdf.

[405] *See* FIO, *2019 Annual Report*, 58; FIO, *2020 Annual Report*, 79-80.

[406] "[O]n a date no later than the first day of the month, 42 months after the date of signature of this Agreement, the United States shall begin evaluating a potential preemption determination under its laws and regulations with respect to any U.S. State insurance measure that the United States determines is inconsistent with this Agreement and results

the United States "shall complete any necessary preemption determination" not later than the first day of the month, 60 months after signature (September 1, 2022).[407]

FIO is currently reviewing the relevant state insurance laws and regulations, and is engaging proactively and cooperatively with the NAIC and individual states as part of that work.[408] FIO is required to report annually to Congress on "actions" taken regarding preemption of inconsistent state insurance measures.[409] The Preemption Report for Fiscal Year 2021 (issued concurrently with this Report) does not identify any such actions.[410] Implementation progress is further discussed below.

b) NAIC Progress on Credit for Reinsurance Models and Implementation

In 2019, the NAIC adopted revisions to its Credit for Reinsurance Model Law (#785) and Regulation (#786) intended to "make the models consistent with provisions of covered agreements with the European Union and United Kingdom with respect to reinsurance collateral requirements."[411] The NAIC subsequently designated those amendments as parts of its state insurance regulation accreditation standard, effective September 1, 2022.[412] Under the amended models, newly designated categories of "reciprocal jurisdictions" and "reciprocal reinsurers" were defined to incorporate into the respective models that reinsurers domiciled in the relevant jurisdictions would be prospectively eligible for the collateral reductions contemplated by the covered agreements.

in less favourable treatment of an EU insurer or reinsurer than a U.S. insurer or reinsurer domiciled, licensed, or otherwise admitted in that U.S. State.... [O]n a date no later than the first day of the month 60 months after the date of signature of this Agreement, the United States shall complete any necessary preemption determination under its laws and regulations with respect to any U.S. State insurance measure subject to such evaluation." U.S.-EU Covered Agreement, Article 9, Paragraph 4.

[407] U.S.-EU Covered Agreement, Article 9, Paragraph 4. *See also* U.S.-EU Covered Agreement, Article 10, Paragraph 2(d).

[408] *See* "Preemption Analysis," Treasury, https://home.treasury.gov/policy-issues/financial-markets-financial-institutions-and-fiscal-service/federal-insurance-office/covered-agreements/preemption-analysis.

[409] 31 U.S.C. § 313(n)(1).

[410] *See* "Reports and Notices," Treasury, https://home.treasury.gov/policy-issues/financial-markets-financial-institutions-and-fiscal-service/federal-insurance-office/reports-notices.

[411] NAIC, "NAIC Updates to Credit for Reinsurance Model Law and Regulation," news release, June 25, 2019, https://www.naic.org/Releases/2019_docs/credit_reinsurance_model.htm. The NAIC maintains a compendium of its model laws and regulations on its website: "Resource Center: Model Laws," NAIC, https://content.naic.org/model-laws. *See also* NAIC: Reinsurance Task Force, Credit for Reinsurance Model Law—Redlined (July 15, 2019), https://naic-cms.org/sites/default/files/inline-files/MO785%20redlined%206-25-19.pdf; Credit for Reinsurance Model Regulation—Redlined (July 15, 2019), https://naic-cms.org/sites/default/files/inline-files/MO786%20redlined%206-25-19.pdf.

[412] NAIC, *Summer National Meeting Executive Committee & Plenary Agenda* (August 14, 2020), https://content.naic.org/sites/default/files/national_meeting/Ex_Plenary_DRAFT_2.pdf (item 16); NAIC, *Executive Committee and Plenary Meeting Materials* (August 14, 2020), https://content.naic.org/sites/default/files/national_meeting/Materials_EXPlenary_asof_07-22.pdf (attachment 13).

The NAIC has taken various steps to encourage prompt action by the states to adopt the model revisions, and to facilitate implementation of the provisions of those amendments in a nationally efficient manner. For example, on June 9, 2020, the NAIC's Reinsurance Task Force adopted a new Uniform Checklist for Reciprocal Jurisdiction Reinsurers, to assist the states in administering the laws and regulations they are adopting to implement the covered agreements.[413] On July 23, 2021, through its Reinsurance Task Force, the NAIC adopted a revised and expanded "Process for Evaluating Qualified and Reciprocal Jurisdictions," which among other things establishes that the list of reciprocal jurisdictions will include all EU Member States and the UK so long as the covered agreements remain in force.[414] More recently, the NAIC has published for comment its "Review Process for Passporting Certified and Reciprocal Jurisdiction Reinsurers"—which in part explains and facilitates the process by which the NAIC Reinsurance Financial Analysis Working Group will "provide advisory support and assistance to states in the review of reinsurance collateral reduction applications."[415]

FIO expects that the foregoing procedures regarding "passporting" will "reduce the amount of documentation filed with the states and reduce duplicate filings."[416] When fully implemented these undertakings should ease the burden on each of the U.S. states, and on reinsurers from the EU and the UK, in establishing consistent application of the solvency and other consumer protection conditions of the covered agreements. FIO is monitoring on an ongoing basis implementation of the credit for reinsurance amendments by the U.S. states, and will take appropriate steps to ensure that future state insurance measures are consistent with the provisions of the covered agreements.

c) Progress of U.S. States on Credit for Reinsurance Amendments

In consultation with state regulators and the NAIC, FIO has continued to monitor the status of state efforts to pass legislation and adopt regulations consistent with the 2019 amendments to the NAIC credit for reinsurance models. The U.S. states have made substantial progress since FIO's *2020 Annual Report*. According to the NAIC, as of July 30, 2021, 42 U.S. states had amended credit for reinsurance measures based on Model Law #785 (up from 11), and 15 U.S. states had adopted revisions based on Model Regulation #786.[417]

FIO recognizes the individual and collective efforts of state insurance officials, state legislators, the NAIC, and other stakeholders in achieving this progress. At the same time, the adoption

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[413] NAIC, *Reinsurance Task Force Conference Call* (June 9, 2020), https://content.naic.org/sites/default/files/national_meeting/RTF%2008.2020%20Materials_0.pdf (attachment 1).

[414] NAIC, *Reinsurance Task Force: Meeting Summary Report* (July 27, 2021), https://content.naic.org/sites/default/files/call_materials/RTF%207.27.2021%20Summary.pdf.

[415] NAIC, *ReFAWG Review Process for Passporting Certified and Reciprocal Jurisdiction Reinsurers*, (Draft July 19, 2021), https://content.naic.org/sites/default/files/inline-files/ReFAWG%20Passporting%20Document%206-17-21.pdf. *See also* NAIC, *Reinsurance Task Force: Meeting Summary Report* (July 27, 2021).

[416] NAIC Model Regulation #786 (July 15, 2019), 786-19, https://content.naic.org/sites/default/files/inline-files/MO786%20redlined%206-25-19.pdf.

[417] NAIC, "State Adoption Maps," available through "Financial Condition Committee," NAIC, https://content.naic.org/cmte_e.htm ("documents" tab). *Compare* FIO, *2020 Annual Report*, 81-82.

metrics alone are not a determination by FIO that any given state's revisions conform to the models or are consistent with the covered agreements for preemption consideration. As noted above, FIO's state-by-state "consistency analysis" is ongoing. FIO takes this opportunity to urge those states that have not adopted legislation and regulation consistent with the provisions of the covered agreement to do so promptly.[418]

d) State Progress on Group Capital Assessment

Under Article 4(h) of the covered agreements, if U.S. insurance supervisors do not develop and implement a group capital assessment applicable to U.S. groups with insurance operations in the EU and UK, regulators from those jurisdictions could impose their domestic group capital requirements on such groups.[419] State-level work through the NAIC on developing the GCC, and on related model law and regulation texts, has been ongoing for a number of years. In December 2020, the NAIC adopted the GCC through revisions to the Insurance Holding Company System Model Act (#440) and Insurance Holding Company System Model Regulation (#450).[420]

After adopting the GCC, the NAIC initiated its procedures concerning accreditation to address the need and timing for states to adopt the revisions to models #440 and #450.[421] At a public meeting on April 12, 2020, the NAIC adopted a motion to move to accreditation in the ordinary course, which involves a longer implementation period. Notwithstanding the motion, the Financial Regulation Standards and Accreditation Committee (Accreditation Committee) stated that it "strongly encourages all states with a group impacted by the Covered Agreement to adopt the group capital calculation revisions to Model #440 and Model #450 for those groups effective Nov. 7, 2022."[422]

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[418] FIO considers the NAIC Credit for Reinsurance Model Law and Regulation, as revised in 2019, to provide a basis for U.S. states to revise their credit for reinsurance measures for purposes of achieving consistency with the covered agreements and avoiding a potential preemption determination under the FIO Act. *See* "Preemption Analysis," Treasury, https://home.treasury.gov/policy-issues/financial-markets-financial-institutions-and-fiscal-service/federal-insurance-office/covered-agreements/preemption-analysis.

[419] *See* FIO, *2018 Annual Report*, 47; U.S.-EU Covered Agreement, Article 10.

[420] Revised Models #440 and #450 (adopted December 9, 2020), together with instructional and explanatory documents, are available on the website of the NAIC Group Capital Calculation Working Group ("documents" tab), https://content.naic.org/cmte_e_grp_capital_wg.htm. For additional information on the GCC, see Section III.J.2.

[421] *See* NAIC, *Financial Regulation Standards and Accreditation Committee: Meeting Materials for August 14, 2021 Meeting* (July 22, 2021) (Attachments One and Four), https://content.naic.org/sites/default/files/national_meeting/FRSAC%20Summer%202021%20Open%20Agenda%20and%20Materials%208-14-21%20-%20EMAIL.pdf ("Due to this agreement, the Working Group recommends that the accreditation standard become effective Nov. 7, 2022 for those states who are the group wide supervisor of a group with operations in the EU or UK."). The date of November 7, 2022 conforms to date under the covered agreements after which EU and UK authorities are no longer required to forbear from application of their worldwide group capital standards to U.S. insurers operating there, if the relevant U.S. jurisdiction has not adopted a "group capital assessment." *See* U.S.-UK Covered Agreement, Article 10(e).

[422] NAIC, *Financial Regulation Standards and Accreditation Committee: Draft Minutes -April 12, 2021, Meeting*, https://content.naic.org/sites/default/files/national_meeting/FRSAC%20Summer%202021%20Open%20Agenda%20and%20Materials%208-14-21%20-%20EMAIL.pdf (Attachment One).

At its 2021 Summer National meeting, the Accreditation Committee voted to expose revised Models #440 and #450 as an accreditation standard for the customary one-year comment period, resulting in an effective date for accreditation standard purposes (if adopted) of not earlier than January 1, 2026. It appears that approximately 15 states presently serve as group wide supervisor for U.S. insurance groups with operations in the EU or UK. The covered agreements contemplate potentially substantial repercussions that could prejudice U.S. insurers and reinsurers in those markets if such states do not timely implement the GCC.[423] FIO intends to closely monitor the implementation and further development of the GCC, particularly with regards to those states that are the group-wide supervisor of U.S. insurance groups with operations in the EU and UK.

e) The Covered Agreement Joint Committees

The covered agreements each establish a "Joint Committee" to "provide the Parties with a forum for consultation and to exchange information on the administration of the Agreement and its proper implementation," and require the Parties to consult within the Joint Committee annually unless the Parties otherwise decide.[424] The Joint Committee under the U.S.-EU Covered Agreement held its third meeting (via video conference) on October 26, 2020.[425] The Joint Committee under the U.S.-UK Covered Agreement held its inaugural meeting (via video conference) on March 25, 2021.[426] The fourth meeting under the U.S.-EU Covered Agreement will be held prior to the end of 2021, hosted by the United States. These committees provide a forum for the Parties to consult and exchange information on the administration of the agreements and their proper implementation.

3. Additional International Engagements

a) Insurance Dialogue Projects

FIO is continuing its work with the EU-U.S. Insurance Dialogue Project, a collaborative effort among U.S. and EU insurance authorities to increase mutual understanding and enhance cooperation between the United States and the EU in order to promote business opportunities,

[423] Under Article 4(h), U.S. insurance groups could be exposed to Solvency II group supervision. Moreover, Article 10.2(b) suggests that EU and UK supervisors may not be barred from imposing collateral requirements on U.S. reinsurers ("the obligation of a Party set forth in Article 3, paragraphs 1 and 2 ... shall be applicable only if ... the supervisory authorities of the other Party exercise supervision as set forth in Article 4").

[424] U.S.-EU Covered Agreement, Article 7. It has been the practice of the United States to include key U.S. state insurance commissioners at all meetings of the Joint Committees to date.

[425] Treasury, "Third Joint Committee Meeting Under The Bilateral Agreement Between The United States Of America And The European Union On Prudential Measures Regarding Insurance And Reinsurance," news release, October 30, 2020, https://home.treasury.gov/news/press-releases/sm1171.

[426] Treasury, "First Joint Committee Meeting Under the Bilateral Agreement Between the United States of America and the United Kingdom on Prudential Measures Regarding Insurance and Reinsurance," news release," March 30, 2021, https://home.treasury.gov/news/press-releases/jy0086.

consumer protection, and effective supervision.[427] In addition to FIO, the members of the EU-U.S. Insurance Dialogue Project include state insurance commissioners, the Federal Reserve, the NAIC, EIOPA, the European Commission, and insurance regulators from France, Germany, Ireland, and the Netherlands.[428] The EU Project in 2020 and for the first half of 2021 continued to focus on cyber and big data issues, building upon the Project's work from prior years.[429] The next (virtual) public forum is currently scheduled for October 2021, and will include a summary of the prior work and a preview of new workstreams for the future, including climate-related work being led by FIO.

With the departure of the United Kingdom from the EU, FIO has started the U.S.-UK Insurance Dialogue Project. The United States and United Kingdom are two of the world's largest insurance markets, and insurers in each jurisdiction are important sources of insurance and reinsurance for customers in the other's market. In view of the key role that these markets serve for commercial, institutional, and individual policyholders in the United States and the United Kingdom, officials in both jurisdictions have a shared interest in maintaining close cooperation between their insurance authorities. The UK Project aims to increase mutual understanding and enhance cooperation between insurance authorities of the United Kingdom and the United States to promote policyholder protection and financial security, market integrity, and business opportunities, as well as to promote and enhance effective supervision related to insurance.

b) Organisation for Economic Co-Operation and Development

FIO remains engaged in the IPPC at the OECD, participating in the U.S. delegation together with representatives from the U.S. Departments of Commerce and Labor, and the NAIC. The OECD is a multilateral organization with 38 members that serves as a source of public policy advice and analyses for global and regional forums, including the G20, as well as the general public, and collects and publishes statistical data and analyses on assorted topics.[430]

Over the past year, the IPPC has contributed to a number of OECD publications, including *Global Insurance Market Trends 2020*, *Public and Private Sector Relationships in Long-term Care and Healthcare Insurance*, and *Insurance Markets in Figures*.[431] It also updated its prior

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[427] *See* EU-U.S. Dialogue Project, *EU-U.S. Dialogue Project: The Way Forward, Objectives and Initiatives for the Future* (December 2012), https://home.treasury.gov/system/files/311/eu_us_dialogue_wayforward_2012_1.pdf.

[428] *See, e.g.*, Maryland Insurance Administration, "Commissioner Birrane Selected for International Insurance Regulation Project," news release, February 2, 2021, https://insurance.maryland.gov/Pages/newscenter/NewsDetails.aspx?NR=2021293.

[429] *See* FIO, *2020 Annual Report*, 83-84.

[430] *See* OECD, *OECD Secretary-General's Report to Ministers 2020* (2020), 22, https://read.oecd.org/10.1787/27007c6c-en?format=pdf; OECD, "OECD Welcomes Costa Rica As Its 38th Member," news release, May 25, 2021, https://www.oecd.org/newsroom/oecd-welcomes-costa-rica-as-its-38th-member.htm.

[431] OECD, *Global Insurance Market Trends 2020* (January 2021), https://www.oecd.org/daf/fin/insurance/Global-Insurance-Market-Trends-2020.pdf; OECD, *Public and Private Sector Relationships in Long-term Care and Healthcare Insurance* (February 2021), http://www.oecd.org/daf/fin/insurance/Public-and-Private-Sector-Relationships-in-Long-term-Care-and-Healthcare-Insurance.pdf; OECD, *Insurance Markets in Figures* (June 2021), https://www.oecd.org/daf/fin/insurance/Insurance-Markets-in-Figures-2021.pdf.

analysis on policy responses to the COVID-19 pandemic and the pandemic protection gap in insurance.[432]

Going forward, the IPPC is expected to continue to address issues relating to, among other things, digitalization and innovation, long-term care insurance, and catastrophe risk insurance programs. Many of these issues relate to significant U.S. policy initiatives being led by Treasury, and therefore FIO plans to take a leadership role on insurance matters at the OECD.

c) Bilateral Dialogues

FIO engages with its international colleagues not only through multilateral forums like the IAIS, but also through additional formal and informal bilateral dialogues. For example, FIO continues to coordinate with its colleagues in India on insurance issues of mutual interest, following the execution of a Memorandum of Understanding for "cooperation, coordination, consultation and exchange of information relating to the Regulation of the Insurance Sector."[433] FIO is examining whether to sign similar Memoranda of Understanding with other leading insurance jurisdictions.

FIO also participated in the U.S.-UK Financial Regulatory Working Group meetings in October 2020 and May 2021, and the U.S.-EU Joint Financial Regulatory Forum in March 2021; insurance was a topic in all three meetings.[434]

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[432] "Responding to the COVID-19 and Pandemic Protection Gap in Insurance," OECD, last updated March 16, 2021, https://www.oecd.org/coronavirus/policy-responses/responding-to-the-covid-19-and-pandemic-protection-gap-in-insurance-35e74736/.

[433] For more information on the Memorandum of Understanding, see FIO, *2019 Annual Report*, 67.

[434] *See* Treasury, "Joint Statement on UK-U.S. Financial Regulatory Working Group Meeting," news release, October 22, 2020, https://home.treasury.gov/news/press-releases/sm1160; Treasury, "Joint Statement on the U.S.-EU Joint Financial Regulatory Forum," news release, March 29, 2021, https://home.treasury.gov/news/press-releases/jy0084; Treasury, "Joint Statement on U.S.-UK Financial Regulatory Working Group Meeting," news release, May 24, 2021, https://home.treasury.gov/news/press-releases/jy0197.

IV. CONCLUSION

In the coming year, FIO will continue to address climate-related financial risks, the affordability and availability of insurance products for traditionally underserved communities and consumers, the role of the insurance industry in helping to improve our nation's cybersecurity, and other relevant developments affecting the U.S. insurance industry, policyholders, and consumers.