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

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GLOSSARY

A&H	....	Accident and Health
ABS	....	Asset-Backed Securities
ACRSM	....	Advisory Committee on Risk-Sharing Mechanisms
AI	....	Artificial Intelligence
CISA	....	U.S. Department of Homeland Security's Cybersecurity and Infrastructure Security Agency
CLO	....	Collateralized Loan Obligation
CMBS	....	Commercial Mortgage-Backed Securities
CRE	....	Commercial Real Estate
Dodd-Frank Act	....	Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010
EGRRCPA		Economic Growth, Regulatory Relief, and Consumer Protection Act (EGRRCPA)
FACI	....	Federal Advisory Committee on Insurance
Federal Reserve	....	Board of Governors of the Federal Reserve System
FEMA	....	Federal Emergency Management Agency
FIO	....	Federal Insurance Office
FSOC	....	Financial Stability Oversight Council
GDP	....	Gross Domestic Product
GLBA	....	Gramm-Leach-Bliley Act
Health	....	Health sector includes companies licensed solely as health insurers or as health maintenance organizations
IAIS	....	International Association of Insurance Supervisors
ICS	....	Insurance Capital Standard
IFTRIP	....	International Forum of Terrorism Risk (Re)Insurance Pools
IMR	……..	Interest Maintenance Reserve
IPO	....	Initial Public Offering
L&H	....	Life and Health
M&A	....	Mergers and Acquisitions
ML	....	Machine Learning
NAIC	....	National Association of Insurance Commissioners
OECD	....	Organisation for Economic Co-operation and Development
ONCD	....	White House Office of the National Cyber Director
P&C	....	Property and Casualty
PRT	....	Pension Risk Transfer
RBC	....	Risk-Based Capital

RMBS	....	Residential Mortgage-Backed Securities
SEC	……..	U.S. Securities and Exchange Commission
Report	....	FIO, *Annual Report on the Insurance Industry* (2023)
S&P Global	....	S&P Global Market Intelligence
SEC	....	U.S. Securities and Exchange Commission
Secretary	....	Secretary of the Treasury
TRIA	....	Terrorism Risk Insurance Act of 2002, as amended
TRIP	....	Terrorism Risk Insurance Program
Treasury	....	U.S. Department of the Treasury

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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 of 2010 (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. The Structure of this Report and Summary of Findings

This Report begins with an overview of FIO's statutory responsibilities, then summarizes certain of FIO's key activities since those described in its 2022 *Annual Report on the Insurance Industry*.[2]

Section II presents a discussion and analysis of the insurance industry's financial performance in calendar year 2022 and its financial condition as of December 31, 2022. Section II focuses on the aggregate 2022 financial results of the life & health (L&H), property & casualty (P&C), and health insurers licensed in the United States. Market volatility, inflationary pressures, and monetary tightening weighed considerably on the financial performance and condition of the U.S. insurance industry in 2022. The trend of annual increases in premiums continued in 2022, but at a slightly slower pace compared to 2021. The industry experienced a contraction in surplus for the first time since 2008, largely driven by unrealized capital losses in insurer investment portfolios. The P&C sector also was adversely affected by increased input costs, natural and climate-related catastrophes, and the growing cost of capital in 2022. Tight asset-liability matching and surrender protections, however, supported the industry's liquidity needs and strengthened its overall capital position. Certain investment and credit trends, arising partly in response to the macro environment, were also noted. Nonetheless, P&C and L&H sector stock indices outperformed the S&P 500 for the year. U.S. insurers continued to access the capital markets (predominantly for issuance of debt) for new capital throughout 2022. Section II also discusses the sharply lower insurer mergers and acquisitions (M&A) activity in 2022, as well as catastrophic cyber risks and offshore reinsurance. Section II concludes with a domestic industry outlook and international insurance marketplace overview that notes, among other things, that the industry will need to adapt to the changing economic environment characterized by inflationary pressures, higher interest rates, and heightened catastrophe exposures.

Section III concludes the Report with anticipated areas for FIO's focus in the coming year.

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

[2] FIO, *2022 Annual Report on the Insurance Industry* (2022) *(2022 Annual Report)* (2022), https://home.treasury.gov/system/files/311/2022%20Federal%20Insurance%20Office%20Annual%20Report%20on%20the%20Insurance%20Industry_0.pdf (*2022 FIO Annual Report*).

B. Federal Insurance Office Overview and Activities

1. FIO Overview

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.[3] Title V of the Dodd-Frank Act established FIO within Treasury.[4] 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 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

[3] 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.

[4] 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).

- perform such other related duties and authorities as may be assigned to FIO by the Secretary.[5]

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.[6] 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.[7]

FIO is authorized to collect data and information on and from the insurance industry and insurers, including through the use of subpoenas.[8] FIO is also authorized to analyze and disseminate data and information and issue reports on all lines of insurance, except health insurance.[9]

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 (EGRRCPA) 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.[10] The EGGRCPA also requires the Secretary and Federal Reserve Chairman (or their designees) to report to Congress on their efforts to increase transparency at IAIS meetings.[11] In addition, the EGRRCPA 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 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.[12]

[5] FIO Act, 31 U.S.C. § 313(c)(1).

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

[7] 12 U.S.C. § 5365(i)(1)(A).

[8] 31 U.S.C. § 313(e).

[9] *Id*. 31 U.S.C. § 313(e).

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

[11] EGRRCPA § 211(c)(4).

[12] EGRRCPA § 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.

2. FIO Activities

FIO released its last Annual Report on September 30, 2022.[13] FIO's activities since those discussed in the last Annual Report include those summarized below.

On September 8, 2022, the U.S. Senate Committee on Banking, Housing, and Urban Affairs held a hearing on "Current Issues in Insurance," at which FIO Director Steven Seitz testified.[14]

On September 29, 2022, Treasury published a request for comment on questions related to cyber insurance and catastrophic cyber incidents in order to inform a joint assessment being conducted by FIO and the U.S. Department of Homeland Security's Cybersecurity and Infrastructure Security Agency (CISA) into the extent to which risks to critical infrastructure from catastrophic cyber incidents and potential financial exposures warrant a federal insurance response.[15]

The Federal Advisory Committee on Insurance (FACI) held public meetings on September 29, 2022, December 8, 2022, March 29, 2023, and June 1, 2023.[16] Secretary Yellen provided remarks at the March 29, 2023 public meeting.[17]

On September 30, 2022, FIO released its 2022 Preemption Report, noting that during the fiscal year ending September 30, 2022, FIO did not take any action regarding the preemption of any state insurance measures that were inconsistent with a covered agreement.[18]

FIO staff contributed to various FSOC reports, including its report on digital asset financial stability risks and regulation published on October 3, 2022, the FSOC 2022 Annual Report published on December 16, 2022, and the staff progress report by the FSOC's Climate-related Financial Risk Committee, issued on July 28, 2023, which discusses actions underway to support

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[13] FIO, *2022 Annual Report*.

[14] *Current Issues in Insurance*, Before the Senate Committee on Banking, Housing, and Urban Affairs, 117th Cong. (September 8, 2022), https://www.banking.senate.gov/hearings/current-issues-in-insurance. *See also Current Issues in Insurance*, Before the Senate Committee on Banking, Housing, and Urban Affairs, 117th Cong. (September 8, 2022) (Statement by Steven E. Seitz, Director, Federal Insurance Office), https://www.banking.senate.gov/imo/media/doc/Seitz%20Testimony%209-8-22.pdf.

[15] Potential Federal Insurance Response to Catastrophic Cyber Incidents, 87 Fed. Reg. 59,161 (September 29, 2022). FIO extended the comment period on November 9. *See* Potential Federal Insurance Response to Catastrophic Cyber Incidents, 87 Fed. Reg. 67,755 (November 9, 2022).

[16] FACI is a federal advisory committee tasked with making non-binding recommendations to FIO in performing its duties and authorities. FACI includes a cross-section of members representative of the views of state and non-government persons having an interest in the duties and authorities of FIO. More information on FACI—including its meeting agendas, minutes, and presentations—is available on FIO's website. "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.

[17] U.S. Department of the Treasury, "Remarks by Secretary of the Treasury Janet L Yellen at Federal Advisory Committee on Insurance Meeting" March 29, 2023, https://home.treasury.gov/news/press-releases/jy1375; *see* "Federal Advisory Committee on Insurance (FACI)," Treasury.

[18] FIO, *2022 Preemption Report – Federal Insurance Office* (2022), https://home.treasury.gov/system/files/311/2022%20Federal%20Insurance%20Office%20Preemption%20Report.pdf.

capacity building and disclosure, address data gaps, and assess climate-related financial risks.[19] In addition, FIO staff contributed to the Treasury report, released on February 8, 2023, on the potential benefits and challenges associated with the increasing trend of financial sector firms adopting cloud services technology.[20]

On October 18, 2022, FIO participated in the United States and the United Kingdom's second meeting of the Joint Committee established under the U.S.-UK Agreement on Prudential Measures Regarding Insurance and Reinsurance.[21]

Also on October 18, 2022, Treasury announced that FIO had issued a proposal for the collection of data from insurers to assess climate-related risks across the United States.[22] The request for public comment on the proposed data collection appeared in the Federal Register on October 21, 2022.[23] The request for comment explained that FIO proposes to collect data from P&C insurers regarding current and historical underwriting data on homeowners' insurance at the ZIP Code level, in order to "assist FIO's assessment of climate-related exposures and their effects on insurance availability for policyholders, including whether climate change may create the potential for any major disruptions of private insurance coverage in regions of the country that are particularly vulnerable to climate change impacts."[24]

On December 28, 2022, the Federal Reserve published the joint report co-authored with FIO, "Engagement in Global Insurance Regulatory or Supervisory Forums in 2021."[25]

With respect to TRIP, on December 21, 2022, Treasury issued a Federal Register notice advising that TRIP's insurance marketplace aggregate retention amount under TRIA for 2023 would be $44,979,114,932.[26] On March 21, 2023, Treasury published a final rule on inflation adjustment

[19] FSOC, *Report on Digital Asset Financial Stability Risks and Regulation* (2022), https://home.treasury.gov/system/files/261/FSOC-Digital-Assets-Report-2022.pdf; FSOC, *2022 Annual Report* (2022), https://home.treasury.gov/system/files/261/FSOC2022AnnualReport.pdf; FSOC, *Climate-Related Financial Risk: 2023 Staff Progress Report* (2023), https://home.treasury.gov/system/files/261/FSOC-2023-Staff-Report-on-Climate.pdf.

[20] Treasury, *The Financial Services Sector's Adoption of Cloud Services* (2022), https://home.treasury.gov/system/files/136/Treasury-Cloud-Report.pdf.

[21] *See* Treasury, "United States and United Kingdom Hold Second Joint Committee Meeting under the Bilateral Agreement on Prudential Measures Regarding Insurance and Reinsurance," news release, October 26, 2022, https://home.treasury.gov/news/press-releases/jy1050.

[22] Treasury, "Treasury's Federal Insurance Office Takes Important Step to Assess Climate-Related Financial Risk – Seeks Comment on Proposed Data Call," news release, October 18, 2022, https://home.treasury.gov/news/press-releases/jy1030.

[23] Agency Information Collection Activities; Proposed Collection; Comment Request; Federal Insurance Office Climate-Related Financial Risk Data Collection, 87 Fed. Reg 64,134 (October 21, 2022).

[24] 87 Fed. Reg. at 64,134.

[25] Federal Reserve and Treasury, *Engagement in Global Insurance Regulatory or Supervisory Forums in 2021* (2022), https://home.treasury.gov/system/files/311/global-insurance-forums-20221228_0.pdf.

[26] IMARA Calculation for Calendar Year 2023 Under the Terrorism Risk Insurance Program, 87 Fed. Reg. 78,202 (December 21, 2022).

of civil monetary penalties, including penalties for TRIP.[27] On March 28, 2023, on FIO's behalf, Treasury published a request for public comment on "issues that FIO will be analyzing in connection with its next report related to the participation of small insurers in the [Terrorism Risk Insurance] Program, including any competitive challenges such insurers face in the terrorism risk insurance marketplace."[28] In addition, FIO conducted its annual TRIP data call in April and May 2023, as required under TRIA. All insurers participating in TRIP were required to submit information, subject to certain reporting exemptions.[29]

On March 6-7, 2023, FIO attended the annual meeting of the International Forum of Terrorism Risk (Re)Insurance Pools (IFTRIP), which discussed issues of common interest among the various national pools and programs. IFTRIP serves as an information-sharing organization and publishes (and coordinates in the publication of) documents and other papers concerning the structure and differences of the various international approaches to terrorism risk insurance, as well as thought leadership pieces in the field of terrorism risk insurance. IFTRIP does not produce official advice, standards, or recommendations that are binding on its members.[30] FIO accepted the invitation to assume the role of IFTRIP Vice Chair, and will host IFTRIP's International Conference in April 2024 in Washington, D.C.

On June 30, 2023, FIO released its 2023 *Study of Small Insurer Competitiveness in the Terrorism Risk Insurance Marketplace*, informed by the feedback received from the March 28, 2023 request for comment together with information aggregated from the annual data calls.[31]

FIO continues to serve on the EU-U.S. Insurance Dialogue Project's Steering Committee and to actively contribute to the Project's work. On June 8, 2023, the Project published reports summarizing the efforts of its three workstreams on (1) climate risk financial oversight, (2) climate risk and resilience, and (3) innovation and technology.[32] On June 16, 2023, FIO also participated in a public forum discussing the Project's work.[33]

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[27] *See* Inflation Adjustment of Civil Monetary Penalties, 88 Fed. Reg. 16,885 (March 21, 2023).

[28] Comments in Aid of Analyses of the Terrorism Risk Insurance Program, 88 Fed. Reg. 18,374 (March 28, 2023).

[29] *See* 2023 Terrorism Risk Insurance Data Call, 88 Fed. Reg. 18,632 (March 29, 2023).

[30] *See* "Sharing Knowledge About Terrorism Risk," IFTRIP, https://iftrip.org/.

[31] FIO, *Study of Small Insurer Competitiveness in the Terrorism Insurance Marketplace* (2023), https://home.treasury.gov/system/files/311/2023%20TRIP%20Small%20Insurer%20Report%20FINAL.pdf.

[32] EU-US Insurance Dialogue Project, *Climate Risk Financial Oversight Workstream: June 2023 Summary Report* (2023), https://content.naic.org/sites/default/files/government-affairs-eu-us-insurance-dialogue-project-ws1-climate-risk-financial-oversight-summary-report-june-2023.pdf; EU-US Insurance Dialogue Project, *Climate Risk and Resilience Workstream: June 2023 Summary Report* (2023), https://content.naic.org/sites/default/files/government-affairs-eu-us-insurance-dialogue-project-ws2-climate-risk-and-resilience-summary-report-june-2023.pdf; EU-US Insurance Dialogue Project, *Innovation and Technology Workstream: June 2023 Summary Report* (2023), https://content.naic.org/sites/default/files/government-affairs-eu-us-insurance-dialogue-project-ws3-innovation-and-technology-summary-report-june-2023.pdf.

[33] "Update on the EU-U.S. Insurance Dialogue Project, June 2023," NAIC, https://content.naic.org/government-affairs-eu-us-dialogue-project.htm.

On June 27, 2023, FIO released a report, *Insurance Supervision and Regulation of Climate-Related Risks*.[34] The report assesses climate-related issues and gaps in the supervision and regulation of insurers and provides 20 policy recommendations to better integrate climate-related considerations into U.S. insurance regulation.[35] FIO participated in the event hosted by the Brookings Institution on June 27 to discuss ongoing work to integrate climate-related risks into insurance supervision and regulation.[36]

On July 26, 2023, FIO reconvened the Advisory Committee on Risk-Sharing Mechanisms (ACRSM). At this public meeting, the Committee discussed the implementation of its prior recommendations. In addition to a presentation from Pool Re, the Committee received a report from FIO staff on the small insurer study that FIO published on June 30 as well as on FIO's request for comment on a potential federal insurance response to catastrophic cyber incidents.[37]

FIO continues to fulfill its statutory role representing the United States in the IAIS and in other forums on prudential international insurance measures. Throughout 2022 and 2023, FIO continued its involvement in IAIS activities, including as a member of the IAIS Executive Committee. FIO's work at the IAIS includes matters relating to the implementation of the Holistic Framework, the monitoring period for the Insurance Capital Standard (ICS), the comparability work of the Aggregation Method to the ICS, and strategic planning for the IAIS. FIO also continued its engagement and leadership roles across a number of committees, working groups, and task forces at the IAIS on a variety of other issues, including matters relating to resolution of insurers, financial crimes, cybersecurity, climate risk, financial inclusion, and diversity, equity, and inclusion.[38]

Internationally, FIO has remained engaged in the Insurance and Private Pensions Committee at the Organisation for Economic Co-operation and Development (OECD).[39] FIO has also assisted with Treasury's work with the G7 Cyber Expert Group.

[34] Treasury, "Treasury's Federal Insurance Office Releases Report Assessing Climate-Related Risk, Gaps in Insurance Supervision," news release, June 27, 2023, https://home.treasury.gov/news/press-releases/jy1579.

[35] FIO, *Insurance Supervision and Regulation of Climate-Related Risks* (2023), https://home.treasury.gov/system/files/311/FIO-June-2023-Insurance-Supervision-and-Regulation-of-Climate-Related-Risks.pdf

[36] "Assessing Insurance Regulation and Supervision of Climate-Related Financial Risk," The Brookings Institution, June 27, 2023, https://www.brookings.edu/events/assessing-insurance-regulation-and-supervision-of-climate-related-financial-risk/.

[37] The ACRSM provides advice and recommendations to the Federal Insurance Office (FIO) 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 the TRIP. "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.

[38] *See also* Federal Reserve and Treasury, *Engagement in Global Insurance Regulatory or Supervisory Forums in 2021*.

[39] The OECD 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. *See, e.g.*, "Insurance," OECD, https://www.oecd.org/finance/insurance/.

During 2022 and 2023, FIO continued to provide expertise to other federal agencies. For example, FIO provided technical assistance to the Federal Emergency Management Agency (FEMA) in connection with FEMA's transfer of $502.5 million of risk from the National Flood Insurance Program to the private reinsurance market in January 2023, and the capital markets placement providing $275 million in coverage over three years.[40] In addition, FIO continued to participate in the work of the Mitigation Framework Leadership Group.[41] FIO also participates as a member of the Flood Resilience Interagency Working Group and the Climate-Resilience interagency policy group.

Section III discusses more of FIO's continuing and planned work.

Box 1: FIO Cyber Insurance Initiatives Update

In accord with a recommendation made by the Government Accountability Office, FIO and CISA continue to work together "to produce a joint assessment for Congress on the extent to which the risks to the nation's critical infrastructure from catastrophic cyberattacks, and the potential financial exposures resulting from these risks, warrant a federal insurance response."[42] On September 29, 2022, FIO published detailed questions in its Request for Comments on a Potential Federal Insurance Response to Catastrophic Cyber Incidents.[43] FIO received 60 comments.[44] Comments were submitted by a wide range of stakeholders, including insurers and reinsurers (as well as specialist cyber insurers), insurance and reinsurance brokers, an insurance rating agency, trade associations (insurance, reinsurance, and insurance-related), insurance risk modeling analytics organizations, insurance think tanks and academic experts, cybersecurity consultants and cybersecurity product companies, and 15 organizations representing multiple critical infrastructure sectors. Commenter themes included (1) broad conceptual support for some type of future federal insurance response, (2) general agreement that any federal insurance response should address cyber hygiene, (3) a range of ideas proposed for the structure of a potential insurance response, (4) differing views regarding the adoption of key structural elements from TRIA and TRIP, (5) the suggestion of numerous structural elements not featured

[40] *See* "National Flood Insurance Program's Reinsurance Program," FEMA, last updated September 11, 2023, https://www.fema.gov/flood-insurance/work-with-nfip/reinsurance; FEMA, "FEMA Announces Reinsurance Program to Manage Future Flood Risk in 2023," news release, January 10, 2023, https://www.fema.gov/press-release/20230110/fema-announces-reinsurance-program-manage-future-flood-risk-2023; FEMA, "Public Notice for Capital Market Reinsurance Placement – March 2023," https://www.fema.gov/sites/default/files/documents/fema_taa-procurement-notice_2023.pdf.https://www.fema.gov/sites/default/files/documents/fema_taa-procurement-notice_2023.pdf.

[41] "Mitigation Framework Leadership Group (MitFLG)," FEMA, last updated September 7, 2023, https://www.fema.gov/emergency-managers/national-preparedness/frameworks/mitigation/mitflg.

[42] Government Accountability Office, *Cyber Insurance: Action Needed to Assess Potential Federal Response to Catastrophic Attacks* (June 2022), https://www.gao.gov/assets/gao-22-104256.pdf.

[43] *See* Potential Federal Insurance Response to Catastrophic Cyber Incidents, 87 Fed. Reg. 59,161 (September 29, 2022); and Potential Federal Insurance Response to Catastrophic Cyber Incidents, 87 Fed. Reg. 67,755 (November 9, 2022).

[44] The comments are available at https://www.regulations.gov/docket/TREAS-DO-2022-0019/comments.

in TRIA, and (6) support for considering cross-border scenarios while assessing catastrophic cyber insurance.[45]

FIO's ongoing work is consistent with President Biden's National Cybersecurity Strategy, released in March 2023, which includes "Explore a Federal Cyber Insurance Backstop" as Strategic Objective 3.6.[46] The National Cybersecurity Strategy Implementation Plan, released in July 2023, identifies Treasury (through FIO) as the Responsible Agency for implementing Strategic Objective 3.6 (with CISA and the White House Office of the National Cyber Director (ONCD) identified as Contributing Agencies).[47] The Plan assigns a completion date for an initial assessment of "the need for a Federal insurance response to a catastrophic cyber event," of December 31, 2023.[48] FIO is conducting extensive engagements with industry and other stakeholders, including consultations with FACI and the ACRSM, among other activities.[49]

FIO's cyber-related initiatives also include its administration of TRIP, because cyber insurance may be written in TRIP-eligible lines of insurance and therefore be subject to TRIP. FIO's 2023 *Study of Small Insurer Competitiveness in the Terrorism Risk Insurance Marketplace* includes a discussion of the cyber insurance marketplace, based on information from the TRIP data call.[50] FIO is also continuing to develop its terrorism risk insurance modeling capabilities, including a cyber risk modeling component.[51]

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[45] *See* FIO, "Summary of Comments on Request for Comment: Federal Insurance Response to Catastrophic Cyber Incidents" (presentation, FACI, Washington, DC, March 29, 2023), https://home.treasury.gov/system/files/311/2023-03-27%20Presentation%20Summary%20of%20Cat%20Cyber%20RFI%20Responses.pdf. Note that FIO was not endorsing these views, but merely summarizing them to provide some highlights of the initial feedback received.

[46] The White House, *National Cybersecurity Strategy* (March 2023), 22, https://www.whitehouse.gov/wp-content/uploads/2023/03/National-Cybersecurity-Strategy-2023.pdf.

[47] The White House, *National Cybersecurity Strategy Implementation Plan* (July 2023), https://www.whitehouse.gov/wp-content/uploads/2023/07/National-Cybersecurity-Strategy-Implementation-Plan-WH.gov_.pdf.

[48] The White House, *National Cybersecurity Strategy Implementation Plan*, 34.

[49] *See* FIO, "Update on FIO's RFI on a Potential Federal Insurance Response to Catastrophic Cyber Incidents," (presentation, ACRSM, Washington, DC, July 26, 2023), https://home.treasury.gov/system/files/311/ACRSM%20Update%20on%20Catastrophic%20Cyber%20RFI%20%2826%20Jul%202023%29.pdf.

[50] FIO, *Study of Small Insurer Competitiveness*, 30-34.

[51] *See, e.g.*, FIO, *Study of Small Insurer Competitiveness*, 47.

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, focuses on the U.S. insurance industry's financial performance and condition through December 31, 2022, the latest date for which detailed, comprehensive, and definitive data is available.[52] As in previous reports, trends over the last 10 years have been analyzed as well.

Inflationary pressures that emerged in 2021 escalated in 2022, as the Consumer Price Index reached a 40-year high of 9.1 percent in June 2022. In light of elevated inflation, the Federal Reserve raised the minimum level of the federal funds rate from zero at the start of 2022 to 4.25 percent at year-end through a series of seven rate increases beginning in March 2022.

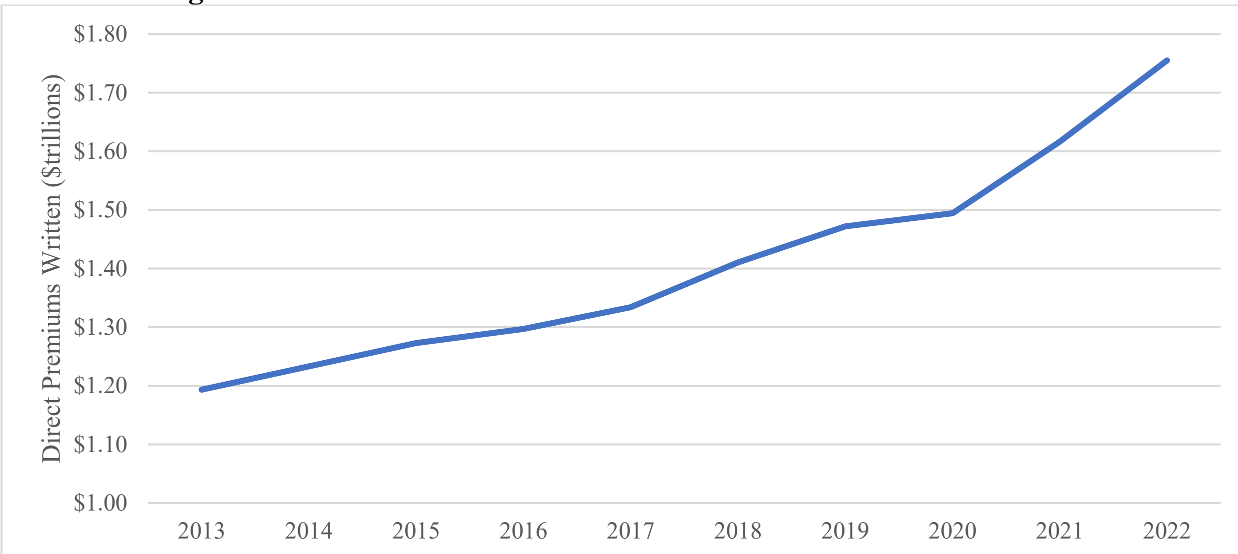
Inflationary pressures, combined with market volatility and monetary tightening, affected the financial performance of the L&H and P&C sectors in 2022. The insurance industry experienced a contraction in surplus for the first time since 2008, largely driven by unrealized capital losses.[53] With the L&H sector's longer asset and liability durations, rising rates decreased the valuation of fixed-income securities held in the sector's investment portfolios. In addition, the P&C sector was adversely affected by increased input costs, natural and climate-related catastrophes, and the growing cost of capital in 2022—all of which contributed to a 10-year high in the sector's loss ratio and a sharply lower return on average equity. Despite the challenges presented in 2022, the two sectors continued to maintain their financial health in support of their policyholder and financial commitments.

The growth of the L&H and P&C sectors in 2022 is illustrated in Figure 1, showing direct premiums written. Direct premiums written are the amount paid for insurance by policyholders and are a measure of sales activity and growth. The U.S. insurance industry has shown positive year-over-year growth in direct premiums written since 2013. In 2022, the combined total direct premiums written in the L&H and P&C sectors was $1.8 trillion, which represented a nearly nine percent annual increase and a 10-year high.

[52] Except as otherwise indicated, data cited in this section of the Report are as of December 31, 2022, as derived from S&P Global Market Intelligence (S&P Global) on July 20-21, 2023. These data are presented on a statutory accounting basis. S&P Global continuously updates its data for corrections in filings. The 2022 data in this Report are based on updated data available as of July 20-21, 2023, and thus may be different in some respects from corresponding figures reported in FIO's *2022 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.

[53] The industry reported an immaterial surplus decline in 2018. Total combined surplus of the two sectors was $1.2 trillion at year-end 2018, 0.3 percent lower than at year-end 2017.

Figure 1: Total Direct Premiums Written in L&H and P&C Sectors



Source: S&P Global

1. Financial Performance and Condition Overview

This section addresses the financial performance and condition of the U.S. insurance industry, including the 667 L&H insurers, 2,656 P&C insurers, and 1,355 health insurers licensed in the United States during 2022. 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). The Health sector includes companies licensed solely as health insurers or as health maintenance organizations. The subsequent detailed financial analyses are limited to the L&H and P&C sectors.

Direct premiums written for the L&H sector were approximately $879 billion in 2022, constituting 32 percent of direct premiums written for the combined L&H, P&C, and Health sectors. For the P&C sector, direct premiums written were approximately $876 billion, which is also approximately 32 percent of direct premiums written for the three sectors. The Health sector reported $1.0 trillion of direct premiums written for 2022, or approximately 36 percent of the combined total for the three sectors.

Figure 2 and Figure 3 show the 10 largest L&H insurance groups measured by direct premiums written, with the 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 aggregate all L&H sector products and all geographies of the United States. Premiums shown in Figure 3 aggregate all A&H sector products and all geographies of the United States.

Figure 2: L&H Insurance Groups by 2022 U.S. Life Insurance Lines Direct Premiums Written

2022 Rank	Insurance Group	2022 Direct Premiums Written ($000)	Share of Total (%)
1	MetLife	$ 111,999,545	12.08
2	Equitable Holdings	75,348,492	8.13
3	New York Life	47,567,996	5.13
4	MassMutual	46,416,683	5.01
5	Prudential Financial Inc.	44,677,015	4.82
6	Athene (U.S. only)	38,439,197	4.15
7	Nationwide	36,336,179	3.92
8	Western & Sthrn Finl Grp	35,554,856	3.84
9	Corebridge Financial	26,741,269	2.89
10	Lincoln Financial	26,344,110	2.84
	Combined Top 10	$ 489,425,342	52.81

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

Figure 3: L&H Insurance Groups by 2022 U.S. A&H Lines Direct Premiums Written

2022 Rank	Insurance Group	2022 Direct Premiums Written ($000)	Share of Total (%)
1	UnitedHealth Group	$ 43,497,796	20.61
2	CVS Health Corp.	42,827,580	20.30
3	Cigna	25,243,390	11.96
4	MetLife	9,861,799	4.67
5	Unum Group	6,633,039	3.14
6	Mutual of Omaha	5,414,774	2.57
7	Aflac	5,087,888	2.41
8	Guardian	4,760,033	2.26
9	Sun Life Financial	3,803,295	1.80
10	Hartford Life & Accdt Ins Co.	3,632,423	1.72
	Combined Top 10	$ 150,762,017	71.44

Source: S&P Global

The data presented in Figure 2 and Figure 3 for life and annuity and A&H business, and in the comparable figures for other lines of business, are aggregated at a group level from filings made with state insurance regulators by individual legal entity insurers writing those lines. For example, premiums shown for MetLife include premiums written and reported by all of its insurance subsidiaries in the United States but not business written by affiliated entities in non-U.S. jurisdictions.

For life insurance and annuity writers, the aggregate market shares of the top 10 firms increased by a bit more than two percentage points in 2022 to 52.8 percent from 50.6 percent. The premium growth of New York Life (no. 3) moved it up two spots from 2021 and ahead of MassMutual (now no. 4) and Prudential Financial (now no. 5) for the year. Corebridge Financial, the spin-off of American International Group's (AIG) life insurance business through an initial public offering (IPO) completed in 2022, entered the top ten at number nine.

Figure 3 shows A&H premiums written by insurers (legal entities) authorized to offer both life and health insurance; it excludes premiums written by insurers that are authorized to offer only health insurance (health-only insurers are addressed in Figure 7). For example, the data presented in Figure 3 for UnitedHealth Group does not reflect its total health insurance premiums on a consolidated basis, but rather only those premiums written by UnitedHealth subsidiaries licensed to offer both life and health insurance. There was little change among the top 10 writers of A&H lines of business in 2022 as compared to 2021, and their aggregate market share was essentially flat.

P&C insurers offer a variety of products, generally categorized as either personal lines or commercial lines. Figure 4 reports P&C market share information on a combined personal and commercial lines basis, while Figure 5 and Figure 6 break the P&C sector into personal and commercial lines of business, respectively. On a combined basis, there was little year-over-year change in the composition of the top 10 P&C groups, although those top 10 firms garnered slightly lower aggregate market share for 2022. For the personal lines of P&C business, Allstate (no. 2) regained market share lost in 2021 and then some, jumping two spots from its 2021 position in overtaking both Progressive (now no. 3) and Berkshire Hathaway (now no. 4). Total market share of the top 10 personal lines writers was essentially flat as compared to 2021. The top 10 writers of commercial lines were little changed, as was their aggregate market share.

Figure 4: P&C Insurance Groups by 2022 U.S. Combined Lines Direct Premiums Written

2022 Rank	Insurance Group	2022 Direct Premiums Written ($000)	Share of Total (%)
1	State Farm	$ 78,643,121	8.98
2	Berkshire Hathaway Inc.	56,879,631	6.49
3	Progressive	52,326,628	5.97
4	Allstate Corp	45,512,585	5.19
5	Liberty Mutual	45,262,773	5.17
6	Travelers	34,347,686	3.92
7	Chubb	30,226,781	3.45
8	USAA	26,864,181	3.07
9	Farmers Insurance	26,416,631	3.01
10	Nationwide	20,323,220	2.32
	Combined Top 10	$ 416,803,237	47.57

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

Figure 5: P&C Insurance Groups by 2022 U.S. Personal Lines Direct Premiums Written

2022 Rank	Insurance Group	2022 Direct Premiums Written ($000)	Share of Total (%)
1	State Farm	$ 71,434,281	17.12
2	Allstate Corp	41,650,348	9.98
3	Progressive	41,371,557	9.91
4	Berkshire Hathaway Inc.	38,630,554	9.26
5	USAA	25,258,120	6.05
6	Liberty Mutual	23,729,112	5.69
7	Farmers Insurance	20,891,129	5.01
8	Travelers	12,563,933	3.01
9	American Family Insurance	11,808,102	2.83
10	Nationwide	9,872,547	2.37
	Combined Top 10	$ 297,209,683	71.23

Source: S&P Global

Figure 6: P&C Insurance Groups by 2022 Commercial Lines Direct Premiums Written

2022 Rank	Insurance Group	2022 Direct Premiums Written ($000)	Share of Total (%)
1	Chubb	$ 25,110,196	5.57
2	Travelers	21,783,753	4.83
3	Liberty Mutual	21,438,662	4.76
4	Berkshire Hathaway Inc.	17,411,206	3.86
5	Zurich	17,215,758	3.82
6	AIG	14,249,432	3.16
7	CNA	12,791,758	2.84
8	The Hartford	11,784,390	2.61
9	Progressive	10,934,117	2.43
10	Nationwide	10,407,342	2.31
	Combined Top 10	$ 163,126,614	36.19

Source: S&P Global

As shown in Figure 7, the aggregate market share of the top 10 writers in the Health sector continued to tighten somewhat at the top, with the aggregate market share of the top 10 writers increasing by one-and-one-half percentage points (to 64.5 percent) from 63.0 percent in 2021. UnitedHealth Group was responsible for most of that aggregate gain, as it increased its market share by almost two percentage points compared to 2021. There were only minor changes in the rankings of the top 10 writers of health insurance for 2022.

Figure 7: Health Insurance Groups by 2022 Direct Premiums Written

2022 Rank	Insurance Group	2022 Direct Premiums Written ($000)	Share of Total (%)
1	UnitedHealth Group Inc.	$ 175,720,451	17.49
2	Elevance Health, Inc.	102,397,154	10.19
3	Centene Corp.	94,313,583	9.39
4	Humana Inc.	86,266,270	8.58
5	HealthCare Service Corp.	50,731,749	5.05
6	CVS Health Corp.	39,533,732	3.93
7	Molina Healthcare Inc.	26,418,198	2.63
8	GuideWell Mutual Holding Corp.	26,294,346	2.62
9	Independence Health Group Inc.	25,609,293	2.55
10	Kaiser Fndtn Health Plan Inc.	21,299,855	2.12
	Combined Top 10	$ 648,584,631	64.54

Source: S&P Global

2. Life and Health Sector

a) Financial Performance

This section presents additional analysis of the financial performance of the L&H sector in 2022, and then assesses the L&H sector's overall financial condition as of December 31, 2022.

i. Net Premiums Written

Direct premiums written is a principal measure of the sales activity and growth of an insurer. In 2022, direct premiums written of $879 billion for the L&H sector increased by seven percent from the $819 billion reported in 2021, marking a new record for annual direct premiums written for the L&H sector. Direct premiums written have increased in each of the past 10 years. Growth in 2022 direct premiums written was driven by a strong increase in annuity premiums and considerations from pension risk transfer activity (see Box 2: The Pension Risk Transfer Market) and a shift in sales focus to fixed annuities from variable annuities to capture the appeal of the higher rates of return to consumers.[54] The rise in interest rates, fears of a potential recession, and increased consumer appetite for annuities also contributed to the gain in annuity sales.[55] Considerations for pension risk transfer activity—in which a defined-benefit pension provider divests some or all of its obligation to pay guaranteed retirement income and/or benefits to plan participants by shifting the obligations to insurers through the purchase of one or more

[54] Kris Elaine Figuracion and Tyler Hammel, "U.S. Annuity Considerations Reach Another Record High in 2022," *S&P Global Market Intelligence*, April 6, 2023, https://www.capitaliq.spglobal.com/web/client?auth=inherit#news/article?id=75075583.

[55] Greg Iacurci, "Annuity Sales Hit Record Last Year, Eclipsing Sales During 2008 Financial Crisis Amid Fear, Higher Rates," *CNBC*, February 2, 2023, https://www.cnbc.com/2023/02/02/annuity-sales-record-2022-higher-interest-rates-stock-market-recession-fear.html.

annuities—rose in the United States to a record $48 billion in 2022.[56] Net ceded reinsurance was essentially flat in 2022 as compared to 2021, at $181 billion. Much of the ceded business was assumed by private equity-linked reinsurers (approximately 43 percent), the presence of which has been growing over the past few years.[57] (See also Box 3: Trends in Offshore Reinsurance.)

Box 2: The Pension Risk Transfer Market

Pension risk transfer (PRT) refers to transactions through which defined benefit pension plan providers seek to reduce—often through the use of annuities purchased from insurers—some or all of the financial risk to the plan sponsor associated with the pension obligations that have accumulated on their balance sheets. As noted in FIO's 2020 Annual Report, PRT activity decreased substantially at the height of the pandemic.[58] As interest rates have risen, competition among insurers in the PRT market has intensified, leading to more attractive pricing for plan sponsors seeking to de-risk through annuity purchases.[59] Consequently, PRT activity reached an all-time high in 2022, with $52 billion in single premium transactions in 2022 compared to $38 billion in 2021.[60] This activity includes a $16 billion pension risk transfer buyout involving IBM, MetLife, and Prudential, which is the second-largest U.S. pension risk transfer transaction on record, after Prudential's $25 billion transaction with General Motors in 2012.[61] Companies such as Prudential, MetLife, Apollo, and KKR are increasingly involved in large-scale PRT deals, while smaller insurers may lack the financial and operational capacity for effective execution and integration of such large deals.

Net premiums written, the sum of direct premiums written and net ceded reinsurance premiums, is a basic measure of the amount of risk retained by an insurer. Figure 8 shows net premiums written, considerations, and deposits over the past five years for the L&H sector, while Figure 9 shows the 2022 composition of net premiums and considerations. L&H sector net premiums written reached $700 billion in 2022, marking a 10 percent increase from the $638 billion reported in 2021.

Net premiums written have contributed on average 71 percent of total L&H sector revenues over the past 10 years and constituted 68 percent of revenues in 2022, somewhat below this average but up slightly from 67 percent in 2021. As there has been a larger volume of new deals in 2022 relative to 2021, and continued use of reinsurers to facilitate risk transfer, a large positive swing

[56] Hailey Ross & Jason Woleben, "Pension Risk Transfer Activity Hits Record High in 2022," *S&P Global Market Intelligence*, March 31, 2023, https://www.capitaliq.spglobal.com/web/client?auth=inherit#news/article?id=74980130.

[57] Tim Zawacki, "Affiliated, Private Equity-Backed Reinsurers Fuel Life and Annuity Cession Surge," *S&P Global Market Intelligence*, May 15, 2023, https://www.spglobal.com/marketintelligence/en/news-insights/research/affiliated-private-equity-backed-reinsurers-fuel-life-and-annuity-cession-surge.

[58] FIO, *Annual Report on the Insurance Industry* (2020), 19, https://home.treasury.gov/system/files/311/2020-FIO-Annual-Report.pdf.

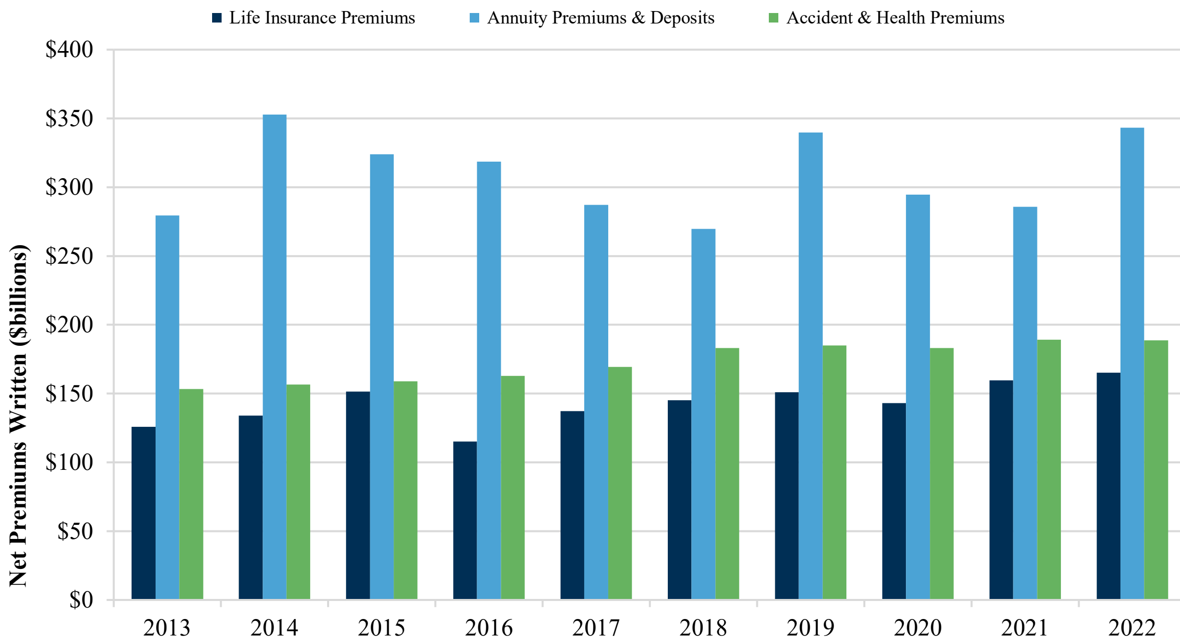
[59] *See also* FIO, *2022 Annual Report*, Box 2.

[60] Fiona Ng *et al.*, *Pension Risk Transfer: Staying Current in a Rapidly Evolving Market* (2023), https://www.milliman.com/en/insight/pension-risk-transfer-staying-current-evolving-market.

[61] Ross & Woleben, "Pension Risk Transfer Activity Hits Record High in 2022."

in the reinsurance allowance boosted total sector revenue growth.[62] However, flat net investment income held total revenue growth in 2022 to nine percent, or slightly less than the growth in net premiums written. Net annuity premiums and deposits swelled by 20 percent, while life insurance premiums increased by four percent, and A&H premiums remained flat as compared to 2021. For 2022, annuity premiums and deposits constituted 49 percent of total net premiums written, as shown in Figure 9. Sales of traditional life insurance products accounted for 24 percent of 2022 L&H sector net premiums written, while the remaining 27 percent was comprised almost entirely of A&H sector premiums.

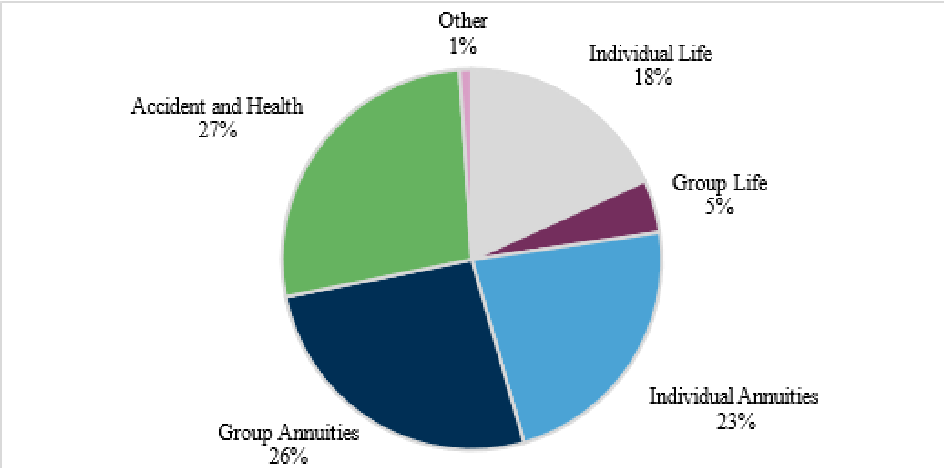
Figure 8: L&H Sector Net Premiums, Considerations, and Deposits



Source: S&P Global

[62] Reinsurance allowance is the amount paid by the reinsurer to the ceding company to help cover the ceding company's acquisition and other costs, especially commissions, and runs through the ceding company's income statement. Allowances are usually calculated as a large percentage (often 100%) of the first-year premiums reinsured and account for smaller percentages of renewal premiums reinsured.

Figure 9: 2022 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 other obligations of L&H insurers under life insurance, annuity, and other insurance contracts and policies. Contract surrenders occur when a policyholder or contract holder elects to cancel a policy or contract before the end of the contractual term and thus receives its accumulated cash value (if any). Contract benefit payments (i.e., Total Benefit Payments in Figure 10) and contract surrenders (i.e., Total Surrenders in Figure 10)) comprise the majority of total expenses for L&H insurers in any given year. Other expenses—which include general administrative and overhead expenses, expenses incurred in acquiring business (particularly producer commissions), and expenses related to payments made under contractual provisions of policies, including loss verification and adjustment expenses—have remained flat over the observed period. However, other expenses did increase markedly in 2022 as compared to prior years. Figure 10 shows aggregate L&H sector benefit payments, surrenders, reserve increases, and all other expenses for recent years.

Figure 10: L&H Sector Expenses ($ thousands)

	2018	2019	2020	2021	2022
Total Benefits Payments	$289,480,982	$301,813,113	$313,209,521	$338,416,308	$321,002,240
Total Surrenders	350,278,913	339,640,132	323,347,674	362,681,903	348,082,858
Total Reserve Increases	143,299,884	120,573,957	107,832,650	89,753,609	128,603,408
Total Trsfrs. to Sep. Accts	(89,648,289)	(71,995,355)	(69,212,368)	(75,602,806)	(50,138,537)
Commissions	58,336,146	61,198,400	59,917,778	64,523,544	67,480,045
General & Administrative Expenses	65,887,312	67,822,122	66,778,532	69,360,513	70,494,143
Insurance Taxes, Licenses and Fees	10,746,370	9,298,006	11,444,001	10,059,919	10,379,320
Other Expenses	11,349,411	14,420,556	6,262,306	14,802,007	61,603,704
Total	**$839,730,729**	**$842,770,930**	**$819,580,093**	**$873,994,998**	**$957,507,180**

Source: S&P Global

Total L&H sector expenses increased by 10 percent in 2022. Expenses attributable to total benefits payments decreased by five percent and those attributable to total contract surrenders decreased by four percent. However, a significant 43 percent jump in Total Reserve Increases brings it in line with levels seen pre-COVID-19. As interest rates have risen and the mix of business has shifted in favor of annuities, higher reserves were required.[63] Other expenses swelled by 316 percent, overwhelming the trends observed in non-benefit related expenses. The 2022 decrease in benefits payments was largely due to volatility in mortality from the COVID-19 pandemic among the working age population.[64] Surrenders of annuity contracts and cash value-building policies tend to drop when account values decrease (in this case, with rising interest rates). A 34 percent decrease in net transfers from separate accounts was also an unfavorable change in 2022 expenses.[65]

iii. Investment Income

Net investment income of $199 billion constituted about 21 percent of aggregate L&H sector revenues in 2022 but represented a one percent decrease from 2021 levels. Yields on new fixed income investments have benefited from the rapid rise in interest rates on the shorter end of the yield curve more than medium to longer maturities, but portfolio turnover was not significant enough to overcome the impact of less favorable equity markets on investments such as private equity and hedge funds.[66] Figure 11 shows L&H sector net investment income from invested assets (excluding net realized gains and losses) and the net investment yield for recent years. The net yield on invested assets slipped to 4.01 percent from 4.21 percent in 2022. Despite the rising interest rate environment, this marked the lowest net yield on invested assets in the last 10 years, as typically the life insurer investment portfolio turnover is low, and the impact of higher-yielding assets takes longer to become evident. The decrease in net yield was primarily the result of the one percent decrease in net investment income, coupled with a higher, three percent increase in cash and invested assets.

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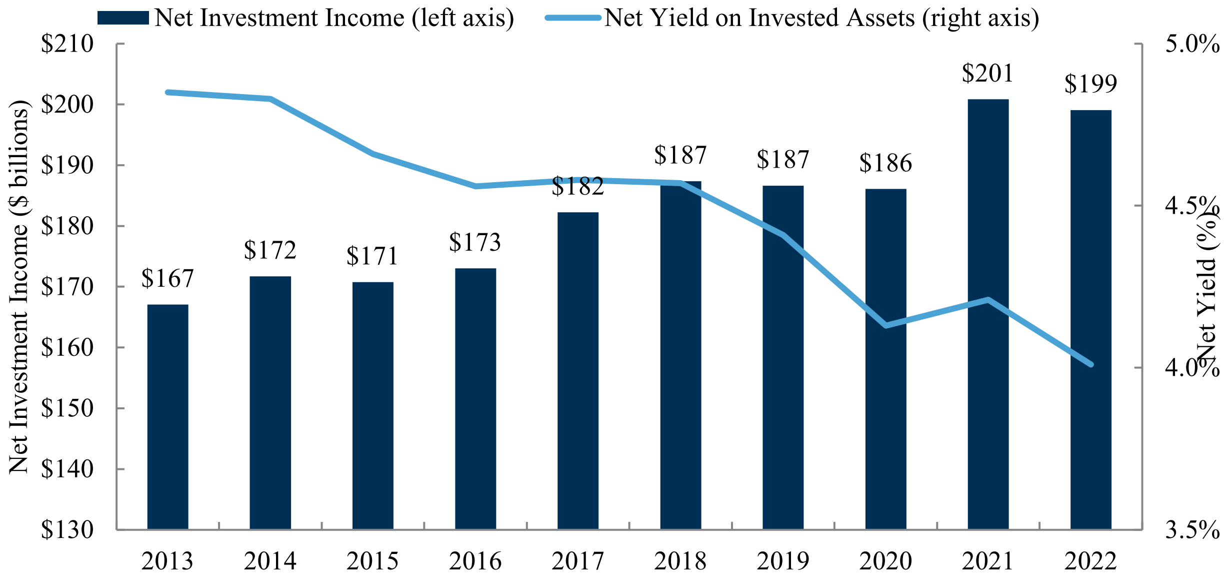
63 See, e.g., American Council of Life Insurers, *2022 American Council of Life Insurers Life Insurers Fact Book* (2022), 31-32, https://www.acli.com/-/media/acli/public/files/factbook/2022lifeinsurersfactbook_v2.pdf.

64 Jason Hopper, *Premiums Grow, Revenue Drops for Public Life/Annuity GAAP Insurers* (2023), https://news.ambest.com/research/displaybinary.aspx?URatingID=2562038&TY=P&record_code=330627.

65 A separate account is a segregated set of financial statements held by a life insurance company, maintained to report assets and liabilities for specific products that are separated from the insurer's general account. The product features of a separate account can vary but, generally, it allows an investor to choose an investment category according to risk tolerance and desire for performance. Separate account investments and related risks flow to the investor (i.e., the policyholder or annuitant) while the general account and its related risks are owned by the insurer.

66 Hopper, *Premiums Grow, Revenue Drops for Public Life/Annuity GAAP Insurers*.

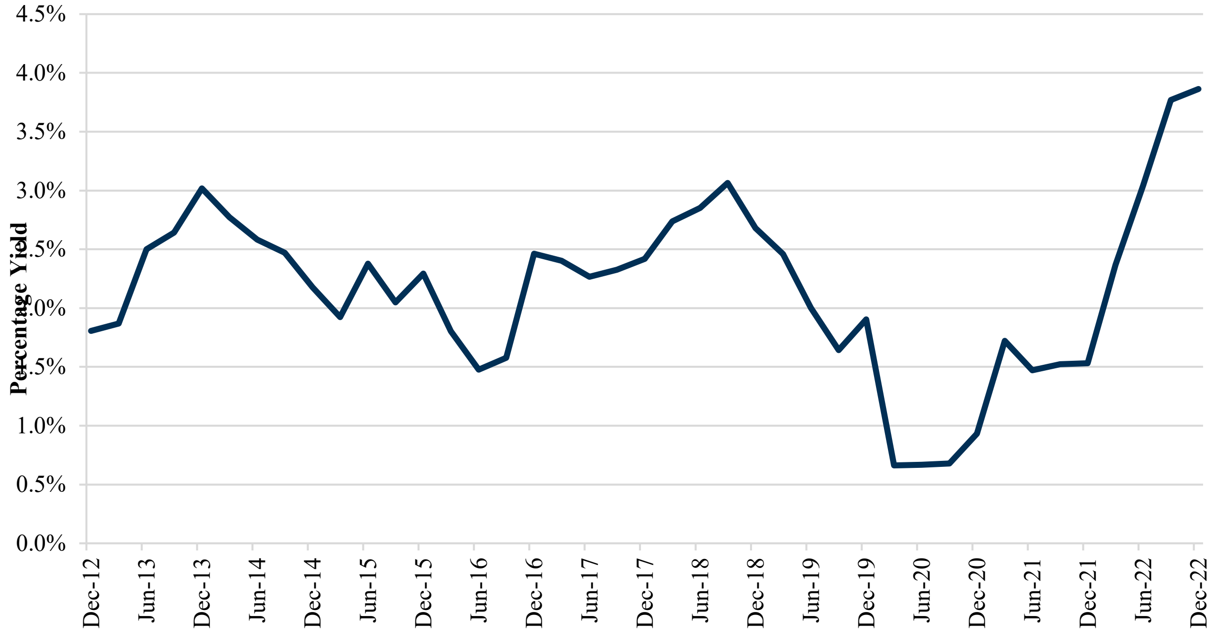
Figure 11: L&H Sector Annual Net Investment Income and Net Yield on Invested Assets



Source: S&P Global

Longer term interest rates continued to rise throughout most of 2022, with some pullbacks in the late second quarter to early third quarter and the latter part of the fourth quarter (see Figure 12). At the end of 2022, the rate on 10-year U.S. Treasury bonds stood at 3.88 percent, up 236 basis points from the prior year-end. The U.S. Treasury bond yield curve became inverted early in the second quarter of 2022 and remained so over the remainder of the year.

Figure 12: Percentage Yield on 10-Year Treasury Bonds



Source: S&P Global

iv. Net Income and Return on Equity

Figure 13 presents a summary income statement for the L&H sector. Total revenues in the L&H sector of $1.03 trillion in 2022 marked an increase of nine percent from the $946 billion reported in 2021, and crossed the $1 trillion level for the first time in history. Net premiums growth and the reinsurance allowance were the primary drivers of the overall gain in revenue in 2022. Total expenses increased by 10 percent to $958 billion, leading to a seven percent increase in pre-tax operating income. The increase in net income was held at two percent, rising to more than $38 billion in 2022, largely because of a $2.5 billion increase in the net realized capital losses.

In 2022, the L&H sector net realized capital losses increased by 30 percent to $10.8 billion from $8.3 billion in 2021 (see Figure 13). This followed a 28 percent decrease in net realized capital losses experienced in 2021 compared to 2020. The deterioration in 2022 appears to be due to realized losses on fixed income securities in 2022, whereas the industry realized gains on these securities in 2021, as well as considerably lower realized gains on unaffiliated preferred and common stocks and other invested assets, all of which were slightly offset by lower losses on derivatives (almost exclusively used for hedging transactions).

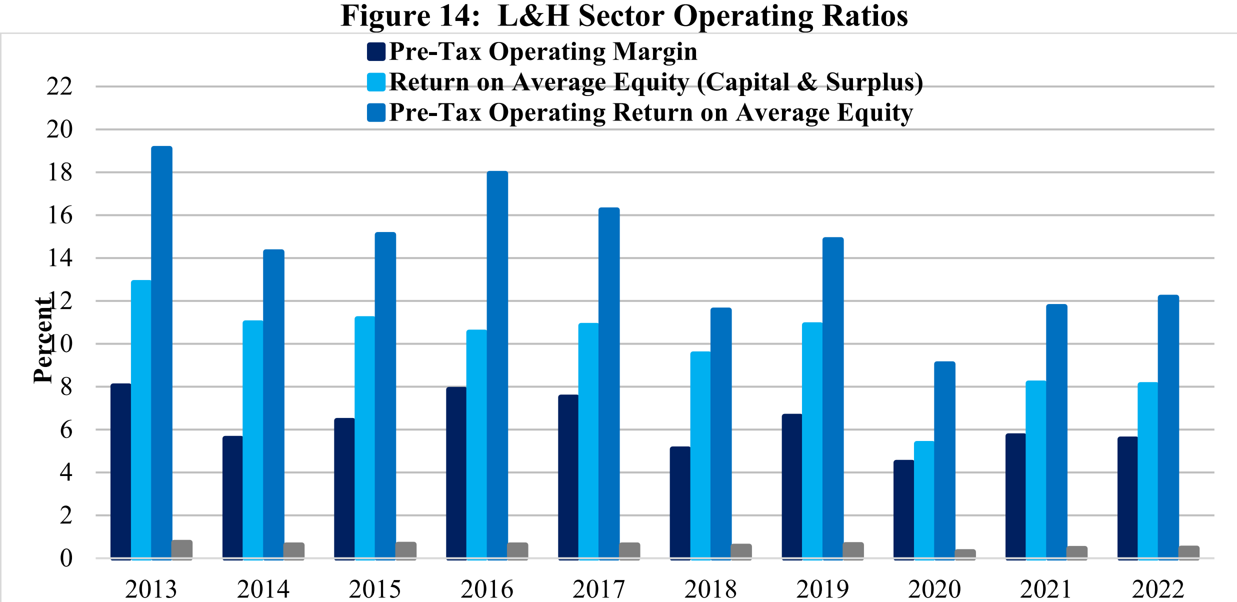
Figure 13: L&H Sector Net Income ($ thousands)

	2018	2019	2020	2021	2022
Premiums, Consideration & Deposits	$603,190,697	$679,437,300	$624,051,814	$637,846,666	$700,126,256
Net Investment Income	187,381,415	186,650,144	186,080,220	200,856,430	199,081,674
Reinsurance Allowance	32,044,503	(29,719,855)	(22,835,847)	8,507,447	38,243,443
Separate Accounts Revenue	37,271,230	36,754,163	37,351,807	40,977,971	38,372,934
Other Income	44,037,925	48,749,163	52,023,341	57,500,520	58,811,990
Total Revenue	**903,925,771**	**921,870,915**	**876,671,335**	**945,689,034**	**1,034,636,297**
Total Expenses	839,730,729	842,770,930	819,580,093	873,994,998	957,507,180
Policyholder Dividends	18,192,333	18,111,045	18,027,639	17,784,403	19,682,456
Net Gain from Operations before FIT	46,000,675	60,988,940	39,063,604	53,909,633	57,446,661
Federal Income Tax (FIT)	3,397,276	9,432,127	5,249,570	8,152,308	8,470,023
Net Income before Cap Gains	42,604,906	51,556,814	33,814,034	45,757,325	48,976,639
Net Realized Capital Gains (Losses)	(4,742,717)	(6,860,853)	(10,745,883)	(8,281,762)	(10,766,190)
Net Income	**$37,865,073**	**$44,695,961**	**$23,068,150**	**$37,475,563**	**$38,210,449**

Source: S&P Global

Figure 14 shows key operating ratios for the L&H sector. The L&H sector's 2022 pre-tax operating margin decreased slightly to 5.6 percent from 5.7 percent in 2021. The increase in operating income, coupled with a two percent decrease in equity (discussed below), led to an increase in the sector's pre-tax operating return on average equity to 12.2 percent, compared to the 11.7 percent recorded in 2021. The return on average equity slipped to 8.1 percent in 2022 from 8.2 percent in 2021. The return on average assets remained at 0.46 percent in 2022. While the 2022 operating performance demonstrated by these metrics is mixed, as was also the case in 2021, these results are an improvement over the COVID-19 pandemic-impacted 2020 metrics and are consistent with a trend toward more normalized results for the sector.

Figure 14: L&H Sector Operating Ratios



Source: S&P Global

b) Financial Condition

This section presents information on the 2022 financial condition of the L&H sector, providing insight into the sector's financial safety and soundness and related implications by highlighting certain financial indicators and trends in recent years and over the ten-year period from 2013 through 2022.

i. Capital and Surplus

The Federal Reserve embarked upon a path of monetary tightening beginning in March 2022.[67] For the L&H sector, this translated into capital losses and increased leverage emerging in its capital and surplus position.

Surplus Performance and Drivers

The L&H sector reported a sharp increase in net unrealized capital losses, contributing to a year-over-year decline in capital and surplus in 2022 for the first time in more than a decade, compared to a 10-year high attained in 2021 (*see* Figure 15). In 2022, capital and surplus decreased by 2.2 percent to $466.9 billion, a reversal of year-over-year growth reported in the previous four years (as well as in the prior years since 2008). A considerable drop in separate account assets and a slowdown in the growth of investment holdings were largely behind the 2022 reduction in the sector's capital levels.

Figure 15: L&H Capital and Surplus Position ($ thousands)

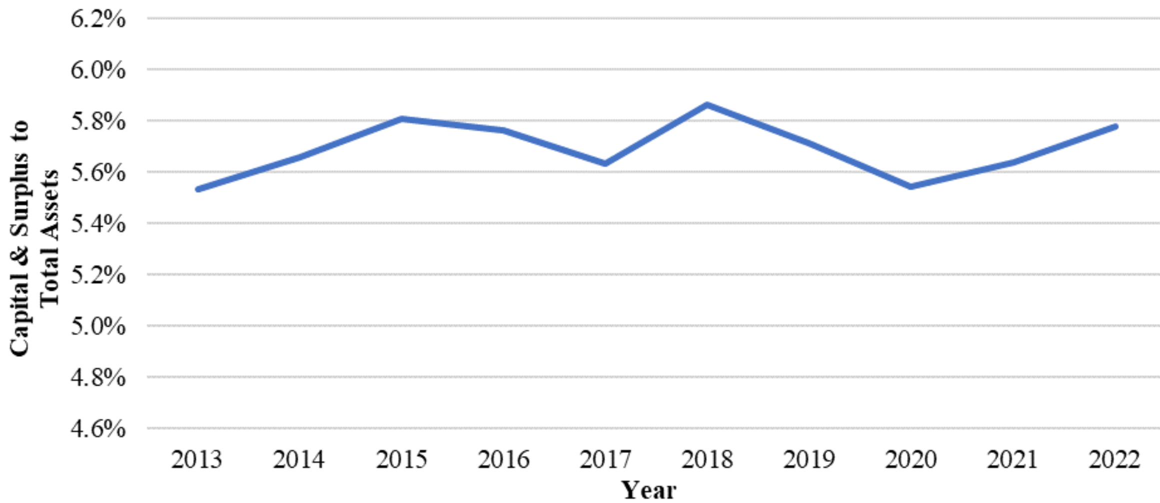
	2018	2019	2020	2021	2022
Capital & Surplus	$ 399,896,318	$ 421,671,764	$ 441,192,582	$ 477,465,682	$ 466,904,892
Year-Over-Year Growth	1.2%	5.4%	4.6%	8.2%	-2.2%
General Account Assets	$4,358,585,783	$4,583,365,496	$4,916,574,328	$5,166,698,822	$5,346,714,840
Year-Over-Year Growth	1.3%	5.2%	7.3%	5.1%	3.5%
Separate Account Assets	$2,462,921,733	$2,797,443,192	$3,045,168,769	$3,303,984,450	$2,733,938,968
Year-Over-Year Growth	-9.2%	13.6%	8.9%	8.5%	-17.3%

Source: S&P Global

Annual growth in general account assets has remained positive over the past 10 years, enhancing surplus for the L&H sector. The growth in separate account assets is likely to fluctuate from year to year, as performance is largely influenced by equity and bond assets under management. Despite the decline in aggregate capital and surplus and separate account assets at year-end 2022, the ratio of capital and surplus to total assets (combined general and separate account assets) remained stable overall and suggests that the L&H sector has been able to consistently withstand adverse investment and mortality experience, as demonstrated in Figure 16 below. The boost in 2022 was caused by the greater pace at which total assets decreased from 2021 relative to the year-over-year drop in capital and surplus.

[67] The Federal Reserve raised interest rates on seven separate occasions in 2022, resulting in the federal funds rate to reside in the range of 4.25-4.50 percent by year-end. *See, e.g.*, Forbes, "Federal Funds Rate History 1990 to 2023," June 14, 2023, https://www.forbes.com/advisor/investing/fed-funds-rate-history/.

Figure 16: Strength of L&H Capital & Surplus



Source: S&P Global

Capital infusions such as surplus notes are another contributing factor to aggregate capital and surplus. The L&H sector issued surplus notes of $49.7 billion in 2022, marking a 10-year peak in issuance levels, but annual growth slowed from the previous three years to 3.9 percent. Of note, annual growth of surplus note issuance was 11.7 percent and 14.5 percent in 2021 and 2020, respectively. Decelerated growth in 2022 may be attributed to the increased cost of financing due to rising interest rates. Despite the recent slowdown, annual growth in surplus notes or debt capital continues to be material, averaging at a rate of 9.5 percent since 2017.[68] By contrast, growth of organic or non-debt capital has only averaged 2.9 percent over the same period. Surplus notes accounted for 10.6 percent of aggregate capital and surplus at year-end 2022, the highest share in the last 10 years and up from 10 percent at year-end 2021. Because of their relative share of capital and surplus, the removal of surplus notes does not substantially change the pro forma growth of capital and surplus, suggesting that the L&H sector in the aggregate is able to generate capital from its core operations without reliance on external capital.

Sustained net income before factoring in capital gains and losses has steadily generated capital for the L&H sector since 2013. Annual revenue growth of over nine percent largely resulted in the sector's strong underwriting performance in 2022, with net income (before capital gains) contributing 10.3 percent to the growth of capital and surplus from the previous year end.

Expectations of continued monetary tightening accompanied by economic uncertainty of a potential recession resulted in market volatility and investment losses in 2022. As rising interest rates depressed asset values, the L&H sector reported an increase in net unrealized capital losses of $28.2 billion as well as an increase in net realized capital losses of $10.8 billion. Net realized losses were primarily due to losses from derivative instruments and unaffiliated bonds.[69] Of note

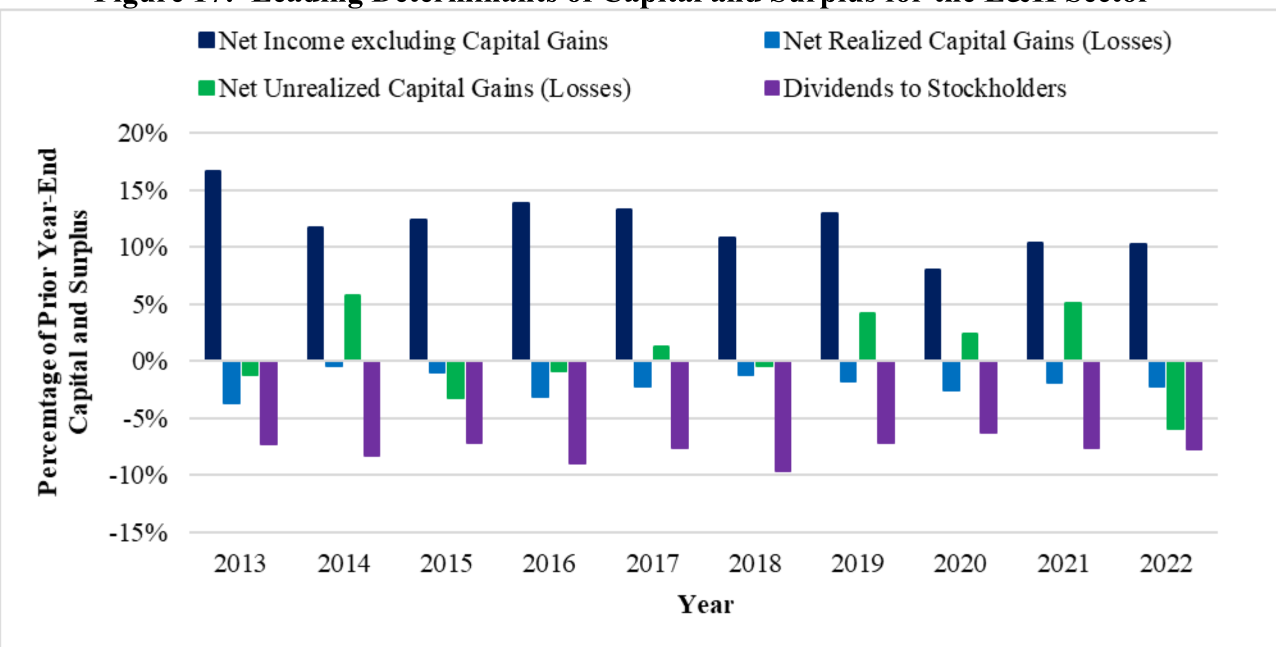
[68] Though treated as equity under state insurance regulations, surplus notes are debt-like instruments that are subordinated to policyholder obligations and other current and future borrowings.

[69] NAIC, *U.S. Life and A&H Insurance Industry Analysis Report* (2023), https://content.naic.org/sites/default/files/inline-files/2022%20Life%20Annual%20Industry%20Commentary_1.pdf.

is that interest maintenance reserve (IMR) balances of life insurers dropped substantially in 2022, even turning negative in some cases, due to the higher interest rate environment.[70] The increases in unrealized and realized capital losses combined to erode the L&H sector's surplus by 8.2 percent.

Stockholder dividends are another element of the sector's capital position, serving to partially offset potential growth. In 2022, stockholder dividends were $36.6 billion compared to $33.6 billion in 2021 and a 10-year high of $38 billion in 2018.[71] 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 reduced capital and surplus by 7.8 percent on average annually since 2013. By contrast, net income before capital gains and losses have increased capital and surplus by 12.0 percent on average over the same period. Figure 17 presents the key drivers of capital and surplus for the L&H sector during the past 10 years through 2022.

Figure 17: Leading Determinants of Capital and Surplus for the L&H Sector



Source: S&P Global

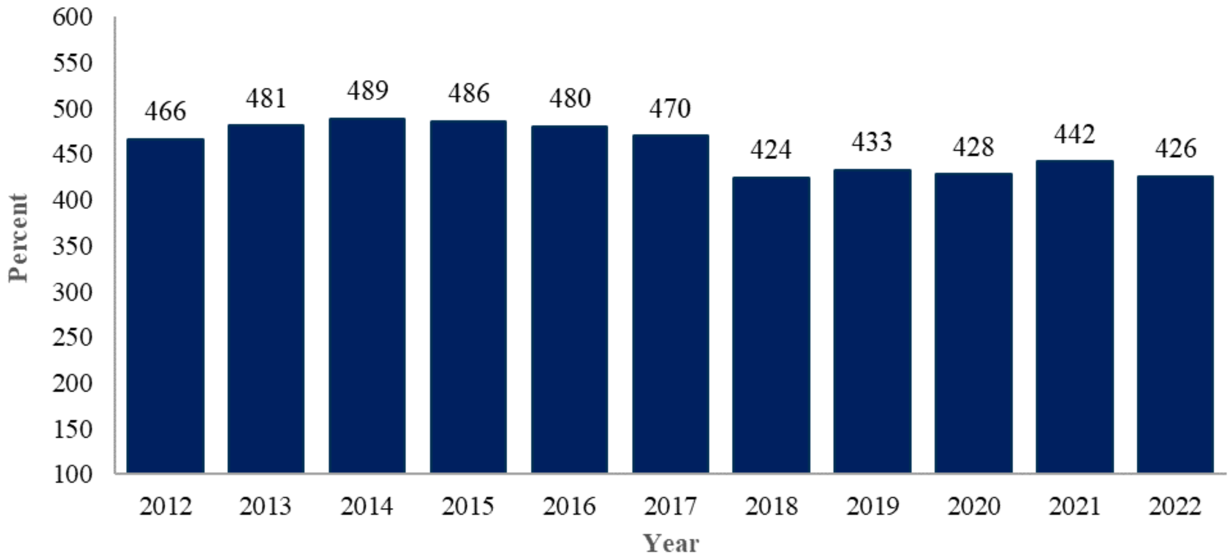
Given the recent year-over-year decline in aggregate capital and surplus, it is not surprising to find that the average risk-based capital (RBC) ratio for the L&H sector weakened somewhat in 2022, but remained strong. Figure 18 shows that statutory capital and surplus in 2022 for the

[70] Statutory accounting requires realized gains and losses related to interest rate movements to be amortized into IMR over the asset's remaining period to maturity. Negative IMR balances are currently restricted from being admitted under statutory accounting rules. The current accounting treatment of negative IMR balances is to record as a non-admitted liability; however, some insurers have received a permitted practice from their respective state regulators to admit the negative balances.

[71] In 2018, Aflac, Inc. issued an $11 billion extraordinary non-cash dividend. Moody's Investor Service, *Life Insurance: Strong Capital Levels Heading into Uncertain Economic Environment* (2023).

L&H sector was 4.26 times the level of minimum required regulatory capital on average, compared to 4.42 and 4.28 times the required levels in 2021 and 2020, respectively.

Figure 18: Average Risk-Based Capital Ratios for the L&H Sector

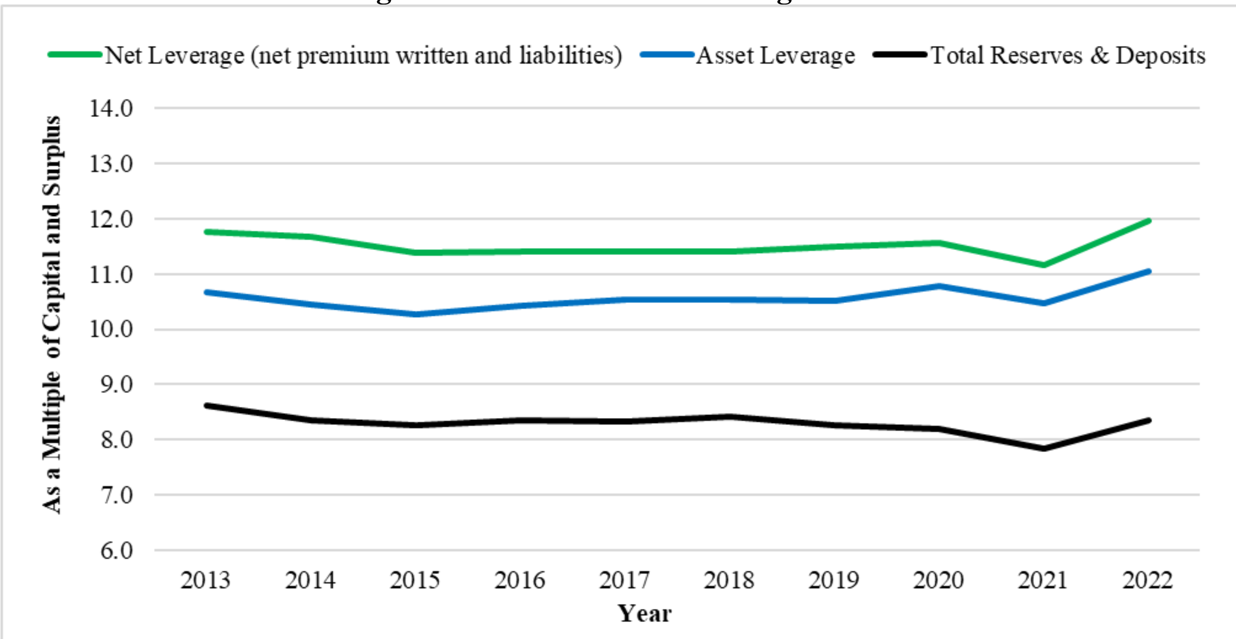


Source: *2022 American Council of Life Insurers Life Insurers Fact Book*; S&P Global (RBC ratios are calculated from S&P Global data)

Leverage Levels

Leverage represents the degree to which an insurer's surplus is exposed to risks from underwriting and investment activities and, as an indicator of surplus strength, it presents a key window into the health of the sector's capital and surplus. The trends observed in certain leverage ratios can be indicative of an insurer's ability to successfully navigate through market pressures. The greater financial flexibility illustrated by steady (or declining) leverage ratios, for example, can better enable insurers to 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 to move some of the risks off their own balance sheets and on to those of reinsurers, thereby improving (i.e., decreasing) leverage. Figure 19 provides a view of the L&H sector's general account leverage for the last 10 years.

Figure 19: L&H Sector Leverage Ratios



Source: S&P Global

As illustrated, all three leverage metrics exhibited an uptick in 2022. The decline in capital and surplus in 2022 together with the pace of growth in the other components captured in the ratios heightened the L&H sector's financial leverage from 2021. Of note are the net leverage and asset leverage ratios, both of which reached a 10-year high in 2022.

The net leverage ratio was nearly 12 in 2022, up from 11.2 in 2021, suggesting an increased reliance on reserve funds and potential strain on the L&H sector's ability to absorb losses from claims and estimated future liabilities.[72] Annual growth of almost 10 percent in net premiums, annuities, and considerations (referred to collectively as net premiums) factored meaningfully in raising the net leverage ratio in 2022.[73] Net premiums were $700.1 billion in 2022 compared to $637.8 billion in 2021. While growth of general account liabilities was at a slower pace, exhibiting a 4.1 percent annual increase to $4.9 trillion in 2022, it was also impactful.

Fueled by record individual annuity sales and pension buyouts, annuity considerations rose by 14.8 percent to total nearly $456 billion in 2022, which were new highs in annual growth and volume.[74] Near 18 percent year-over-year growth in individual annuities to total $279.4 billion and another 10.3 percent annual increase in group annuities to $176.6 billion were behind those record highs. Underlying that growth were several factors. In the wake of the COVID-19 pandemic and the rise in interest rates, pension risk transfer deals have become more attractive to

[72] 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.

[73] As indicated by S&P Global, net premiums, annuities, and considerations are defined to be premiums, annuity considerations and considerations for supplementary contracts with life contingencies, including deposit-type funds for years 2000 and prior due to codification change.

[74] Figuracio & Hammel, "U.S. Annuity Considerations Reach Another Record High in 2022."

companies that are seeking to offload some or all the risk of their pension plan obligations. By removing this long-term liability off their balance sheets, these companies also eliminate the volatility of their plans' funding status (see Box 2: The Pension Risk Transfer Market). At the same time, principal protection and attractive interest rates are incentivizing consumers to seek out annuity products. Finally, increased demand by consumers for the protection that fixed annuities offer against market volatility has motivated carriers to shift sales towards fixed annuities and away from variable annuities. Fixed rate deferred annuity sales totaled $113 billion in 2022, more than double the $53.1 billion achieved in 2021, while traditional variable annuity sales dropped to $61.8 billion in 2022 from $86.6 billion in 2021.[75] At year-end 2022, over 49 percent of the L&H sector's business mix consisted of annuities, up from 44.8 percent at year-end 2021. The life insurance business segment comprised 23.6 percent and 25 percent of the business for the years ending 2022 and 2021, respectively, while A&H largely made up the remainder.

The net leverage ratio also considers the sector's reinsurance activity. Surplus relief levels have steadily risen over the last 10 years, averaging five percent (as a share of capital and surplus) annually since 2013. Over the recent 10-year period, surplus relief more than doubled to $27.3 billion in 2022 from $12.7 billion in 2013, accounting for 5.84 percent and 3.83 percent of capital and surplus for the two years, respectively.[76] The share of gross premiums ceded to reinsurers decreased in 2022, resulting in a higher net retention rate of 65.3 percent compared to 63.2 percent in 2021. In terms of volume, ceded premium did not change materially at $371.5 billion compared to $370.2 billion in the previous year. The L&H sector's total direct business continued its year-over-year growth to $878.2 billion in 2022, a 7.6 percent increase from 2021.

Turning to total policy reserves and deposit-type contract reserves, year-over-year growth has averaged 3.4 percent since 2013. Total policy reserves and deposit-type contract reserves were $3.9 trillion and $3.7 trillion for the years ending 2022 and 2021, respectively. The multiple of policy reserves and deposits to capital and surplus was 8.34 at year-end 2022, compared to the 10-year low of 7.83 at year-end 2021, and resides within the range observed since 2014. On removing the outliers observed in 2013 and 2021 in Figure 19, the ratio has ranged between 8.20 and 8.41 over the last 10 years with year-over-year deviations of 5 to 15 basis points, suggesting that the financial resources set aside by the sector have largely been in line with expected claims commitments.[77]

Lastly, 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

[75] LIMRA, "Record Annuity Sales in 2022 Expected to Continue into First Quarter 2023," news release, March 8, 2023, https://www.limra.com/en/newsroom/news-releases/2023/limra-record-annuity-sales-in-2022-expected-to-continue-into-first-quarter-2023/.

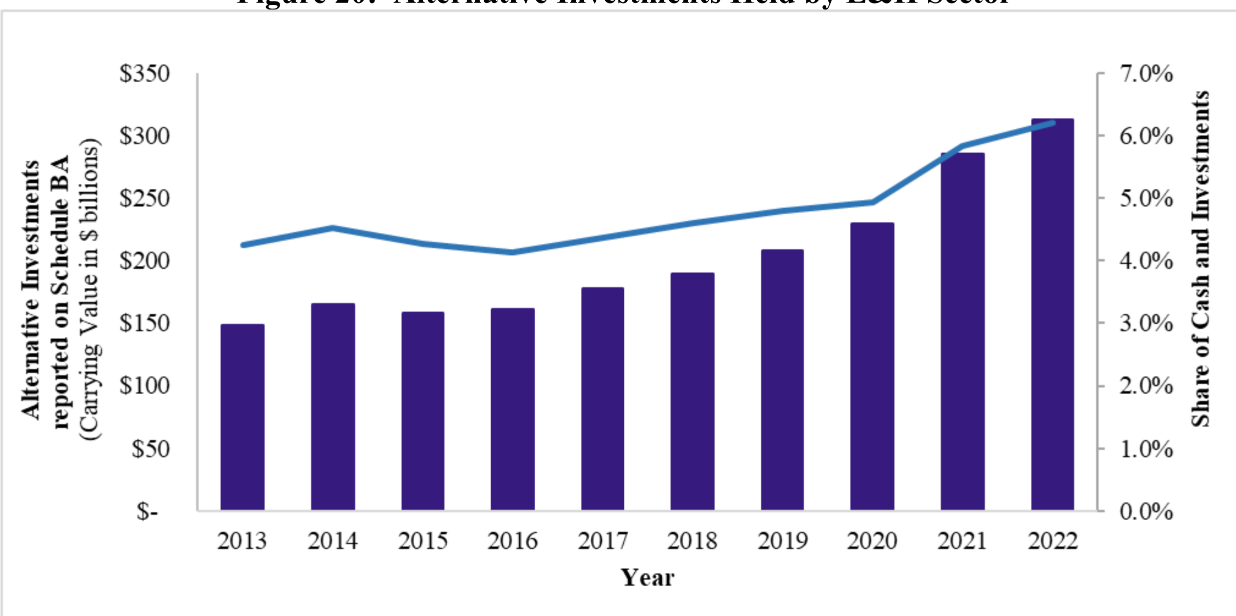
[76] "Surplus relief" refers to the amount of surplus not yet reported as income from commissions and expense allowances on reinsurance ceded during the current year. It captures the amounts related to A&H business as well as life and annuity business for general and separate accounts. The use of reinsurance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

[77] The outliers refer to the highs and lows observed for the ratio of total policy reserves and deposits to capital and surplus over the 10-year period from 2013 through 2022. Because these outliers were excluded, the annual basis-point changes for 2014 and 2022 were not included in the range of deviations noted.

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. Since 2013, the L&H sector's asset leverage ratio has ranged between a low of 10.26 at year-end 2015 and a high of 11.05 at year-end 2022. The higher the ratio, the more vulnerable the sector's capital is to market volatility and investment losses. The 10-year high in 2022 may be reflective of the increased exposure to riskier asset holdings like mortgage loans and non-traditional bond investments. As life insurers sought yield during the prolonged low interest environment, their investment portfolios have gradually shifted away from traditional holdings in favor of higher yielding but less liquid investments, thereby potentially heightening exposure to risks stemming from a decrease in asset prices, elevated issuer leverage, rising defaults, and funding risks. That trend continued in 2022.

Figure 20 shows the L&H sector's holding of alternative investments between 2013 and 2022.[78]

Figure 20: Alternative Investments Held by L&H Sector



Source: S&P Global

As Figure 20 above shows, the L&H sector's holdings of alternative investments have been on a steady upward path since 2013. They totaled $312.5 billion at year-end 2022, up from $285.5 billion at year-end 2021 and more than double the value of holdings at year-end 2013. As illustrated, the L&H sector has been allocating an ever-greater share of its investment portfolio to alternatives since 2017. Of note is the annual growth rate of alternative holdings by the L&H sector in the last four years alone, averaging 13.4 percent.

[78] Alternative investments refer to those investments reported on Schedule BA of the statutory financial statements, capturing investments that include joint ventures, hedge funds, and private equity.

Box 3: Trends in Offshore Reinsurance for the U.S. Life/Retirement Sector

As FIO has previously reported, U.S. life insurers increasingly have been ceding risk on their books offshore to reinsurers.[79] In general, such transactions reduce the U.S. insurer's reserves, releasing surplus capital and potentially lowering RBC requirements under U.S. statutory accounting. This trend continued in 2022, influenced in part by differences in tax treatment and accounting rules applicable to the U.S. ceding insurer versus those applicable to the offshore assuming insurer (reinsurer). With regard to Bermuda, ceded U.S. life insurance and annuity reserves increased by 16 percent in 2022 to $809 billion, accounting for 81 percent of total life sector reserves ceded to non-U.S. life reinsurers, as compared to 11 percent of total reserves ceded to non-life reinsurers in 2016.[80] Alternative asset managers have become significant participants in this business, with private equity-backed reinsurers accounting for 35.3 percent of all of the cedant life and annuity reserve credits and modified coinsurance reserves associated with reinsurance arrangements at year-end 2022.[81] In some cases, the U.S. ceding insurer and Bermuda reinsurers are affiliates, and in certain instances their transactions may be complex and relatively opaque to U.S. insurance regulators. State regulators and the NAIC have increased their focus on these and similar business structures, with regard to both market conduct and prudential considerations, with the aim of ensuring that the financial security of U.S. policyholders and annuitants is not put at risk through such transactions.[82] FIO remains engaged with the NAIC, state insurance regulators, the Bermuda Monetary Authority, and other regulators and policymakers with regard to these evolving U.S. life insurance trends and will continue to monitor these activities.

ii. Assets

Contributing to the decrease in capital and surplus was a 4.6 percent drop in total L&H sector assets from $8.5 trillion at year-end 2021, to a total $8.1 trillion at year-end 2022, representing a shift from year-over-year growth in the sector's asset portfolio since 2018. The last decline in total assets was in 2008 when the financial crisis occurred. Then, as now, general account asset growth was offset by significant declines in separate account assets during years of sharp market volatility.

General account assets rose to $5.3 trillion in 2022 from $5.2 trillion in 2021, resulting in an average annual growth rate of 4.1 percent since 2013. Steady growth of the general account asset portfolio has largely been supported by year-over-year growth in investment holdings. In particular, annual growth in general accounts, for the three years spanning 2019 through 2021,

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[79] *See*, e.g., FIO, *2021 Annual Report on the Insurance Industry* (2021), https://home.treasury.gov/system/files/311/FIO-2021-Annual-Report-Insurance-Industry.pdf (*2021 Annual Report*); FIO, *2022 Annual Report*.

[80] Moody's Investor Service, *Life Insurance: Strong Capital Levels Heading into Uncertain Economic Environment*.

[81] Tim Zawacki, "Affiliated, Private Equity-Backed Reinsurers Fuel Life and Annuity Cession Surge," *S&P Capital IQ*, May 1, 2023, https://www.capitaliq.spglobal.com/apisv3/spg-webplatform-core/news/article?id=75312928&redirected=1.

[82] *See, e.g.*, FIO, *2021 Annual Report*; FIO, *2022 Annual Report*; "Private Equity," NAIC, last updated June 28, 2023, https://content.naic.org/cipr-topics/private-equity.

intensified to average nearly six percent, mirroring the expansion of the L&H sector's investment portfolio. Annual growth in separate account assets has been averaging 3.4 percent in the last 10 years and over 10 percent between 2019 and 2021.

Figure 21 not only shows the composition of the L&H sector's asset portfolio and distribution of cash and investments during the last five years but also suggests a gradual transformation in risk appetite. Of total asset holdings, general account assets have averaged 63 percent of the portfolio on a yearly basis since 2018, while separate account assets have averaged 37 percent.

Figure 21: Composition of L&H Sector General Account Assets and Investment Portfolio

	2018	2019	2020	2021	2022
General Account Assets / Total Assets	63.9%	62.1%	61.8%	61.0%	66.2%
Separate Account Assets / Total Assets	36.1%	37.9%	38.2%	39.0%	33.8%
Bonds (long-term)	72.5%	71.1%	70.2%	69.9%	69.4%
Preferred Stocks	0.3%	0.3%	0.3%	0.4%	0.3%
Common Stocks	2.0%	2.1%	2.2%	2.4%	2.1%
Mortgage Loans	12.6%	13.0%	12.6%	12.8%	13.5%
Real Estate	0.5%	0.5%	0.5%	0.5%	0.4%
Contract Loans	3.1%	3.0%	2.8%	2.6%	2.6%
Derivatives	1.4%	1.8%	2.6%	2.0%	1.9%
Cash & Short-Term Investments	2.5%	2.7%	3.2%	2.9%	2.8%
Other Investments	5.1%	5.3%	5.5%	6.6%	7.0%
Total Cash & Investments	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Share of General Account Assets	**94.6%**	**94.7%**	**94.8%**	**94.6%**	**94.2%**

Source: S&P Global

As detailed in Figure 21, cash and invested assets continued to reflect the structure of the L&H sector's general account asset portfolio, making up more than 94 percent or $5.0 trillion of it at year-end 2022. Furthermore, investment allocations have remained generally constant over the last five years, including certain ongoing trends. Bond holdings (largely corporate) 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 for their asset-liability matching strategies. The predictability of cash flows from bond investments enhances insurers' ability to meet future policyholder obligations, making such investments a key feature of the sector's business model. Of total bonds held by life insurers, at least 97 percent have consistently been long-term in nature each year—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 insurers with the ability to estimate cash flows to meet both debt and policyholder obligations as they become due. Long-term bonds totaled $3.5 trillion and $3.4 trillion for the years ending 2022 and 2021, respectively.

Driven by a desire for higher yield in a sustained low interest rate environment until recently, the L&H sector has been steadily reallocating increased shares of its investment portfolio away from long-term bond holdings. As Figure 21 indicates, the L&H sector has progressively reduced its long-term bond exposure while expanding its mortgage loan investments. Mortgage loans are less liquid than bond investments and, with less credit and pricing transparency, they can be subject to greater market volatility. The past 10 years showed that long-term bond holdings have declined by over five percentage points or, more exactly, 527 basis points, falling from a high of 74.7 percent of the L&H investment portfolio in 2013, while mortgage loans have increased by over three percentage points or 334 basis points during that same period. Mortgage loans have remained the second largest investment class held by the L&H sector, averaging close to 12 percent of cash and invested assets annually since 2013. Consistent year-over-year growth resulted in total mortgage loan holdings of $679.5 billion in 2022, rising from $625.9 billion and $587.2 billion in 2021 and 2020, respectively. Of note is that mortgages in foreclosure of $1.1 billion reached a decade high in 2022 and were three times the level in 2021.

Commercial mortgage loans have made up the bulk of the sector's exposure to mortgage loans. As life insurers searched for yield to improve product spreads and profitability, their exposure to the commercial mortgage loan market increased. When interest rates were still at historic lows between 2020 and 2021, commercial mortgage yields were 1.5 percent higher than that of BBB-rated bonds.[83] In 2022, the potential for a commercial real estate (CRE) shock has become a considerable focus for market observers.[84] Maturing CRE debt and a changing work paradigm are weighing heavily on CRE market performance. Deterioration in debt service coverage and increased refinancing risk, linked to rising interest rates, are pointing to potential declining credit quality. Additionally, the shift to a more remote work environment has increased office vacancies, putting real estate valuations under pressure and raising loan-to-value ratios.[85] Office properties made up 20 percent of the L&H sector's commercial mortgage loan exposure at year-end 2022.[86]

Finally, the "other investments" category in Figure 21, which include alternative investments reported on Schedule BA of statutory financial statements, has shown a steady year-over-year increase, averaging over nine percent since 2013 and over 14 percent in the last four years alone. Other investments totaled $353.7 billion at year-end 2022, a 10.1 percent increase from the prior year-end. The prolonged low interest rate environment was central in motivating insurers to expand their participation in the private credit markets where yields are more attractive, but risk may be less transparent to investors.

iii. Liquidity

Adequate risk management capabilities that properly address asset-liability and liquidity risk exposures are critically important for life insurers. Life insurers generally benefit in an environment of improving investment yields, but rapidly rising interest rates can heighten

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[83] Fitch Ratings, "U.S. Life Insurers Navigate CRE Challenges," *Fitch in Five*, https://events.fitchratings.com/uslifeinsnavigatecrechallenges.

[84] Moody's, *Where Office Vacancy Stands as Working from Home Becomes Mainstream*, https://cre.moodysanalytics.com/insights/cre-trends/where-office-vacancy-stands/.

[85] Federal Reserve, *Financial Stability Report* (May 2023), https://www.federalreserve.gov/publications/files/financial-stability-report-20230508.pdf.

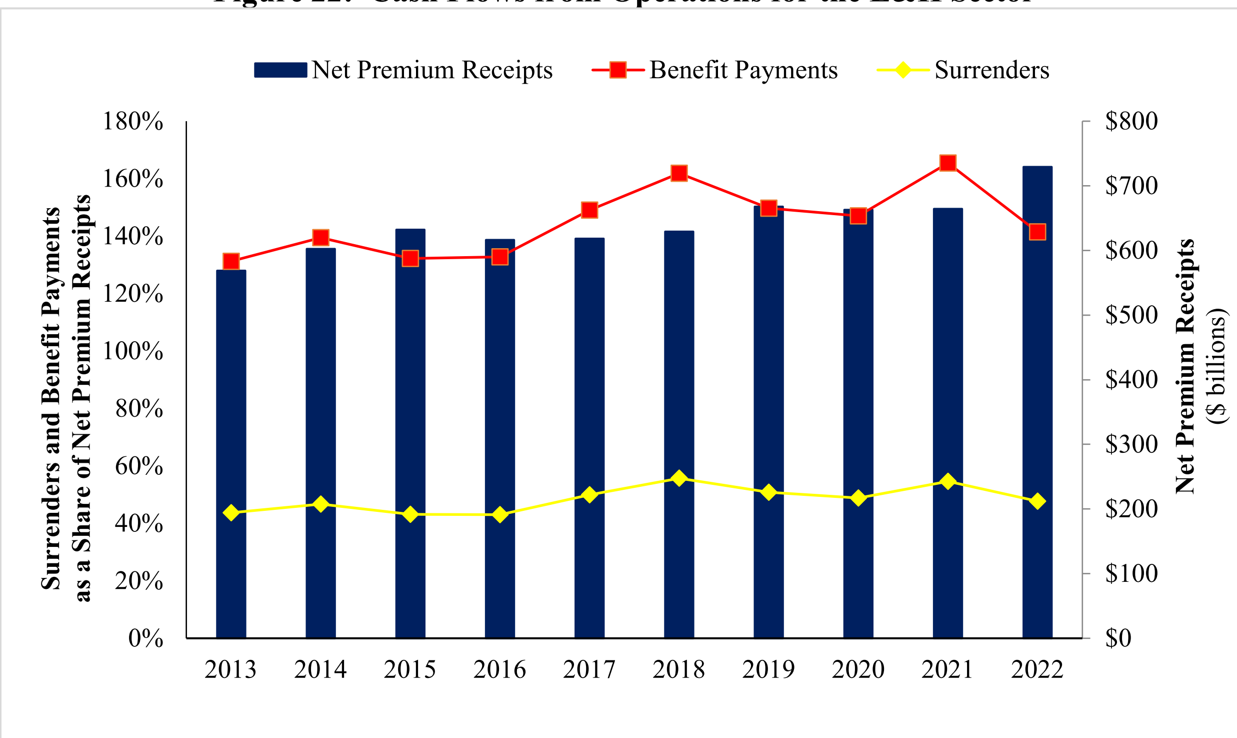
[86] Fitch Ratings, "U.S. Life Insurers to Weather Commercial Real Estate Loss Exposure," *FitchWire*, June 28, 2023, https://www.fitchratings.com/research/insurance/us-life-insurers-to-weather-commercial-real-estate-loss-exposure-28-06-2023.

disintermediation risk for them when opportunities to earn attractive returns from other financial products incentivize policyholders to lapse or surrender their policies. The L&H sector's liquidity profile remained resilient in 2022 in the face of more restrictive monetary policy to address escalating inflation and market fears of a potential recession due to tightening financing conditions and reduced demand. Nevertheless, some notable trends continue and suggest potential vulnerabilities for the L&H sector going forward. Specifically, signs of greater asset illiquidity were evident, which contributed to a decline in the current liquidity ratio by 231 basis points (*see* Figure 23).[87]

Cash Flow

The L&H sector managed its cash flow needs effectively in 2022. Figure 22 illustrates the cash flows from L&H sector operations for each of the past 10 years, showing surrenders and benefit payments, each as a share of net premium receipts.

Figure 22: Cash Flows from Operations for the L&H Sector



Source: S&P Global

The L&H sector has been reporting positive net cash flows from operations year after year, including for the most recent year when they totaled $207.0 billion. In 2022, life insurers experienced sharply higher net cash flows from operations compared to those in 2021, the result of a combination of lower surrender activity, reduced benefit payments, and increased net

[87] The current liquidity ratio refers to the portion of cash and investments available (i.e., exclusive of real estate and affiliated investments) to meet total liabilities (net of separate account transfers and the asset valuation reserve).

premium receipts.[88] By contrast, surrender levels and benefit payments were at decade highs in 2021, due to expectations of higher interest rates and elevated mortality levels stemming from COVID-19.

Retreating from levels in the previous two years, the ratios in 2022 reflect the onset of more normal market conditions, as gross domestic product (GDP) grew at a pace in line with pre-COVID-19 pandemic levels.[89] Market imbalances continued to escalate, however, as supply chain challenges persisted and labor markets operated at full employment. For life insurers, strong sales growth and the prevalence of policy surrender charges positively impacted the sector's liquidity position in 2022. Premium receipts reached a decade high of $729.5 billion in 2022 and were up by nearly 10 percent from 2021.[90] Net cash flows were further boosted by a four percent decrease in surrenders to $348.1 billion and a 7.1 percent decline in benefit payments to $684.0 billion from 2021. For the past five years, the average annual growth in net premium receipts (3.4 percent) exceeded that of surrenders (2.7 percent) and benefits payments (2.5 percent), despite the economic fallout from the COVID-19 pandemic.

Positive cash flows from operations have contributed to steady growth in cash and invested assets, bolstering the L&H sector's liquidity position. In 2022, cash and invested assets grew by 3.0 percent from the prior year, now totaling $5.0 trillion. The 2022 growth figure, however, was substantially lower than in recent years—the sector's cash and invested assets grew annually by 4.9 percent, 7.3 percent, and 5.3 percent for the years ending 2021, 2020, and 2019, respectively. Growth of the investment portfolio continued to closely track year-over-year growth in general account liabilities, rising by 4.1 percent to $4.9 trillion in 2022. Moreover, the ratio of cash and invested assets to general account liabilities has remained stable over the past decade at slightly above a multiple of one annually, pointing to the sector's tightly matched asset-liability books.

Due to their longer-dated liabilities, life insurers' portfolios are often heavily weighted with fixed-income securities because they provide greater certainty in asset cash flows. As expected of the L&H sector, bonds have consistently made up the bulk of cash and investments, totaling $3.6 trillion at year-end 2022, a 2.5 percent increase from the previous year end. About 41.2 percent or $1.5 trillion of the bond portfolio had maturities of 10 years or longer at year-end 2022, up from 40.5 percent at year-end 2021. This share in the last two years is in sharp contrast to prior years (between 2008 and 2020) when the share of bonds with maturities of at least 10 years averaged 35.7 percent.

Of the bonds with maturities of 10 years or longer, 53.3 percent or $783.2 billion had maturities in excess of 20 years, in close alignment with recent trends but falling from nearly 58 percent at

[88] 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 statement.

[89] "Gross Domestic Product," Bureau of Economic Analysis, https://www.bea.gov/data/gdp/gross-domestic-product.

[90] 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.

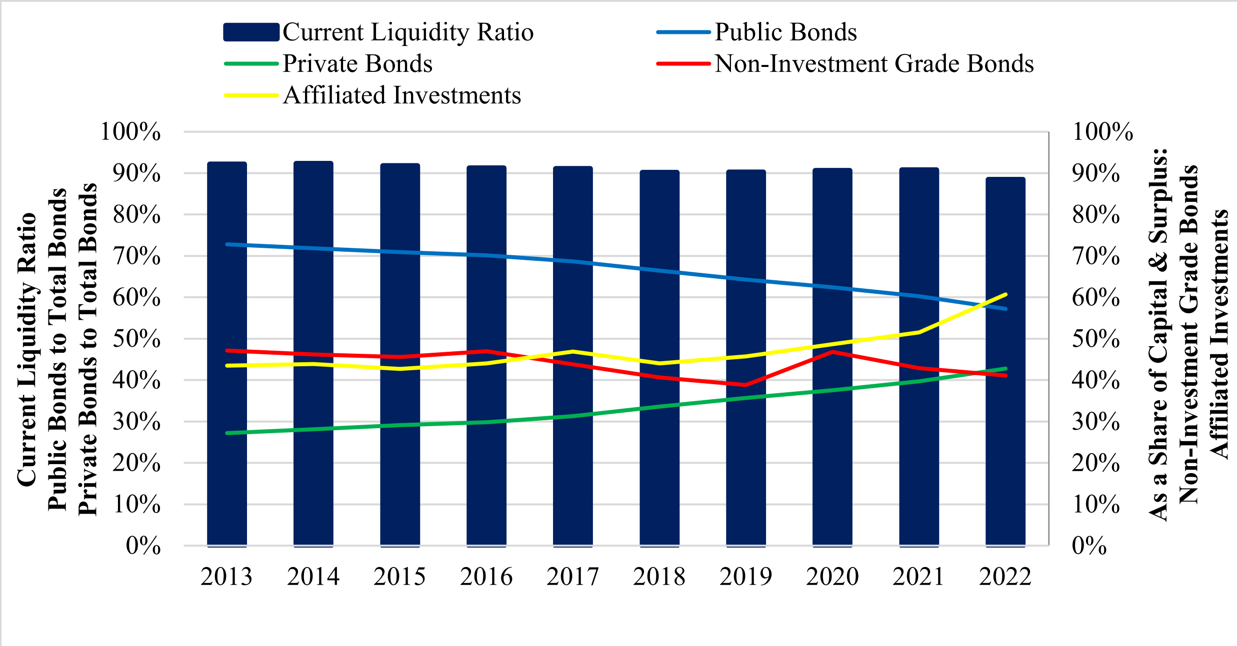
the start of the most recent ten-year period. More than 26 percent of the bond portfolio consisted of holdings with maturities between five and 10 years as of year-end 2022, compared to 27.3 percent as of the prior year-end and the yearly average of 29.3 percent since 2013. In summary, over two-thirds of the sector's entire bond portfolio has steadily been allocated to medium- 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 at least 94 percent of its total bonds in investment-grade debt each year since 2013, reinforcing its ability to meet policyholder commitments.

Ongoing Investment Trends

Tight interest margins have been a motivating factor for life insurers to search for yield and capture illiquidity premiums. As discussed below, greater illiquidity carries with it potentially widening market and credit risk exposures. Although, at present, the L&H sector's continued ability to support its policyholder and funding commitments as they come due remains strong, the noted trends are reason for continued scrutiny.

The increased risk-taking by life insurers has led to a gradual transformation of the characteristics of the L&H sector's investment portfolio, as demonstrated in Figure 23. The investment allocations reflect a tradeoff of some increase in liquidity risk for higher expected yields. Specifically, the share of the bond portfolio allocated to private bonds has remained on an upward path, while public bond allocations have decreased by almost 16 percentage points since 2013. At year-end 2013, public bonds of $1.9 trillion comprised almost 73 percent of the L&H sector's bond portfolio. Non-investment grade bonds continue to account for more than 41 percent of capital and surplus, as they have throughout the past 10 years. Finally, affiliated investments have been on an upward trajectory since 2018, accounting for a larger proportion of capital and surplus over that time. Because the marketability of such investments is uncertain, affiliated holdings are typically illiquid in nature and can impact the overall quality of available capital.

Figure 23: A View of L&H Liquidity



Source: S&P Global

Up until recent inflationary pressures, the prolonged low interest rate environment that followed the 2008 financial crisis compelled life insurers to look beyond investment-grade bonds in search of yield. The reallocation has diversified the L&H sector's investment portfolio, but it has also resulted in more complex assets on life insurers' balance sheets. Privately placed bonds have accounted for a growing share of total bond holdings over the past 10 years, reaching a decade high of 42.8 percent at year-end 2022 for the L&H sector. The degree of information on private-placements and private-label securities available to investors in support of due diligence reviews is limited as compared to that available to public issuers. Private placements are not required to be registered with the SEC, and therefore are not subject to disclosure and reporting requirements comparable to those for public issuers. Additionally, private placements are not typically assigned credit-agency ratings, making it challenging for investors and regulators to compare the risk of these instruments to that of rated issues. Issuers must therefore be prepared to pay investors a premium in exchange for taking on the potential added risk. Life insurers' private placement holdings have progressively expanded, taking up 3.3 times the L&H sector's capital and surplus at year-end 2022 compared to a 2.2 multiple at year-end 2013.

While fixed income securities remain the core of life insurers' investment portfolios, mortgages, private credit assets, private-label securities, asset-backed securities (ABS), and other structured securities such as collateralized loan obligations (CLOs) have been progressively reflected in the sector's investment allocations. Life insurers continue to migrate away from more transparent, regulated asset classes towards such alternative and other non-traditional investments, often relying on external and affiliated third-party asset managers with private asset class capabilities.

Reports have indicated that total assets under management for insurers increased to $3 trillion in 2022 from $1.3 trillion in 2012.[91]

The trend towards investing in alternative and non-traditional asset classes by life insurers has not only raised the level of illiquidity embedded in capital and surplus but has amplified market risk exposures.[92] The lower degree of credit and pricing transparency associated with these illiquid types of investments can result in heightened volatility. As illustrated in Figure 20, the L&H sector's exposure to alternative assets, as reported on Schedule BA, grew more slowly during 2022 (9.4 percent) compared to the annual growth reported in the previous two years. However, they comprised more than two-thirds of the sector's capital surplus at year-end 2022, up from 59.8 percent at year-end 2021 and 52.1 percent at year-end 2020.

Bank loans, an asset class typically characterized by higher yields and lower ratings relative to more traditional general account investments, are also becoming increasingly prevalent in life insurers' investment portfolios. Bank loans grew by more than 30 percent year-over-year to $95.3 billion at year-end 2022.[93]

The L&H sector's bond portfolio extends beyond corporate and government bonds to include ABS and other structured securities like CLOs. The presence of such securities on insurers' books highlights the growth of non-traditional bond holdings for life insurers, now amounting to almost 23 percent of total bonds as of year-end 2022. These asset classes may be more susceptible to credit pressures and interest rate movements in comparison to more traditional corporate or municipal debt instruments, thus carrying liquidity implications for insurers in times of stress.[94] CLO asset quality started to deteriorate in the second half of 2022, as rising interest rates affected the credit performance of highly levered speculative-grade borrowers.[95] As indicated in Figure 24, total ABS holdings of $816.0 billion, a volume that has been steadily rising each year since 2015, comprised 16.2 percent of the L&H sector's investment portfolio as of year-end 2022. While its exposure to residential mortgage-backed securities (RMBS) has consistently declined over the last 10 years, the L&H sector reported annual growth in commercial mortgage-backed securities (CMBS) in eight of those same years. In 2022, CMBS holdings declined somewhat to $196 billion from $198.3 billion in 2021, but this is still a substantial expansion of nearly 27 percent from 2013 levels.[96] Despite the recent decline, CMBS

[91] Palash Ghosh, "Insurance Assets Dip in 2022 but Interest in Alternatives Rises – Clearwater," *Pensions & Investments*, May 18, 2023, https://www.pionline.com/alternatives/insurance-assets-dip-2022-interest-alternatives-rises-clearwater.

[92] NAIC, *U.S. Insurance Industry's Exposure to Schedule BA Assets Exceeds $500 Billion in 2021* (2022), https://content.naic.org/sites/default/files/capital-markets-special-reports-Sch-BA-YE2021.pdf.

[93] NAIC, *Growth in U.S. Insurance Industry's Cash and Invested Assets Declines to 1.3% at Year-End 2022* (2022), https://content.naic.org/sites/default/files/capital-markets-special-reports-asset-mix-ye2022.pdf.

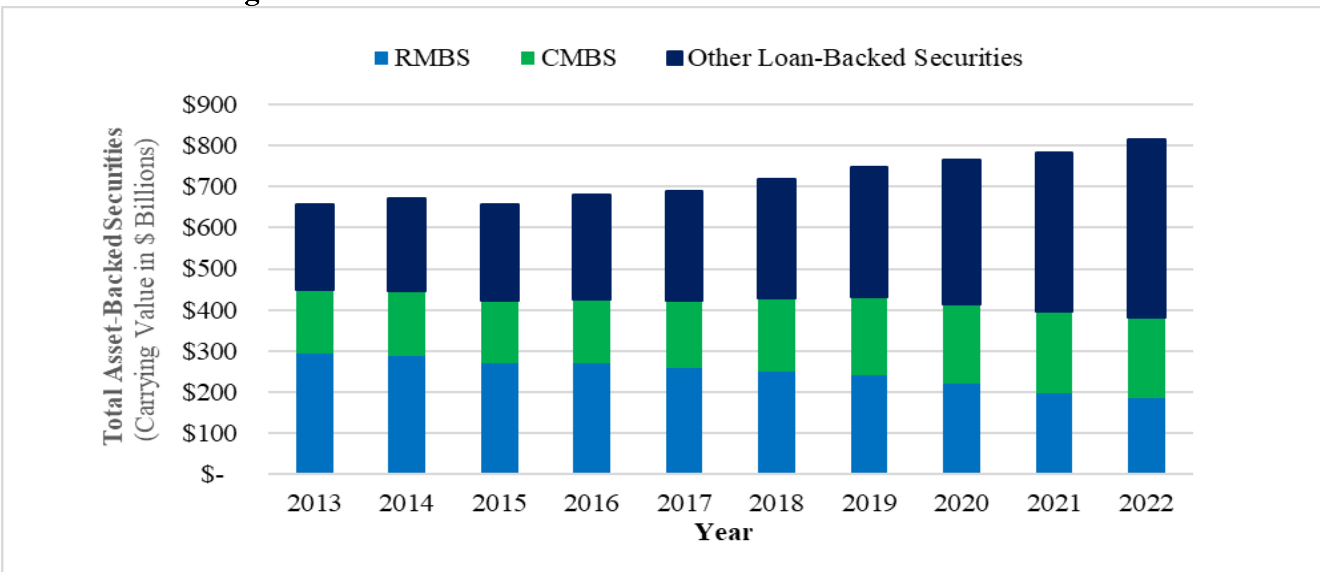
[94] The degree and scope of the risks associated with these types of securities differ, depending on their structure. The securities are structured to meet investors' risk appetites and can range from pass-throughs to complex tranching arrangements. Bank loans, for example, can benefit from rising rates and are somewhat insulated from declining credit by their position in the capital structure.

[95] Moody's, *CLO Holdings Continue to Rise, and So Could Capital Charges Against Them* (2023), https://www.moodys.com/creditfoundations/Default-Trends-and-Rating-Transitions-05E002/reports.

[96] A decline occurred in 2015 when CMBS holdings dropped to $151.1 billion from $157.5 billion in 2014.

accounted for a slightly greater share of capital and surplus, amounting to 42 percent at year-end 2022 compared to 41.5 percent at year-end 2021. Other loan-backed securities (primarily CLO holdings) have shown substantial growth in the last five years, averaging over 10 percent annually. In 2022, they made up more than 53 percent of total ABS holdings and totaled $435.7 billion, up from $387.2 billion and $352.0 billion in 2021 and 2020, respectively.

Figure 24: L&H Sector Portfolio of Asset-Backed Securities



Source: S&P Global

Affiliated Exposures

With the exception of 2018, the L&H sector has expanded its holdings of affiliated cash and investments in each of the last 10 years, resulting in an average annual growth rate of 8.4 percent. Affiliated investments were $283.4 billion and $245.9 billion for the years ending 2022 and 2021, respectively, amounting to a 15.2 percent year-over-year increase and 5.6 percent of L&H cash and investments. Due to the more illiquid nature of affiliated holdings, significant growth in affiliated investments may have the potential to adversely affect an insurer's capital base. Moreover, affiliated cash and invested assets made up 60.7 percent of capital and surplus as of year-end 2022, up from 51.5 percent as of year-end 2021 and 48.7 percent as of year-end 2020.

The composition of the L&H sector's affiliated investment portfolio exhibited a significant migration to bonds in 2022, primarily away from common stocks. Affiliated bonds replaced affiliated common stock as the second largest affiliated exposure. Affiliated bonds of $70.8 billion made up 25 percent of affiliated investments at year-end 2022 compared to $41.3 billion and 16.8 percent at year-end 2021. Affiliated common stock of $67.2 billion accounted for 23.7 percent of total affiliated holdings at year-end 2022, while other affiliated investments (primarily, alternatives) comprised 46.2 percent. Alternatives have consistently made up the bulk of the L&H sector's other affiliated exposures in each of the last 10 years. At year-end

2022, affiliated holdings represented over 40 percent of total Schedule BA investments reported by the L&H sector, not materially changed from the previous year-end.[97]

iv. Mitigants

While certain risk factors increased in 2022, it is important to note there are relevant mitigants that should moderate potential concerns about the L&H sector's financial condition. As mentioned in the Capital and Surplus section above, substantial exposure to corporate bonds, CLOs, and CRE debt has contributed to the L&H sector's increased leverage in 2022, leaving capital more vulnerable to market shocks. However, as life insurance liabilities typically have longer maturities than their underlying assets, higher (and stable) interest rates are expected to benefit the sector by improving profitability and potentially reducing the incentive to invest in riskier assets.

The NAIC and state regulators are currently examining the appropriateness of the current capital framework for CLOs and other structured securities. In August 2023, the NAIC adopted a change to the Life RBC formula, which would apply to the residual tranches of structured securities. Any life insurer with a residual interest in a structured security would be subject to a 30 percent RBC factor at year-end 2023 and an interim 45 percent factor at year-end 2024.[98] Additionally, the NAIC has removed the filing exemption for structured equity and fund investments, including CLOs, requiring such holdings to be subject to modeling for statutory valuation purposes, effective in 2024.[99] While the CLO tranches held by life insurers are largely high in credit quality (only 6.7 percent of tranches are below investment grade), these new regulatory requirements may make CLOs less attractive to life insurers going forward.[100]

It is also important to note the overall performance of the L&H sector's investment portfolio. More than 99 percent of the sector's mortgage loan portfolio has persistently been in good standing. Mortgages in foreclosure comprised only 0.2 percent of the L&H sector's capital and surplus at year-end 2022. Despite potential stress in the CRE market, Fitch maintains a neutral outlook for life insurers due to quality underwriting and high-loan-to-value levels in the sector's commercial mortgage loan portfolios. Commercial mortgage loan-to-value ratios improved to 54 percent in 2022 from 60 percent pre-pandemic.[101] Finally, alternative assets may have lower correlation to traditional investments, potentially reducing portfolio risk.

[97] Cash, short-term investments, preferred stock, and mortgage loans combined to make up the remainder of affiliated holdings, representing 5.1 percent of affiliated exposures at year-end 2022 compared to 5.6 percent at year-end 2021.

[98] NAIC, "NAIC Adopts Change to Better Monitor Life Insurer Investments," news release, August 16, 2023. https://content.naic.org/article/naic-adopts-change-better-monitor-life-insurer-investments.

[99] NAIC, *Valuation of Securities Task Force: Meeting Summary Report* (March 1, 2023), https://content.naic.org/sites/default/files/national_meeting/2023%20VOSTF%20Spring%20NM%20Materials%20v4.pdf.

[100] Moody's, *CLO Holdings Continue to Rise, and so Could Capital Charges Against Them* (2023), https://www.moodys.com/creditfoundations/Default-Trends-and-Rating-Transitions-05E002/reports.

[101] Fitch Ratings, "U.S. Life Insurers Navigate CRE Challenges."

The NAIC has adopted 13 regulatory considerations which, while not exclusively applicable to private equity-owned insurers, state regulators may use to examine the evaluation of affiliate investment arrangements, including the use of offshore reinsurers and sidecar vehicles.[102]

Several factors serve to mitigate concerns related to the potential weakening in the L&H sector's liquidity risk profile discussed above.

- First, the sector's ability to effectively manage its cash flow is reflected in the annual growth of cash and invested assets over the last 10 years, averaging four percent. This suggests that the L&H sector generally has been able to consistently anticipate and fulfill its policyholder and operational needs on an ongoing basis.
- Second, there are signs of recent credit quality improvement of L&H bond exposures. The allocation to investment-grade bonds increased by 50 basis points to 94.6 percent at year-end 2022. Over the past 10 years, investment-grade bonds have averaged over 94 percent of bond exposures annually, providing a reliable source of liquidity for life insurers. Additionally, the proportion of bonds that were at or near default has continued to decrease.
- Third, the L&H sector's non-traditional debt investments may also serve to mitigate concerns. The L&H sector's share of ABS holdings, though meaningful, has not changed materially in the last three years, remaining just below 23 percent of the aggregate bond portfolio. Although CMBS is an asset class currently under pressure due to ongoing stresses in the CRE market, the L&H sector has allocated less than four percent of its investment portfolio to CMBS at year-end 2022, which is a reduction from 4.1 percent and 4.2 percent for the years ending 2021 and 2020, respectively. Similarly, bank loans accounted for less than two percent of the aggregate L&H investment portfolio at year-end 2022. Further, the L&H sector's entire Schedule BA exposures still comprised only 6.2 percent of total cash and investments as of year-end 2022 (up from 5.8 percent at year-end 2021). Lastly, CLOs only comprised 3.4 percent of the L&H investment portfolio at year-end 2022.
- Fourth, despite the continued growth in the L&H sector's holdings of affiliated cash and investments, on average such assets have comprised only 4.5 percent of total cash and invested assets annually since 2013, and were less than six percent at year end 2022. Moreover, unaffiliated investments held by life insurers generally are aligned with the sector's fundamental asset/liability matching philosophy, with bonds accounting for at least 72 percent of unaffiliated holdings in each of the last five years. Unaffiliated cash and invested assets were \$4.8 trillion at year-end 2022, up by 2.4 percent from \$4.7 trillion at year-end 2021 and growing at an annual pace of 4.1 percent on average in the last five years. Unaffiliated cash and invested assets have covered general account liabilities by a multiple of one in each of the last 10 years, while the contribution of unaffiliated investments to capital and surplus has remained at a yearly multiple of 10.
- Finally, with regard to liquidity mitigants, effective cash flow management and surrender protections on products can limit the impact of policy lapses. Moreover, in the event of a

[102] *See* "Private Equity," NAIC, last updated June 28, 2023, https://content.naic.org/cipr-topics/private-equity.

severe market disruption, life insurers can access various sources of funding, including collateralized advances from Federal Home Loan Banks, the variation margin on interest rate derivatives, and contingent capital facilities.

3. Property and Casualty Sector

This section presents additional analysis of the financial performance of the P&C sector in 2022 and then assesses the P&C sector's overall financial condition as of December 31, 2022, including a trend analysis of the last 10 years.

a) Financial Performance

i. Direct and Net Premiums Written

Figure 25 shows the 2022 composition of P&C sector direct premiums written by lines of business, while Figure 26 shows a longer-term view of the amount and composition of direct premiums written by major lines of business. For 2022, total P&C sector direct premiums written reached a record level at $876 billion, marking a 10 percent increase over 2021 levels and the second consecutive year of strong growth following two years of much more moderate increases. Direct premiums written for personal lines increased by eight percent compared to 2021, while direct premiums written for commercial lines increased by 11 percent. Total commercial lines premiums exceeded total personal lines premiums for the first time in the past ten years. Private (also known as personal) auto premiums increased by nearly seven percent in 2022, largely driven by approved rate increases.[103] Homeowners insurance premiums increased 10 percent in 2022; while increases in exposure to catastrophe risks[104] and premium rates contributed to this growth, new higher home sales and rising home values had a greater impact according to industry sources.[105] Generally, the magnitude of rate increases requested by industry grew as materials and labor costs rising from inflation led to increased claims expense.[106] Commercial lines premium growth was driven by rate increases, with gains in premiums for fire and allied lines, marine, and commercial auto lines of business leading the way. Total net reinsurance cessions for the sector increased 22 percent for the year, leading to net premiums written of a record $776 billion, an increase of eight percent over 2021.

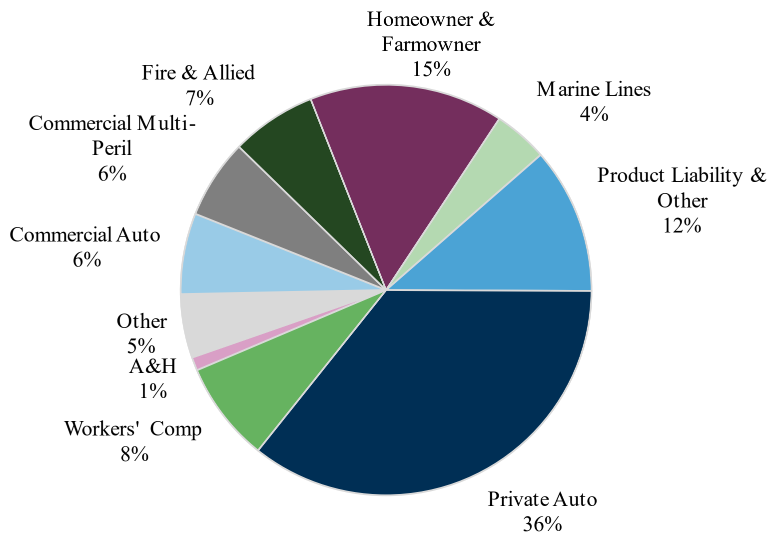
[103] *APCIA Analysis of Financial Operating Results and Trends Impacting 2023* (2023), 45, https://www.apci.org/attachment/static/8125/.

[104] Christopher Flavelle, *et al*., "Climate Shocks are Making Parts of America Uninsurable. It Just got Worse," *New York Times*, May 31, 2023, https://www.nytimes.com/2023/05/31/climate/climate-change-insurance-wildfires-california.html.

[105] Gordon, *APCIA Analysis of Financial Operating Results and Trends Impacting 2023*, 45.

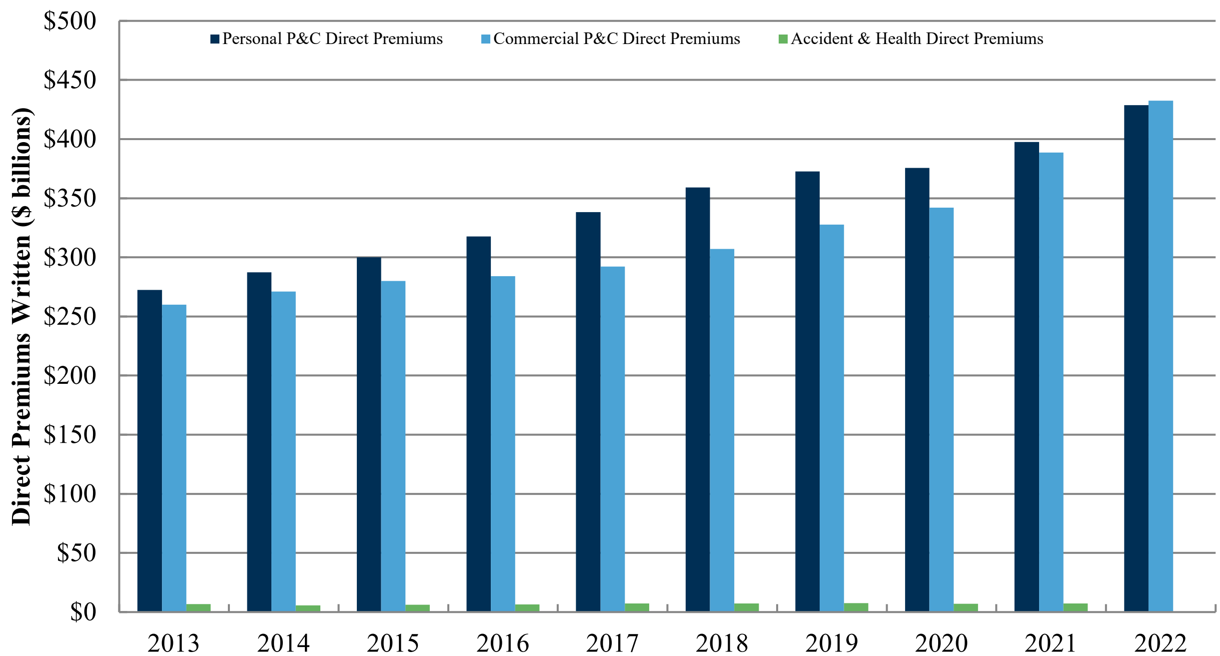
[106] David Blades, "2022 P/C Snapshot: Unprofitable Auto and Property Results Weaken P/C Underwriting Performance," *A.M. Best Company, Inc*., July 21, 2023, 3, https://www3.ambest.com/industryresearch/DisplayBinary.aspx?TY=P&record_code=333726&URatingId=2562038&AltSrc=159.

Figure 25: P&C Sector Composite of Direct Premiums Written



Source: S&P Global

Figure 26: P&C Sector Direct Premiums Written



Source: S&P Global

Box 4: Cyber Insurance Market

U.S. insurers continued to report growth in the cyber insurance market (for both package and stand-alone policies) in 2022, with approximately $7.2 billion in direct premiums written, a 51 percent increase over 2021's approximately $4.8 billion in direct premiums. (See Figure 27.) However, this premium amount remains under one percent of the total P&C market.[107] The growth appears linked to, among other things, continued but slowing increases in premium rates—a 62 percent increase in cyber insurance pricing on average, by one estimate, which is lower than 2021.[108] Overall, as shown in Figure 27, the cyber insurance market remains concentrated, with the top 10 cyber writers holding a combined market share of 52.3 percent, down from 55.3 percent in 2021. The top 25 cyber writers combined hold over 86 percent of the cyber insurance market.

Figure 27: P&C Insurance Groups by U.S. Cyber Direct Premiums Written

2022 Rank	Insurance Group	2022 Direct Premiums Written ($000)	Share of Total (%)
1	Chubb	$604,927	8.4
2	Fairfax Financial	562,995	7.8
3	AXA SA	527,442	7.3
4	Tokio Marine	367,607	5.1
5	Arch Capital	346,373	4.8
6	Travelers	315,325	4.4
7	AIG	299,012	4.1
8	Nationwide	257,313	3.6
9	Zurich	252,515	3.5
10	Sompo	247,978	3.4
	Combined Top 10	$3,781,486	52.3

Source: S&P Global

[107] Cyber insurance market figures 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. Since 2018, Treasury has collected data on cyber premiums in TRIP-eligible lines of insurance and reported on its most recent TRIP data call, including new cyber elements, in its *Small Insurer Report* earlier this year. The TRIP data call figures differ from those reported to the states for various reasons related to the different scopes of the respective calls.

[108] *See* Alexei Alexis, "Cyber Insurance Premium Hikes Slowed in 2022, Fitch Says," *Cybersecurity Dive*, April 18, 2023, https://www.cybersecuritydive.com/news/cyber-premiums-spike-slower-pace-2022-fitch/647942/.

ii. Underwriting Results

Figure 28 shows the combined operating ratio for the P&C sector and its composition for the past five years.[109]

Figure 28: P&C Sector Combined Operating Ratios

	2018	2019	2020	2021	2022
Loss Ratio	60.71	60.05	59.34	62.37	66.44
Loss Adjustment Expense Ratio	10.70	10.98	10.80	10.15	9.92
Loss and Loss Adjustment Expense Ratio	**71.42**	**71.03**	**70.14**	**72.52**	**76.36**
Net Commission Ratio	11.26	11.00	11.27	11.05	11.11
Salaries & Benefits Ratio	7.38	7.40	7.43	7.16	6.72
Tax, License & Fees Ratio	2.39	2.34	2.31	2.29	2.28
Administrative & Other Expense Ratio	6.26	6.45	6.46	6.02	5.81
Expense Ratio	**27.28**	**27.20**	**27.48**	**26.52**	**25.93**
Policyholder Dividend Ratio	0.62	0.78	1.19	0.67	0.44
Combined Ratio	**99.32**	**99.01**	**98.80**	**99.71**	**102.73**

Source: S&P Global

The combined ratio for the P&C sector increased to approximately 102.7 percent in 2022 from 99.7 percent in 2021, reflecting a decline in underwriting profit.[110] Losses in personal auto were behind the significant decline in underwriting results due to the impacts of rising inflation and increasing loss severity.[111] The direct loss ratio (excluding loss adjustment expenses) for personal auto reached its highest mark in the last ten years at 80.1 percent in 2022, with each successive quarter worse than the preceding one. Supply chain shortages and rising costs of repair materials also weighed on homeowners' insurance losses. Natural catastrophes, notably Hurricane Ian, also contributed to the poor underwriting results, but total insured losses were not much higher (implying lower severity) in 2022 as compared to 2021.[112] Reserve development was again favorable in 2022, albeit less so in comparison to 2021. Figure 29 shows losses from catastrophic events in the United States since 2018, and Figure 30 shows reserve development over the same period.[113] Additionally, the 2022 expense ratio decreased slightly from the 2021

[109] S&P Global ratios include the policyholder dividend ratio because dividends represent a cash outlay.

[110] A combined ratio of greater than 100 percent would indicate 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, that a company did not generate an underwriting profit. Investment income, realized capital gains/losses, and income taxes are not considered in the combined ratio.

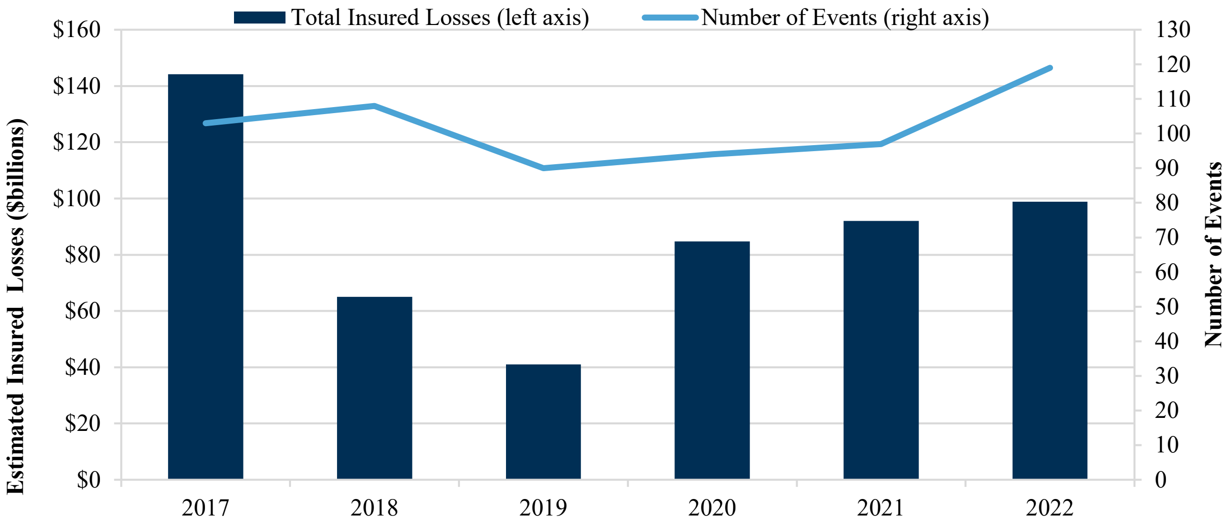
[111] *See, e.g.,* Gordon, *APCIA Analysis of Financial Operating Results and Trends Impacting 2023*, 45; Christopher Grimes, "North American Property/Casualty Insurers' 2022 Results," *FitchRatings*, March 27, 2023.

[112] Matthew Coppola, "First Look: 12-Month 2022 U.S. Property/Casualty Financial Results," *A.M. Best Company, Inc.*, March 22, 2023, https://www3.ambest.com/industryresearch/DisplayBinary.aspx?TY=P&record_code=329904&URatingId=2562038&AltSrc=159.

[113] 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 for that year, thereby freeing reserves to contribute to the insurer's bottom line.

level as large personal auto insurers trimmed advertising costs in response to worsening underwriting results.[114]

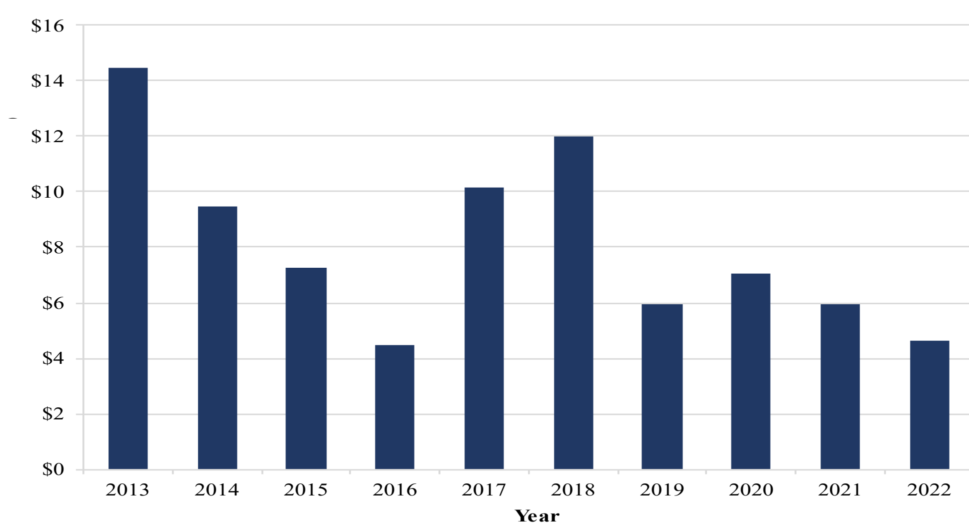
Figure 29: Estimated Insured Property Losses, U.S. Catastrophic Events



Note: Losses are adjusted for inflation through 2020 by the Insurance Information Institute using the GDP implicit price deflator.

Sources: Insurance Information Institute; Property Claim Services, a unit of ISO, a Verisk Analytics Company; U.S. Bureau of Economic Analysis

Figure 30: Total One Year Reserve Development for the P&C Sector



Note: Reflects total incurred net loss development for all accident years.

Source: S&P Global

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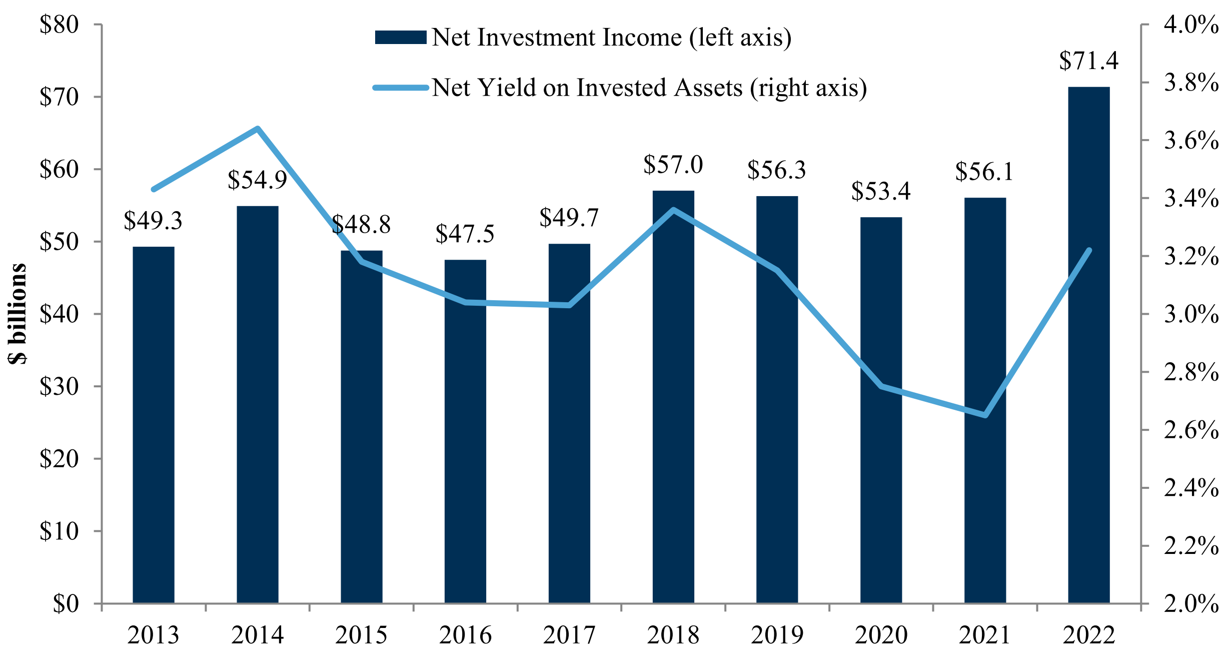
[114] S&P Global Market Intelligence, *2022 US Auto Insurance Market Report* (2022), 15, https://www.capitaliq.spglobal.com/web/client?auth=inherit#news/file?keyFileVersion=9881b805-fe8f-c20b-779b-17189833bf30&keyFileFormat=3.

iii. Investment Income

Net investment income for the P&C sector swelled by 27 percent to $71 billion in 2021, while cash and invested assets balances decreased by a slight one percent to $2.2 trillion. As a result, the net yield on invested assets jumped to 3.22 percent in 2022 from 2.65 percent in 2021. Rising short-term interest rates and an inverted yield curve favored the generally shorter-duration P&C asset portfolio (compared to the L&H investment portfolio). Figure 31 depicts a longer-term view of the trends 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 and their effect on income is explained below. P&C insurers are less dependent than L&H insurers on net investment income to fund losses and expenses, given the shorter contract terms and shorter-tailed losses, and net investment income accounted for approximately nine percent of total P&C sector revenues in 2022, marking a return to its ten-year historical average of nine percent after several years below it. Strong gains in income from other invested assets as reported in Schedule BA (up $10 billion, or 84 percent), and increases in income from corporate bonds, cash and short-term investments, and common stocks drove the overall gain in net investment income.

Figure 31: P&C Sector Annual Net Investment Income and Net Yield on Invested Assets



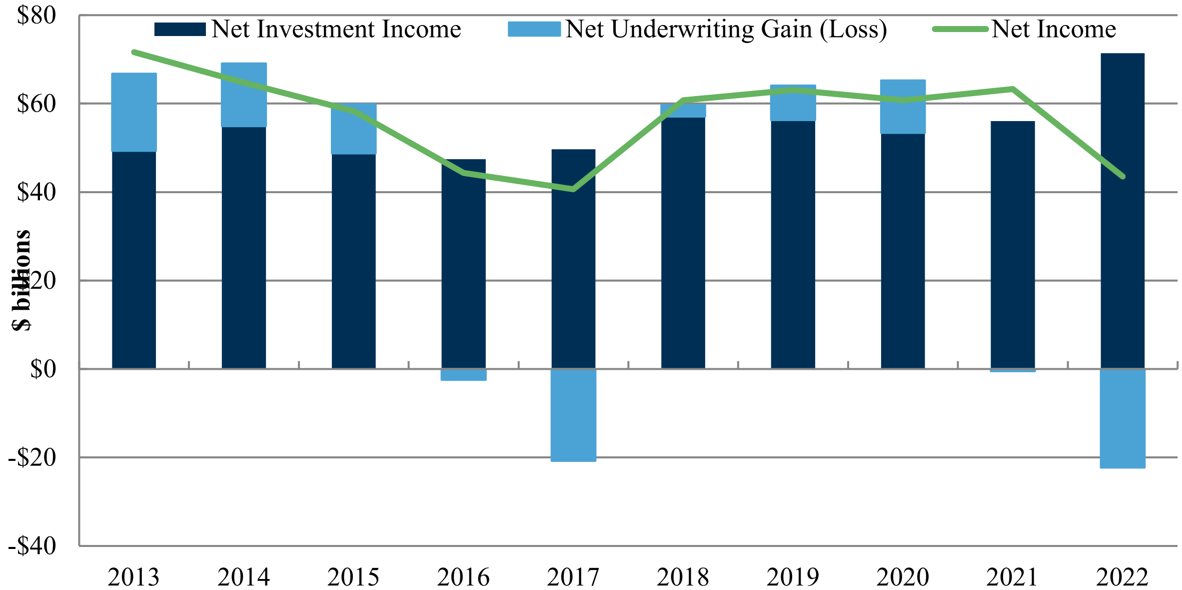
Source: S&P Global

The increase in net investment income was essentially offset, however, by a 90 percent decline in realized capital gains. Realized capital gains on investments were almost $2 billion in 2022, compared to nearly $18 billion in 2021. All fixed income and preferred stock categories recorded net realized capital losses in 2022 versus gains in 2021, but net gains on unaffiliated common stocks were sufficiently strong to leave the overall position in a slight net gain for the year.

iv. Net Income

The P&C sector's net income decreased by 31 percent in 2022 to $43.5 billion from the $63.3 billion reported in 2021, as shown in Figure 32. Despite solid growth in net premiums earned (up eight percent) in 2022, the sector experienced a significant underwriting loss of $22.3 billion as compared to a small loss of $491 million in 2021. The increase in net investment income and the deterioration in capital losses led to a decrease in pre-tax operating income of 31 percent to $49.6 billion in 2022 from $72.3 billion in 2021. A similar reduction in federal income taxes led to a decrease in net income of 31 percent.

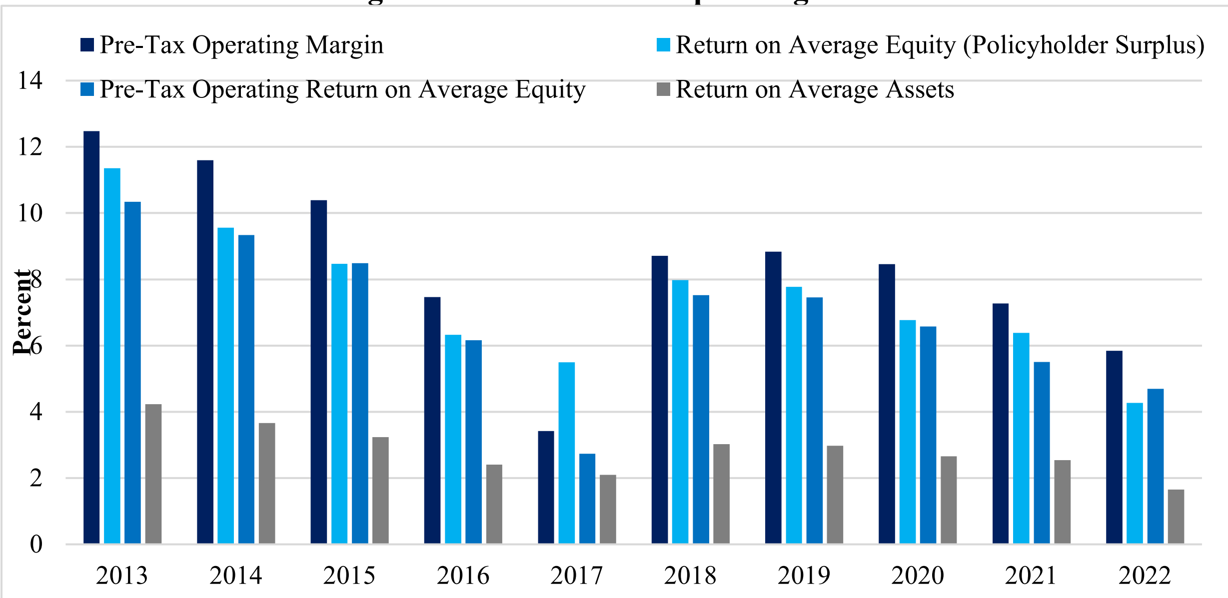
Figure 32: P&C Sector Net Income



Source: S&P Global

Figure 33 displays key measures of returns for the P&C sector. The 2022 pre-tax operating margin decreased to 5.8 percent from 7.3 percent in 2021; this decline was due to the growth in revenues and the significant decrease in pre-tax operating income. The 2022 return on average equity of 4.3 percent was below the 6.4 percent mark for 2021, and below the average of nearly eight percent for the past 10 years. This decline was due to the significant decrease in 2022 net income combined with a more modest decrease in policyholders' surplus.

Figure 33: P&C Sector Operating Ratios



Source: S&P Global

b) Financial Condition

This section analyzes the financial condition of the P&C sector at the end of 2022 and examines trends over the last 10 years from 2013 through 2022, focusing on surplus, assets, and liquidity.

i. Surplus as Regards Policyholders

Overall capital remains stable for the P&C sector, though some strains emerged in 2022. Inflationary pressures and market volatility were prevalent in the P&C sector's balance sheet performance in 2022. Net income of $43.5 billion was offset by a sharp increase in net unrealized capital losses of $97.7 billion from volatile equity markets, reducing the sector's surplus from a 10-year high of $1.1 trillion in 2021 to $984.0 billion in 2022 and reversing significant year-over-year growth in surplus in the previous three years, as indicated in Figure 34. The surplus decline in 2022 was largely driven by losses in the personal lines of business, lowering aggregate net income considerably in comparison to 2021, and by equity investment valuation declines. Specifically, market imbalances that included labor shortages and supply-chain disruptions factored into inflationary pressures and costlier replacement parts and repair costs, contributing to stresses in the personal auto business line, a primary driver of weak underwriting results in 2022. Additionally, the pro-forma removal of capital contributions in the form of surplus notes would have resulted in a 6.8 percent reduction in policyholders' surplus at year-end 2022.

As Figure 33 details, the P&C sector still grew policyholders' surplus by nearly six percent on average over the last five years, despite the recent surplus contraction.

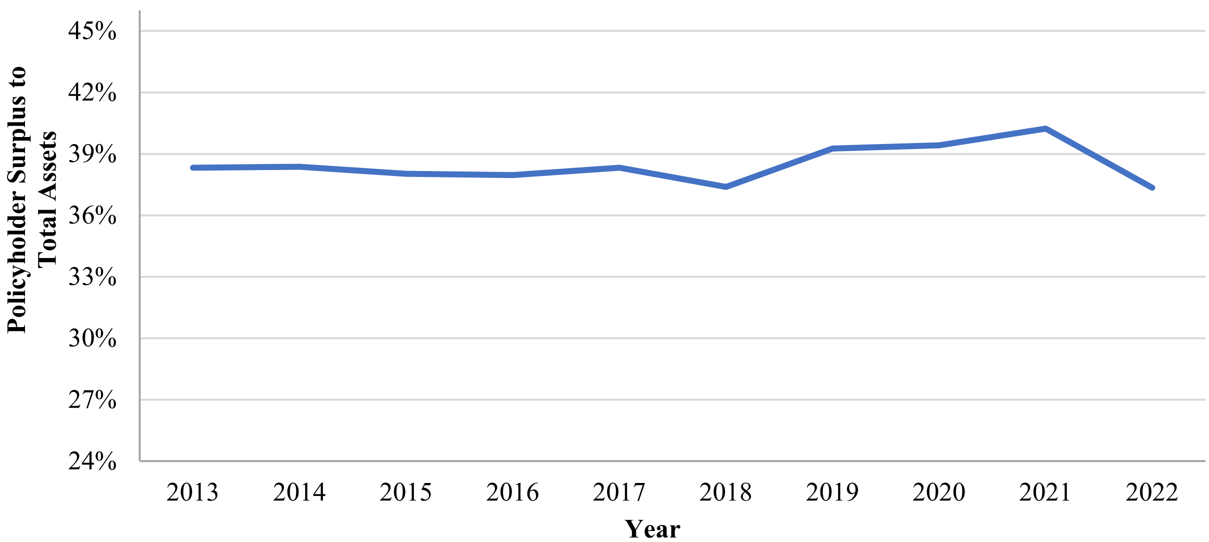
Figure 34: P&C Surplus Position ($ in thousands)

	2018	2019	2020	2021	2022
Total Assets	$2,025,126,449	$2,205,405,670	$2,357,556,571	$2,617,334,805	$2,634,918,080
Annual Growth	1.4%	8.9%	6.9%	11.0%	0.7%
Policyholders' Surplus	$757,104,378	$ 865,925,868	$ 929,253,009	$1,052,962,039	$ 983,980,840
Annual Growth	-1.1%	14.4%	7.3%	13.3%	-6.6%

Source: S&P Global

A further look into the stability of the sector's surplus is the ratio of policyholders' surplus to total assets. (See Figure 35.) Though edging down in 2022 and mirroring 2018 performance, the ratio still reflects the potential availability of a financial cushion against unforeseen losses.

Figure 35: Strength of P&C Policyholders' Surplus



Source: S&P Global

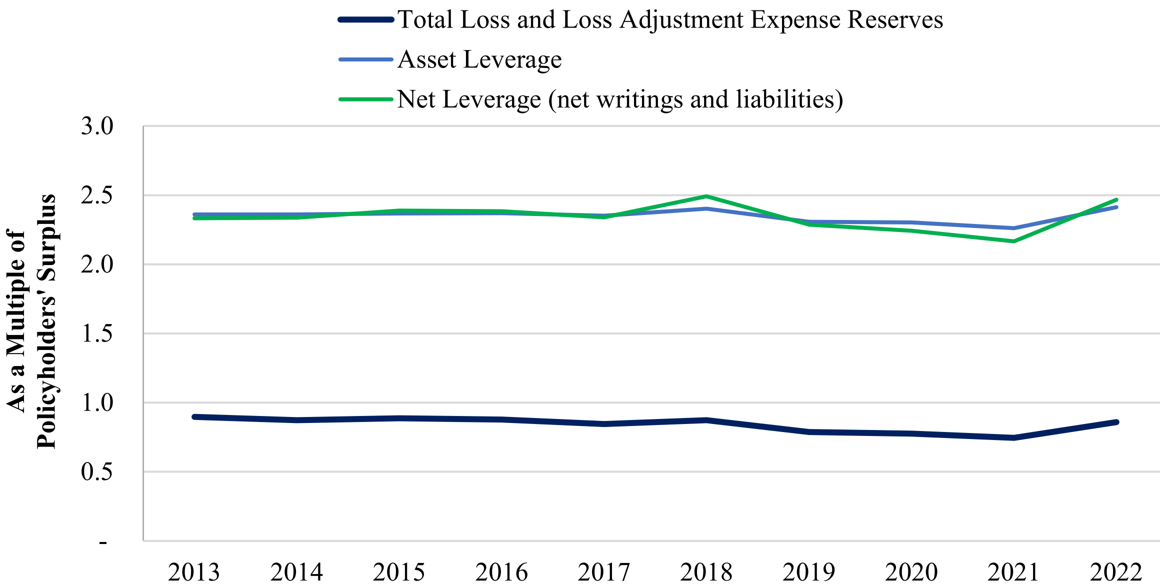
Though it reported a net underwriting loss in 2022, the P&C sector was able to expand policyholders' surplus organically (without the aid of external capital sources such as surplus notes) largely through its investment activities. The P&C sector earned $73.2 billion in investment income that included net realized capital gains, contributing to positive earnings in 2022. Continued profitability partially offset the negative impacts to surplus growth.

Similar to the L&H sector, stockholder dividends have had a significant effect on the P&C sector's capital formation. The P&C sector paid stockholder dividends of $37.2 billion in 2022 compared to $34.4 billion in 2021 and the 10-year high of $46.1 billion in 2020 when P&C insurers provided premium refunds and rebates to policyholders during the COVID-19 pandemic. Stockholder dividends have reduced policyholder surplus by 4.6 percent on average in each of the last 10 years, which is less than the L&H sector average due to the P&C sector's larger surplus base.

Net realized capital gains have consistently contributed to generating capital for the P&C sector, adding 1.6 percent on average annually to prior year-end policyholders' surplus over the last 10 years, and net unrealized capital gains have boosted surplus by 2.5 percent.

As shown in Figure 36, the P&C sector has generally been managing its leverage levels consistently over the last ten years. Like the L&H sector, the P&C sector demonstrated signs of surplus pressures in 2022. All three leverage ratios edged up at year-end 2022, halting the downward trend since 2018 that ended with 10-year lows in 2021.[115] Leverage climbed in 2022, primarily due to the annual decline in policyholders' surplus further stressed by the pace of growth in the variables that comprise the numerators of the ratios under analysis. Of note is the asset leverage ratio, reaching a 10-year high in 2022.[116]

Figure 36: P&C Leverage Ratio



Source: S&P Global

Though they measure different exposures, the asset and net leverage ratios presented in Figure 36 have been closely aligned for most of the past 10 years. In addition to maintaining underwriting discipline and addressing exposure accumulations, the health of the balance sheet can be affected by the volatility and credit quality of the investment portfolio, reinsurance recoverables, and agents' balances.[117] The disruption in 2022 to the downward path of the asset

[115] The three ratios in 2018 nearly mirrored those in 2022. In both years, ratio levels were a combination of surplus declines and widening exposures.

[116] Though growth of the numerator of the asset leverage ratio was relatively flat from 2021, the 6.6 percent reduction in surplus led the ratio to peak in 2022 over the last ten-year period.

[117] 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; A&H 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.

leverage ratio can be attributed to the volatility that occurred in the equity markets during the year, contributing to the considerable increase in net unrealized capital losses in surplus. Given that more than one quarter of the P&C sector's investment portfolio is allocated to common stock holdings and another 55 percent to bonds, it is not surprising to observe an uptick in the asset leverage ratio in 2022. For the most of the last ten years, however, the P&C sector has been growing surplus by effectively managing its vulnerabilities to market risks including credit and interest rate risks (see Figure 35).

The net leverage ratio indicates the degree of exposure stemming from pricing and reserving errors in the book of business. Apart from 2018 and 2022, when surplus growth was negative, the net leverage ratio has generally decreased over the past 10-year period. By successfully evaluating its underwriting risk and maintaining reserve adequacy, the P&C sector has generally improved its financial capacity to support its business. In particular, total liabilities (the larger component in the ratio's numerator) of $1.7 trillion were 1.68 times policyholders' surplus at year-end 2022, up from 1.49 at year-end 2021 and 1.61 at year-end 2013. Net writings were $776.7 billion in 2022, rising from $716.1 billion in 2021, making up 79 percent and 68 percent of policyholders' surplus for the same two years, respectively.

Growth in both direct writings and net reinsurance premiums affected the net premiums written component of the net leverage ratio in 2022. Direct writings were $876.1 billion and $797.8 billion in 2022 and 2021, respectively, amounting to a year-over-year increase of 9.8 percent. Net reinsurance premiums (assumed premium less ceded premium) resulted in cessions of $99.4 billion in 2022, nearly 22 percent higher than cessions of $81.7 billion in 2021. The growth of the two components—total liabilities and net writings—and deterioration in surplus combined to materially affect the net leverage ratio's performance in 2022.

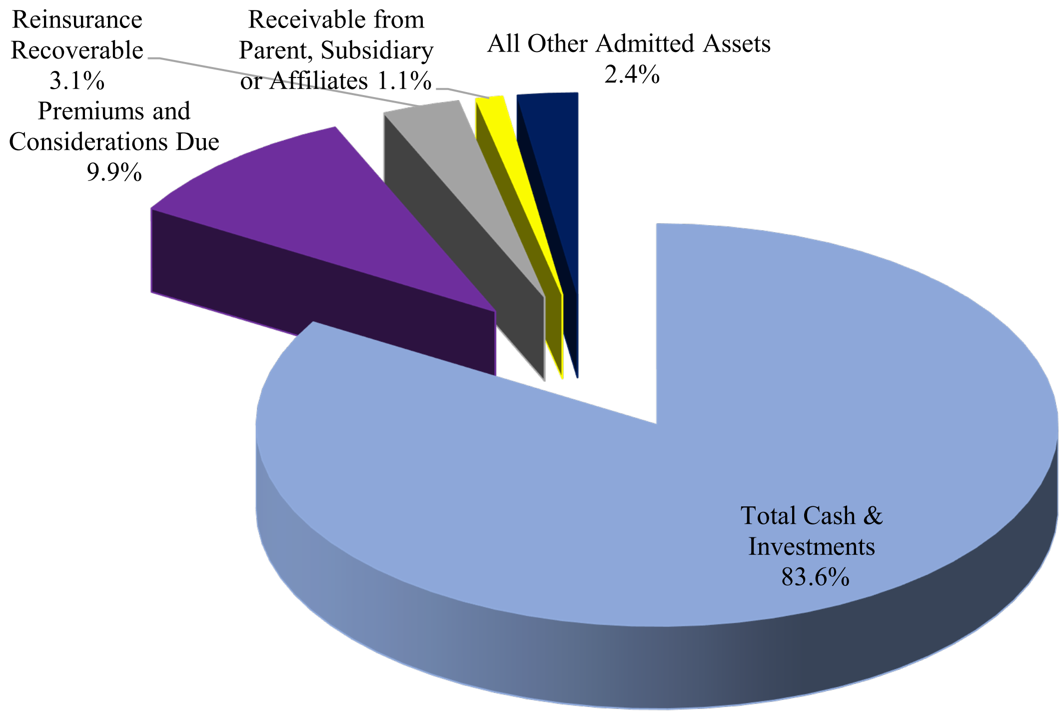
At year-end 2022, the ratio of loss and loss adjustment reserves to policyholders' surplus was 0.86, increasing from 0.75 at year-end 2021. Increased growth in loss and loss adjustment reserves reduced surplus, contributing to an uptick of the ratio in 2022. Loss and loss adjustment expense reserves were $845.8 billion and $784.8 billion in 2022 and 2021, respectively, representing annual growth of 7.8 percent and within the range of growth reported in the previous two years. Stable reserve growth further points to the consistency with which the P&C sector has been managing and estimating reserves for potential losses and adjustment costs arising from claims made on policies underwritten.

ii. Assets

The stability of the P&C's sector's capital position over the last 10 years has been supported by year-over-year asset growth and sound asset-liability matching. After experiencing the highest annual growth in 2021 in more than 10 years, the P&C sector reported a considerable slowdown in 2022 with a less than one percent year-over-year increase in total assets, which now amounted to $2.6 trillion. Nonetheless, the annual expansion of 4.9 percent on average over the last ten years has helped to sustain the P&C sector's financial health. Since 2013, about 84 percent of the sector's asset portfolio has consistently been comprised of cash and invested assets, reflecting the strength of the sector's balance sheet to pay claims as they come due.

The structure of the P&C sector's asset portfolio has remained virtually constant for the last 10 years. Figure 37 illustrates the composition of the P&C sector's assets at year-end 2022, which largely mirrors that of prior years.[118]

Figure 37: Composition of P&C Asset Portfolio



Source: S&P Global

Cash and invested assets have consistently been the largest component of total assets for the P&C sector, followed by premiums and considerations due.

As Figure 37 details, the impact of rising interest rates and market volatility (arising from recessionary fears) in 2022 appears to have affected P&C investment allocations. The sector raised its investment exposure to bonds by the same amount as it lowered its common stock exposure, by 2.3 percentage points from the previous year. At the same time, the sector reduced its allocation to other investments by 20 basis points, potentially signaling a desire to reduce exposure to riskier assets.

Previously, the effects of the low-rate environment could clearly be observed in the sector's investment behavior in the last ten years. (See Figure 38.) Bond holdings declined from a high of 62.5 percent in 2013 to a low of 53.1 percent in 2021. Common stock, the P&C sector's second largest investment exposure, rose from 21.4 percent of the investment portfolio in 2013 to a 10-year high of 28.6 percent in 2021.

[118] Total in Figure 37 does not sum to 100 percent exactly due to rounding.

Figure 38: Composition of P&C Sector's Investment Portfolio

	2018	2019	2020	2021	2022
Bonds (long-term)	60.3%	57.0%	55.4%	53.1%	55.4%
Preferred Stocks	0.3%	0.8%	0.8%	0.8%	0.7%
Common Stocks	22.9%	25.9%	25.8%	28.6%	26.4%
Mortgage Loans	1.2%	1.2%	1.2%	1.2%	1.3%
Real Estate	0.8%	0.7%	0.7%	0.6%	0.6%
Contract Loans	0.0%	0.0%	0.0%	0.0%	0.0%
Derivatives	0.0%	0.0%	0.0%	0.0%	0.1%
Cash & Short-Term Investments	6.0%	6.2%	7.0%	7.1%	7.1%
Other Investments	8.5%	8.2%	9.1%	8.6%	8.4%
Total Cash & Invested Assets	**100%**	**100%**	**100%**	**100%**	**100%**

Source: S&P Global

The composition of the investment portfolio shown in Figure 38 aligns with the risk management practices employed by the 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). Year-over-year growth in bond holdings has been positive, as the predictability of cash flows produced by fixed-income securities can be better aligned with policyholder obligations and other business needs. Recently, annual growth of bond holdings has accelerated, averaging 4.5 percent since 2018. From 2013 to 2017, the P&C sector expanded its bond holdings by only 1.5 percent on average. By contrast, growth of common stock holdings has fluctuated over the past 10 years, exhibiting a 9.3 percent average annual growth rate.

Total bonds, both short-term and long-term combined, were $1.3 trillion at year-end 2022, up by almost two percent from the previous year-end. Within the aggregate bond portfolio, the allocation across maturities has remained consistent in the last ten years. Almost 55 percent had maturities of less than five years on average, while bonds with maturities ranging between 5 and 10 years averaged 32 percent of the bond portfolio each year since 2013. P&C insurers allocated significantly less to longer-dated bonds, with just over 13 percent on average consisting of bonds with maturities greater than 10 years. In 2022, more than 14 percent of the sector's bond portfolio was allocated to holdings with maturities of at least 10 years, rising from 11.9 percent and 11.5 percent in 2021 and 2020, respectively, potentially signaling a shift to a longer-duration strategy considering recessionary expectations.

There was some evidence in 2022 of a potential migration of P&C investment allocations. 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 had become increasingly evident until 2022. Private placements comprised 19.83 percent or $258.6 billion of the $1.3 trillion aggregate bond portfolio at year-end 2022. Previously, they were on an upward trajectory, progressively rising from 9.9 percent of the bond portfolio at year-end 2013 to 19.85 percent at year-end 2021.

As noted, the share of the sector's investment portfolio allocated to equities declined in 2022 after peaking in 2021. Common stock investments were $580.1 billion in 2022, a 9.1 percent decrease from $638.5 billion in 2021. Also, while still a small percentage of total cash and invested assets, mortgage loans have continued to exhibit considerable year-over-year growth in

P&C insurers' investment portfolios since 2013. In 2022, however, mortgage loans represented a greater portion of the sector's cash and invested assets. Total mortgage loans were $29.4 billion at year-end 2022, rising by 8.7 percent annually and accounting for 1.3 percent of cash and invested assets compared to 1.2 percent of the investment portfolio in the previous four years and 0.5 percent in 2013.

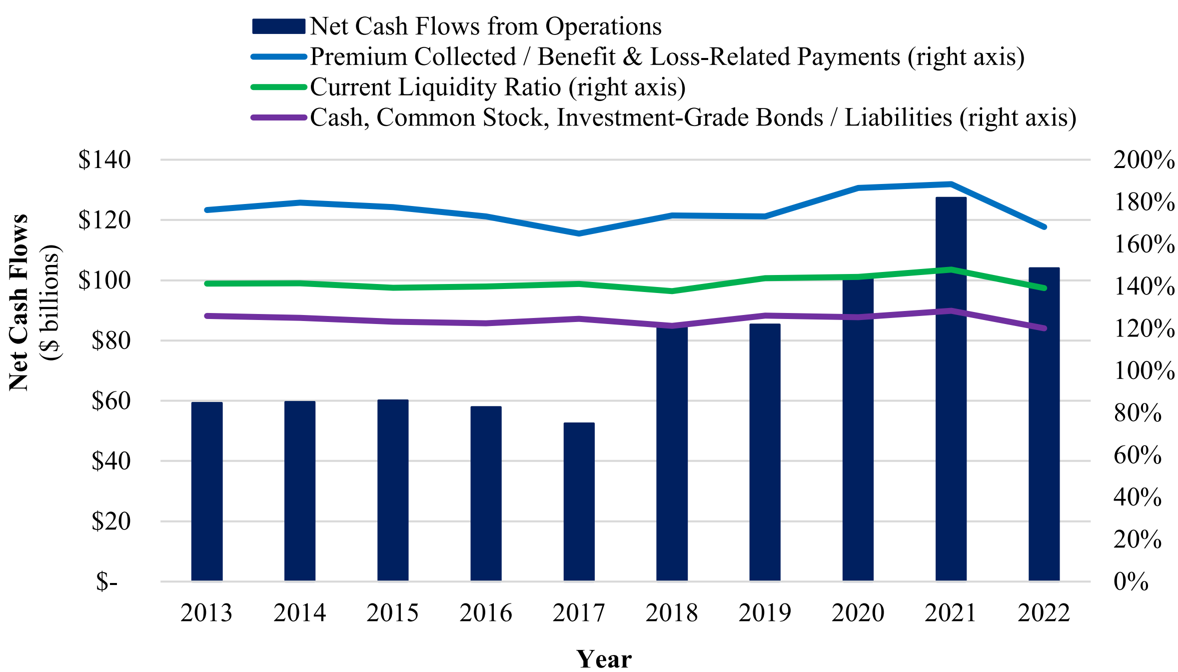
iii. Liquidity

Although the P&C sector experienced positive cash flows from operations in 2022 (as in the previous year), some weakening in liquidity surfaced as the sector dealt with inflationary stresses that sharply impacted input and claims costs in 2022.

Cash Flows

Figure 39 illustrates a noticeable dip in the liquidity metrics under analysis, after they had reached 10-year highs in 2021. Annual growth in benefits and loss-related payments of 20.2 percent significantly outpaced the 7.3 percent increase in premium receipts, contributing to relatively flat growth in liquid assets and a reduced current liquidity ratio of 139.1 percent at year-end 2022, compared to 147.9 percent at year-end 2021.

Figure 39: A View of P&C Sector Liquidity



Source: S&P Global

While the P&C sector maintained positive cash flows from operations of $104 billion in 2022, they declined by over 18 percent from $127.3 billion in 2021. As shown in Figure 39, premiums collected, net of reinsurance, exceeded benefit and loss-related payments by only 68 percent at year-end 2022, sharply down from 88 and 87 percent for the years ending 2021 and 2020, respectively.[119]

Year-over-year positive cash flows from operations, however, have contributed to an average annual growth rate of 7.1 percent in cash and short-term investments over the last 10 years, enhancing liquidity levels. Liquid assets of $2.2 trillion (the numerator of the current liquidity ratio) supported policyholders' surplus by a multiple of 2.2 at year-end 2022, up from 2.1 at the prior year-end (primarily a result of reduced surplus). Note that a multiple of 2.2 has been the average since 2013, reflecting the strength of the sector's liquidity position.

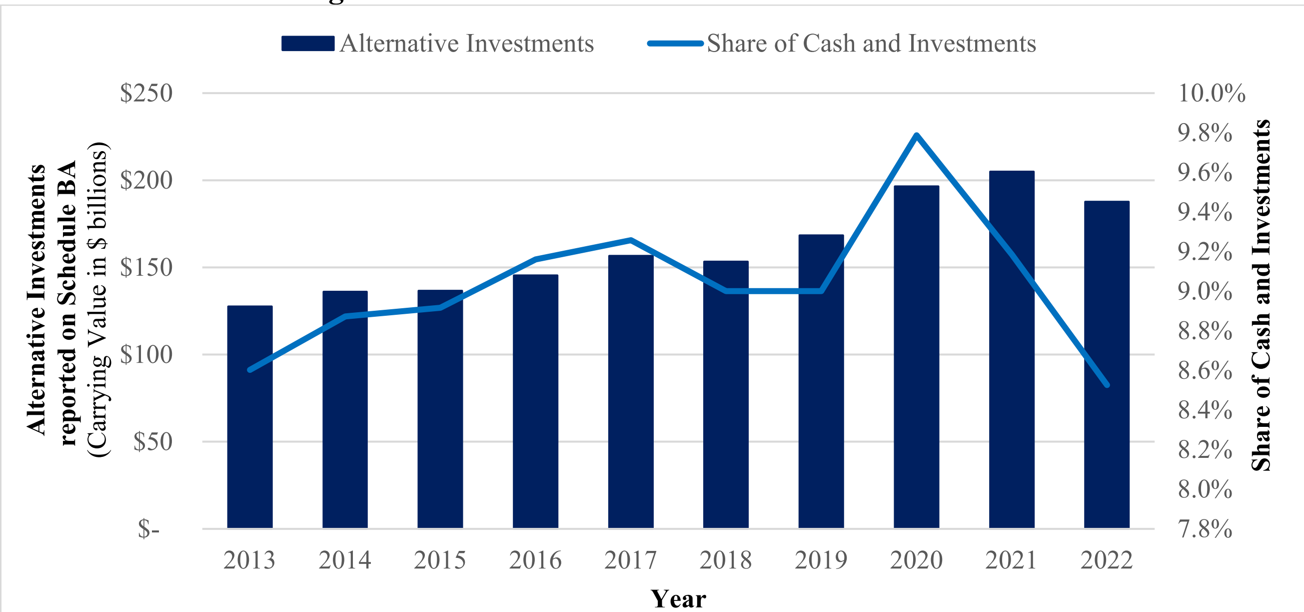
Credit Trends

As noted in the P&C Assets discussion above, higher interest rates seem to have influenced the P&C sector's recent asset allocation. The P&C sector migrated away from some riskier assets in 2022, potentially enhancing its liquidity risk profile.

Figure 40 illustrates a sharp shift in 2022 away from allocations to alternative investments, as reported on Schedule BA. After reporting year-over-year growth of alternatives during the previous three years, the P&C sector lowered the share of alternatives to 8.5 percent of its investment portfolio at year-end 2022 from 9.2 percent at year-end 2021. In fact, annual growth of alternative holdings turned negative in 2022 after averaging 10.3 percent year-over-year growth between 2019 and 2021. Alternative investments totaled $187.7 billion as of year-end 2022, down by 8.4 percent from $204.9 billion as of year-end 2021.

[119] 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.

Figure 40: P&C Sector Alternative Investments



Source: S&P Global

The P&C sector's exposure to alternative assets comprised 37.5 percent of the entire insurance industry's Schedule BA exposure. As is the case for the L&H sector, joint ventures comprised the bulk of Schedule BA exposures for P&C insurers in 2022.

Examining the investment portfolio more closely, the P&C sector reported an uptick of 21 basis points in its holdings of U.S. government bonds, now totaling $244.6 billion or 18.8 percent of the aggregate bond portfolio at year-end 2022.[120] Overall, however, holdings of securities issued by U.S. federal, state, and local governments only increased by less than one percent annually, after growing significantly in 2021 by close to 15 percent. Total government bonds were $358.5 billion and $355.6 billion in 2022 and 2021, respectively.

Revenue bonds have continued to comprise the largest concentration of the sector's bond portfolio. Growth of revenue bonds continued in 2022, increasing by three percent from the prior year, which is somewhat lower than the annual growth rates achieved in the previous four years. Overall, revenue bonds have been averaging annual growth of 4.4 percent since 2018, double the average growth rate of 2.2 percent observed between 2013 and 2017. As of year-end 2022, revenue bond holdings totaled $892.4 billion, rising from $866.1 billion as of year-end 2021.

The composition of these two bond classes (U.S. government and revenue) within the aggregate bond portfolio has remained relatively stable over the last decade. At least 67 percent of all bond holdings have consisted of some form of revenue bond investments, including special revenue and industrial revenue bonds, while government bonds have made up at least 26 percent each year since 2013. While revenue bonds are often issued by local or municipal governments, the

[120] Government bonds refer to those issued by the U.S. government, states, political subdivisions, and U.S. territories.

debt service is tied to the specific revenues generated from a project and is 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 as compared to municipal bonds, i.e., there is risk exposure to the insurer in case the entity responsible for repayment becomes financially distressed.

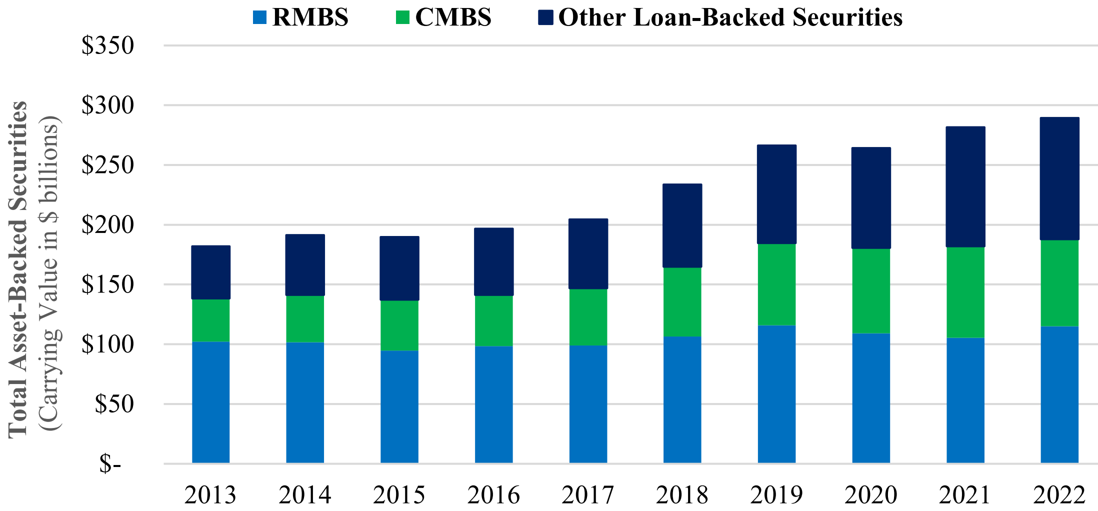
After double-digit annual growth between 2019 and 2021, non-investment grade bond holdings decreased sharply by 15.4 percent in 2022. Investment-grade bonds, in contrast, rose by nearly 3 percent from 2021, remaining on a path of year-over-year growth since 2013. Investment-grade bonds were $1.25 trillion in 2022 compared to $1.21 trillion and $1.1 in the previous two years, respectively. Non-investment grade bonds totaled $57.9 billion as of year-end 2022, down from $68.5 billion as of year-end 2021 and $61.3 billion as of year-end 2020, respectively.

Averaging an annual growth rate of over 4.9 percent in the last 10-year period, ABS constituted a significant share of policyholders' surplus at more than 29 percent at year-end 2022. As noted in the L&H Liquidity discussion above, ABS can be relatively more susceptible to market pressures as compared to bond holdings due to their greater opacity and illiquidity. Total ABS held by the P&C sector were $289.3 billion in 2022 compared to $281.5 billion and $264.3 billion in 2021 and 2020, respectively. Figure 41 shows the composition of the P&C sector's ABS portfolio since 2013.

While the L&H sector has been reporting a constant decline of RMBS holdings in the last 10 years, the P&C sector has been increasing its RMBS holdings by about one percent on average over the same period. In 2022, RMBS investments rose by almost nine percent to $114.9 billion and comprised nearly 40 percent of total structured securities held by the sector. While prepayment risk is less of a concern with RMBS holdings in a rising rate environment, the credit risk exposure of these holdings will potentially widen should a recession take hold. On the other hand, the current risk of RMBS default is mitigated to an extent by ongoing tight labor market conditions and rising wages.

By contrast, CMBS investments dropped by 4.8 percent as of year-end 2022, after exhibiting year-over-year growth since 2013. CMBS holdings of $72.9 billion in 2022 were twice 2013 levels and constituted 25.2 percent of all ABS held. Though growth of other loan-backed securities (largely, CLO) slowed to a rate of 2.1 percent in 2022 compared to over 19 percent in 2021, they continued to make up the fastest growing category of ABS, expanding steadily at an annual rate of 10 percent on average since 2013. Their value totaled $101.5 billion as of year-end 2022, up from $99.4 billion as of year-end 2021, and represented a 2.3 multiple of 2013 levels.

Figure 41: P&C Sector's Asset-Backed Securities



Source: S&P Global

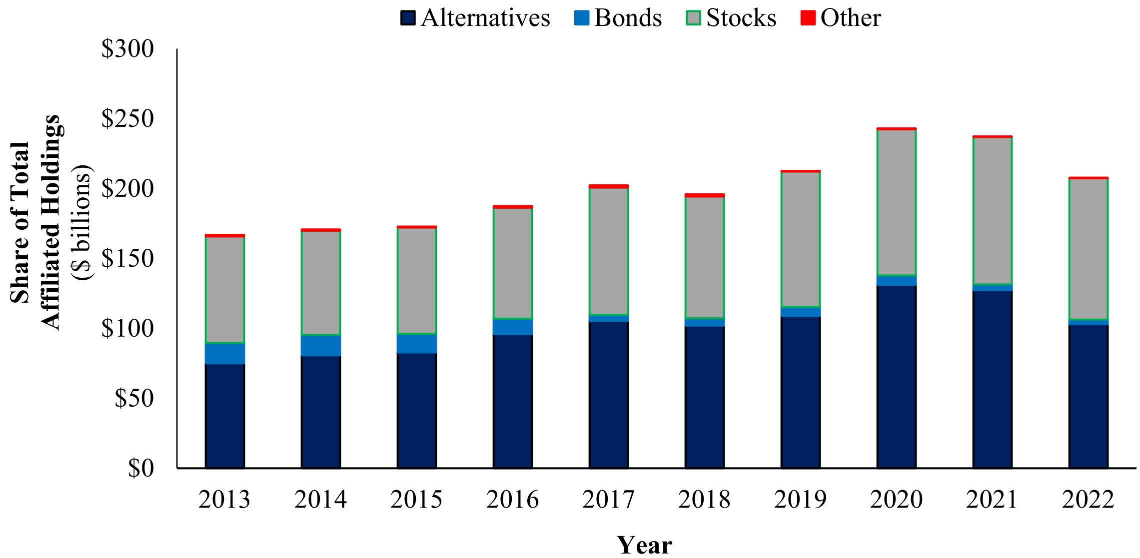
Affiliated Exposures

As in the case of the L&H sector, affiliated holdings can be a potential source of liquidity risk for the P&C sector. In addition to the potential liquidity risk of these types of investments, their interconnectedness may have adverse implications for the holder.

The trends have further supported the P&C sector's liquidity. Figure 42 shows the growth and shift in the composition of affiliated investments in the P&C sector over the past 10 years. Affiliated holdings declined for a second consecutive year in 2022 to $207.9 billion from $237.4 billion and $242.9 billion in 2021 and 2020, respectively. A significant decline in affiliated alternatives largely drove the 12.4 percent drop in total affiliated investments in 2022.

Apart from 2018 and 2021 (and, as noted, in 2022), the P&C sector has shown positive year-over-year growth in affiliated holdings during the last 10 years. Affiliated cash and investments constituted 9.4 percent of the P&C sector's total cash and investments at year-end 2022, down from 10.6 percent and 12.1 percent for the years ending 2021 and 2020, respectively. Affiliated alternatives in Figure 42—including joint ventures, surplus debentures, collateral loans, private equity funds, and residual interests—totaled $103.0 billion and $127.4 billion in 2022 and 2021, respectively. As with the L&H sector, affiliated alternative investments have come to dominate P&C affiliated holdings. Affiliated alternatives have steadily expanded since 2013, growing by 5.1 percent on average year-over-year and making up close to half of total affiliated exposures at year-end 2022.

Figure 42: P&C Sector's Affiliated Exposures



Note: "Other" consists of cash and short-term investments and mortgage loans.

Source: S&P Global

Mitigants

Although the P&C sector is facing challenges in the current economic environment, several factors suggest that the sector has maintained a solid liquidity profile.

- First, high quality bonds still make up the overwhelming 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 and averaged close to 60 percent of aggregate cash and invested assets in each of the last 10 years. The ratio of investment-grade bonds to policyholders' surplus improved to a 1.27 multiple at year-end 2022 from 1.15 and 1.22 for the years ending 2021 and 2020, respectively. By averaging at a 1.32 multiple each year since 2013, the ratio further illustrates the sector's quality of capital. Moreover, bonds at or near default have been declining for the past two years, further strengthening the sector's bond portfolio.
- Second, although ABS as a share of policyholders' surplus rose in 2022, that increase can largely be attributed to the 6.6 percent drop in surplus. In the previous three years from 2018 through 2021, ABS were taking up a decreasing share of policyholders' surplus. Moreover, their share of the bond portfolio has not materially changed since 2018, averaging at just over 22 percent annually.
- Third, alternatives as a share of the P&C investment portfolio have been declining for the past three years.
- Fourth, unaffiliated cash and invested assets have been twice the level of policyholders' surplus each year since 2013, mitigating to some degree concerns of affiliated investment exposures.

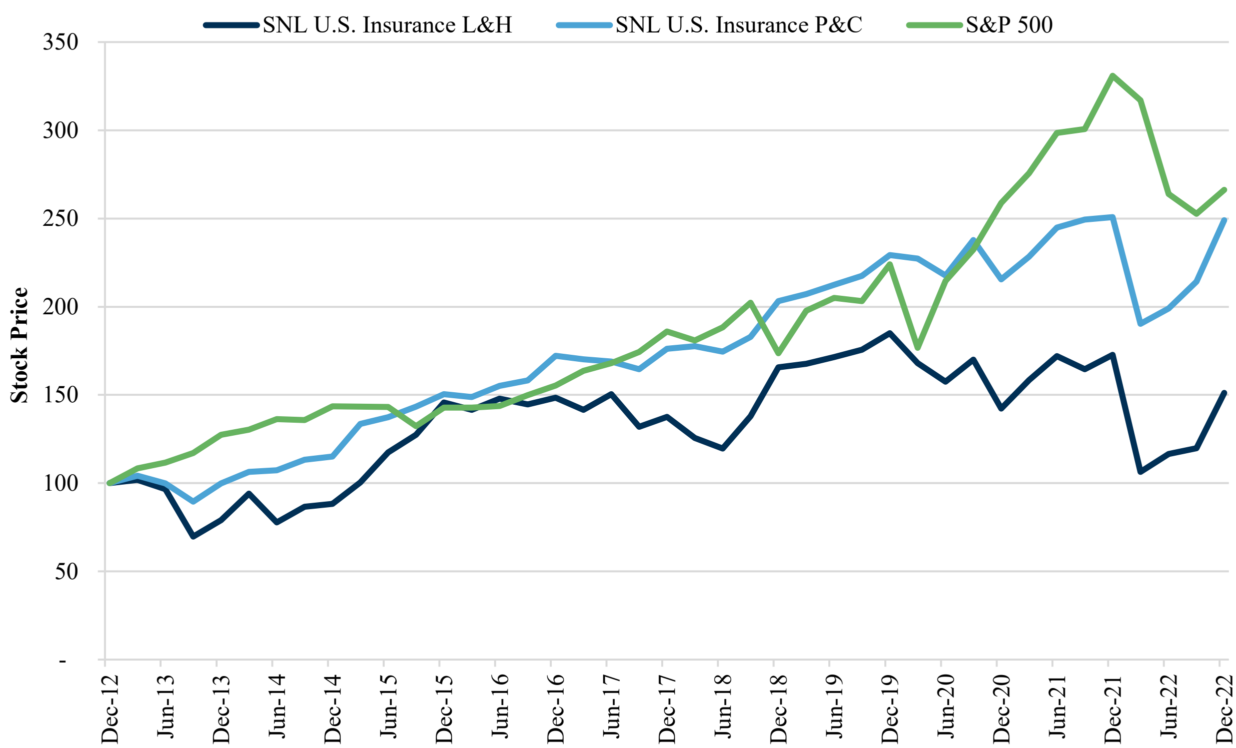
- Finally, unaffiliated bond holdings have accounted for close to two-thirds of the P&C sector's unaffiliated investment portfolio on average in each of the last 10 years, providing stable cash flows against underwriting results. Additionally, more than 21 percent on average has been allocated to unaffiliated common stock investments, establishing a marketable source of funding to cover unexpected liquidity needs.

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.

For the ten-year period ending December 31, 2022, both the L&H and P&C sector stock price indices underperformed the S&P 500, as shown in Figure 43. In that period, the L&H index appreciated 51 percent, the P&C index gained 149 percent, and the S&P 500 increased by 166 percent. Over most of the last 10 years the L&H index has consistently underperformed the broader market. The P&C sector has only fared somewhat better, generally performing in-line with the broad market until mid-2020 but underperforming since then. For 2022, however, both the L&H and the P&C stock indices actually outperformed the S&P 500, losing 12 percent and one percent, respectively, compared to depreciation of 20 percent for the S&P 500. Concerns about inflationary pressures, the broad economic environment, and the interest rate environment weighed on both sectors.

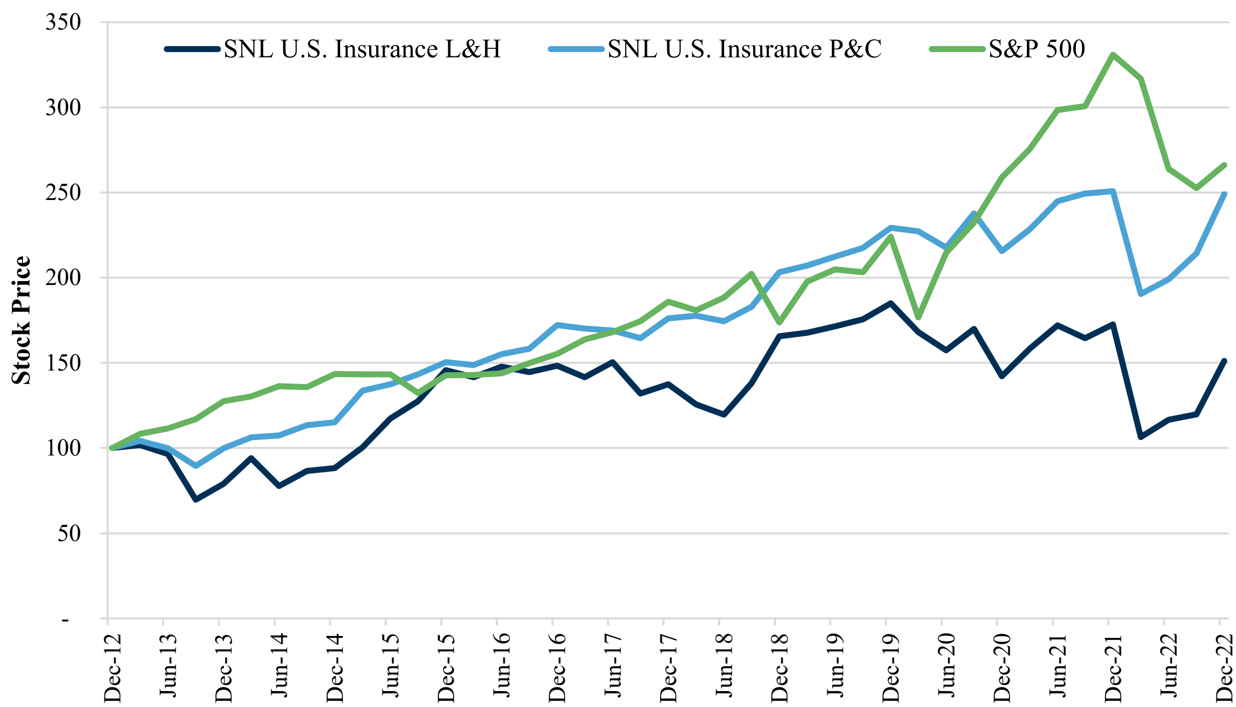
Figure 43: Insurance Industry Stock Price vs. S&P 500



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 44 compares L&H and P&C sector price-to-book value ratios from year-end 2012 through year-end 2022. At the end of 2022, the index of stocks of L&H insurers slipped to a deeper discount at 0.74 times its book value from 0.92 times at the end of 2021, while the index of stocks of P&C insurers retained its historical premium at 1.44 times book value, slightly lower than in 2021.

Figure 44: Insurer Price/Book Value Ratios



Source: S&P Global

5. Domestic Outlook

Full year 2023 insurance industry results will be reviewed by FIO in next year's *Annual Report on the Insurance Industry*. In the meantime, while financial results reported by insurers through the first half of 2023 (the most recently available data) do not determine the outcome for the rest of 2023, they do suggest that the outlook for the U.S. insurance industry may continue to be hampered to an extent in the near- and medium-term by market pressures brought on by economic uncertainty and continued market volatility.

With higher inflation and increased financing costs, the macroeconomic environment facing insurers is different from that characterized by sustained low interest rates for more than 10 years. Uncertainty continues over the extent to which the current macro environment will impact economic growth. Additionally, the frequency and severity of natural catastrophe and climate-related events may continue to intensify, potentially weighing on insurer performance in the near term.

Recent financial results indicated that the L&H sector experienced continued leverage strains at the end of the second quarter 2023, as surplus declined by another 6.4 percent (after a 2.2 percent annual decline at year-end 2022), partly attributable to continued realized capital losses. While growth in P&C surplus resumed and was largely restored from year-end 2022, elevated loss and loss adjustment expenses contributed to underwriting losses through the first half of 2023 and to a return on average equity of 1.75 percent, just over a quarter of the level for the comparable period in 2022. In the near term, downward pressure on property valuations and heightened interest rates would generally have negative implications for liquidity and credit risk exposures, and higher than desired inflation could weaken reserve adequacy.

In this new environment of increased interest rates, insurers could come under less pressure to turn to riskier investments for yield, providing them an opportunity to rebalance investment portfolios and improve liquidity profiles. Some evidence to this effect was apparent in 2022, though it is too early to determine whether this will be an ongoing trend. On a combined basis (L&H and P&C sectors together), long-term bond holdings as a share of the combined investment portfolio rose by 55 basis points to 65.2 percent at year-end 2022 from 64.6 percent at year-end 2021. The same ratio, however, stood at 64.2 percent at the end of the second quarter 2023, but it is still premature to present as a clear indicator of future movements.

The trend of insurers reaching for the yields offered by alternative asset classes and private structured and non-structured credit investment vehicles may continue, even with the presence of higher interest rates. However, fixed income securities will remain the core of insurance company investment portfolios. At the same time, sustained expansion of alternatives has led to the creation of more capital-efficient structures and fund investment vehicles, driving portfolio returns and diversification for insurers and increasing the appeal of these investments. Alternative holdings comprised 7.1 percent of the insurance industry's aggregate investment portfolio at the end of the second quarter 2023, rising from 6.9 percent at year-end 2022.[121]

CLOs have captured a larger share of the industry's bond portfolio in the last ten years. Insurers' credit risk exposures may widen if there are increased investment allocations to both CLOs and leveraged loans—asset classes that typically have floating rates that move in alignment with rising interest rates and that historically have had returns that have been positively correlated with inflation. The underlying loans of CLOs and leveraged loans, however, carry default risk exposures, particularly in the case of mezzanine tranches, of which insurers are significant holders, and which absorb losses before the senior CLO tranches. In a rising rate environment, borrowers of floating loans are subject to more costly debt, thus raising the likelihood of loan default and losses for investors.

Because of the longer-dated liabilities on their books, life insurers hold CRE in their investment portfolios to support those future cash outflows. Through direct holdings, wholly-owned

[121] The June 30, 2023 ratio of alternatives to cash and investments is estimated from amounts reported on Schedule BA – Verification of the June 30, 2023 financial statements.

properties, and structured securities, real estate can serve as an effective inflation hedge, as rents and the cost of goods and services rise with inflation. The CRE market, however, has been exhibiting signs of stress. Slowing rent growth, higher labor and material costs, and rising vacancy rates are expected to weigh heavily on the net operating income generated from some CRE properties. As discussed in the L&H Assets discussion above, the rise of remote work also has led to reduced demand for office properties. The recent Financial Stability Report issued by the Federal Reserve indicates that while price declines have been widespread across all property types, the fundamentals for office properties in central business districts are weak.[122] Stress in multifamily properties could also surface because of rising debt costs and other factors Approximately 32 percent of the insurance industry's CRE mortgage loan exposure stemmed from multifamily properties, while another 22 percent resided in office space at year-end 2022.[123] Because 90 percent of commercial mortgage loan holdings are investment grade, potential losses are likely to remain limited in the near term.[124] Nevertheless, the combination of declining property values and maturing debt will carry significant implications for the CRE market.

In the near term, higher premium rates and investment yields should enable P&C insurers to narrow the rate gap between commercial and personal business lines that had resulted in significant underwriting losses in 2022 and through the first quarter of 2023. Should there be additional high catastrophe activity as seen earlier in 2023, reserve adequacy could become a growing concern for P&C insurers, as premium growth, claims costs, investment yields, and capital gains are impacted.

The effects of the current macro environment on insurers warrant continued monitoring and oversight. However, the industry's strong liquidity levels and capital position, as well as its cash flow matching of assets and liabilities, are likely to potentially mitigate any market volatility. Favorable reserve development has slowed for the P&C industry, which could be further affected by the frequency and severity of natural catastrophes. FIO will continue to monitor insurance industry financial developments and report on them in 2024.

FIO also continues to monitor other insurance industry developments, including the use of technology and data (see Box 5).

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[122] Federal Reserve, *Financial Stability Report* (May 2023), https://www.federalreserve.gov/publications/files/financial-stability-report-20230508.pdf.

[123] NAIC, *U.S. Insurance Industry's Mortgage Loan Exposure Rises at Year-End 2022 as Commercial Real Estate Trends Deteriorate* (2023), https://content.naic.org/sites/default/files/capital-markets-special-reports-cre-ye2022.pdf.

[124] Fitch Ratings, "U.S. Life Insurers Navigate CRE Challenges."

Box 5: Technology, Data Use, and Privacy

The increasing use of big data and technology such as artificial intelligence (AI) by insurers can facilitate innovation and modernization in insurance product design, distribution, and delivery. However, it also involves potential risks around fairness and privacy, and highlights the need for state regulators to guard against the potential for bias and unlawful discrimination.

AI, in particular, has been of recent concern for policymakers at both the federal and state level. In October 2022, the White House released a Blueprint for an AI Bill of Rights, which proposed a set of five principles and associated practices to help guide the design, use, and deployment of AI systems to protect the rights of consumers.[125] One of the principles focuses on algorithmic discrimination protections and suggests proactive equity assessments of algorithms and ongoing disparity testing and mitigation. There is also related action at the state level. Colorado, for example, enacted legislation requiring the 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.[126]

FIO also is monitoring the work of the NAIC in this area, following its adoption of *Principles on Artificial Intelligence*, which emphasizes the importance of the fairness and ethical use of AI; accountability; compliance with state laws and regulations; transparency; and a safe, secure, and fair system.[127] The NAIC's Innovation, Cybersecurity, and Technology Committee released a draft model bulletin in July 2023 on the "Use of Algorithms, Predictive Models, and Artificial Intelligence Systems by Insurers" to provide regulatory guidance on insurers' use of AI.[128]

In addition, the NAIC's Big Data and Artificial Intelligence Working Group has been surveying insurers for insight on what AI and machine learning (ML) techniques they are using and what governance and risk management controls they are currently employing. The Working Group produced a report in December 2022 on survey results from private passenger auto insurers and a second report in August 2023 on survey results from homeowners insurers.[129] Some key findings include that 88 percent of surveyed private passenger auto insurers use, plan to use, or plan to explore using AI/ML, with the most use in claims, marketing, and fraud detection. In comparison, approximately 70 percent of surveyed homeowners insurers use or plan to use

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[125] White House Office of Science and Technology Policy, *The Blueprint for an AI Bill of Rights: Making Automated Systems Work for the American People* (October 2022), https://www.whitehouse.gov/wp-content/uploads/2022/10/Blueprint-for-an-AI-Bill-of-Rights.pdf.

[126] Colorado Senate Bill 21-169 (enacted July 6, 2021).

[127] NAIC, *National Association of Insurance Commissioners Principles on Artificial Intelligence* (August 14, 2020), https://content.naic.org/sites/default/files/inline-files/AI%20principles%20as%20Adopted%20by%20the%20TF_0807.pdf.

[128] NAIC, *Model Bulletin on the Use of Algorithms, Predictive Models, and Artificial Intelligence Systems by Insurers* (exposure draft, July 17, 2023), https://content.naic.org/sites/default/files/07172023-exposure-draft-ai-model-bulletin.docx.

[129] NAIC, *Private Passenger Auto Artificial Intelligence/Machine Learning Survey Results* (December 8, 2022), https://content.naic.org/sites/default/files/inline-files/PP%20Auto%20Survey%20Team%20Report%20120822.pdf ; NAIC, *Home Insurance Artificial Intelligence/Machine Learning Survey Results* (August 10, 2023), https://content.naic.org/sites/default/files/inline-files/Home%20Survey%20Team%20Report_08102023.pdf.

AI/ML, with the greatest use in claims, underwriting, marketing, fraud detection, and rating. The Working Group has also surveyed life insurers but has not yet released a report on those survey results. The Working Group also plans to develop a "library" of third-party vendors in the private passenger auto and homeowners insurance markets as a tool for regulators to share information about vendors' activities, as well as a set of questions for state regulators to use to ask about models and data used by insurance companies.[130]

Data privacy is another key regulatory issue that FIO continues to monitor. In response to evolving technology and business practices, policymakers and regulators at the state and federal levels are focusing on modernizing frameworks for data privacy and protection. Insurance in particular can touch all aspects of a consumer's life, and insurers gather significant data about consumers in the process, making it important to ensure appropriate safeguards for consumers' personal information and its use by insurers. The Gramm-Leach-Bliley Act (GLBA) required all state insurance authorities to adopt standards relating to the privacy and disclosure of nonpublic personal financial information applicable to the insurance industry.[131] A number of states have passed or are considering comprehensive data privacy laws, with some exempting or partially exempting entities covered by GLBA or other federal data protection laws.[132] In response to the GLBA, the NAIC published the Privacy of Consumer Financial Health and Information Regulation—which is now over 20 years old.[133] The NAIC's Privacy Protections Working Group is drafting a new Insurance Consumer Privacy Protection Model Law to replace the old regulation as well as the NAIC's Insurance Information and Privacy Protection Model Act.[134] Following the release of an initial draft in February 2023, the Working Group released an updated version in July 2023 and continues to work through its provisions with industry and consumer group stakeholders.[135]

[130] NAIC *Innovation, Cybersecurity, and Technology (H) Committee Minutes* (March 22, 2023), https://content.naic.org/sites/default/files/national_meeting/Hcmte_MinutesPacket.pdf.

[131] 15 U.S.C. § 6801 et seq.

[132] NAIC, *Proposed State Privacy Laws Comparison Chart* (Updated 07/25/2023), https://content.naic.org/sites/default/files/national_meeting/State%20Privacy%20Law%20Comparison%20Chart%20Changes%2007%2025%202023_0.pdf.

[133] Privacy of Consumer Financial and Health Information Regulation (NAIC 2017), https://content.naic.org/sites/default/files/model-law-672.pdf.

[134] Insurance Information and Privacy Protection Model Act (NAIC 1992), https://content.naic.org/sites/default/files/inline-files/MDL-670.pdf.

[135] Insurance Consumer Privacy Protection Model Law #674 (NAIC exposure draft February 2023), https://content.naic.org/sites/default/files/inline-files/Exposure%20Draft-Consumer%20Privacy%20Protection%20Model%20Law%20%23674%201-31-23.pdf; Insurance Consumer Protection Model Law (NAIC exposure draft July 11, 2023), https://content.naic.org/sites/default/files/inline-files/Exposure%20Draft-Consumer%20Privacy%20Protection%20Model%20Law%20%23674%20as%20of%207-11-23_0.pdf.

B. Capital Markets Activity

1. Financings

The U.S. insurance industry continued to access the capital markets throughout 2022, albeit at a slightly slower pace compared to 2021. Reflecting more volatile and negatively-biased equity markets, only 10 insurer-related public equity offerings were completed over 2022, with an aggregate value of $2.5 billion.[136] This level of activity was considerably lower than the 16 deals valued at $4.4 billion that were completed in 2021. Of the offerings in 2021, only one transaction—valued at $1.7 billion and the largest 2022 equity capital raise—was an IPO, marking two less transactions, and a lower aggregate value from the three IPOs valued at $2.3 billion in 2021. The 2022 IPO was the $1.7 billion raised by AIG's spin-off of its life insurance, retirement, and wealth management operations into Corebridge Financial, Inc.

Debt markets continued to be the preferred source of additional capital for insurers in 2022. During the year, U.S. insurers raised an aggregate $72.3 billion in 127 separate debt offerings.[137] Likely reflecting the higher interest rate environment over 2022, the aggregate value of debt issued decreased by nine percent from the $79.3 billion raised in 145 offerings in 2021. This level of activity marked the second year of declines in both aggregate value and number of debt offerings. The largest single debt offering was a $2.75 billion issue sold by Forethought Life Insurance Company. However, MetLife, Inc. (and its subsidiaries) was the largest issuer of debt, selling $13.9 billion in 23 separate offerings across 2022. New York Life Insurance Company, which sold $7.1 billion in 16 separate offerings, was the second-largest issuer of debt in 2022. In the aggregate, the funds raised by the top five issuers of debt accounted for 49 percent of the 2022 industry total, up from 39 percent for the top five debt issuers in 2021, as fewer individual companies sold debt.

2. Mergers & Acquisitions of U.S. Insurers

In 2022, there were 54 M&A transactions announced involving U.S. insurance companies, with a total value of $13.6 billion.[138] Inflation and higher interest rates took their toll on M&A activity, as the number of deals dropped noticeably from the 67 transactions in 2021, and the aggregate value of the 2022 deals plummeted from the $46.5 billion aggregate value total in 2021. Among the 2022 transactions, the L&H sector saw 16 deals in 2022 with an aggregate value of $160 million, for a 93 percent drop, while the 38 transactions in the P&C sector recorded a 39 percent decline in aggregate value to $13.5 billion. The largest transaction in 2022 was Berkshire

[136] All data in this section with respect to financings is 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.

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

[138] Mark Purowitz, *et al*., *2023 Insurance M&A Outlook: Balancing Uncertainty with Optimism* (2022), https://www2.deloitte.com/us/en/pages/financial-services/articles/insurance-m-and-a-outlook.html. All data in this section with respect to M&A transactions is sourced from Deloitte. Transactions were announced between January 1, 2022, and December 31, 2022, and were either completed during the year or remained pending at the end of 2022. Transactions include acquisitions of whole companies, assets, or minority interests in instances where a U.S-domiciled insurer was either the buyer or seller.

Hathaway Inc.'s October $11.6 billion acquisition of Allegheny Corp., which alone accounted for 85 percent of the total industry aggregate deal value.

C. International Insurance Marketplace Overview and Outlook

At year-end 2022, the United States remained the world's largest single-country insurance market, with a 44 percent market share of global direct premiums written (see Figure 45).[139] This market share increased by approximately 3.3 percent compared to 2021 and is the highest level since 2019. When viewed as a single market, the European Union's combined share of global direct premiums written (17 percent, or $1.1 trillion) is the next largest, although its market share dropped by 2.1 percent from 2021. China remained the second-largest single-country insurance market, with 10 percent of global direct premiums written for 2022. Collectively, the 20 largest of the world's (single country) insurance markets accounted for 91 percent of global direct premiums written. Globally, direct premiums written increased by less than one percent (in nominal terms, unadjusted for inflation) in 2022 year-over-year, as a four percent decline in global life insurance premiums was slightly more than offset by a four percent rise in global non-life premiums.[140] For the same period, global GDP expanded by an estimated 3.5 percent (in nominal terms).[141]

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[139] Fernando Casanova Aizpun, *et al.*, *sigma 3/2023: World Insurance: Stirred, and not Shaken* (2023), https://www.swissre.com/institute/research/sigma-research/sigma-2023-03.html. Swiss Re sigma examines insurance and macroeconomic data from 147 countries sourced through Swiss Re Institute. Swiss Re sigma separates the insurance industry into "life" and "non-life" sectors according to standard European Union 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 2020-2022 have been adjusted for this change. All figures shown use amounts converted to U.S. dollars.

[140] *See* Aizpun, *sigma 3/2023*, 14.

[141] IMF, *World Economic Outlook: Update – Near-Term Resilience, Persistent Challenges* (2023), 1, https://www.imf.org/en/Publications/WEO/Issues/2023/07/10/world-economic-outlook-update-july-2023.

Figure 45: World Market Share 2020-2022 for Top Twenty Markets

2022 Rank	Country	2020 Premium Volume ($ millions)	2020 World Market Share (%)	2021 Premium Volume ($ millions)	2021 World Market Share (%)	2022 Premium Volume ($ millions)	2022 World Market Share (%)	2022/2021 Premium Volume Change (%)
1	United States	2,515,358	40.0%	2,724,798	40.3%	2,959,808	43.6%	8.6%
2	PR China	655,865	10.4%	696,128	10.3%	697,806	10.3%	0.2%
3	Japan	414,475	6.6%	397,948	5.9%	337,812	5.0%	(15.1%)
4	United Kingdom	341,950	5.4%	373,613	5.5%	363,009	5.4%	(2.8%)
5	France	238,998	3.8%	292,649	4.3%	261,254	3.9%	(10.7%)
6	Germany	260,322	4.1%	272,390	4.0%	241,633	3.6%	(11.3%)
7	South Korea	190,085	3.0%	193,008	2.9%	182,846	2.7%	(5.3%)
8	Canada	139,243	2.2%	166,292	2.5%	170,972	2.5%	2.8%
9	Italy	172,704	2.7%	191,896	2.8%	160,168	2.4%	(16.5%)
10	India	111,911	1.8%	123,016	1.8%	131,041	1.9%	6.5%
11	Taiwan	113,304	1.8%	113,424	1.7%	86,475	1.3%	(23.8%)
12	Netherlands	88,004	1.4%	92,418	1.4%	83,875	1.2%	(9.2%)
13	Brazil	57,900	0.9%	62,878	0.9%	75,876	1.1%	20.7%
14	Australia	62,825	1.0%	72,294	1.1%	71,805	1.1%	(0.7%)
15	Hong Kong	72,940	1.2%	72,825	1.1%	68,767	1.0%	(5.6%)
16	Spain	67,220	1.1%	73,129	1.1%	68,237	1.0%	(6.7%)
17	Switzerland	57,801	0.9%	57,938	0.9%	56,082	0.8%	(3.2%)
18	Sweden	39,285	0.6%	59,411	0.9%	54,363	0.8%	(8.5%)
19	Singapore	30,813	0.5%	45,215	0.7%	46,984	0.7%	3.9%
20	South Africa	41,110	0.7%	49,748	0.7%	45,831	0.7%	(7.9%)
	World	6,291,834		6,764,694		6,782,235		0.3%

Source: Swiss Re sigma, *World Insurance*

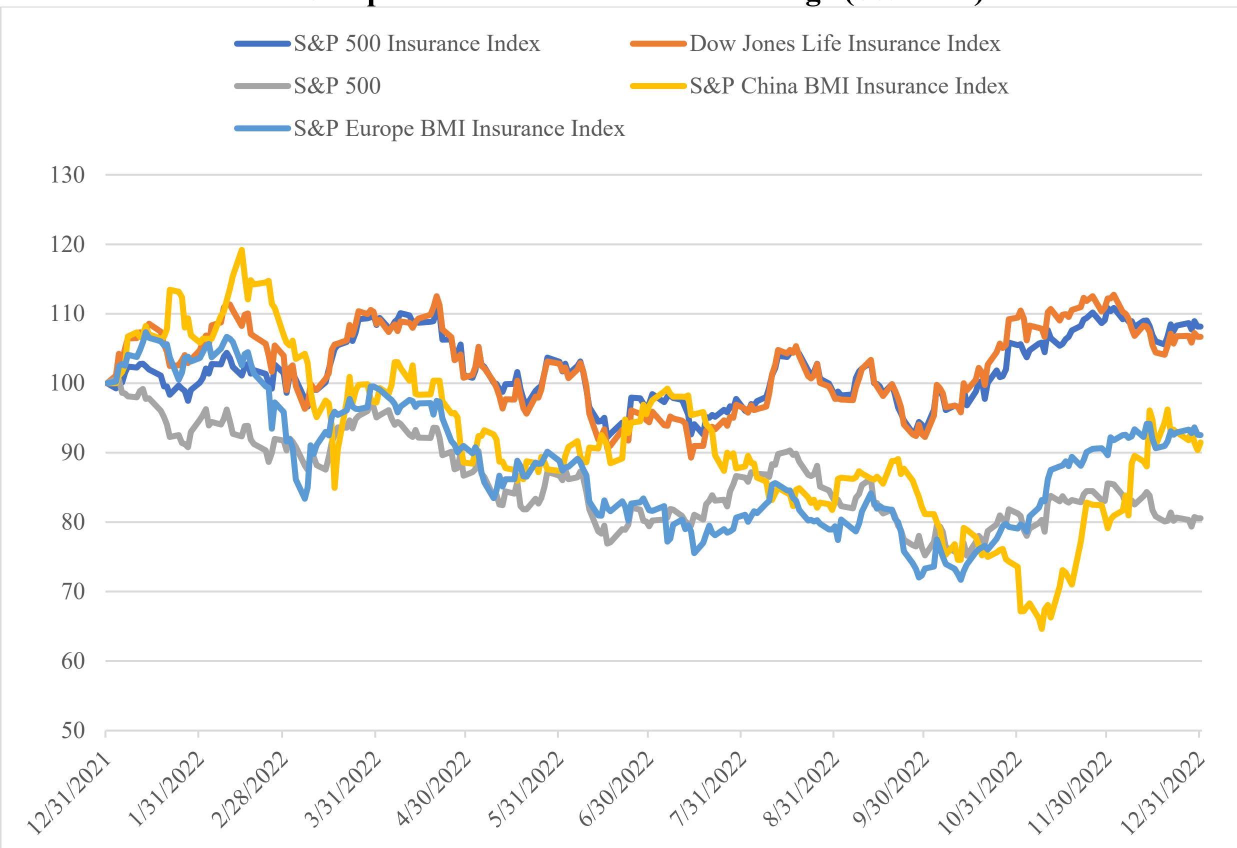
Back on trend after a departure in 2021, real premium growth in emerging markets outpaced growth in advanced economies across the board. World life insurance premiums, in real terms, contracted by 3.1 percent, mainly due to a 4.4 percent decrease for this business in advanced economies, which was slightly offset by a 1.4 percent increase in emerging markets' life premiums.[142] The weakest life premiums results were in Europe, with additional weakness in Asia, all offset by strong annuity sales in the United States and Canada and strong growth in India's life business. On the non-life side, world premium growth of 0.5 percent in real terms likewise reflected stronger performance in emerging markets (up 2.8 percent in real terms) than in advanced markets (flat in real terms).

Most insurance indices in major insurance markets outside the United States recorded negative results in 2022, but still outperformed broader benchmarks—in most instances by a wide range. Among the indices FIO tracked (see Figure 46), the S&P 500 Insurance Index was the best performing, increasing by roughly eight percent in 2022 (compared to a 20 percent decline for

[142] Aizpun, *sigma 3/2023,* 33.

the S&P 500). The SNL U.S. Insurance Life & Health Index did not perform as well as the Dow Jones U.S. Life Insurance Index, as it is a broader-based index with a greater population of smaller companies (see Market Performance discussion above). Chinese insurer equities, which declined nine percent as measured by the S&P China BMI Insurance Index, were held back due to renewed COVID-19 pandemic lockdowns.

Figure 46: Performance of Global Insurance Indices as Compared to Broader Market Average (S&P 500)



Source: S&P Global

For the near future, slower global economic growth, inflation risks, and the effects of attendant tighter monetary policy are the primary concerns for the world insurance marketplace. Slower economic activity generally leads to lower demand for insurance products, while the impact of inflation is generally reflected in rising claims costs, although the ongoing global financial markets instability also presents stress. Nonetheless, observers expect that total world premium growth (in nominal terms) is likely to continue in 2023-24 with some degree of nominal gains eroded by inflation.[143] Similarly, profits of non-life insurers will likely be pressured by inflationary claims costs in personal lines, somewhat offset by hardening rates and expectations for continued strong commercial lines pricing.[144] Life insurers may benefit from the effect of higher interest rates in terms of both premiums (from demand for annuities and pension risk

[143] Aizpun, *sigma 3/2023*, 2.

[144] Aizpun, *sigma 3/2023*.

transfers) and earnings (from improved yields on investments).[145] Given the expectations of relatively low global economic growth and relatively high inflation, potential credit downgrades and an increase in surrenders are risks to world life insurer profitability.[146]

[145] Aizpun, *sigma 4/2022,* 2.

[146] Aizpun*, sigma 3/2023*, 2.

III. CONCLUSION

In the coming year, FIO will continue to monitor macroeconomic and other developments affecting the U.S. insurance industry and consumers. The impacts to insurers from increased catastrophe exposure, as well as the accelerated shift to digital technology and the heightened need for cybersecurity, are among the considerations that FIO will continue to analyze.