CFRA

## Industry Surveys

### Property & Casualty Insurance

JANUARY 2023

Catherine Seifert Equity Analyst Fateh Yahaya Industry Analyst

### CONTENTS

5	Industry Snapshot
6	Financial Metrics
8	Key Industry Drivers
11	Industry Trends
17	Porter's Five Forces
41	How the Industry Operates
46	How to Analyze a Company in this Industry
50	Glossary
52	Industry References
53	Comparative Company Analysis

### Contacts

### Sales Inquires & Client Support

800.220.0502 cservices@cfraresearch.com

### **Media Inquiries**

press@cfraresearch.com

### **CFRA**

977 Seminole Trail, PMB 230 Charlottesville, VA 22901

### Contributors

### Raymond Jarvis Senior Editor

**Atifi Kuddus, Geraldine Tan** Associate Editors

Copyright © 2023 CFRA 977 Seminole Trail, PMB 230 Charlottesville, VA 22901 All rights reserved.

### CHARTS & FIGURES

- 6 Net Written Premium Growth Net Earned Premium Growth Net Investment Income Growth
- 7 Combined Ratio
  Net-Written-Premium/Surplus Ratio
  Losses and Loss Adjustment Expense
  (LAE) Ratio
- 8 U.S. Real GDP GrowthU.S. Unemployment Rate
- 9 U.S. Inflation Rates (CPI)U.S. Interest Rates
- 10 U.S. Yield Spread Leading Economic Index (LEI)
- 11 Profit Share Maps
- 12 Top 10 Property & Casualty Underwriters
- 18 Average Property-Casualty Commercial Lines Rate Increases
- 19 Commercial Rate Changes by Line of Business
- 20 Data Breaches 2010-2021
- 21 Cyber Insurance Premium Growth Versus Industry Growth Loss Trends Cyber Versus Property-Casualty Industry
- 24 Largest Insured Catastrophe Losses

### **NEW THEMES**



What's Changed: We expect written premium growth of 7% to 10% in 2022 and 5% to 8% in 2023, above the industry's long-term average rate of growth of just under 5%. Check out all the Financial Metrics on pages 6 and 7.



What's Changed: Hurricane lan, which struck western Florida in late September last year, will likely end up being the largest loss-causing event of 2022, with insured loss estimates of between \$50 billion and \$65 billion. Read more on page 24.

### **EXECUTIVE SUMMARY**

CFRA has a positive fundamental outlook on the property-casualty insurance and insurance brokerage subindustries. Highlighted below are several key trends that will drive results in 2023 and beyond:

### Insurance Pricing Remains 'Hard' Despite an Easing of Some Gains

Several years of record-setting catastrophe losses and an uptick in liability claim costs amid "social inflation" were already propelling insurance prices upward by double digits before Covid-19 and the war in Ukraine hit. In the aftermath of these events and accelerated by record-setting losses from Hurricane Ian, the insurance pricing environment remains "hard," with average third-quarter 2022 rate increases of over 8% – some particularly loss-laden lines of business are seeing rate increases of more than 20%. The third quarter of 2022 marked the 20th consecutive quarter of price increases. CFRA forecasts written premium growth of 7% to 10% in 2022 and 5% to 8% in 2023, above the industry's long-term average rate of growth of just under 5%.

### A Climate-Change-Driven Catastrophe Surge Could Lead to an Availability Crisis in Certain Property Insurance Markets

Worldwide catastrophe losses are poised to reach \$115 billion in 2022, coming on the heels of \$120 billion of worldwide catastrophe claims the industry shouldered in 2021. The bulk of the 2022 losses – an estimated \$50 billion to \$65 billion – were from Hurricane Ian, which ripped through western Florida as a category four hurricane in late September 2022. Hurricane Ian was significant not only in the damage it caused, but also as a catalyst in driving insurers out of the Florida property insurance market and further imperilling the already fragile state-run insurance market. CFRA believes an "availability crisis" could be brewing in certain catastrophe-prone markets in California, Colorado, Florida, and Louisiana, as insurers pull back from writing unprofitable business.

### The Reinsurance Market is Also Hardening

A combination of back-to-back record levels of worldwide catastrophe losses, coupled with some capacity constraints as some underwriters reduce their exposure to property catastrophe coverage, has "hardened" the reinsurance market. January 2023 renewals – an important milestone for this industry – are expected to produce a rate increase of over 20% in certain lines of business, as reinsurers seek to recover from a couple of years of underwriting losses. CFRA forecasts that U.S.-based reinsurers will produce written premium growth of 12% to 15% in 2022 and 13% to 18% in 2023.

### Regulators are Pushing Insurers for More Transparency on Climate Risk

The Securities and Exchange Commission (SEC) and the National Association of Insurance Commissioners (NAIC) both unveiled a series of proposals in 2022 aimed at increasing insurers' climate disclosures. The SEC's proposal is aimed at all publicly traded companies and is in response to concerns that the current level of disclosures is not adequate. The NAIC's newly adopted climate risk reporting standard aligns with the international Task Force on Climate-Related Financial Disclosures (TCFD), and, like the SEC proposal, is focused on governance, strategy, risk management, and metrics and targets related to climate change assessment and disclosure.

### Insurance Stocks May Give Back Some of 2022's Gains

Insurance stocks' performance in 2022 was very strong, as investors embraced "value" strategies and rewarded insurers' pricing power, driving an outperformance by the entire group. Reinsurance stocks were the best performers, rising 25.3% during 2022, versus a 19.4% decline in the S&P 500. Property & Casualty Insurance stocks also outperformed the broader averages, rising 12.6%, as strength in commercial lines pricing was partly offset by adverse claim trends that pressured auto insurers' shares. The disparate multi-line insurance group also performed well on the heels of AIG's successful restructuring and rose 7.1%. The weakest performers during 2022 were insurance brokerage stocks. After rising nearly 38% in 2021, this subgroup fell by 1.8% during 2022, as a strong U.S. dollar hampered results of these multinationals. CFRA expects some near-term profit-taking in early 2023 but sees relatively attractive underlying fundamentals for most subgroups buoying their shares in 2023.

**RANK** 

NO.

10

### PROPERTY & CASUALTY INSURANCE

Outlook: Positive

### **MARKET CAP BREAKDOWN\***

**COMPANY** 

NAME

### **MARKET** CAP

19.3

298.58

		(\$ billion)
1	Chubb	91.6
2	Progressive	75.9
3	Travelers	43.9
4	Tokio Marine	43.0
5	Allstate	36.0
6	People's Insurance	29.8
7	Intact Financial	25.2
8	Arch Capital	21.1
9	PICC	21.1

\*Companies included in the S&P 1500 Index: as of December 31, 2022.

Berkley

Others†

†Refer to the Comparative Company Analysis section of this survey for other companies in the industry. Source: CFRA, S&P Global Market Intelligence.

### **ETF FOCUS**

IAK iShares U.S. Insurance	AUM (\$M) 566.4	Expense Ratio 0.39
KIE SPDR S&P Insurance	AUM (\$M) 533.6	Expense Ratio 0.35
KBWP Invesco KBW Property & Casualty Insurance	AUM (\$M) 354.2	Expense Ratio 0.35

### BY THE NUMBERS



### \$68 billion

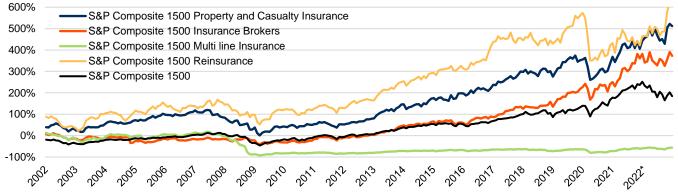
U.S. propertycasualty insurers' net investment income in LTM Q3 2022, up from \$5 billion in prior period

\$16 billion Net underwriting loss in LTM to Q3 2022

101.65% Combined loss and expense ratio in LTM to Q3 2022

3.22% Investment yield in LTM to Q3 2022, up from 2.72% in prior year period since 1960

### 20-YEAR INDEX PERFORMANCE



\*Data through December 31, 2022. Source: S&P Global Market Intelligence.

### **FINANCIAL METRICS**

### **Net Written Premium Growth**



- ◆ Property-casualty net written premiums which reflect business production and are a sign of the following year's level of earned premiums – rose by a lackluster 2.5% in 2020 before surging 9.2% in 2021. CFRA expects growth of 7% to 10% in 2022 and 5% to 8% in 2023 due to the economic recovery and a still-strong insurance pricing environment.
- ◆ In the latest available Reinsurers Association of America (RAA) survey, reinsurers reported net written premium growth of 11.7% Y/Y in the first nine months of 2022, reflecting a combination of economic recovery, reversal of premium returns and discounts on personal auto business, and substantial rate increases in multiple commercial property and liability product segments.

### **Net Earned Premium Growth**



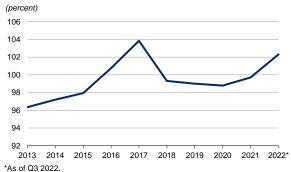
- ♦ In 2021, the Property & Casualty Insurance subindustry posted a 7.4% growth in net earned premiums, reflecting a rebound from losses incurred during the pandemic. Year-to-date through the third quarter of 2022, net earned premiums grew 7.3% Y/Y, reflecting the rise in commercial rates and reduced incurred losses related to the pandemic.
- Reinsurers in RAA's latest survey posted an 11.3% Y/Y rise in earned premiums in the first nine months of 2022, reflecting the industry and company-specific drivers mentioned above.

### **Net Investment Income Growth**



- ◆ Property-casualty insurers posted a 5.0% increase in net investment income in 2021. In the first quarter of 2022, net investment income grew significantly, a 78% Y/Y increase, before slowing down in the second and third quarters of 2022. We attribute the surge in growth to social and economic life returning to pre-pandemic normalcy.
- CFRA expects net investment income in 2022 to provide relief to insurers, as investment gains in alternative assets and equity investments would improve GAAP operating performance.

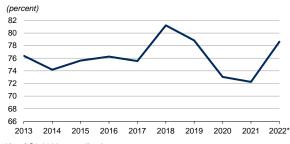
### **Combined Ratio**



Source: CFRA, S&P Global Market Intelligence.

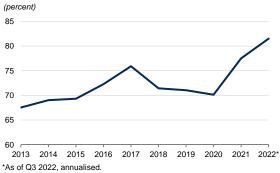
- ♦ In the first three quarters of 2022, property-casualty insurers posted a combined ratio of 102.3%, a moderate deterioration from the 99.7% the industry produced in the same period in 2021. (A combined ratio of less than 100% shows an underwriting profit, while anything more than 100% means there is an underwriting loss.) We attribute the deterioration to the aftermath of Hurricane Ian and continued inflationary pressures.
- ◆ For all of 2023, CFRA expects underwriting results to stabilize, with a combined ratio of under 100%, though an active hurricane season could imperil that forecast.
- ◆ Evidence of the slight deterioration in reinsurers' underwriting results can be seen in their combined ratios. As of September 30, 2022, the 17 reinsurers in the RAA survey posted a combined ratio of 101.7%, slightly worse than the combined ratio of 100.7% from the prior-year period.

### **Net-Written-Premium/Surplus Ratio**



\*As of Q3 2022, annualized. Source: CFRA, S&P Global Market Intelligence. ◆ In the last 12 months through September 30, 2022, the Property & Casualty Insurance subindustry had a written premium to average surplus ratio of 0.786, compared to 0.752 in the last 12 months through September 30, 2021. In other words, for every \$1 of capital, insurers on average wrote \$0.78 of business.

### Losses and Loss Adjustment Expense (LAE) Ratio



Source: CFRA, S&P Global Market Intelligence

- Given the trend of heavy catastrophe claims in recent years, underwriting results have been somewhat bifurcated by the variation in claim trends among insurers between those that are catastrophe-exposed and those that are not.
- ◆ During the third quarter of 2022, the Property & Casualty insurance sub-industry reported a loss and LAE ratio of 81.51%, versus 79.18% in the third quarter of 2021.
- ◆ CFRA expects incurred loss costs and LAE to be up by 8% to 12% in 2022, and by 6% to 9% in 2023, assuming a "normal" level of weatherrelated catastrophes and Covid-19-related claims estimated between \$40 billion and \$80 billion.

### **KEY INDUSTRY DRIVERS**

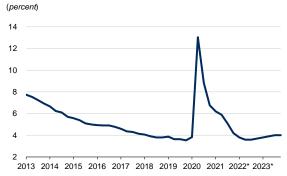
### U.S. Real GDP Growth



<sup>\*</sup>Actual data through Q3 2022, projected data by Action Economics. Source: Bureau of Economic Analysis. Action Economics.

- ◆ The Federal Open Market Committee (FOMC) projected for U.S. real GDP to grow by a mere 0.7% in 2022 and to remain flat in 2023. This compares with the forecast by Action Economics, which sees U.S. real GDP growing by 0.3% in 2022 and 1.1% in 2023.
- ◆ In December 2022, Action Economics projected that global GDP would grow by 3.0% in 2022 and 2.5% in 2023, marking a downward revision that reflects the pressure from prolonged inflation, disrupted supply chain, and heightened uncertainty due to the Ukraine-Russia war.

### **U.S. Unemployment Rate**



\*Actual data through Q3 2022, projected data by Action Economics. Source: U.S. Bureau of Labor Statistics, Action Economics.

- ◆ The U.S. unemployment rate recovered to 3.5% in July 2022, reaching pre-pandemic levels, before rising slightly to 3.7% in November. We see the rise in unemployment rate going in tandem with robust job growth and may not warrant concern just yet.
- ◆ Action Economics projects the U.S. unemployment rate to average 3.7% in 2022, and will continue to increase to 4.1% in 2023 and 4.4% in 2024.

### U.S. Inflation Rates (CPI)



\*Actual data through November 2022, projected data by Action Economics. Source: U.S. Bureau of Labor Statistics.

- Action Economics projects the U.S. inflation rate to rise significantly to 8.0% in 2022, hitting a 40-year high (from 4.7% in 2021 and 3.3% in 2020) before dropping to 3.3% in 2023.
- The inflation spike can be attributed to the supply chain disruptions across the globe (including chip and energy shortages) due to the pandemic, the Ukraine-Russia war, as well as strong consumer demand fueled by historically robust job and wage growth as the pandemic recedes.
- ◆ Despite the Consumer Price Index (CPI) being the more commonly used measurement of inflation, the Federal Reserve uses the Personal Consumption Expenditure (PCE) Index as a reference for its inflation goals. Action Economics expects PCE levels to rise to 6.2% in 2022 (from 4.0% in 2021 and 1.1% in 2020) before dropping to 2.7% in 2023.

### **U.S. Interest Rates**



\*Data through December 15. Source: U.S. Federal Reserve.

- ◆ In December 2022, the Federal Reserve raised the federal funds rate to 4.25-4.50%, its highest level in 15 years. The Federal Reserve raised the federal funds rate seven times in 2022, and more rate hikes are expected in 2023. Aggressive steps have been taken to try to tame rapid and persistent inflation even at the expense of inflicting economic pain to get prices under control.
- ◆ The FOMC's federal funds rate December projections are 4.4% in 2022, 5.1% in 2023, and 4.1% in 2024, versus the FOMC's September projection of 4.4% in 2022, 4.6% in 2023, and 3.9% in 2024.

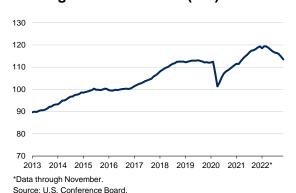
### **Yield Spread (10-Year T-Bond and 2-Year T-Note)**



Source: U.S. Department of the Treasury.

- ◆ A flattening yield curve from 2014 to 2019 had dampened investor sentiment toward the financial sector. However, we note that the yield curve had inverted in the latter half of 2022 on the expectation of aggressive monetary policy tightening by the Federal Reserve to tame rising inflation. An inverted yield curve can also be seen as an indication of a possible recession.
- ◆ Action Economics expects the yield curve to remain negatively sloped through 2023, though the yield on the 2-year Treasury note is expected to average 3.08% in 2022, 4.02% in 2023, and 3.65% in 2023. The yield on the 10-year Treasury is forecasted to average 3.00% in 2022, 3.84% in 2023, and 3.71% in 2024.
- Given that most property-casualty insurers have dramatically shortened the duration of their fixed income portfolios in recent years, most are fairly well insulated from a widening yield spread, whereby long-term bond prices will decrease relative to short-term bonds.

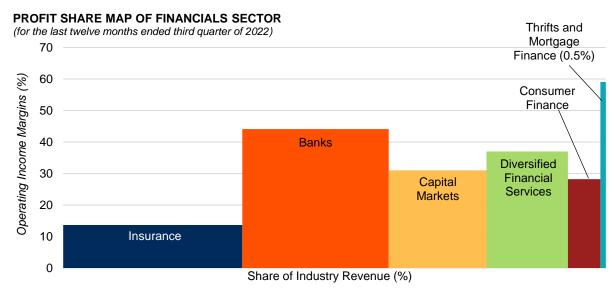
### **Leading Economic Index (LEI)**



- ◆ The Leading Economic Index (LEI) is an economic indicator intended to predict future economic activity from the value of 10 key economic variables. Historically, the LEI has turned downward prior to a recession.
- ◆ The U.S. LEI decreased 1.0% in November 2022 to 113.5, the ninth consecutive month of decline. Despite having recovered from Covid-19 contraction back in October 2021 and currently nearing a historical high, the LEI is once again on a downward trend fueled by tanked stock prices, a slowdown in housing construction, gloomier consumer expectation amid inflation, the Ukraine-Russia war, and tighter monetary policy.

### **INDUSTRY TRENDS**

### **Profit Pools**

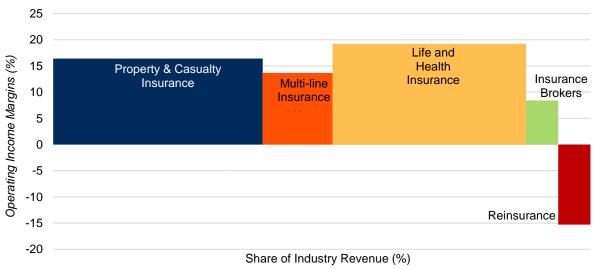


Source: CFRA, Company Reports.

The Insurance industry is the largest industry in terms of revenue within the Financials sector while maintaining the lowest operating margin. Among Insurance's five sub-industries, we note that the Property & Casualty Insurance sub-industry has the highest amount of revenue share. The Reinsurance sub-industry has the smallest revenue share and the lowest operating margin, while the Life and Health Insurance sub-industry has the highest operating margin. For reference, our profit pool analysis is based only on constituents of the S&P 1500 Index.

### PROFIT SHARE MAP OF PROPERTY & CASUALTY INSURANCE INDUSTRY\*

(for the last twelve months ended third quarter of 2022)



Source: CFRA, Company Reports.

### **Operating Environment**

Property-casualty insurers are heading into 2023 continuing to garner price increases that remain well above long-term average price hikes, though the rate of pricing gains is easing a bit and near-term underwriting results are being pressured by some adverse claim trends.

Overall demand for insurance – particularly commercial lines coverage – has recovered from the Covid-19 induced recession but is poised to slow amid a Fed-induced slowdown or recession that is becoming increasingly likely in 2023. Insurers' healthy capital levels enabled them to withstand yet another costly hurricane season that occurred in 2022. However, there are a number of challenges on the horizon. Primary insurers must contend with surging rates for reinsurance coverage as that market hardens in the aftermath of record insured losses from Hurricane Ian, coupled with a growing sense of wariness over the impact climate change is having on the risk profile of residential and commercial property coverage, particularly in coastal areas. While most Covid-19 related claims have been settled and the majority of Covid-19 related coverage litigation has been resolved in insurers' favor, claim cost inflation (accelerated by the pandemic) remains a challenge for property-casualty insurers, albeit one that most are still able to address with rate increases.

### PROPERTY & CASUALTY INSURANCE SUB-INDUSTRY

TOP 10 PROPERTY & CASUALTY UNDERWRITERS (Ranked by 2021 direct premiums written, in \$, millions, annual)					
RANK NO.	COMPANY NAME	PREMIUMS (before reinsurance transactions, includes state funds)	MARKET SHARE (%) (U.S. total including territories)		
1	State Farm	70,312	8.9		
2	Berkshire Hathaway Inc.	51,604	6.5		
3	Progressive Corp.	48,373	6.1		
4	Liberty Mutual	41,474	5.3		
5	Allstate Corp.	41,388	5.3		
6	Travelers Companies Inc.	30,920	3.9		
7	Chubb Ltd.	26,983	3.4		
8	USAA Insurance Group	25,258	3.2		
9	Farmers Insurance Group of Companies	25,009	3.2		
10	Nationwide Mutual Group	19,436	2.5		
Source: S&P Global Market Intelligence.					

### Financial Results in 2022 Reflect an Erosion in Profitability

Property-casualty insurers' financial results for the trailing 12 months ended September 30, 2022 (latest available) reflect some decent top line trends thanks to still-decent pricing and demand trends, offset by an erosion in underwriting profitability amid an uptick in claim costs. Higher interest rates helped the growth in investment income but realized investment gains plunged on market weakness.

After a post-pandemic recovery in pricing and demand for insurance coverage produced a 7.4% rise in net earned premiums for the 12 months ended December 31, 2021 (to \$690.2 billion from \$642.7 billion in 2020), insurers posted a 7.2% rise in net earned premiums (to \$724.7 billion from \$676.2 billion) in the 12 months ended September 30, 2022, according to data from S&P Global Market Intelligence. Written premium growth (or production) decelerated in the 12 months ended September 30, 2022, to 7.4%, from

growth of 9.2% posted for all of 2021. That equaled \$753.6 billion of written premiums in the 12 months ended September 30, 2022, versus \$716.1 billion of written premiums in 2021.

### **Investment Results Reflect the Impact of Higher Interest Rates**

Property-casualty insurers' investment results in 2022 reflected a sell-off in asset values in the wake of the Federal Reserve's efforts to combat inflation by raising interest rates. Asset values in 2021 reflected a recovery in asset values driven by a surge in realized investment gains and an easing of pressures from a still low (but rising) interest rate environment that helped propel investment income upward. Net investment income is typically the second-largest revenue component for property-casualty insurers (after premiums) and can account for 15% to 20% (or more) of total revenues, so a change in the direction or magnitude of growth trends here can have a big impact on overall revenue growth, particularly during periods of modest premium growth. During the 12 months ended September 30, 2022, property-casualty insurers posted a 26.3% year-over-year rise in net investment income (to \$70.5 billion from \$55.8 billion). This compares to a 5.0% rise in investment income in 2021, and partly reflects a one-quarter reporting lag on private equity and alternative assets. CFRA expects net investment income in 2023 to trend modestly higher and investment yields to tick up, assuming cash flow trends remain relatively stable and grow at a healthy (5% to 7%) pace.

Realized investment gains (or losses) can have a significant impact on an insurer's bottom-line. While most analysts exclude the impact of net investment gains from insurer profit estimates to arrive at a net operating income forecast, generally accepted accounting principles (GAAP) include net investment gains as part of net income. During the 12 months ended September 30, 2022, realized investment gains plunged by 63%, to \$7.4 billion from \$20.3 billion, as equity markets corrected in the wake of the Federal Reserve's tightening actions. During 2021, investment gains surged by more than 72% (to \$17.9 billion from \$10.4 billion), as asset values recovered from the Covid-19-induced plunge in early 2020. While most insurers' investment mixes are heavily weighted toward fixed-income investments, many also have an allocation to equities and alternative investments.

### Claim Cost Inflation is Pressuring Underwriting Profitability

Loss costs are the largest expense item for an insurer, so a change in the direction of these expenses can have a big impact on underwriting results. Trends in loss costs vary by firm, sometimes significantly, depending on the mix of business and exposure to catastrophe and weather-related claims. Thus, a commercial lines insurer with a book of business heavily weighted with casualty (or liability) lines of business will likely not be as affected by catastrophe losses as a personal lines carrier with a large book of homeowners' business. Given the trend of heavy catastrophe claims in recent years, underwriting results have been somewhat bifurcated by the variation in claim trends among insurers between those that are catastrophe-exposed and those that are not.

Incurred losses and loss adjustment expenses (LAE) during the 12 months ended September 30, 2022 totaled \$544.4 billion, up 11.9% from loss costs of \$486.6 billion in the year-ago trailing 12 months period. Loss and LAE costs rose 11%, year-over-year, in 2021, to \$500.6 billion (from \$450.8 billion in 2020). During 2020, incurred losses and LAE rose by only 1.1%, to \$450.8 billion from \$445.6 billion in 2019. CFRA expects incurred loss costs and LAE for all of 2022 to be up by between 8% and 12%, with a rise of 6% and 9% estimated in 2023, assuming a "normal" level of weather-related catastrophes and some ongoing (but easing) inflationary issues that have pressured claim costs.

Property-casualty insurers posted a \$16.5 billion pretax underwriting loss in the 12 months ended September 30, 2022, versus a pretax underwriting gain of \$3.0 billion in the same period a year ago. For all of 2021, property-casualty insurers posted a \$397.7 million pretax underwriting loss, as claim cost inflation outpaced the rise in premiums, particularly in the personal auto line. This represented a sharp contrast to 2020, when pretax underwriting profits totaled more than \$11.9 billion, as the pandemic kept many drivers off the roads.

As a result, the combined loss and expense ratio for the 12 months ended September 30, 2022 equaled 101.6%. For the 12 months ended December 31, 2021, the combined ratio equaled 99.7%, versus 98.8% in 2020. For all of 2023, CFRA expects underwriting results to stabilize, with a combined ratio of under 100%, though an active hurricane season could imperil that forecast. CFRA expects pricing for most lines of coverage to increase in 2023 with commercial lines coverage showing continued strength, with price increases averaging 6% to 8%. Property lines, particularly those in catastrophe-prone areas, may experience rate increases of 8% to 12%. While adequate capacity in the casualty segment of the industry may limit the degree to which prices increase, CFRA expects the impact of social inflation to drive casualty rates higher by between 4% and 6% in 2022. The bigger variables to the equation are exposure growth and the degree to which global economic activity impacts the demand for insurance coverage. As a result, we forecast written premium growth of between 7% and 10% in 2022 and between 5% and 8% in 2023.

### **Industry Surplus Contracts Amid a Decline in Asset Values**

A decline in asset values in 2022 exacerbated the erosion in underwriting results and produced a 6.2% decline in industry capital levels, which stood at \$986.5 billion at September 30, 2022, down from just under \$1.1 trillion at December 31, 2021. The September 30, 2022 surplus levels supported a written premium base of \$753.6 billion for the 12 months ending September 30, 2022, resulting in a written premium-to-surplus ratio of 0.76 to 1. Put another way, insurers were writing \$0.76 of premium for every \$1 of surplus, continuing a multi-year trend of under-leveraging their capital.

CFRA expects higher catastrophe and cyber-related loss costs, coupled with rising loss costs in several liability lines of business, as well as rising personal lines claim trends will propel premium rates higher. The degree to which overall premiums increase will depend on the degree to which the global economy contracts in the face of rising interest rates and surging energy prices, since overall economic activity heavily influences demand for commercial insurance protection. However, this increase in exposure is not as positive for insurers as improved pricing since they are absorbing more risk.

### REINSURANCE SUB-INDUSTRY

### Reinsurers Head Into 2023 With A Healthy Pricing Tailwind Despite Elevated Claims

Reinsurance is the process by which insurers transfer risk. Through reinsurance, insurers are able to manage their risk exposure to a variety of claims in both property-casualty (or liability) and life-health lines of business. Insurers transfer, or "cede," a portion of a particular risk to reinsurers in exchange for a percentage of the premium dollars they collect from the insured parties.

Broadly speaking, reinsurance transactions can be structured in two forms: treaty and facultative. Treaty reinsurance coverage provides for a percentage of an entire class of business (for example, homeowners insurance), up to certain prearranged policy limits. Facultative reinsurance is a policy that provides coverage for specific individual risks that usually are either too large for the primary insurer to absorb adequately or that a company's reinsurance treaties do not cover. An example might be coverage for a high-risk building.

Reinsurance fundamentals are similar to primary insurance fundamentals, in that the industry is highly cyclical, with periods of "soft" pricing (when there is excess capital or underwriting capacity) and periods of "hard" pricing (when capital is drained from the system). The latter typically occurs in the aftermath of a significant catastrophe, such as a hurricane or a terrorist attack.

Traditionally, reinsurance was a transaction entered into by two insurance entities (the primary insurance carrier and the reinsurer). However, the business of risk transfer has evolved into one where the transfer of risk can be achieved in one of two ways: through the traditional mechanism or through a capital markets mechanism (typically an insurance-linked security or a catastrophe bond).

### Reinsurance Underwriting Results Reflect Some Mixed Trends in 2022

The latest available aggregate reinsurance data from the reinsurance trade and research organization Reinsurance Association of America (RAA) indicates that top-line growth trends in the first nine months of 2022 were aided by an improved pricing environment and by a still-healthy level of demand for reinsurance protection, although a combination of heavy weather-related and catastrophe claims and an uptick in certain liability claims as a result of "social inflation" led to a deterioration in underwriting results. CFRA also believes some investor concerns over the validity of underwriting models and over collateral management in the insurance-linked securities space may tilt demand for risk transfer in favor of traditional reinsurance. Some of the latest data also reflect several company-specific issues and trends. Nevertheless, market conditions for reinsurers are driven by most of the same factors that drive rates and market conditions for primary insurers. Currently, demand for catastrophe-exposed property reinsurance protection is increasing while underwriting capacity is being reduced, as underwriters reassess their risk appetites amid increasing severity and frequency of weather-related losses. As a result, prices for this type of coverage are increasing significantly. While aggregate industry underwriting capacity remains ample, industry underwriting appetite for certain types of risk has diminished.

Reinsurers in the latest available RAA survey reported net written premiums of \$64 billion for the nine months ended September 30, 2022, an increase of almost 12% from the \$57.3 billion of net written premiums produced by this representative group of reinsurers in the first nine months of 2021. This rate of premium growth varies somewhat from the roughly 7% rate of growth reported by primary insurers during the same period and reflects a combination of some large, company-specific transactions coupled with an increase in demand and sharply higher pricing for property reinsurance, especially catastrophe-exposed property covers. For example, two of Berkshire Hathaway's reinsurance units, General Re Group and National Indemnity Co., account for nearly half of the reinsurance industry's written premiums. Taken together, these two underwriters produced written premiums of about \$28.8 billion in the first nine months of 2022, up about 7.9% from the first nine months of 2021. This rate of growth reflects the business mix of these two mature, established reinsurers, which tends to be tilted toward long tail liability lines of coverage. Conversely, some smaller reinsurers, like Endurance Assurance, posted nine-month 2022 written premium growth of 37%, while Renaissance Reinsurance U.S. posted a 13% rise in nine-month 2022 written premiums.

Earned premiums (a revenue component) for reinsurers in the latest available RAA survey advanced by 11.3%, year-over-year, to \$58.2 billion in the first nine months of 2022. These results also reflect the industry and company-specific drivers mentioned above.

Net investment income for the reinsurers in the RAA survey advanced by nearly 24% in the first nine months of 2022, to \$10.5 billion from \$8.5 billion, thanks in part to the rise in interest rates. The attendant decline in asset values during this period produced realized investment losses of \$3.2 billion for this group, a deterioration from the year-ago investment gains of \$5.4 billion. The deterioration in realized investment results masked the otherwise strong premium growth in the first three quarters of 2022 and led to a 1.1% decline in total revenues for U.S. reinsurers.

A 15% rise in loss and loss adjustment expenses (LAE) in the first three quarters of 2022 led to a \$2.3 billion pretax underwriting loss in the first nine months of 2022, wider than the \$1.6 billion underwriting loss posted in the first nine months of 2021. The deterioration in both underwriting and investment trends during the first nine months of 2022 resulted in a 21% year-over-year drop in net income (to \$6.4 billion from \$8.1 billion) for this representative group of U.S. reinsurers during that period.

Evidence of the year to date deterioration in underwriting results can be seen in reinsurers' combined (loss and expense) ratios. As of September 30, 2022, the 17 reinsurers in the RAA survey posted a

combined ratio of 101.7%, worse than the combined ratio of 100.7% this group produced in the first nine months of 2021.

A decline in asset values and a deterioration in underwriting profitability resulted in a drop in reinsurer policyholders' surplus. As of September 30, 2022, reinsurers in the RAA survey reported a surplus of \$239 billion, down more than 7% from a surplus level of \$257.6 billion as of September 30, 2021. CFRA expects surplus levels to recover modestly in 2023, along with general asset levels as capital markets recover, though capacity in the traditional reinsurance market will likely remain adequate. Another factor increasing the supply of available reinsurance capital is the influx of alternative sources of reinsurance capacity, including hedge fund and private equity firms that either form captive entities or issue catastrophe bonds. However, a surge in Covid-19-related claims on the heels of several years of heavy catastrophe losses could lead to a situation where some of this capital becomes "trapped," or tied up in the claims process, and not available for future risk transfers.

CFRA expects the combination of higher industry-wide loss costs and trapped capital to exert upward pressure on rates for many types of reinsurance protection in 2023. Demand for reinsurance coverage will also be driven by primary insurers likely to reassess their risk management strategies in the wake of erosion in claim trends for several key lines of business. This, coupled with heavy property-exposed losses, will drive increased demand for reinsurance coverage. Overall demand for risk transfer services (via reinsurance or through alternative mechanisms) will be heavily influenced by the level of economic activity, which is poised to contract in 2023.

### INSURANCE BROKERS SUB-INDUSTRY OVERVIEW

### Financial Results in 2023 Likely to Slow from the Post-Pandemic Recovery

After posting double-digit revenue growth in 2021 amid a recovery in insurance pricing and demand in the aftermath of the pandemic, the cohort of large, publicly traded insurance brokers in the S&P 1500 is well positioned for solid revenue growth in 2022 and 2023, aided by still-decent insurance pricing and demand environment, partly offset by a mixed outlook for consulting services amid a slowing economy.

CFRA forecasts that this representative group will post revenue growth of between 6% and 10% in 2022 and between 5% and 8% in 2023, versus the 12.4% rise in revenues reported in 2021. Revenue growth at the largest firms, including Aon Plc, Marsh & McLennan Companies, and Willis Towers Watson Plc, will be somewhat constrained by currency headwinds and by lagging organic revenue growth, reflecting the mature, competitive nature of this business and business mixes that included slower-growing consulting operations. However, smaller and mid-size insurance brokers, many of whom are actively engaged in acquisition strategies to fuel growth, will likely post results that exceed these averages. CFRA's positive fundamental outlook on the insurance brokers sub-industry reflects our view that the property-casualty insurance pricing environment will continue to firm in the aftermath of record, heavy worldwide catastrophe losses (including those from Covid-19) incurred in recent years. The degree to which overall demand for coverage increases will depend on the extent to which the economy is able to absorb a rise in interest rates and an elevated geo-political risk climate. Unless global economies contract significantly, demand for brokering and consulting services will likely remain robust, enhancing the strong insurance pricing environment and driving revenue growth for brokers.

As the brokerage industry continues to consolidate, takeover speculation will also likely buoy valuations in this space, though this potential catalyst will likely be felt by smaller brokers, not the largest firms. Many of the larger insurance brokers also have a presence in the human resource consulting industry. Results in this segment, which have been under pressure as many client companies held off on discretionary consulting projects amid the Covid-19 pandemic, are starting to recover. We do not expect a material uptick in consulting revenues, since demand for human resource consulting is predicated to a large degree on the health of the broader global economy and a recovery in labor markets worldwide. A

number of insurance brokers also employ a strategy of growing by acquisitions as a means of offsetting weak organic growth. As organic growth trends remain tepid, acquisitions will likely remain a component of many firms' strategies. However, as consolidation at the upper echelons of the insurance brokerage industry also increases, antitrust issues (like those that prevented the merger of Aon and Willis Towers Watson) may start to emerge.

### **Restructuring Actions are Yielding Results**

Many of the nation's top insurance brokers have undertaken an array of restructuring activities to offset the impact of sluggish organic top-line growth, and recent results highlight the benefits these actions are starting to yield. A sharp reduction in travel and entertainment costs due to Covid-19 restrictions has also helped margins for any brokers. Partly offsetting the impact of lower operating costs is an expected rise in interest expense amid a rising rate environment. Much of this increase reflects transaction costs related to ongoing merger & acquisition (M&A) activity. Despite an expected uptick in interest costs, CFRA expects insurance broker profitability in 2023 to be aided by the benefits of recently enacted cost-cutting and restructuring initiatives undertaken at many firms. Several brokers have also reassessed their business mixes and are shedding assets to achieve wider margins and faster growth. CFRA forecasts that the combination of still-favorable top line growth trends in 2023, coupled with the benefits of several years of restructuring actions, will generate after-tax profit growth of 8% to 12% in 2023.

### **Competitive Environment**

### **Porter's Five Forces**

Porter's five forces, which provide a framework for industry analysis, were formulated by Michael E. Porter of Harvard Business School in 1979. Below, we describe the five parameters on which an industry can be analyzed, and how these apply to the Property & Casualty Insurance sub-industry.

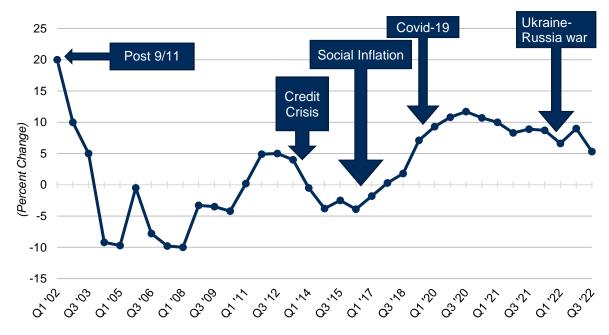
- ◆ Threat of new competition (Low). The Property & Casualty Insurance sub-industry is heavily regulated and capital intensive, both of which are strong deterrents for potential new entrants. Also, given the retail nature of these insurance products, economies of scale can be difficult to achieve, giving large insurers a huge cost advantage over the smaller players. Hence, the barrier to entry for the industry is high.
- ◆ Threat of substitutes (Very Low). There is no substitute for the insurance industry. The other alternative is to self-insure against any probability of loss.
- ◆ Bargaining power of customers (Low-Medium). Most buyers of property or casualty insurance are retail customers who usually do not have much control over insurance prices. However, the cost of switching to other insurance providers is low, which gives customers some negotiation power.
- ◆ Bargaining power of suppliers (Unique). The suppliers for the Property & Casualty Insurance sub-industry vary widely. For example, reinsurers supply capital to property-casualty insurers, while property-casualty insurers are the suppliers of insurance products to insurance brokers. However, the limited supply of labor and talent (i.e., insurance professionals) is a common concern within the sub-industry, which increases the negotiation power for these suppliers.
- ♦ Intensity of competitive rivalry (High). The sub-industry is highly competitive as many large insurers offer comparable products and aggressively compete against each other to gain market share. Over the years, the characteristics of insurance products have become more commodity-like due to low product differentiation. As a result, insurers with cost advantages and better operating efficiency are more competitive.

### Property-Casualty Insurance Pricing Remains 'Hard'

Central to a competitive analysis of the Property & Casualty Insurance sub-industry is an examination of the so-called pricing cycle. The pricing cycle is the tendency of property and casualty insurance premiums, profits, and availability of coverage to rise and fall with some regularity over time. A cycle begins when insurers tighten their underwriting standards and sharply raise premiums after a period of severe underwriting losses or negative stocks to capital (for example, after a significant catastrophe or a sharp rise in investment losses). Stricter standards and higher premium rates lead to an increase in profits and accumulation of capital. The increase in capital or underwriting capacity increases competition, which in turn drives premium rates down and relaxes underwriting standards, thereby causing underwriting losses and setting the stage for the cycle to begin again.

As the chart below highlights, a survey published on November 16, 2022, by the Council of Insurance Agents and Brokers (CIAB), an influential industry trade organization, noted that commercial property-casualty insurance prices continued to strengthen across most lines of business in the third quarter of 2022, marking the 20th consecutive quarter of price increases, with an average increase of 8.1% in the third quarter, up from 7.1% reported in the second quarter of 2022 but slightly below the 8.7% average increase reported in the fourth quarter of 2021.

### AVERAGE PROPERTY-CASUALTY COMMERCIAL LINES RATE INCREASES



Source: Council of Insurance Agents & Brokers.

As the next chart highlights, third-quarter 2022 price increases have been fairly broad-based, with nearly every major line of business garnering rate increases. According to the CIAB survey, the cyber line of coverage saw the greatest rate of price increases – an average of 20.3% in the third quarter of 2022, as insurers work to recoup losses paid out in recent years amid a rash of cyber-attacks amid dwindling underwriting capacity. The umbrella line of coverage (which typically provides an extra layer of coverage for certain types of liability insurance to extend certain primary policies) was impacted by adverse claim trends in the commercial auto and general liability policies that supported the umbrella policies, which drove the substantial rate hikes. The umbrella line of business posted rate increases that averaged 11.3% in the third quarter of 2022, continuing a multi-quarter trend of price increases that have topped 10%. There is also evidence to suggest that this line had been underpriced during previous, softer market periods – leading many carriers to play "catch-up" on an inadequately priced line of business. A rise in

social inflation and a growing trend of "nuclear verdicts" – or jury verdicts in which the punitive damage award exceeds \$10 million – are also cited as reasons behind the sharp rise in umbrella policy rates.

Another area where social inflation is likely having an outsized impact is the directors and officers (D&O) line of coverage. These adverse claim trends have also led many underwriters to pull back writings here, which has reduced capacity and amplified the magnitude of rate increases. D&O rate hikes averaged 7.3% in the third quarter of 2022, though down from the double-digit average price increases that began in early 2019. However, commercial property rate increases, which averaged 11.2% in the third quarter of 2022, strengthened considerably, versus the 8.3% and 8.6% average increases in the prior two quarters, respectively. The average rate hike in third-quarter 2022 was also above the third-quarter 2021 average rate hike of 10.3%, reflecting the impact that heavy catastrophe losses and building cost inflation have had on property lines of coverage. Finally, commercial auto rate hikes, which averaged 7.6% in the third quarter of 2022, have risen between 6% and 8% over the last year, reflecting ongoing and persistent adverse claim trends in that line.

# 25% 20% 15% 10% Terrotein sures the tracker to Construction trackers the trackers the trackers the trackers to Construction trackers to Constr

THIRD QUARTER 2022 COMMERCIAL RATE CHANGES BY LINE OF BUSINESS

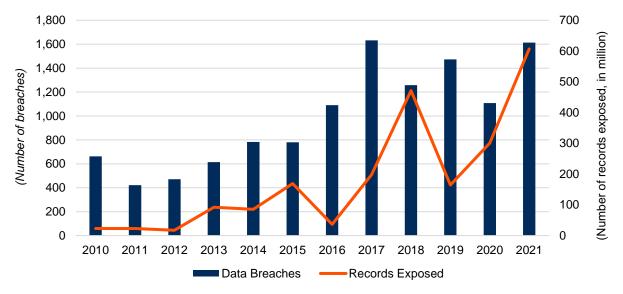
Source: Council of Insurance Agents & Brokers.

The Cyber Insurance Market Remains Problematic Amid a Mismatch Between Supply and Demand Standalone cyber insurance – once expected to be a \$20 billion-plus line of business by 2025 – has (so far) failed to gain the traction most insurers were anticipating when these policies were initially developed more than 30 years ago. Cyber insurance direct written premiums doubled in 2021, but barely topped \$3 billion (or less than 1% of industry annual written premium volume). CFRA expects the recent surge in both the frequency and severity of cyber-attacks – amplified by the war in Ukraine – to drive an increase in demand for and pricing of cyber insurance protection. We expect written premium growth of more than 30% for standalone cyber policies in 2022 and 2023. We forecast premium growth of 15% to 20% in 2022 and 2023 for cyber coverage embedded in package policies – or more than double the rate of the growth we are forecasting for the broader Property & Casualty Insurance sub-industry.

While cyber risks have steadily increased over the last decade or so, a number of recent trends have led some cybersecurity experts to declare the current situation as "the cusp of global digital pandemic". As

the data in the charts below illustrate, internet crime has been steadily increasing, though incidents of phishing have surged in recent years. Phishing – when an attacker sends a fraudulent email designed to trick a human victim into revealing sensitive information and/or deploying malicious software (like ransomware) – has become cyber criminals' go-to method for attacking their victims' digital infrastructure. The use of ransomware (a type of malware that threatens to publish a victim's sensitive data or perpetually block access to it unless a ransom is paid) is increasingly a part of this scheme. Data on the use of ransomware is difficult to obtain, though in a 2021 report on cyber readiness published by cyber insurer Hiscox, the firm noted that one in six firms attacked was hit with ransomware and, of those, 58% paid ransom. A number of recent, high-profile cases have included the payment of significant sums of ransom – including insurer CNA Financial, which reportedly paid hackers \$40 million to regain control of its network. A number of cyber insurance policies include coverage for the payment of ransom in their coverage – something that may be fueling the growth in ransom requests.

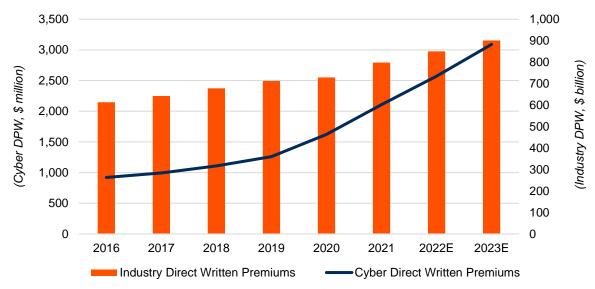
### **DATA BREACHES 2010-2021**



Source: Identity Theft Resource Center, Insurance Information Institute.

While the cyber insurance market remains underpenetrated (with an estimated market penetration rate of 27% to 38% for standalone coverage) and market conditions are currently very fluid, CFRA forecasts an uptick in demand (that could accelerate), coupled with a sharp rise in pricing for most types of cyber coverage, to produce standalone cyber insurance written premium growth of 30% in 2022 and 2023. This compares to our forecast of written premium growth for the entire U.S. Property & Casualty Insurance industry of 7% to 10% in 2022, and 5% to 8% in 2023.

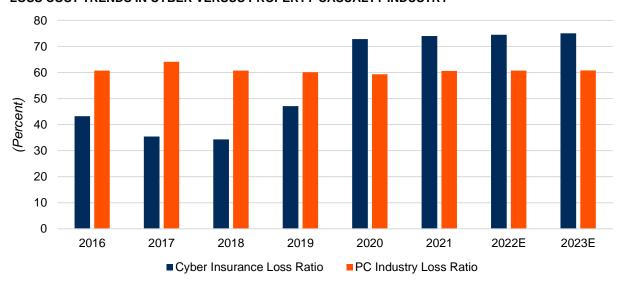
### CYBER INSURANCE PREMIUM GROWTH VERSUS INDUSTRY GROWTH



Source: CFRA Research, S&P Global Market Intelligence.

Adverse loss cost trends and limited underwriting capacity, as underwriters remain leery to expand their exposure here, will likely fuel price hikes. As the data below highlights, historical loss cost trends in cyber coverage were superior to those of the broader industry. For many insurers, cyber coverage was a highly profitable line of business. That trend changed in 2020 when cyber loss costs surged amid an increase in cyber-attacks. CFRA does not expect these trends to reverse any time soon, and insurers will continue to raise rates to offset these adverse trends, in our view. Evidence of this trend emerged in recent pricing trends previously discussed.

### LOSS COST TRENDS IN CYBER VERSUS PROPERTY-CASUALTY INDUSTRY



Source: CFRA Research, S&P Global Market Intelligence.

The market for standalone cyber coverage is concentrated and barriers to entry are high, but the industry is at an inflection point. The market for standalone cyber coverage is dominated by a handful of firms, with the top five writers accounting for about 60% of premium volume. Cyber liability insurance emerged

in the mid-1990s amid the dot-com bubble, as tech companies and their clients sought protection against data processing errors. Initially, cyber policies excluded coverage for damage from unauthorized access, fines, and penalties. By the early 2000s, though, cyber policies began to evolve, and coverage limits expanded to include coverage for data breaches and network security issues, data loss, and virus-related claims. Some insurers also expanded policy terms to include business interruption protection.

By the early to mid-2000s, many states passed regulations requiring businesses and state agencies to notify customers when their unencrypted personal information had been accessed by an unauthorized party. As a result, cyber insurance protection once again expanded and evolved to include coverage to protect against the cost of these efforts, as well as enhanced IT security and coverages for regulatory defence, fines, and penalties.

Over the last several years, amid an ongoing increase in the frequency, severity, and complexity of cyber-attacks, insurers were forced once again to broaden policy terms and parameters to provide a more comprehensive suite of coverage options. After several years of increasing cyber-attacks, the cyber insurance market is at an inflection point. While some carriers are frustrated that these policies have not gained significant traction in the marketplace, others are retreating from this line of coverage. One of the roadblocks we see to further market penetration is the lack of standardization among policies and carriers. This makes comparison shopping difficult for potential insureds. In response to the recent surge in cyber-attacks, a number of carriers have also reduced policy coverage limits, essentially diluting the value proposition of this type of coverage.

One of the more controversial elements of some cyber policies – and one that CFRA believes will have to be addressed – is the inclusion of ransom payments as a reimbursable cost under some policies. Ironically, the growth of cybersecurity policies containing ransomware reimbursement clauses may have helped fuel an increasingly professional ransomware industry. In response to this trend, a number of leading underwriters announced they would no longer write policies with this coverage option.

However, in a number of recent cases, the U.S. government has recovered ransom paid in cyber-attacks. Because ransom payments are not illegal, are sometimes covered by insurance, and in some cases are even tax-deductible, they will likely continue.

The market for cyber coverage that is offered as part of a package policy (like a commercial multi-peril business insurance policy) is even more concentrated than the standalone cyber market. The top three writers (Chubb, CNA, and The Hartford) account for more than 50% of premium volume. Since this type of coverage is an adjunct to an existing line of business, the barriers to entry are not as high for those insurers already writing commercial package policies. One of the risks that impact this market and providers of commercial liability insurance is "silent cyber risk," a term used to describe the potential cyber-related losses in traditional property and liability policies that were not officially designed to cover these risks, but which do not explicitly exclude them either.

One of the ways insurers have addressed this issue is to update policy contract language with explicit cyber exclusions and offer standalone cyber coverage or separate cyber coverage within the structure of a package policy. However, not every insurer has updated their policy language and there still exist numerous policies that were written decades ago where the policy language is vague on cyber coverage, neither including nor excluding it. This leaves the insurance industry open to a potential liability and future litigation.

A number of states have enacted policies and legislation to deal with cyber security issues. Most of these resolutions have focused on training and disclosure efforts to bolster cyber defences, and stiffer penalties for cybercrimes. However, not every state has enacted meaningful legislation. Also, unlike the European Union which established cybersecurity standards and an array of unified data protection regulations, the

U.S. does not have a broad-based, unified set of federal cyber security laws and regulations. There are a number of industry-specific federal regulations that currently mandate that health care organizations, financial institutions, and federal agencies should protect their systems and information. Many of these laws were enacted decades ago and are not adequate to address today's cyber issues. There have been numerous attempts by Congress to address these issues, but none have materialized into significant legislative action.

For his part, President Biden issued an executive order on May 12, 2021, aimed at improving the nation's cybersecurity. Specifically, Biden's order calls for improving the federal government's efforts at identifying, deterring, and protecting against cyber-attacks. Further, the executive action removes the barriers between various government agencies and certain independent contractors that prevented the sharing of threat assessment information, as well as aims to modernize the federal government's cybersecurity practices and enhance its software supply chain security. The executive action also established a Cyber Safety Review Board, under the auspices of the Department of Homeland Security, and sets in place a plan to improve the federal government's investigative and remediation capabilities.

Finally, the insurance industry is also likely to embrace the creation of a cyber security rating system that CFRA expects to gain traction, whereby companies' and organizations' cyber security strengths are assessed in a system like a credit rating system. This would enable insurers to better assess and price each entity's risk.

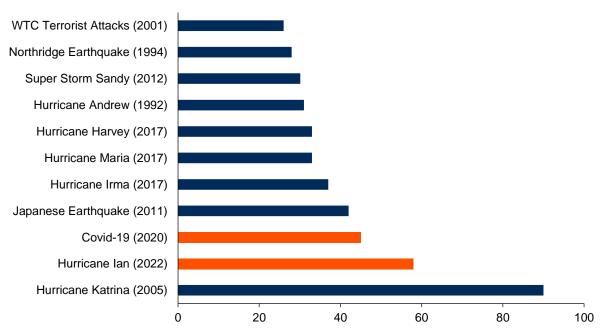
Although the cyber insurance market has its share of challenges, CFRA believes it will remain an important risk management tool for commercial insureds, despite the likelihood that policy terms and conditions may undergo some changes to address recent changes in claim frequency and severity. CFRA has a positive fundamental outlook on the Property & Casualty Insurance sub-industry, reflecting our view that the firm market pricing environment will combine with an expected uptick in demand for coverage amid a post-Covid-19 economic recovery and generate rates of premium growth for insurers that are well above recent historical averages, providing the shares of most property-casualty insurers with a catalyst. For the handful of insurers that provide cyber coverage, this pricing power will be amplified by recent market conditions and by the concentrated nature of this market's competitive environment.

### Covid-19 and Cyber-Attacks Dominate the Headlines, but the Threat from Other Catastrophes Remains Significant

While the worst-case initial insured loss estimates from Covid-19 have not materialized, the pandemic is still set to produce insured losses of some \$45 billion, making it one of the costlier catastrophes on record, as highlighted in the chart below.

### LARGEST INSURED CATASTROPHE LOSSES

(\$, billion)



Source: Swiss Re, CFRA. Covid-19 and Hurricane Ian figures are preliminary estimates.

Nevertheless, global warming-induced climate volatility has produced a record level of catastrophes in recent years, and 2022 was no exception to this ominous trend. Estimates released in early December 2022 from reinsurer Swiss Re Group indicate that worldwide insured catastrophe losses are poised to reach \$115 billion in 2022, coming on the heels of worldwide insured catastrophe losses of \$120 billion in 2021. Both years' insured loss levels are above the 10-year average of \$81 billion. Hurricane Ian, which made landfall in western Florida in late September 2022 as a category four hurricane, will likely end up being the largest loss-causing event of 2022, with insured loss estimates of between \$50 billion and \$65 billion. An array of secondary events, including a number of floods and hail storms, comprise the remaining \$50 billion in insured losses.

Hurricane lan was significant not only because of the damage it caused – lan served as yet another catalyst, driving even more public insurers out of the Florida property insurance market and threatening to cripple the state-based private carriers. While Florida is the most extreme example, there are a number of other catastrophe-prone insurance markets – including wildfire-exposed parts of California and Colorado and hurricane-prone parts of Louisiana – where a "crisis of availability" could emerge in the property insurance market.

Insured catastrophe losses in the U.S. totaled \$85 billion in 2021, according to Munich Re data. Included in the U.S. totals were insured loss estimate of \$36 billion from Hurricane Ida, which made landfall as a category four storm in late August 2021. Indeed, the 2021 hurricane season was the third most active season on record, having produced 21 named storms. The 2020 hurricane season, coming on the heels

of Covid-19, was extremely active, with 30 named storms that hit landfall, of which 13 developed into hurricanes (including six that were major hurricanes with wind speeds of at least 111 mph). The combination of record-setting Covid-19 insured losses, heavy hurricane claims, and an ongoing elevated level of wildfires produced global catastrophe losses of \$187 billion in 2020. Insured catastrophe losses totaled \$83 billion in 2020, with U.S. insured losses accounting for about \$76 billion (or nearly 92%) of the global total. While the severity and volatility surrounding catastrophe losses will likely support the continued rate hikes in property-based lines of coverage, these loss patterns are also likely to fuel demand for reinsurance.

### Insured Losses from the War in Ukraine Will be Manageable for U.S. Insurers

Insured losses from the conflict in Ukraine will likely be in the tens of billions of dollars, a small fraction of the total economic loss this conflict is likely to produce. At this juncture, it's too early to accurately estimate what total insured losses from this conflict and the attendant economic fallout will be. However, we think there are several points for investors to consider now. First, we estimate direct exposure to Russia and Ukraine account for a very small (less than 2%) percent of premium bases for the U.S.-based insurers in our coverage universe. Second, many standard lines of coverage – like commercial property and business interruption – have explicit war exclusions. Other lines of coverage, like cargo, aviation, and marine, contain provisions for a "war risk premium", or a surcharge to the existing policy that is automatically implemented to cover the additional risks of transporting and traveling within hostile territories. We expect that the exposure the insurers in our coverage universe have to this region will primarily be in cyber, political risk cover, aviation and marine, and energy. Finally, the U.S. domiciled insurance industry has a capital base of more than \$1 trillion to sustain these claims and remains underleveraged.

But certain lines of business, like cyber and political risk coverage, face near-term pressures. One of the expected fallouts from the Russian invasion of Ukraine is an uptick in cyber-attacks, which have already surged in recent years. CFRA believes this growing threat will have a dual impact on insurers. First, it will fuel additional, and significant, upward pressure on rates for standalone cyber insurance coverage, a line of business already under pressure from a surge in online crime. Second, it injects another level of so-called silent cyber risk into the broader insurance marketplace, increasing the likelihood of cyber-related losses stemming from insurance policies that were not specifically designed to cover that risk.

Political Risk Insurance is Another Line of Business Set to be Impacted by the Invasion of Ukraine As its name implies, political risk coverage is designed to protect the insured against loss in the event of "political action and instability", including war and terrorism. Political risk insurance (PRI) protects assets against expropriation, currency inconvertibility, and the non-payment by foreign governments of cross-border loans and commitments. PRI has its origins in the aftermath of World War II, but the private insurance market for PRI coverage gained greater acceptance in the 1970s amid several emerging markets' debt crises and continued to gain traction as emerging markets grew in importance to the global economy. The National Association of Insurance Commissioners estimates there are approximately 60 insurers writing political risk coverage, though AIG, Chubb, Lloyd's of London, and Zurich Insurance are market leaders.

PRI coverage is a highly specialized niche within the broader property-casualty industry and as such, policy forms and terms are not standard. As a result, coverage limit and policy terms and conditions will likely vary widely and will be open to interpretation in the event of a claim. AIG's political risk coverage offers policy limits up to \$150 million in multi-year policies with a term of up to 15 years. Chubb, another market leader, has not publicly disclosed its policy limits.

### **Robust Reinsurance Premium Growth Likely in 2023**

Reinsurance premiums have grown at a rate that is more than 2x that of insurance premiums. As the chart below highlights, U.S. reinsurers have grown written premiums at a 10-year compound annual growth rate (CAGR) of 10%, more than double the 4.5% CAGR we estimate primary insurers have grown

their premium base. CFRA expects reinsurance top-line growth to remain robust and to grow by 12% to 15% in 2022 and by 13% to 18% in 2023.

### 90 80 70 60 50 30 20 10 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022E

### **U.S. REINSURANCE NET WRITTEN PREMIUMS 2010-2022**

Source: CFRA Research, Reinsurance Association of America.

### **Multiple Factors Are Buoying Reinsurance Demand**

There is an array of forces fueling demand for reinsurance and supporting an increase in the rate of cession by primary insurers – or the degree to which they utilize reinsurance to manage their risk. Catastrophe losses, which have averaged \$43 billion annually over the last 30 years (adjusted for inflation), have become more severe and unpredictable in recent years, causing many insurers to rethink their risk management strategies, especially in geographic areas once thought to be lower risk – like inland areas that are now prone to volatile weather events. Emerging risks, like those from Covid-19 and cyber-attacks, have rendered (historical data-based) underwriting models obsolete, prompting many insurers to reassess their risk tolerance. Strained public-private partnerships, like the National Flood Insurance Program (NFIP), are facing financial strain and waning taxpayer support and are turning to the private reinsurance market to mitigate their risk. Low interest rates have pressured margins of long-term policy obligations, like those in life insurance, annuity, and long-term care insurance policies, prompting many carriers to mitigate this risk through reinsurance. Finally, while most of the aforementioned factors are negative for primary insurers, one positive factor – a strong insurance pricing environment – has also fueled reinsurance demand, as primary carriers manage both their risk tolerance and growth objectives by ceding business to reinsurers.

### FORCES DRIVING INCREASED REINSURANCE DEMAND



Source: CFRA Research, Insurance Information Institute.

### Stress Points and Growth Opportunities are Driving an Uptick in Cession Rates

Loss and loss adjustment expenses (LAE) are the largest expense items for a property-casualty insurer, so the magnitude of change in the direction of these costs can have a significant impact on an insurer's underwriting profit and overall risk management strategy, including its use of reinsurance. Our analysis of loss cost data obtained from S&P Global indicates that loss and LAE for U.S. property-casualty insurers rose at a CAGR of 3.7% during the 10 years through the end of 2021, as highlighted in the chart below. Loss and LAE cost rose 11% in 2021 and CFRA expects it to drop by 7.2% in 2022. These seemingly benign loss cost trends belie stress points in other lines of business (like commercial property, business interruption, and general liability), since they reflect a relatively stable claim trend environment in personal auto (which accounts for more than 40% of the industry's written premium base).

Also, primary insurers are addressing these pressure points and leveraging a strong pricing environment through a greater use of reinsurance. The rate of cession – or the percentage of gross written premiums that insurers transferred (or ceded) to reinsurers – averaged around 12% during the period from 2009 to 2017, when it peaked at 13.1%. After bottoming in 2018 at 8.8% during a "soft" pricing environment that prompted insurers to retain more premium volume (and risk), cession rates jumped to 10.8% in 2021 and CFRA forecasts a cession rate of 11.5% in 2022.

### PRIMARY INSURER LOSS COST TRENDS AND CESSION RATES

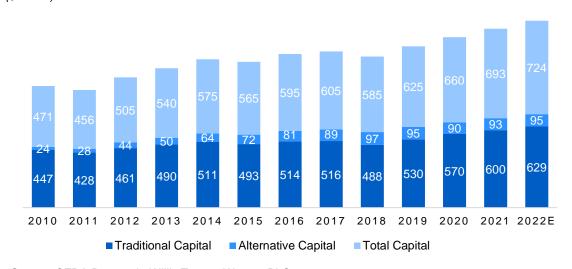


Source: CFRA Research, S&P Global Market Intelligence.

### Global Reinsurance Capital Is Adequate to Meet This Increased Demand

As the chart below shows, worldwide reinsurance capital (or underwriting capacity) has remained fairly stable over the last 10 years (growing at a compound annual growth rate/CAGR of less than 3%), as stagnant traditional capital has been offset by the surge in alternative capital, which has grown at a 10-year CAGR of over 14%. Despite this rise, we do not see alternative capital as a significant threat to traditional reinsurers in the current underwriting environment. Many of the large enterprise-wide transactions (like those in the life and annuity space) tend to be better suited to the traditional reinsurance market. Given the recent uptick in severity and frequency of catastrophes, many investors are also taking a more tempered approach to alternative capital (like insurance-linked securities), particularly since we estimate that approximately 20% of current alternative capacity is "trapped" (or tied up in claim disputes) and not available to be deployed for new transactions. CFRA believes this combination of stable supply and increased demand will help drive an increase in rates for most lines of reinsurance, providing the shares of reinsurers with a catalyst.

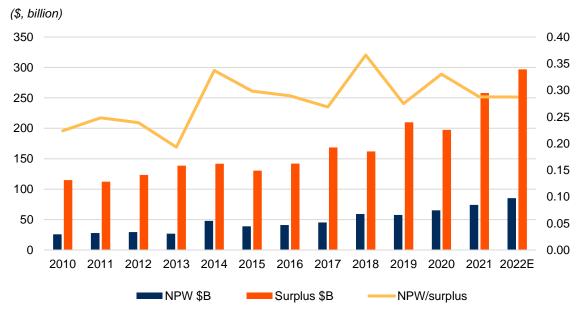
### **WORLWIDE REINSURANCE CAPITAL** (\$ billion)



Source: CFRA Research, Willis Towers Watson PLC.

Domestic Reinsurers Remain Underleveraged and Have Capacity to Meet This Increase in Demand Because the reinsurance market is more global and fluid than the primary insurance market, a discussion of reinsurance demand and pricing trends should include an assessment of worldwide capacity. However, our actionable investment ideas are focused on the U.S. and Bermuda domiciled reinsurers. As the chart below highlights, leverage for this group has recently declined a bit amid a recovery in asset values. However, surplus (or capital) for this representative group of insurers ended 2021 at around \$258 billion (up nearly 31% from the previous year), which is supporting an annual written base at about \$74.2 billion in 2021. At these levels, reinsurers remain modestly leveraged – writing about \$0.29 of premiums for every \$1.00 of surplus or capital. To put this in perspective, the insurance industry is considered to be underleveraged and on average insurers are writing about \$0.77 of premiums for every \$1 of surplus. While reinsurance underwriting trends can be more volatile and warrant less leverage than that typically employed underwriting primary insurance, CFRA believes the U.S.-based reinsurance industry has excess capacity to support a premium base 30%-45% above current levels.

### U.S. REINSURERS NET WRITTEN PREMIUMS TO SURPLUS



Source: CFRA Research, Reinsurance Association of America.

The combination of heavy catastrophe losses (and the spectre of more thanks to climate change), social inflation, and claims from Covid-19 is a unique series of events that have combined to "turn" the property-casualty underwriting cycle and also drive an increase in demand for and pricing of reinsurance protection, propelling reinsurance premium growth up by about 15% in coming periods, nearly 50% above the industry's 10-year CAGR of around 10%. Despite these favourable growth prospects, investors have focused on the uncertainty surrounding the level and nature of claims from this array of unpredictable events, keeping valuations under pressure. CFRA expects reinsurance stocks to be aided by robust reinsurance premium growth and steps reinsurers have taken to mitigate and diversify their risk, combined with an expected rotation into value sub-sectors of the financial services space (like reinsurance).

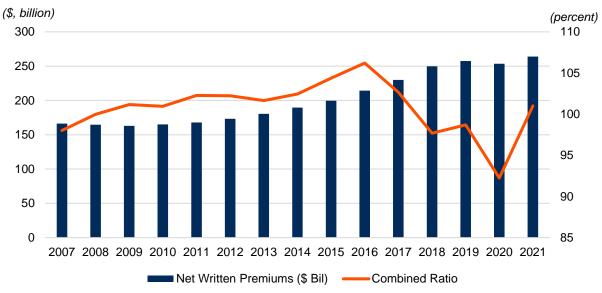
### Personal Auto: Corrective Rate Actions Will Boost Insurers' Top Lines in 2023 But Claim Cost Inflation Remains a Challenge

Our positive fundamental outlook on the Property & Casualty Insurance sub-industry stems from our view that pricing for most lines of coverage continues to remain strong in the aftermath of higher claim costs from Covid-19, social inflation, and several years of heavy catastrophe losses. However, our outlook on the commercial lines insurance space is also predicated on a "soft landing" for the economy as the Federal Reserve raises interest rates to stem inflation, since demand for commercial insurance is more economically sensitive. However, the personal auto line of business saw some fundamental deterioration on several fronts, as an erosion in underwriting profitability in 2021 (amid a resumption of "normal" driving patterns following the Covid-19 lockdown) was exacerbated by a disrupted supply chain-driven surge in claim cost inflation. As a result, personal lines insurers began to seek rate hikes in 2022 to counter these trends. We expect this trend to continue into 2023. Beyond these near-term corrective actions, though, lies an array of more potentially transformative changes, including an acceleration in the acceptance and adoption of usage-based insurance and a change in the way risk is assessed and underwritten.

Personal auto insurance coverage is the single most important line of business for U.S. property-casualty insurers, accounting for nearly 37% of industry written premium volume, or nearly \$280 billion in 2022. This coverage is divided into three broad areas (although within each area, there are several coverage options and components). Private passenger liability is the largest component and typically accounts for more than 50% of personal auto premiums. This coverage is mandatory in most states and protects both property and bodily injury to another person and/or their vehicle in the event of an accident. Personal auto physical damage is the second-largest component, accounting for about 40% of written premiums. Often referred to as collision coverage, it covers damage to the vehicle. The third and smallest component (accounting for about 7.0% of written premiums) is personal injury protection, which covers the insured's medical bills and lost earnings in the event of an accident.

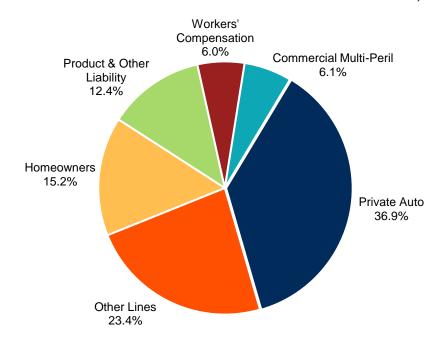
Underwriting results in recent years in this core line of business have been pressured by several factors, including an increase in both claim frequency and claim severity. As a result, industry-wide personal auto underwriting results (as measured by the combined loss and expense ratio) have been unprofitable, with combined ratios above 100%. Based on our analysis of data from S&P Global Market Intelligence covering 10 years of personal auto underwriting results, personal auto combined ratios peaked in 2016 at 106.2% and bottomed in 2020, ending the year at 92.3%, reflecting the pandemic-induced reduction in driving activity that aided underwriting profitability. Personal auto underwriting results deteriorated sharply in 2021, ending the year at an unprofitable 101% amid an increase in both claim frequency and severity. CFRA expects underwriting results to remain unprofitable in 2022, but to improve to around break-even in 2023, when the impact of rate hikes takes effect.

### PERSONAL AUTO PREMIUM GROWTH AND UNDERWRITING TRENDS



Source: CFRA, S&P Global Market Intelligence.

### PROPERTY CASUALTY NET WRITTEN PREMIUM BY LINE OF BUSINESS, 2021



Source: CFRA, S&P Global Market Intelligence.

### **Autonomous Vehicles Challenge Existing Underwriting Models**

Against this backdrop of relatively stable underwriting conditions, insurers are grappling with threats to their business models from shared mobility, the advent of autonomous (and semi-autonomous) vehicles, and from new pricing and distribution models. CFRA expects the adoption of these trends will accelerate in the aftermath of Covid-19, as driving patterns have changed. CFRA forecasts the competitive landscape in the insurance industry will be littered with those firms unwilling or unable to adapt to these challenges. But for those able to pivot and maintain their value proposition to consumers, the rewards could be significant.

Perhaps the most significant threat to the current auto insurance underwriting model is from fully autonomous vehicles. Estimates from Accenture (based on a study conducted with Stephens Tech) indicate that by 2035, 23 million fully autonomous vehicles will be on the road, representing nearly 10% of the estimated 250 million of total registered vehicles. Moreover, by 2025, some 40% of all cars will likely be equipped with advanced driver assistance systems (ADAS), rendering them semi-autonomous.

Since 94% of auto accidents are caused by human error (according to the National Highway Traffic Safety Administration), the advent of autonomous cars shifts the liability for accidents from the driver to the manufacturer of the vehicle. This change strikes at the core of auto liability coverage and has dramatic implications for the insurance industry (and society as a whole). Managing this shift is a challenge for insurers, and the stakes are high.

A handful of insurers, including Assurant (AIZ) and Chubb (CB), have undertaken perhaps one of the most workable and proactive initiatives at this juncture: pairing up with car manufacturers as they move to a subscription-based model of car usage. Several car makers, including Volvo, Ford, Cadillac, Porsche, BMW, and Mercedes-Benz, have announced and/or unveiled "car subscriptions," which bundle car payments, insurance, and maintenance into one package. AIZ has had a number of strategic partnerships with dealer and manufacturer groups for years. It has also recently partnered with a handful of car ownership startup entities, including Fair.com and Carma. CB's claims management unit has also partnered with several car subscription services to manage the insurance aspects of these contracts.

While the above two firms lead the pack in terms of innovative partnerships, they are not significant auto insurance underwriters. The top three publicly traded personal auto insurers – GEICO, a unit of Berkshire Hathaway Inc. (BRK.B); Progressive (PGR); and Allstate (ALL) – have a range of strategies and responses. CFRA believes Progressive and Allstate have demonstrated their ability to pivot and shift their model and offerings, giving these two firms first-mover advantage in the evolving personal auto insurance market.

GEICO, with a market share of 13.7% of the U.S. private passenger auto insurance market, is the second-largest auto insurer (behind mutual insurer State Farm, with a share of over 16%) and the largest publicly traded insurer. GEICO's parent, Berkshire Hathaway, has not articulated its strategy on driverless cars or usage-based insurance. However, Berkshire chairman Warren Buffett noted the following in a televised interview: "If autonomous vehicles prove to be safer than regular cars, insurance costs will plummet, and by the time roads are filled with self-driving cars, insurers like GEICO will have taken a serious hit." Buffett also noted that disrupting an entire industry "...takes time, and the market will embrace self-driving cars slowly despite the immense amount of capital that tech companies are spending on their development." We view GEICO's competitive position as vulnerable to these shifts, and while we have flagged this as a negative implication, we note that GEICO accounts for less than 15% of Berkshire Hathaway's revenues.

TOP 10 PERSONAL AUTO UNDERWRITERS					
(Ranked by 2021 direct premiums written, in \$, millions, annual)					
RANK NO.	COMPANY NAME	PREMIUMS (before reinsurance transactions, includes state funds)	MARKET SHARE (%) (U.S. total including territories)		
1	State Farm Mutual Automobile Insurance	70,311.7	15.9		
2	Berkshire Hathaway	54,261.3	14.3		
3	Progressive	48,373.1	13.7		
4	Allstate	41,473.6	5.1		
5	USAA Insurance Group	41,387.7	10.4		
6	Farmers Insurance Group of Companies	30,920.0	2.0		
7	Liberty Mutual	25,258.0	6.0		
8	Nationwide Mutual Group	25,009.1	4.8		
9	American Family Insurance	19,435.6	2.1		
10	Travelers Companies	13,557.7	0.7		
Source: S&P Global Market Intelligence.					

The concept of shared mobility – the communal use of a vehicle, bicycle, or other modes of transportation, including ride-hailing and on-demand ride services like Uber and Lyft – has witnessed significant consumer acceptance and will likely continue to do so, even as the acceptance of fully autonomous vehicles evolves. As a result, insurers have had to shift their underwriting strategies to accommodate this change in demand for coverage on an "as needed" basis versus a constant basis.

CFRA believes Progressive has emerged as a leader in the usage-based insurance space after it made a number of innovations to its core personal auto product offering in response to changes in driving and car ownership trends. Perhaps its most significant pivot point is its Snapshot user-based insurance product. Snapshot collects user and driving data and prices insurance based on how much and how safely a client drives. By interacting with onboard diagnostics in most cars (those built after 1996), Progressive has data that can be used to analyze driving data. Presumably, Progressive would also be able to alter its model to accommodate the use of semi-autonomous vehicles. This could emerge as a significant competitive advantage, although the shifting of liability would still be an issue. Allstate has also developed a usage-based insurance program called Drivewise. Allstate started the program in 2010 and currently offers an app or a plug-in device (like Snapshot). The Allstate device functions similarly to Progressive. Both of these initiatives should enable these firms to address the sifting dynamics within the personal auto insurance industry, affording them a long-term competitive advantage.

### A Shift to Telematics-Based Underwriting Widens the Moat Around the Top Auto Insurers

Vehicle telematics is gaining traction as an auto insurance underwriting and pricing tool and is a key to the growth of usage-based insurance (UBI). Telematics is a method of monitoring and harvesting data, primarily from cars and trucks, using GPS and onboard diagnostics to record movements and vehicle condition at points in time. Telematics can measure an array of actions: driving speed and rate of acceleration, sudden breaking, and rapid lane changes, where a vehicle is located. The use of telematics is central to usage-based insurance, often referred to as "pay as you drive" or "pay how you drive" coverage. While the concept and most of the technologies surrounding telematics and usage-based insurance date back more than 40 years, usage-based insurance has only gained traction in the last several years, as (mostly) younger drivers embrace the technology and concept of being "watched" by their insurer. CFRA estimates the penetration rate of telematics in the U.S. to be around 20%, while usage-based insurance accounts for around 10% of the \$279 billion of direct auto insurance premiums the industry wrote in the 12 months ended September 30, 2022.

While current penetration rates are low, the use of telematics has significant long-term implications for personal auto insurance underwriting. Allstate CEO Thomas Wilson put it best when he said he believed that "...in the future (telematics) will be the primary driver of pricing in auto insurance, because it's every bit as powerful as credit." By that, he meant the data produced by telematic devices would likely supplant the demographic factors (like age, gender, and credit scores) that most underwriters currently use to assess risk and price auto insurance. By combining telematically-generated data with artificial intelligence and machine learning capabilities, insurers will ultimately be able to also assess accident damage and settle claims in "real time". This could also dramatically reduce fraud and underwriting expenses, including litigation costs. Also, as auto insurance rates escalate in the aftermath of several inflationary claim cost trends, many insurers (including Allstate) are pitching usage-based insurance as a way for consumers who don't drive extensively to lower their auto insurance premiums.

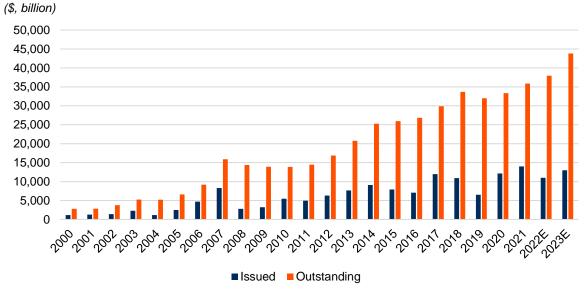
While recent insurtech funding trends have centered on an array of disruptive technologies, they have also led to the formation of new underwriting entities. Root Insurance Company and MetroMile Inc. are two examples of startups taking aim at established auto carriers. Both firms employ telematics to underwrite their usage-based products (UBI), though neither are underwriting profitably.

However, a handful of auto insurance market leaders already have a well-established and profitable presence in this space. Both Root and MetroMile have gained traction in the UBI space, but neither have the scale or the profitability of the market leaders. Progressive, the third-largest auto insurer in the U.S., is a pioneer and a leader in the use of telematics, having piloted a usage-based product, TripSense, in 2004. That led to the development of a plug-in UBI device, dubbed MyRate, in 2008, and ultimately the Snapshot UBI device that was introduced in 2016 and is currently available in 42 states. Allstate, the fourth-largest auto insurer in the U.S., offers its customers an array of telematics-based insurance policies. Allstate's primary offering is Drivewise, which employs technology like Progressive's and is available in 49 states and the district of Columbia. Mutual insurers State Farm and USAA also offer usage-based insurance, though USAA uses technology licensed from Progressive. This contrasts with the approach of Berkshire Hathaway's GEICO unit, the second-largest auto insurer. After discounting the value and relevance of usage-based insurance, GEICO in mid-2019 began testing DriveEasy, a telematics-based policy. Though neither Progressive nor Allstate break out the percentage of auto policies that are usage-based, both firms have underwriting track records that are superior to industry averages.

### Alternative Risk Transfer Market Facing Some Near-Term Headwinds

Insurance linked securities (ILS), fixed income investments whose value is affected by an insured loss event, were historically the fastest growing segment of the risk transfer market, but may be facing some near-term headwinds from an array of factors. ILS issuance totaled just under \$14 billion in 2021, in line with our forecast of \$13 billion to \$15 billion. We expect issuance volume to decline to around \$11 billion in 2022 amid a rise in interest rates and marketplace concerns over the impact of climate change on catastrophe losses, coupled with some near-term disruption in deal flow from so-called "trapped capital" due to some Covid-19 claim disputes. We forecast issuance in 2023 to advance by approximately 18% to around \$13 billion.

### INSURANCE LINKED SECURITIES ISSUED AND OUTSTANDING



Source: CFRA Research, Artemis.

ILS (also commonly referred to as catastrophe or "Cat" bonds) are usually structured as floating rate notes whose principal is impaired if losses associated with a specific event exceed a predefined limit. Cat bonds typically cover four general types of risk: wind (including hurricanes and windstorms), earthquake, life and health risks (like mortality and morbidity risks), and multi-peril events. Because they are triggered by an event and not necessarily dependent on the issuing entity's level of losses, catastrophe bonds may offer a more flexible form of coverage and risk transfer, particularly when used in conjunction with traditional reinsurance. For non-insurance entities, like government agencies, catastrophe bonds may also offer a means of closing existing coverage gaps.

While investors face the loss of some or all of their principal in these investments, the coupon rate is generally much higher (currently around 6%-7%, with some of the riskiest tranches offering 15%) than traditional fixed income investments. Plus, as proponents point out, catastrophe bonds' risk is generally not correlated to overall financial market risk, offering investors a further level of diversification.

While the first ILS was written more than 20 years ago, demand grew in the aftermath of the September 11 terrorist attacks, when rates for insurance and reinsurance protection firmed (or hardened) in the aftermath of losses from that event. Since then, growth has been fueled by several factors, including insurers' and other sponsoring entities' (like government and municipal organizations) desire to diversify their risk transfer options.

Acceptance on the part of investors is also driven by some unique characteristics of these securities. ILS that are linked to a specific type of event (like an earthquake or hurricane, for example) have returns that are not correlated to the general financial markets, making them a unique asset class with an attractive risk profile. The outstanding capital tied to ILS is very diversified by type of risk, with international multiperil risks accounting for the largest percentage (23.5%) of the \$37.5 billion of outstanding ILS (as of December 8, 2022, reported by Artemis), while U.S. multi-peril risks accounted for 17.7% of outstanding ILS. Earthquake risks in the U.S. accounted for just over 15% of outstanding ILS, while Japan earthquake risk accounted for 5.1%. An array of event-specific risks, like U.S. hurricanes, Florida named storms, Texas multi-peril risks, and Japanese typhoons, are also covered by ILS and taken together, account for the remaining 39% of outstanding ILS obligations. However, each of these events accounts for 6% or less of outstanding ILS.

CFRA believes that the overall demand for risk transfer mechanisms will increase in the wake of the record level of catastrophe losses and the widening insurance coverage gap. However, some near-term headwinds, including a rise in interest rates and a degree of uncertainty surrounding weather-related loss cost trends, may impede near-term issuance.

### **M&A Environment**

### A Significant Strategic Shift is Driving Much of the Recent M&A Activity

While the need for scale has always been a factor in insurance merger and acquisition (M&A) activity, there is also a significant strategic shift underway among a subset of insurance underwriters. Driven primarily by a (still) relatively low interest rate environment, a looming accounting change (highlighted in the Regulatory Update section, below), and a reassessment of risk management tactics, many multi-line insurers are shedding non-core life and annuity lines of business and transitioning into "pure-play" property-casualty underwriters. CFRA views many of these actions positively, and sees a continuation and escalation of this trend, particularly as the year progresses and insurers face a January 1, 2023 accounting change that will force many to boost life and annuity reserves. However, CFRA thinks the early adopters of this trend have an advantage, as they sell assets into a market that has not yet become flooded with so-called "non-core" businesses.

Consequently, the multi-line insurance model is being re-evaluated. Conventional insurance industry wisdom held that the multi-line operating model – defined in this context as an insurer that underwrites both life and health and property-casualty insurance – offered a natural hedge, as the more volatile claim patterns from property lines of coverage would be offset by relatively stable and predictable life insurance results. Multi-line insurers were also believed to possess a competitive advantage in gaining market share among consumers, who were able to have all their insurance needs met through one firm. Pre-internet, this was true. But in the last decade or so, amid the advent of online insurance comparison shopping, that competitive moat has eroded.

### A PARADIGM SHIFT IS EMERGING



Source: CFRA Research, company filings.

Evidence of this trend is apparent in recent strategic moves undertaken by The Allstate Corporation (ALL), American Financial Group, Inc. (AFG), and American International Group (AIG). Allstate, a leading personal lines property-casualty insurer, completed the sale of its Allstate Life subsidiary to The Blackstone Group for total proceeds of \$4 billion on November 1, 2021, and its New York life insurance unit to reinsurer Wilton Re for \$400 million on October 1, 2021, for \$400 million. Though ALL incurred a \$4 billion GAAP net loss on these sales, selling its laggard (and capital intensive) life insurance business freed up approximately \$1.7 billion in capital ALL can redeploy into faster-growing businesses. In the wake of these transactions, we expect ALL to selectively pursue bolt-on acquisitions that will further round out its revised property-casualty insurance and fee-based services mix of business. AFG is a multi-line

insurer controlled by the Lindner family that also sold insurance unit and shed its multi-line insurance business model in favor of a more focused, property-casualty centric one. Unlike ALL, AFG's life unit sale to MassMutual for \$3.5 billion yielded a gain of around \$620 million.

AIG has undergone a series of restructurings since being rescued by the federal government during the credit crisis over a decade ago. AIG's latest move is the most dramatic to date, we believe, since it involves cleaving the company into two parts – General Insurance (AIG's property-casualty franchise) and Life and Retirement Services, eschewing the multi-line model through the sale of a portion of the Life & Retirement unit. In November 2021, AIG completed the sale of 9.9% of its Life & Retirement unit to Blackstone Inc. for \$2.2 billion and entered into an asset management arrangement with Blackstone. AIG also sold 12.4% of its Life & Retirement unit (renamed Corebridge Financial, Inc.) in a September 2022 initial public offering (IPO) of that unit's shares that yielded gross proceeds to AIG of around \$1.7 billion.

# Berkshire Hathaway Inc. Makes a Rare Reinsurance Deal to Pace 2022 P-C Deal Activity Based on data obtained from S&P Global Market Intelligence, year-to-date through December 28, 2022, 2022, there were 51 deals in the insurance underwriters' space, with property-casualty insurance deals accounting for the bulk (34) of the year-to-date transactions. This compares to 2021, when 77 deals valued at \$50.2 billion were announced. Property-casualty deals accounted for 42 (or nearly 55%) of all the insurance underwriter deals announced in 2021. Strategic decisions to narrow business models or build out capabilities were behind many of these transactions, though one deal stands out as a pure consolidation play.

Though Berkshire Hathaway is a multi-faceted conglomerate, insurance and reinsurance operations represent a core line of business for the firm. On March 21, 2022, Berkshire opted to expand its presence in that space by offering to acquire Alleghany Corporation for \$848.02 a share in cash in an \$11.6 billion transaction that closed on October 19, 2022. Like Berkshire, Alleghany underwrites commercial lines insurance and reinsurance, and also engages in private equity-like activities through its Alleghany Capital division. We view this transaction positively, since it expands and diversifies Berkshire's reinsurance and commercial lines insurance mix of business and adds some important underwriting and management talent to the Berkshire team.

U.S. INSURANCE M&A SUMMARY					
	2018	2019	2020	2021	2022*
NUMBER OF DEALS	98	90	87	77	51
Life & Health	18	20	16	24	13
Managed Care	12	22	13	9	3
Property & Casualty	67	42	57	42	34
TOTAL DEAL VALUE (\$M)	17,110.9	32,555.4	18,572.9	50,229.6	16,870.5
Life & Health	5,636.6	7,924.6	3,716.3	16,032.6	4,016.6
Managed Care	2,940.5	15,973.2	3,252.5	3,752.1	150.0
Property & Casualty	8,533.7	8,656.6	11,604.2	30,444.9	12,703.9
MEDIAN PRICE/EARNINGS (x)	21.8	32.9	6.4	8.7	11.4
Life & Health	-	-	3.8	8.0	3.3
Managed Care	-	32.9	-	8.7	-
Property & Casualty	21.8	-	9.0	25.7	11.6
AVERAGE PRICE/BOOK (%)	149.5	360.1	168.2	97.9	119.3
Life & Health	-	-	61.1	74.0	154.3
Managed Care	-	360.1	-	85.2	-
Property & Casualty	149.5	-	203.9	131.1	101.8

<sup>\*</sup>Data as of December 28.

Source: S&P Global Market Intelligence.

#### U.S. Broker Consolidation Pace Remains Brisk, But Below 2021's Surge in Deal Activity

While trends in underwriter M&A tend to be more cyclical, insurance brokerage consolidation has remained robust, and will likely continue to do so, as smaller brokers seek scale. Insurer brokers, particularly smaller ones, have been steadily consolidating for years, and recent data point to a continuation of that trend. Year-to-date through December 28, 2022, data from S&P Global Market Intelligence point to 528 insurance broker M&A deals valued at \$2.43 billion. During 2021, there were 893 announced U.S.-based broker deals, valued at \$5.56 billion, up from 665 deals, valued at \$4.28 billion, announced in 2020. In 2019, a total of 603 deals, valued at around \$2.25 billion, were announced.

Our forecast of continued robust deal activity in 2023 reflects our view that a continued steady stream of U.S. insurance broker deals among smaller firms amid ongoing consolidation in that space will be enhanced by an expected increase in M&A activity among underwriters, driven by an array of factors, including the need for scale and a desire to streamline and enhance business mixes in a strong insurance pricing environment. Insurance brokerage consolidation has remained steady over the last several years, with an annual average of 553 deals valued at around \$3.5 billion, reflecting several smaller brokers being acquired by larger firms. However, in March 2020, the global broker M&A landscape grew in size and visibility when Aon Plc announced a deal to acquire rival broker Willis Towers Watson (WLTW) for stock in a \$30 billion transaction that would have greatly expanded Aon's footprint in the global brokering space. However, the deal hit a bit of a snag in mid-December 2020 when the European Union's regulatory authorities announced plans to launch a "full scale probe" into potential antitrust issues with the proposed deal. In mid-June 2021, the U.S. Justice Department filed an anti-trust lawsuit challenging the merger on the ground that it would eliminate competition in several U.S. product markets, including the core commercial lines brokering market and in the health care benefits market. In late July 2021, the two firms called off their merger.

## **Regulatory Update**

#### A Looming Accounting Change Will Impact Insurers' Long-Term Obligations

The Financial Accounting Standards Board (FASB) issued ASU 2018-12, otherwise known as Targeted Improvements to the Accounting for Long Duration Contracts, in August 2018, with an implementation date that was extended in June 2020 to January 1, 2023, for public companies and two years after that for non-publicly owned insurers. The pronouncement is designed to improve the recognition, measurement, presentation, and disclosure requirements for long-term contracts, like those associated with life and disability insurance, long-term care coverage, and annuities. Highlighted below are key provisions of this significant accounting change. ASU 2018-12 attempts to improve the level of disclosure and quantify the risk inherent in long-term contracts. Highlighted below are three main provisions of the pronouncement.

#### **OVERVIEW OF ASU 2018-12**

#### Liability for Future Benefits

- Would shift from being locked at contract inception to being updated for changes in cash flow and discount rate assumptions at every reporting period.
- Discount rate would be that of an upper medium grade fixed income instrument that reflects characteristics of the liability and not the invested assets supporting it.

## Deferred Acquisition Costs (DAC)

- Methodology would shift from current model that employs multiple methodologies requiring numerous inputs and assumptions to one that is amortized on a constant level basis over the contract term.
- DAC would be subject to writeoffs on unexpected contract terminations but would not be subject to an impairment test under those circumstances.

#### Measurement of Market Risk

- •Two models fair value and an insurance accrual model – are currently used to measure the capital market risk inherent in certain deposit contracts.
- Under ASU 2018-12, market risk would be measured by the fair vlue method and changes would be reflected in insurers' other comprehensive income.

Source: Financial Accounting Standards Board.

The implementation of ASU 2018-12 is likely to be a bifurcating force within the life insurance industry. Investors are likely to welcome the increased transparency intended as a result of this pronouncement, but insurers' financial results are likely to become more volatile as a result of the assumption changes that will now occur quarterly. Also, because many of the insurance and annuity contracts currently outstanding were written during a higher interest rate environment, changes in the discount rate assumptions mandated by this pronouncement in the current (low) interest rate environment will likely lead to increases in reserves. Indeed, many of the leading publicly traded insurers that have begun the implementation of ASU 2018-12 have warned investors that it will likely have a material impact on the financial results. The burden this pronouncement imparts, given the increased level of reporting and assessment required, coupled with the heightened volatility on results, was a factor mentioned by some firms, including Allstate, in their decision to shed their non-core life and annuity operations.

#### **Climate Disclosure Rules Gain Traction**

In late March 2022, both the Securities and Exchange Commission (SEC) and the National Association of Insurance Commissioners (NAIC) unveiled a series of proposals aimed at increasing insurers' climate disclosures. The SEC proposal is aimed at all publicly traded companies, and is in response to the SEC's concern that the current level of climate risk disclosures is not adequate. The SEC is proposing adding a new subpart to its existing disclosure framework that would require SEC registrants to disclose certain climate-related information, including information about its climate-related risks that are reasonably likely to have material impacts on its business or consolidated financial statements, and to include Global Greenhouse Gas (GHG) emissions metrics that will help investors assess and quantify those risks. The SEC proposal also allows registrants to disclose their climate-related opportunities.

Specifically, the SEC proposal would require registrant companies to disclose information about:

- ◆ The oversight and governance of climate-related risks.
- ♦ How climate-related risks have had or will have a material impact on a company's business and financial condition over the short, medium, and long term.
- How any identified climate-related risks have affected or will affect a company's strategy, business model, and outlook.
- ◆ The process by which climate-related risks are identified, assessed, and managed, and whether these processes have been integrated into an overall risk management system.
- The impact of climate related events (like severe weather) and transition activities on the line items of a company's consolidated financial statements, including financial estimates and assumptions.
- Scopes 1 and 2 GHG emission metrics, separately disclosed and expressed in absolute and intensity terms.
- Scope 3 GHG emissions and intensity, if material.
- ◆ A company's climate-related targets or goals and transition plan, if any.

In making this proposal, the SEC acknowledged that many publicly traded companies have already made strides in their climate risk assessment and reporting, largely in response to investor demand. But, in setting forth this proposal, the SEC acknowledged the lack of uniformity and consistency among firms' reporting practices. The public comment period covering these proposals ended on June 17, 2022, and the SEC anticipates compliance dates for large publicly traded firms would be fiscal 2023, filed in 2024.

The NAIC unveiled a number of proposed revisions to its existing climate risk disclosure guidelines, which are currently mandatory for insurers in 14 states and the District of Columbia, and cover about 80% of the insurance market. The NAIC's newly adopted standard for disclosing and reporting climate risks aligns with the international Task Force on Climate-Related Financial Disclosures (TCFD), the international benchmark for climate risk disclosure and reporting. Companies under the auspices of the NAIC would have to implement the TCFD standard by November 2022. Similar to the SEC proposals, the core elements of the TCFD are centered around governance, strategy, risk management, and metrics and targets related to climate change assessment and disclosure.

## **HOW THE INDUSTRY OPERATES**

The insurance industry is undergoing transformation by ongoing competitive pressure from other financial intermediaries (including digital and startup insurers), as well as by regulatory changes and shifts in consumer preferences and habits. In the past, insurers typically provided protection in the event of a loss, be it one's property or one's life. Today, many insurers provide an array of other financial products and play an integral role in many people's financial and estate planning. Many commercial lines insurers also engage in alternative forms of risk transfer, or manage their clients' self-insured risks.

In its simplest form, however, insurance is still a business of shared risk. Insurers collect premiums from policyholders, invest those premiums, and often share some of that income with policyholders (in the form of a policy dividend or income from an annuity, or through a policy's cash value). In the event of a loss, insurers give policyholders some sort of financial reimbursement—either upon the policyholder's death, when a policy or an annuity matures, or in the event of a loss or injury or damage to physical property. In the following section, we discuss various kinds of ownership structures, assets, accounting methods, products, and other key information pertinent to how the industry operates. For purposes of this discussion, we include both mutual and stock insurance companies.

## Two Accounting Methods: GAAP Versus SAP

Many U.S. insurers report their financial results using two kinds of accounting principles. For results submitted to regulators, insurers use statutory accounting principles (SAP). For results given to investors, they use generally accepted accounting principles (GAAP). However, many financial analysts also use SAP financial statements when evaluating an insurer.

The primary difference between the two accounting systems lies in a concept known as the matching principle. Under U.S. GAAP, expenses are charged (matched) to the period in which they were used to generate revenues and provide services, also known as accrual-based accounting. Under SAP, expenses are recognized as incurred, also known as cash-based accounting. One should note that GAAP principles can vary from country to country.

This means that, under SAP, expenses associated with writing an insurance policy—such as commissions and other underwriting expenses—are immediately expensed and deducted from income. Under GAAP, these same costs are treated as assets (referred to as a policy's deferred acquisition costs, or DAC) and are amortized as expenses over the insurance policy's life, which is the period over which the insurer provides its services to the policyholder. Since a policyholder can choose to terminate a policy at a future date, the insurer must estimate (for DAC amortization purposes) lapse rates and the lifetime of a policy. Changes in these estimates can cause an insurer to accelerate or decelerate DAC amortization over time.

Hence, under the more conservative SAP method, which emphasizes a company's solvency, income and surplus tend to be lower than under the GAAP method, which emphasizes a firm's ongoing profitability. Because regulators are primarily concerned with an insurer's solvency and its concurrent ability to meet policyholder obligations, they choose to scrutinize a company's financial statements using SAP. Investors, however, are usually more interested in an insurer's ability to earn a profit, and tend to put more emphasis on an insurer's financials using GAAP figures.

## The Money Flows In...

Regardless of an insurance company's ownership structure, the insurance business is essentially one of sharing and managing risk. Insurers collect payments in the form of premiums from people who face similar risks. A portion of those payments is set aside to cover policyholders' losses. Therefore, earned premiums are typically an insurer's primary revenue source.

When a property & casualty policy is issued, it is recorded on the insurer's books as written premium. Then, over the life of the policy, the premium is "earned," or recognized as revenue, on a fractional basis. These premiums are classified as deferred revenues and assigned to an unearned premium reserve, which is listed as a liability on an insurer's financial statement.

There is usually a lag of about 12 months between the time a policy is written and the time the full premium is recognized as revenue. For example, a \$600 premium for a year of auto insurance coverage would be "earned" by the insurer at the rate of \$50 a month for 12 months.

After premiums, the second-largest component of insurer revenues is investment income. This is derived from investing the funds set aside for loss reserves and unearned premium reserves, and from policyholders' surplus or shareholders' equity.

The third and usually smallest revenue component is realized investment gains; this component is the most volatile and hardest to predict. Realized investment gains arise from the sale of securities (usually stocks and bonds) in an insurer's investment portfolio. Because the timing and magnitude of the gains depend on conditions in the securities markets, which are by their nature dynamic, it is difficult to forecast realized investment gains. Analysts typically exclude realized investment gains and/or losses from insurer earnings forecasts.

## ...and the Money Flows Out

Typically, the largest expenses facing an insurer are claim costs. Funds also are used to pay claims-related expenses and loss adjustment expenses (LAE), including insurance adjusters' fees and litigation expenses. Insurers face other expenses related to the underwriting process, such as salaries for actuarial staff. The underwriting profit (or loss) is determined by subtracting these expenses from earned premiums.

Another core expense for most insurers is the commission paid to the insurance broker, agent, or salesperson for selling a policy; this is usually deducted immediately from the collected premium. The insurance company generally accounts for this commission by deducting it from its policyholders' surplus account and crediting it to the unearned premium reserve.

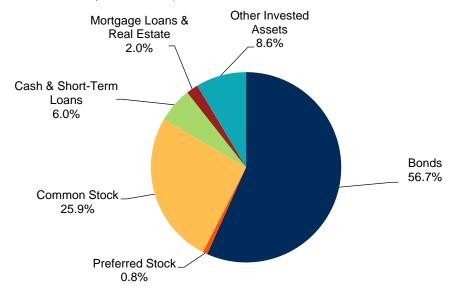
Like most other companies, insurers incur various other operating expenses and interest costs. Pretax profits are calculated by subtracting these expenses from underwriting profits. After-tax (or net) income is derived by taking pretax profits and subtracting shareholder dividends and federal and state income taxes.

## **Finding Funds for Investment**

Insurers derive funds for investment from four primary sources: policy reserves, the liability for unearned premiums and deposited funds, separate account liabilities, and capital and surplus. Policy reserves, which are the funds set aside to pay future claims, are by far the largest liability on an insurer's books.

#### **DISTRIBUTION OF INVESTED ASSETS, PROPERTY & CASUALTY INSURERS**

(for the last 12 months ended third quarter of 2022)



Source: S&P Global Market Intelligence.

#### Loss Reserves: The Financial Buffer

As the largest component of an insurer's liabilities, loss reserves have an important bearing on financial results. An insurer's prosperity depends largely on its ability to quantify accurately the ultimate cost of the losses from the risks it assumes.

When reserve levels are too high—that is, when an insurer sets aside too much money to pay future claims—profits appear lower than they actually are. Consequently, premium rates might not appear high enough to cover losses, causing the insurer to raise its rates unnecessarily. Conversely, if reserves are too low, profits will inflate, leading an insurer to lower its rates inappropriately. In either situation, once losses develop, inaccurate reserve levels will ultimately have to be adjusted. Such erratic accounting adjustments can make an insurer's financial position seem unstable.

Establishing premium and loss reserve levels requires an insurer to estimate the ultimate value of future losses, which is extremely difficult to do accurately. Along with the unpredictability of natural disasters, forecasts of future losses are subject to several other variables, including (but not limited to) real economic growth, inflation, interest rates, sociopolitical trends, judicial rulings, and voter initiatives.

The trend in recent years toward a greater proportion of the insurance business being written in casualty lines has made the reserving process even more difficult. It is considerably harder to estimate the ultimate losses from casualty lines than from property lines such as homeowners' coverage, because casualty lines have "long tails"—that is, the periods between the origination of the policy, the event leading to a claim, and the subsequent payment of that claim may be years or even decades. Inflation can have a

highly negative effect on the insurer's eventual costs as the liability's "tail" lengthens. On the plus side, however, this characteristic of casualty lines lets the insurer invest those premium dollars for a longer time.

## **Estimating the Losses**

Calculating loss reserves involves considering four different kinds of losses, each with differing levels of uncertainty.

- ♦ Losses that have been incurred, reported, and settled, but not yet paid. These losses are the most certain of the four loss types. Because the size of the ultimate loss has been established, setting aside an accurate reserve level is easiest here.
- ♦ Losses that have been incurred and reported, but not settled. These carry a slightly increased level of uncertainty. Here, the insurer is aware that a loss has occurred, but the final payment terms have not yet been established.
- ♦ Losses that have been incurred and reported, but not settled, due to a liability. Because such losses usually involve longer-tail liabilities, calculating the ultimate cost of settlement is more difficult.
- ♦ Losses that have been incurred, but not reported. These losses carry the most uncertainty. In some cases, insurers know about incurred but not reported (IBNR) losses and try to make preliminary loss estimates. For example, suppose an earthquake hit a certain area on December 30, and a local property & casualty insurer ends its fiscal year on December 31. In its year-end statements, the insurer could estimate its earthquake-related IBNR loss based on its experience from prior earthquakes.

In some cases, however, IBNR losses emerge years after the damage first occurs. Such losses are very difficult to predict.

## **Calculating the Loss Reserves**

Most insurance companies assign the task of establishing appropriate loss reserve levels to their actuarial staffs. Actuaries—specialists trained in mathematics, statistics, and accounting—are responsible for calculating premium rates, reserves, and dividends. They use a variety of quantitative methods to establish loss reserves. The five most commonly used methods are the following:

◆ Claim-file estimates plus. This method establishes the estimated liability for reported losses by aggregating pending claim-file estimates (such as estimates being prepared by the claims department), from which payments that have already been made are deducted. Added to this total are formula calculations for additional payments on closed claims that will be reopened for IBNR losses. The sum of the component parts constitutes the full loss liability as of the end of the accounting period.

This method, considered the least sophisticated, is appropriate for property lines in which claim frequency is low and the range of loss costs is sizable. Furthermore, its dependence on claims department estimates exposes it to a degree of subjectivity.

- ◆ Percentage of losses paid to date. Although this method of extrapolating liability from past percentages of losses paid is regarded as simple to apply, its use is limited to coverage in which payment patterns are relatively consistent. The percentage of losses paid to ultimate incurred losses is calculated for various stages of development for prior years. From this history, percentages paid are selected for each stage of development. The amount of losses paid to date for the period under review is then divided by the appropriate percentage, to arrive at the estimated ultimate loss cost. The amount of losses paid to date is subtracted from this figure to produce the estimated loss liability.
- ◆ Counts and average costs of incurred losses. This method indirectly establishes the liability for losses from loss counts and average costs. The projected number of loss units is obtained from the

number of loss units received to date, based on percentages reported in prior years at the same stage of development.

The average cost of loss units closed to date is calculated and compared with average closed costs of prior years at the same stage of development. To arrive at the total estimated ultimate loss, the estimated ultimate average cost derived is multiplied by the projected ultimate number of loss units. Losses paid to date are then subtracted to obtain the estimated liability.

- ♦ Counts and average values of unpaid losses. This method directly establishes the liability from loss counts and average values of unpaid losses. In this case, a selected average value is applied to the number of loss units. If the data are based on reported losses, the selected average value is applied to the number of open loss units, and a separate calculation for IBNR losses is necessary. If the data are based on accidents incurred, the selected average value is based on the total number of open and IBNR losses.
- ◆ Loss ratio. This method estimates the ultimate loss by using an estimated loss ratio. Selected for whatever period of coverage is involved, the ratio is applied to the applicable earned premiums, producing the estimated ultimate losses incurred for that period. Losses paid to date on accidents occurring during the period are deducted from this total to derive the estimated total loss liability.

This overview illustrates the various methods used to quantify an insurer's estimated liability for losses as of the evaluation date. Obviously, more detail and considerable judgment are involved in applying these methods. Furthermore, no method is ideal for all situations: which one a particular insurer chooses will depend on that company's unique experience and product mix. In fact, many companies use more than one method to ensure a high degree of accuracy and reliability. For a more detailed discussion of the various loss-reserving methods, CFRA recommends "Property & Casualty Insurance Accounting," a textbook issued by the Insurance Accounting and Systems Association (IASA).

## **Surplus Funds: Capital Counts**

After investment assets and loss reserves, the third-largest component of an insurer's balance sheet is policyholders' surplus, which is analogous to shareholders' equity. For year-to-date through September 2022, property & casualty insurers had an aggregate surplus of \$928.8 billion, compared to \$965.6 billion in the same period in the prior year, according to data published by the industry research and trade organization Insurance Services Office (ISO) and the American Property Casualty Insurance Association (APCIA).

Policyholders' surplus is one of the indicators that state regulators use to monitor and control insurers' solvency and growth. Industry surplus (sometimes referred to as capital or equity) appreciates or depreciates through retained earnings or losses, unrealized gains or losses from investment portfolios, and additions to investors' capital.

Typically, regulators permit insurers to leverage their surplus to a certain extent, allowing them to underwrite business equal to two to three times the amount of their surplus. Regulators tend to give insurers more leeway on the short-tail property lines than on the long-tail casualty lines, because of the former's relatively greater predictability of underwriting performance.

As the insurance industry has increased its exposure to casualty lines, its leverage has declined. Industry leverage has also declined in response to reassessments of risk and because of various factors contributing to overcapacity.

## HOW TO ANALYZE A COMPANY IN THIS INDUSTRY

Three primary factors are important to consider when analyzing an insurer: profitability (its ability to make money), liquidity (its ability to convert assets into cash to pay policyholder obligations), and leverage (the extent to which the insurer uses its capital to produce business). These three points should be considered against a backdrop of a number of macroeconomic indicators that affect demand for insurance.

## **Profitability**

Insurers' profits consist of two components: underwriting income and investment income. For purposes of this discussion, CFRA analyzes both of these as components of an insurer's operating income, which is net income excluding after-tax realized investment gains or losses. While most insurers report financial results on a net income basis, most analysts model and project profits on the basis of operating income.

## The Profitability of Underwriting

When analyzing underwriting results, consider the company's rate of premium growth, its fee income, and whether it uses reinsurance. The company's expenses, including policyholder benefits, and its selling costs are then examined. These measures then can be compared with aggregate industry data to see how a company stacks up against its peers.

Some companies report fee income separately from premium income; others combine the two and call them "premiums and equivalents." Either way, both of these revenue components must be considered when analyzing underwriting results.

♦ Rate of premium growth. Pay careful attention to the circumstances surrounding the rate of premium growth. For example, if a company increases its premium base 10% while the overall industry is growing by 5% a year, that company would appear to be outperforming its peer group. Presumably, the stock market would award that firm a higher valuation than would be given to some of its slower-growth peers. However, if the insurer is achieving premium growth by adopting risky practices—such as offering unusually high rates of return on certain investment-oriented life insurance products or underpricing an auto insurance policy--then that insurer's valuation would be adjusted downward accordingly.

A company expanding its premium base at a rate slower than that of the overall industry could be doing so because it is limiting its exposure to certain types of less attractive businesses or trying to manage its asset-liability mix. Often, insurers that are very prudent in their underwriting practices show lower-than-average premium growth but above-average profit growth.

- ◆ Fee income. As the insurance industry's product mix shifts from one that generates only premium revenues (from so-called traditional insurance products) to one with a growing level of fee income (from fee-based products like annuities), the level of overall revenue growth may be masked by declining or flat premium growth. In many cases, this is offset by rather robust growth in fee income.
- ♦ Loss and loss adjustment expense (LAE) ratio. This ratio includes claim-related expenses and expenses incurred during the investigation and handling of insurance claims. Generally, a lower loss and LAE ratio will drive stronger earnings for insurance companies.
- ◆ Combined ratio. The combined ratio is calculated by adding three figures: the loss ratio (losses plus loss adjustment expenses, divided by earned premiums), the expense ratio (other underwriting expenses divided by written premiums), and the dividend ratio (policyholder dividends divided by earned premiums). A combined ratio of less than 100% shows an underwriting profit, while anything more than 100% means there is an underwriting loss.

- ◆ Reinsurance. Another factor that affects the rate of premium growth is the extent to which an insurer uses reinsurance. This is the practice of transferring some risk—and premium income—to reinsurance companies. To offset slowing premium growth, some insurers have reduced the level of premiums that they cede (or transfer) to reinsurers. Because using less reinsurance lets an insurer keep more of each premium dollar, it may enhance year-to-year premium growth comparisons. However, using less reinsurance also removes a safety net of protection and leaves a primary insurer more exposed to large claims.
- ◆ Benefits and other expenses. The largest expense facing most insurers is policyholder benefits. These include death benefits to life insurance policyholders; accident, health, and disability benefits to health insurance policyholders; loss benefits for personal or commercial property and casualty insurance policyholders; and annuity benefits. Benefits also include surrender benefits, which arise when policyholders and annuitants terminate their policies or annuities.

Clearly, a sharp rise in any of those benefits should trigger a further investigation into the causes behind the rise. Again, an insurer's business mix will greatly influence its level of benefit expenses and the growth rates therein. For example, an insurer that writes a large amount of fixed-rate annuities (insurance contracts that guarantee the interest rate to be paid on the principal amount deposited in the annuity) may see its surrender rates increase if investors can obtain higher rates of return on their investment dollars elsewhere.

However, one should closely examine an insurer with surrender rates that rise sharply during a period of stable surrenders for the insurance industry. This could indicate that policyholders and annuitants have lost faith in the company's ability to meet its obligations and have pulled out their money in a move similar to a "run" on a bank.

Two factors that influence the level of policyholder benefits for life insurers are trends in mortality and morbidity. Mortality is the ratio of deaths to a specific population. Morbidity is the frequency of the incidence of disease, illness, or sickness. Insurers use various mortality and morbidity assumptions in pricing their policies. While insurers usually do not disclose these assumptions, a section in the annual report called "management's discussion and analysis of financial condition" often includes a discussion of general mortality and morbidity trends. It is important to note whether actual mortality and morbidity trends were in line with the insurer's assumptions.

◆ Selling costs. Aside from assorted policyholder benefits, costs to produce new business or acquire policies (including agent commissions and other related selling expenses) also take a big bite out of insurers' budgets. To measure an insurer's effectiveness at marketing its products, a "lapse ratio" is used. This is the number of insurance contracts that have lapsed (or terminated due to nonpayment) within a specific period, divided by the number of policies in force during that period. A lower lapse ratio is usually better for an insurer's profitability, due to the high level of expenses (primarily agent commissions) that insurers incur to produce new business. Conversely, one would also look for a high level of persistency—the percentage of life insurance policies remaining in force or that have not been canceled for premium nonpayment—during the term.

## **Investment Profitability**

Investment income is an important revenue source for life insurers; in some cases, it provides almost half of an insurer's total revenues. One should review the insurer's asset allocation strategy, then calculate such measures as yield and total return. Two standard financial ratios—return on assets (ROA) and return on equity (ROE)—also help the analyst to assess a company's profitability.

◆ Asset allocation strategies. When evaluating an insurer's investment portfolio, review its asset allocation strategy to see whether the mix of invested assets is appropriate for the kind of business that it writes. For most insurers, the investment process is fairly straightforward. Most insurers keep the bulk of

their invested assets in relatively liquid fixed-income or equity securities that can be easily converted into cash to pay policy or annuity obligations.

For each asset class, such as stocks or bonds, a review of asset quality and diversification is prudent. To help in the analysis of asset quality, insurers usually provide the debt rating of bonds in their portfolio or an average debt rating for their entire portfolio.

Insurers' obligations tend to be relatively long-term in nature: the amount of time from a policy's inception to the payment of a benefit or claim is often lengthy. For this reason, some insurers invest a portion of their invested assets in relatively illiquid (but theoretically higher-yielding) mortgage loans and real estate. A review of this asset class should include an analysis of the reserve levels, the level of delinquencies (in the case of mortgage loans), and the diversification of the real estate portfolio (both by property type and by geographic location).



**Watch Out!** Designating securities as held-to-maturity (HTM), available-for-sale (AFS), or trading results in different balance sheet and income statement treatment for changes in the value of securities. Management can delay recognizing losses by classifying securities inconsistently with intent or practice.

♦ Measures of investment success. Two industry-specific ratios that help the analyst to measure a company's investment success are yield and total return. Yield is usually calculated as the net investment income during a certain period, divided by the portfolio's average value during the same period. Total return is usually calculated as net investment income plus or minus realized and unrealized gains, divided by the portfolio's beginning market value plus or minus the weighted average of additions or dispositions.



**Watch Out!** We raise concerns when a company carries for an extended period of time investments that have declined significantly below fair value without recognizing this impairment through earnings. Companies can defer recognizing losses by failing to acknowledge an other-than-temporary-impairment (OTTI), which has the effect of overstating income and, for most regulated financial companies, regulatory capital ratios.

## Liquidity

Liquidity is another necessary performance benchmark to consider when analyzing an insurer, because the insurer must be able to pay policyholder claims promptly. An insurer's sources of liquidity arise from underwriting cash flow, investment cash flow, and asset liquidation cash flow. For the most part, underwriting cash flow tends to be positive for insurers. Combining this with the cash flow from investment activities, most insurers usually produce a substantial, positive cash flow.

Another measure of liquidity is the quick ratio. This is calculated by dividing assets that can be quickly liquidated at reasonable cost (i.e., cash, trade receivables, and marketable securities), by current liabilities. Sometimes referred to as the acid-test ratio, the quick ratio is designed to measure an organization's ability to pay all its current liabilities promptly without resorting to the more costly, and potentially ill-timed, sales of long-term investments or assets. An insurer with a business mix that contains mostly shorter-term obligations would need to maintain a higher quick ratio—that is, greater liquidity—than one with a business mix predominantly comprising longer-term obligations.

#### Leverage

For insurers, leverage usually measures the extent to which a firm uses its capital base (policyholders' surplus or shareholders' equity) to produce business.

The ratio of premiums to surplus is typically a good gauge of leverage. However, for an accurate picture of leverage, premium equivalence should also be included in this calculation. The ratio of adjusted capital and surplus to liabilities gauges the relative strength of an insurer's capital base compared with its obligations. This ratio is calculated as capital and surplus funds plus the asset valuation reserve, divided by total liabilities, excluding the asset valuation reserve. Typically, regulators allow an insurer to have a ratio of net written premiums to surplus of 2-to-1, or 200%, though very few insurers do.

## **Equity Valuation**

Analysts generally value insurance companies on a forward price-to-book value per-share basis, excluding accumulated other comprehensive income (AOCI). Excluding AOCI is usually a more conservative way to assess book value. This is because insurers are large bondholders and, as such, often hold unrealized gains in their fixed-income portfolios, which flow through AOCI. As a result, AOCI typically inflates insurers' book values since companies usually do not harvest unrealized gains in their bond portfolios. Insurers prefer to keep a tight match between their assets and liabilities to guard against unforeseen events like interest-rate movements, changes in policyholder behavior, and a sudden increase in mortality or morbidity.

Historically, insurers' price-to-book multiples have been highly correlated with their ROE results. It is also important to compare an insurer's ROE versus its cost of capital. Insurers usually operate on a thin margin between the two metrics. For property and casualty insurers, 2021 ROE averaged 12.6%, up from 8.3% in 2020.

## **GLOSSARY**

Agent—A person who acts as the representative of an insurer to sell insurance policies.

**Annuity**—A contract supplying income at regular intervals for a specified period, such as a set number of years or the lifetime of the annuitant. Payouts for an annuity can be immediate or deferred, as well as fixed or variable, and premiums can be single, multiple, and/or flexible.

**Broker**—One who represents an insured in the solicitation, negotiation, or procurement of insurance contracts. A broker may also be an agent of the insurer for certain purposes such as policy delivery or premium collection.

**Cede**—To transfer to a reinsurer all or part of the insurance or reinsurance written by the ceding company.

**Combined ratio**—The sum of an expense ratio and a loss ratio, often under statutory accounting procedures. An underwriting profit occurs when the combined ratio is under 100%.

**Disability benefit**—A feature of some life insurance policies that provides for the waiver of premiums if the policyholder becomes totally and permanently disabled; a monthly income payment is sometimes provided as well.

**Dividend ratio**—Policyholders' dividends as a percentage of earned premiums. It is a component of the combined ratio.

**Earned premium**—Portion of a premium for which the insurer has already provided protection for the policyholder.

**Expense ratio**—The percentage of the premium dollar devoted to paying the expenses of the insurer other than losses, usually calculated on a statutory accounting basis.

Facultative reinsurance—Reinsurance covering only specified individual risks.

**Fintech**—The term used to refer to innovations in the financial and technology crossover space, and typically refers to companies or services that use technology to provide financial services to businesses or consumers.

**Generally accepted accounting principles (GAAP)**—An accounting method that, among other things, attempts to match a company's income and expenses by prorating costs over an insurance policy's assumed life. The GAAP method is employed in the audited financial statements of publicly held companies. (See *Statutory accounting principles (SAP)*.)

**Insurance in force**—Insurance for which premiums are being paid or have been fully paid. It refers to the total face value of a life insurer's portfolio of business: in other words, the potential maximum claim against an insurer.

**Insurtech**—Refers to the use of technology innovations designed to squeeze out savings and efficiency from the current insurance industry model. Insurtech is a combination of the words "insurance" and "technology," inspired by the term fintech.

Lapse ratio—The ratio of the number of contracts or policies lapsed during a specified period to the number in force at the beginning of that period.

**Long tail**—A term that denotes the periods between the origination of the policy, the event leading to a claim, and the subsequent payment of that claim may be years or even decades.

Loss adjustment expense (LAE)—The cost of adjusting losses for filed claims, excluding the amount of the loss itself.

Loss ratio—Losses divided by the premiums paid.

**Morbidity**—The relative incidence of disease; often refers to the ratio of incidence of sickness to the number of people in each group over a given time.

**Multi-peril insurance**—A policy that covers a variety of risks, including, say, a business automobile policy that would cover liability, physical damage, and medical payments.

**Net operating income**—After-tax income before net realized investment gains or losses. Analysts most commonly use this measure of insurer profitability when modeling future earnings of an insurer.

**Net premiums written**—Premium income retained by insurance companies, directly or through accepting reinsurance, less payments made for business reinsured.

**Persistency**—The tendency or likelihood of insurance business not lapsing or being replaced by another insurer's product.

Policy dividend—The return of part of the premium paid for a policy issued on a participating basis.

**Policy loan**—A loan made by a life insurance company from its general funds to a policyholder, using the policy's cash value as security.

**Premium**—The payment, or one of the periodic payments, that a policyholder agrees to make for an insurance policy.

Rate—The cost of a given unit of insurance; premium is the rate multiplied by the number of units of insurance purchased.

**Reinsurance**—The practice whereby a third party (the reinsurer) agrees to indemnify part or all the liability from a policy underwritten by an insurance carrier in return for the payment of a premium or other consideration.

**Reserves**—Funds set aside to cover costs of claims incurred but not yet fully settled; the amount may represent both actual and potential liabilities.

**Risk-based capital (RBC)**—The amount of capital an insurer needs to meet its obligations to policyholders. State regulatory bodies calculate risk-based capital (RBC) levels, considering various types of risk, and compare them with companies' actual capital.

**Statutory accounting principles (SAP)**—An accounting format used by state insurance regulators, SAP is essentially cash-oriented (rather than accrual-oriented, as GAAP is) and has such requirements as immediately expensing all costs related to writing business. More conservative than GAAP, which focuses on profit growth, statutory accounting focuses on solvency—a firm's ability to meet its obligations.

**Surplus**—The excess of assets over liabilities; surplus determines an insurer's capacity to write business and consists of surplus paid in by stockholders and surplus earned through operations.

**Telematics**—The use of a Global Positioning System or GPS and onboard diagnostic systems to record and monitor movements of a vehicle or equipment.

**Usage Based Insurance (UBI)**—Also known as pay-as-you-drive or pay-as-you-go auto insurance program that calculates the cost of insurance according to variables such as time, distance, place, type of vehicle, and driving behavior.

## INDUSTRY REFERENCES

#### **PERIODICALS**

#### **Business Insurance**

businessinsurance.com

Covers corporate risk, employee benefit, and managed health care news.

#### **Investment News**

investmentnews.com

Newsletter for investment advisers covering the entire financials industry.

#### **Reinsurance News**

reinsurancene.ws

Global reinsurance industry trends and reinsurance news

#### **INDUSTRY ASSOCIATIONS**

#### **American Property Casualty Insurance Association**

apci.org

The primary national trade association for home, auto, and business insurers.

#### **Council of Insurance Agents and Brokers**

ciab.com

Global organization representing the leading commercial insurance agencies and brokerage firms.

#### **Insurance Information Institute**

iii.ora

Nonprofit, industry-supported organization that provides information about the Property & Casualty Insurance sub-industry.

#### Insurance Services Office Inc.

verisk.com/insurance/brands/iso/ Trade organization and publisher of aggregate industry underwriting statistics.

#### **LIMRA**

limra.com

Research, consulting, and professional development organization that caters to worldwide financial services and insurance companies worldwide.

# National Association of Insurance Commissioners

naic.org

Publishes relevant information on issues relevant to the property & casualty segments of the insurance industry.

#### Reinsurance Association of America

reinsurance.org

A trade association of property & casualty reinsurers doing business in the U.S.

# Society of Professional Asset-Managers and Recordkeepers (The SPARK Institute, Inc.)

sparkusa.org

Inter-industry professional association serving mutual fund companies, banks, insurance companies, investment advisers, third-party administrators, and record keepers.

#### **ONLINE RESOURCES**

#### **Artemis**

artemis.bm

Covers news, analysis, and data media service devoted to the alternative risk transfer, catastrophe bond & insurance linked security, non-traditional reinsurance, insurance linked investments, and associated risk transfer markets.

#### Munich Re

munichre.com

A leading reinsurance company based in Munich, Germany.

#### S&P Global Market Intelligence

https://www.spglobal.com/marketintelligence/en/ Comprehensive source of data and analysis for the financials industry.

#### Stable Value Investment Association

stablevalue.org

Publishes a newsletter, technical papers, and information regarding stable value products.

#### Swiss Re Group

swissre.com

Wholesale provider of reinsurance, insurance, and other insurance-based forms of risk transfer.

# The Conference Board Inc.: Leading Economic Index

conference-board.org

Reports leading economic index levels.

#### **RATING AGENCIES**

These agencies provide property-casualty insurer financial strength ratings and reports; some also provide debt-rating services.

#### A.M. Best Co., Inc.

ambest.com

#### Fitch Ratings, Inc.

fitchratings.com

#### Moody's Investors Service, Inc.

moodys.com

## **COMPARATIVE COMPANY ANALYSIS**

								Oper	ating Reve	enues								
		-				Million \$				CA	GR (%	)		Index	Basis	(2014=	:100)	
Ticker	Company	Yr. End	2021	2020	2019	2018	2017	2016	2015	10-Yr.	5-Yr.	1-Yr.	2021	2020	2019	2018	2017	2016
PROPER'	TY AND CASUALTY INSURANCE																	
	§ AMBAC FINANCIAL GROUP, INC.	DEC	222.0	153.0	362.0	506.0	567.0	552.0	687.8	-8.7	-16.7	45.1	32	22	53	74	82	80
	§ AMERISAFE, INC.	DEC	316.0	339.5	370.4	377.8	375.2	396.7	401.6	1.2	-4.4	-6.9	79	85	92	94	93	99
	CHUBB LIMITED	DEC	40,955.0	36,052.0	34,230.0	32,679.0	32,340.0	31,480.0	18,968.0	9.3	5.4	13.6	216	190	180	172	170	166
CINF	CINCINNATI FINANCIAL CORPORATION	DEC	9,630.0	7,536.0	7,924.0	5,407.0	5,732.0	5,449.0	5,142.0	9.7	12.1	27.8	187	147	154	105	111	106
EIG	§ EMPLOYERS HOLDINGS, INC.	DEC	703.1	711.4	835.9	800.4	799.3	779.8	752.1	4.2	-2.0	-1.2	93	95	111	106	106	104
FAF	† FIRST AMERICAN FINANCIAL CORPORATION	DEC	9,214.0	7,080.0	6,199.0	5,747.8	5,772.4	5,575.8	5,175.5	9.2	10.6	30.1	178	137	120	111	112	108
HCI	§ HCI GROUP, INC.	DEC	407.9	273.5	242.5	231.3	244.4	262.2	286.0	15.9	9.2	49.2	143	96	85	81	85	92
JRVR	§ JAMES RIVER GROUP HOLDINGS, LTD.	DEC	772.9	668.7	907.1	885.6	817.6	586.2	504.9	6.6	5.7	15.6	153	132	180	175	162	116
	† KEMPER CORPORATION	DEC	5,793.4	5,116.3	5,039.2	3,682.9	2,723.4	2,521.9	2,340.8	8.8	18.1	13.2	247	219	215	157	116	108
KNSL	§																	
L	] LOEWS CORPORATION	DEC	14,657.0	12,549.0	14,931.0	14,066.0	13,735.0	13,105.0	13,415.0	0.4	2.3	16.8	109	94	111	105	102	98
MCY	† MERCURY GENERAL CORPORATION	DEC	3,993.4	3,784.5	3,972.5	3,380.0	3,412.7	3,227.7	3,009.3	3.7	4.3	5.5	133	126	132	112	113	107
	† OLD REPUBLIC INTERNATIONAL CORPORATION	DEC	9,341.5	7,166.0	7,460.4	6,258.7	6,263.1	5,900.5	5,765.9	7.2	9.6	30.4	162	124	129	109	109	102
	§ PALOMAR HOLDINGS, INC.	DEC	247.8	168.5	113.3	73.0	59.5	42.7	42.7	NA	42.1	47.1	580	395	265	171	139	100
PRA	§ PROASSURANCE CORPORATION	DEC	1,124.4	874.9	999.8	886.0	866.1	870.2	772.1	4.7	5.3	28.5	146	113	129	115	112	113
RLI	† RLICORP.	DEC	1,179.2	983.6	1,003.6	818.1	797.2	816.3	794.6	6.7	7.6	19.9	148	124	126	103	100	103
SAFT	§ SAFETY INSURANCE GROUP, INC.	DEC	884.9	846.2	877.8	836.5	839.1	819.8	798.0	3.0	1.5	4.6	111	106	110	105	105	103
SIGI	† SELECTIVE INSURANCE GROUP, INC.	DEC	3,379.2	2,922.3	2,846.5	2,586.1	2,470.0	2,284.3	2,131.9	7.8	8.1	15.6	159	137	134	121	116	107
	§ STEWART INFORMATION SERVICES CORPORATION	DEC	3,305.8	2,288.4	1,940.0	1,907.7	1,955.7	2,013.3	2,035.6	7.3	10.4	44.5	162	112	95	94	96	99
ALL	THE ALLSTATE CORPORATION	DEC	50,588.0	41,909.0	41,541.0	39,815.0	39,407.0	37,399.0	35,653.0	4.5	6.2	20.7	142	118	117	112	111	105
THG	† THE HANOVER INSURANCE GROUP, INC.	DEC	5,227.8	4,824.8	4,890.7	4,494.3	4,267.9	4,053.9	5,034.0	2.9	5.2	8.4	104	96	97	89	85	81
PGR	THE PROGRESSIVE CORPORATION	DEC	47,676.5	42,638.1	38,997.7	31,954.7	26,816.1	23,417.4	20,831.9	11.7	15.3	11.8	229	205	187	153	129	112
TRV	THE TRAVELERS COMPANIES, INC.	DEC	34,816.0	31,981.0	31,581.0	30,282.0	28,902.0	27,499.0	26,815.0	3.2	4.8	8.9	130	119	118	113	108	103
	§ UNITED FIRE GROUP, INC.	DEC	1,066.2	1,068.6	1,201.2	1,070.2	1,052.7	996.4	899.3	4.2	1.4	-0.2	119	119	134	119	117	111
UIHC	§ UNITED INSURANCE HOLDINGS CORP.	DEC	634.5	846.7	825.1	723.9	654.4	487.1	357.6	20.7	5.4	-25.1	177	237	231	202	183	136
UVE	§ UNIVERSAL INSURANCE HOLDINGS, INC.	DEC	1,121.9	1,072.8	939.4	823.8	751.9	685.3	546.5	17.5	10.4	4.6	205	196	172	151	138	125
WRB	W. R. BERKLEY CORPORATION	DEC	9,455.5	8,098.9	7,902.2	7,691.7	7,684.8	7,654.2	7,206.5	6.3	4.3	16.7	131	112	110	107	107	106
INSURAN	CE BROKERS																	
AON	[] AON PLC	DEC	12,193.0	11,066.0	11,013.0	10,770.0	9,998.0	9,409.0	9,480.0	0.8	5.3	10.2	129	117	116	114	105	99
AJG	ARTHUR J. GALLAGHER & CO.	DEC	7,974.4	6,781.8	6,894.2	6,711.2	6,050.9	5,489.5	5,301.0	14.2	7.8	17.6	150	128	130	127	114	104
BRO	† BROWN & BROWN, INC.	DEC	3,050.3	2,610.6	2,386.4	2,009.9	1,857.3	1,762.8	1,657.0	11.7	11.6	16.8	184	158	144	121	112	106
	§ EHEALTH, INC.	DEC	538.2	582.8	506.2	251.4	190.7	193.3	189.5	13.5	22.7	-7.6	284	307	267	133	101	102
MMC	MARSH & MCLENNAN COMPANIES, INC.	DEC	19,820.0	17,224.0	16,652.0	14,950.0	14,024.0	13,211.0	12,893.0	5.6	8.5	15.1	154	134	129	116	109	102
MULTI-LII	NE INSURANCE																	
	† AMERICAN FINANCIAL GROUP, INC.	DEC	6,393.0	5,579.0	5,974.0	6,939.0	6,684.0	6,345.0	6,194.0	3.4	0.2	14.6	103	90	96	112	108	102
AIG	AMERICAN INTERNATIONAL GROUP, INC.	DEC	52,049.0	43,337.0	49,517.0	47,590.0	49,448.0	51,209.0	58,239.0	-2.2	0.3	20.1	89	74	85	82	85	88
AIZ	ASSURANT, INC.	DEC	10,187.6	9,589.6	9,406.1	8,000.7	6,415.0	7,502.2	10,308.7	2.1	6.3	6.2	99	93	91	78	62	73
HMN	§ HORACE MANN EDUCATORS CORPORATION	DEC	1,330.1	1,310.4	1,430.5	1,191.6	1,171.6	1,128.9	1,080.4	2.9	3.3	1.5	123	121	132	110	108	104
HIG	THE HARTFORD FINANCIAL SERVICES GROUP, INC.	DEC	22,349.0	20,494.0	20,736.0	18,925.0	17,125.0	16,254.0	15,966.0	0.3	6.6	9.1	140	128	130	119	107	102
REINSUR	ANCE																	
Υ	† ALLEGHANY CORPORATION	DEC	12,004.1	8,896.7	9,040.7	6,887.2	6,424.7	6,131.0	4,999.5	28.4	14.4	34.9	240	178	181	138	129	123
	EVEREST RE GROUP, LTD.	DEC	11,830.6	9,597.9	8,236.6	7,359.1	6,637.2	5,815.5	5,596.8	9.7	15.3	23.3	211	171	147	131	119	104
	† REINSURANCE GROUP OF AMERICA, INCORPORATED	DEC	16,658.0	14,596.0	14,300.0	12,876.0	12,516.0	11,521.5	10,418.2	6.6	7.7	14.1	160	140	137	124	120	111
RNR TPRE	† RENAISSANCERE HOLDINGS LTD.	DEC	5,321.0	5,146.8	4,204.9	2,087.4	2,093.1	1,741.6	1,518.2	17.0	25.0	3.4	350	339	277	137	138	115
11 IXL																		
	OMPANIES WITH INSURANCE OPERATIONS												4.0-					
BRK.A	BERKSHIRE HATHAWAY INC.	DEC	276,094.0	245,510.0				215,865.0		6.8	5.0	12.5	137	122	126	123	119	107
JEF	† JEFFERIES FINANCIAL GROUP INC.	NOV	8,108.2	5,926.0	3,805.8	4,008.9	3,798.0	2,939.6	10,770.7	33.7	22.5	36.8	75	55	35	37	35	27

Note: Data as originally reported. CAGR-Compound annual growth rate.

[Company included in the S&P 500. †Company included in the S&P MidCap 400. §Company included in the S&P SmallCap 600. #Of the following calendar year.

Souce: S&P Capital IQ.

#### **Net Income**

		•				Million \$					3 A C D (0)	/ <b>\</b>		lu da	. D!-	(0044	00)	
						Willion \$				1 '	CAGR (%	0)	1	inde	Basis	(2014=1	00)	
Ticker	Company	Yr. End	2021	2020	2019	2018	2017	2016	2015	10-Yr.	5-Yr.	1-Yr.	2021	2020	2019	2018	2017	2016
PROPE	RTY AND CASUALTY INSURANCE																	
AMBC	§ AMBAC FINANCIAL GROUP, INC.	DEC	-17.0	-437.0	-216.0	186.0	-329.0	74.8	493.4	-37.8	NM	-96.1	-3	-89	-44	38	-67	15
AMSF	§ AMERISAFE, INC.	DEC	65.8	86.6	92.7	71.6	46.2	77.9	70.5	10.5	-3.3	-24.1	93	123	132	102	66	111
СВ	[] CHUBB LIMITED	DEC	8,539.0	3,533.0	4,454.0	3,962.0	3,861.0	4,135.0	2,834.0	18.7	15.6	141.7	301	125	157	140	136	146
CINF	CINCINNATI FINANCIAL CORPORATION	DEC	2,946.0	1,216.0	1,997.0	287.0	1,045.0	591.0	634.0	33.5	37.9	142.3	465	192	315	45	165	93
EIG	§ EMPLOYERS HOLDINGS, INC.	DEC	119.3	119.8	157.1	141.3	101.2	106.7	94.4	9.4	2.3	-0.4	126	127	166	150	107	113
FAF	† FIRST AMERICAN FINANCIAL CORPORATION	DEC	1,241.0	696.0	707.0	474.5	423.0	343.0	288.1	31.8	29.3	78.3	431	242	245	165	147	119
HCI	§ HCI GROUP, INC.	DEC	1.9	27.6	26.6	17.7	-6.9	29.0	65.9	-15.5	-42.3	-93.3	3	42	40	27	-10	44
JRVR	§ JAMES RIVER GROUP HOLDINGS, LTD.	DEC	-172.8	4.8	38.3	63.8	43.6	74.5	53.5	NA	NM	NM	-323	9	72	119	81	139
KMPR	† KEMPER CORPORATION	DEC	-120.5	409.9	531.1	190.1	120.9	16.8	85.7	NA	NM	NM	-141	478	620	222	141	20
KNSL	§																	
_																		
L	[] LOEWS CORPORATION	DEC	1,578.0	-931.0	932.0	636.0	1,164.0	654.0	260.0	4.0	19.3	NM	607	-358	358	245	448	252
MCY	† MERCURY GENERAL CORPORATION	DEC	247.9	374.6	320.1	-5.7	144.9	73.0	74.5	2.6	27.7	-33.8	333	503	430	-8	195	98
ORI	† OLD REPUBLIC INTERNATIONAL CORPORATION	DEC	1,534.3	558.6	1,056.4	370.5	560.5	466.9	422.1	NA	26.9	174.7	363	132	250	88	133	111
PLMR	§ PALOMAR HOLDINGS, INC.	DEC	45.8	6.3	10.6	18.2	3.8	6.6	6.6	NA	47.3	632.7	693	95	161	275	57	100
PRA	§ PROASSURANCE CORPORATION	DEC	144.1	-175.7	1.0	47.1	107.3	151.1	116.2	-6.7	-0.9	NM	124	-151	1	40	92	130
DI.	L BLICORD	F=-		:	40.0		40= -		46= =		46 :	<b></b> -			400			
RLI	† RLICORP.	DEC	279.4	157.1	191.6	64.2	105.0	114.9	137.5	8.2	19.4	77.8	203	114	139	47	76	84
SAFT	§ SAFETY INSURANCE GROUP, INC.	DEC	130.7	138.2	99.6	83.2	62.4	64.6	-13.9	25.3	15.1	-5.4	-944	-998	-719	-601	-450	-466
SIGI	† SELECTIVE INSURANCE GROUP, INC.	DEC	403.8	246.4	271.6	178.9	168.8	158.5	165.9	33.8	20.6	63.9	243	149	164	108	102	96
STC	§ STEWART INFORMATION SERVICES CORPORATION	DEC	323.2	154.9	78.6	47.5	48.7	55.5	-6.2	63.6	42.3	108.7	NM	NM	NM	-766	-784	-894
ALL	[] THE ALLSTATE CORPORATION	DEC	1,599.0	5,576.0	4,847.0	2,160.0	3,554.0	1,877.0	2,171.0	7.3	-3.2	-71.3	74	257	223	99	164	86
THG	† THE HANOVER INSURANCE GROUP, INC.	DEC	418.7	358.7	425.1	391.0	186.2	155.1	331.5	27.6	22.0	16.7	126	108	128	118	56	47
PGR	[] THE PROGRESSIVE CORPORATION	DEC	3,350.9	5,704.6	3,970.3	2,615.3	1,592.2	1,031.0	1,267.6	12.7	26.6	-41.3	264	450	313	206	126	81
TRV	[] THE TRAVELERS COMPANIES, INC.	DEC	3,662.0	2,697.0	2,622.0	2,523.0	2,056.0	3,014.0	3,439.0	9.9	4.0	35.8	106	78	76	73	60	88
UFCS	§ UNITED FIRE GROUP, INC.	DEC	80.6	-112.7	14.8	27.7	51.0	49.9	89.1	143.5	10.1	NM	90	-126	17	31	57	56
UIHC	§ UNITED INSURANCE HOLDINGS CORP.	DEC	-57.9	-96.5	-29.9	0.3	10.1	5.7	27.4	NA	NM	-40.0	-212	-353	-109	1	37	21
UVE	§ UNIVERSAL INSURANCE HOLDINGS, INC.	DEC	20.4	19.1	46.5	117.1	106.9	99.4	106.5	0.1	-27.1	6.8	19	18	44	110	100	93
WRB	[] W. R. BERKLEY CORPORATION	DEC	1,022.5	530.7	681.9	640.7	549.1	601.9	503.7	10.1	11.2	92.7	203	105	135	127	109	120
INCLIDA	NOT DROVEDS																	
	NCE BROKERS	DEC	4.055.0	4 000 0	4 500 0	4 404 0	4 000 0	4 200 0	4 205 0	0.5	-2.1	20.0	04	4.40	444	00	00	404
AON	[] AON PLC	DEC	1,255.0	1,969.0	1,532.0	1,134.0	1,226.0	1,396.0	1,385.0	2.5		-36.3	91	142	111	82	89	101
AJG	[] ARTHUR J. GALLAGHER & CO.	DEC	906.8	818.8	668.8	633.5	481.3	396.8	356.8	20.2	18.0	10.7	254	229	187	178	135	111
BRO	† BROWN & BROWN, INC.	DEC	587.1	480.5	398.5	344.3	399.6	257.5	243.3	13.6	17.9	22.2	241	197	164	141	164	106
EHTH	§ EHEALTH, INC.	DEC	-104.4	45.5	66.9	0.2	25.4	0.3	-4.8	NA 10.0	NM	NM	2191	-954	NM 100	-5	-534	-6
MMC	MARSH & MCLENNAN COMPANIES, INC.	DEC	3,143.0	2,016.0	1,742.0	1,650.0	1,492.0	1,768.0	1,599.0	12.2	12.2	55.9	197	126	109	103	93	111
MIII TII	INE INSURANCE																	
		DEC	1 005 0	722.0	907.0	E20.0	47E O	640.0	252.0	10.2	25.2	172.5	567	200	255	151	125	101
AFG AIG	† AMERICAN FINANCIAL GROUP, INC. [] AMERICAN INTERNATIONAL GROUP, INC.	DEC	1,995.0 9,388.0	732.0 -5,944.0	897.0 3,348.0	530.0 -6.0	475.0 -6,084.0	649.0 -849.0	352.0 2,196.0	19.3 -7.6	25.2 NM	172.5 NM	567 428	208 -271	255 152	151 0	135 -277	184 -39
AIZ		DEC		-5,944.0 441.8						-	19.4	210.6	969	312	270	177		-39 399
HMN	[] ASSURANT, INC. § HORACE MANN EDUCATORS CORPORATION	DEC	1,372.4 142.8	133.3	382.6 184.4	251.0 18.3	519.6 169.5	565.4 83.8	141.6 93.5	9.8 7.3	11.3	7.1	153	143	197	20	367 181	399 90
HIG	THE HARTFORD FINANCIAL SERVICES GROUP, INC.	DEC	2,365.0	1,737.0	2,085.0	1,807.0	-3,131.0	896.0	1,682.0	12.8	21.4	36.2	141	103	124	107	-186	53
HIG	[] THE HARTFORD FINANCIAL SERVICES GROOF, INC.	DEC	2,303.0	1,737.0	2,005.0	1,007.0	-3,131.0	090.0	1,002.0	12.0	21.4	30.2	141	103	124	107	-100	55
REINSU	RANCE																	
Y	† ALLEGHANY CORPORATION	DEC	1.034.9	101.8	857.8	39.5	90.1	456.9	560.3	21.9	17.8	917.1	185	18	153	7	16	82
RE	EVEREST RE GROUP, LTD.	DEC	1,379.1	514.2	1,009.5	89.0	482.8	996.3	977.9	NA	6.7	168.2	141	53	103	9	49	102
RGA	† REINSURANCE GROUP OF AMERICA, INCORPORATE	DEC	617.0	415.0	870.0	716.0	1.822.0	701.4	502.2	1.2	-2.5	48.7	123	83	173	143	363	140
RNR	† RENAISSANCERE HOLDINGS LTD.	DEC	-40.2	762.4	748.8	227.4	-222.4	503.0	431.2	-3.5	NM	NM	-9	177	174	53	-52	117
TPRE	THE THE PROPERTY OF THE PROPER	220	70.2	102.4	7 -10.0	221.7	222.7	000.0	701.2	3.3	1 4141	1 4141			17.4	00	02	
OTHER	COMPANIES WITH INSURANCE OPERATIONS																	
BRK.A	BERKSHIRE HATHAWAY INC.	DEC	89,795.0	42.521 0	81,417.0	4,021.0	44,940.0	24,074.0	24,083.0	24.2	30.1	111.2	373	177	338	17	187	100
JEF	† JEFFERIES FINANCIAL GROUP INC.	NOV	1,674.4	775.2	964.7	1,120.1	171.7	130.0	283.7	52.1	66.7	116.0	590	273	340	395	61	46
OL:	1 32227   10/11/01/12 01/00/1   110.	1400	1,017.7	110.2	554.1	1,120.1	17.1.7	100.0	200.1	1 02.1	00.7	110.0	. 550	2,0	040	000	01	40

Note: Data as originally reported. CAGR-Compound annual growth rate.

[Company included in the S&P 500. †Company included in the S&P MidCap 400. §Company included in the S&P SmallCap 600. #Of the following calendar year.

Souce: S&P Capital IQ.

MULT	-LIN	IE INSURANCE																	
AFG	†	AMERICAN FINANCIAL GROUP, INC.	DEC	732.0	897.0	530.0	475.0	649.0	352.0	452.0	4.3	15.8	(18.4)	162	198	117	105	144	78
AIG	†	AMERICAN INTERNATIONAL GROUP, INC.	DEC	(5,944.0)	3,348.0	(6.0)	(6,084.0)	(849.0)	2,196.0	7,529.0	NA.	. NM	I NM	-79	44	-0	-81	-11	29
AIZ	§	ASSURANT, INC.	DEC	441.8	382.6	251.0	519.6	565.4	141.6	470.9	4.7	25.6	15.5	94	81	53	110	120	30
HMN	§	HORACE MANN EDUCATORS CORPORAT	DEC	133.3	184.4	18.3	169.5	83.8	93.5	104.2	5.2	7.4	(27.7)	128	177	18	163	80	90
HIG	†	THE HARTFORD FINANCIAL SERVICES GI	DEC	1,737.0	2,085.0	1,807.0	(3,131.0)	896.0	1,682.0	798.0	0.6	0.6	(16.7)	218	261	226	-392	112	211
REINS	URA	ANCE																	
Υ	†	ALLEGHANY CORPORATION	DEC	101.8	857.8	39.5	90.1	456.9	560.3	679.2	(6.5)	(28.9)	(88.1)	15	126	6	13	67	82
RE	[]	EVEREST RE GROUP, LTD.	DEC	514.2	1,009.5	89.0	482.8	996.3	977.9	1,199.2	(1.7)	(12.1)	(49.1)	43	84	7	40	83	82
RGA	§	REINSURANCE GROUP OF AMERICA, INC	DEC	415.0	870.0	716.0	1,822.0	701.4	502.2	684.0	(2.5)	(3.7)	(52.3)	61	127	105	266	103	73
RNR	[]	RENAISSANCERE HOLDINGS LTD.	DEC	762.4	748.8	227.4	(222.4)	503.0	431.2	532.7	0.2	12.1	1.8	143	141	43	-42	94	81
OTHER	CO	MPANIES WITH INSURANCE OPERATIONS																	
BRK.A	[]	BERKSHIRE HATHAWAY INC.	DEC	42,521.0	81,417.0	4,021.0	44,940.0	24,074.0	24,083.0	19,872.0	12.6	12.0	(47.8)	214	410	20	226	121	121
JEF	[]	JEFFERIES FINANCIAL GROUP INC.	NOV	775.2	964.7	1,120.1	171.7	130.0	283.7	208.4	(8.8)	22.3	(19.6)	372	463	538	82	62	136

Note: Data as originally reported. CAGR-Compound annual growth rate.

[]Company included in the S&P 500. †Company included in the S&P MidCap 400. §Company included in the S&P SmallCap 600. #Of the following calendar year. Souce: S&P Capital IQ.

			F	Return	on R	evenu	es (%)	<u> </u>		Retur	n on A	Assets	(%)			Retu	n on	Equity	(%)	
Ticker	Company	Yr. End	2021	2020	2019	2018	2017	2016	2021	2020	2019	2018	2017	2016	2021	2020	2019	2018	2017	2016
PROPE	RTY AND CASUALTY INSURANCE																			
AMBC	§ AMBAC FINANCIAL GROUP, INC.	DEC	NM	NM	NM	36.8	NM	13.6	NM	NM	NM	1.3	NM	0.3	NM	NM	NM	11.3	NM	3.8
AMSF	§ AMERISAFE, INC.	DEC	20.8	25.5	25.0	19.0	12.3	19.6	4.7	5.9	6.2	4.7	3.0	5.1	15.7	19.9	22.1	17.2	10.5	17.1
CB	[] CHUBB LIMITED	DEC	20.8	9.8	13.0	12.1	11.9	13.1	4.3	1.9	2.5	2.4	2.3	2.6	14.3	6.2	8.4	7.8	7.8	10.7
CINF	[ CINCINNATI FINANCIAL CORPORATION	DEC	30.6	16.1	25.2	5.3	18.2	10.8	9.4	4.4	7.9	1.3	4.8	2.9	24.7	11.8	22.6	3.6	13.7	8.8
EIG	§ EMPLOYERS HOLDINGS, INC.	DEC	17.0	16.8	18.8	17.7	12.7	13.7	3.2	3.1	3.9	3.6	2.6	2.8	9.8	10.1	14.4	14.4	11.3	13.3
FAF	† FIRST AMERICAN FINANCIAL CORPORATION	DEC	13.5	9.8	11.4	8.3	7.3	6.2	7.5	5.4	6.1	4.5	4.4	3.9	23.3	15.0	17.4	13.2	13.0	11.9
HCI	§ HCI GROUP, INC.	DEC	0.5	10.1	11.0	7.7	NM	11.1	0.2	2.9	3.3	2.1	NM	4.3	2.4	14.3	14.5	9.4	NM	12.1
JRVR	§ JAMES RIVER GROUP HOLDINGS, LTD.	DEC	NM	0.7	4.2	7.2	5.3	12.7	NM	0.1	8.0	2.0	1.6	3.2	NM	0.6	5.2	9.1	6.3	10.8
KMPR	† KEMPER CORPORATION	DEC	NM	8.0	10.5	5.2	4.4	0.7	NM	2.9	4.1	1.6	1.4	0.2	NM	9.6	15.1	7.3	5.9	0.6
KNSL	§																			
L	[] LOEWS CORPORATION	DEC	10.8	NM	6.2	4.5	8.5	5.0	1.9	NM	1.1	0.8	1.5	0.9	8.9	NM	4.0	3.1	5.9	3.1
MCY	† MERCURY GENERAL CORPORATION	DEC	6.2	9.9	8.1	NM	4.2	2.3	3.7	5.9	5.4	NM	2.8	1.5	11.9	19.6	18.7	NM	8.2	4.1
ORI	† OLD REPUBLIC INTERNATIONAL CORPORATION	DEC	16.4	7.8	14.2	5.9	8.9	7.9	6.1	2.4	5.0	1.9	2.9	2.5	23.5	9.2	19.0	7.5	12.2	11.2
PLMR	§ PALOMAR HOLDINGS, INC.	DEC	18.5	3.7	9.4	25.0	6.4	15.5	5.0	0.9	2.7	7.9	2.0	4.6	12.1	2.1	6.7	20.9	5.0	0.0
PRA	§ PROASSURANCE CORPORATION	DEC	12.8	NM	0.1	5.3	12.4	17.4	2.3	NM	0.0	1.0	2.2	3.0	10.4	NM	0.1	3.0	6.3	8.0
RLI	† RLICORP.	DEC	23.7	16.0	19.1	7.8	13.2	14.1	6.2	4.0	5.4	2.1	3.6	4.1	23.6	14.7	21.3	7.7	12.5	14.0
SAFT	§ SAFETY INSURANCE GROUP, INC.	DEC	14.8	16.3	11.3	9.9	7.4	7.9	6.2	6.7	4.9	4.5	3.5	3.7	14.4	16.3	13.0	11.7	9.1	9.8
SIGI	† SELECTIVE INSURANCE GROUP, INC.	DEC	12.0	8.4	9.5	6.9	6.8	6.9	3.9	2.5	3.1	2.3	2.2	2.2	14.1	10.0	13.6	10.2	10.4	10.8
STC	§ STEWART INFORMATION SERVICES CORPORATION	DEC	9.8	6.8	4.1	2.5	2.5	2.8	11.5	7.8	4.9	3.5	3.5	4.1	29.5	19.2	12.6	8.7	9.1	10.6
ALL	[] THE ALLSTATE CORPORATION	DEC	3.2	13.3	11.7	5.4	9.0	5.0	1.6	4.4	4.0	1.9	3.2	1.7	18.6	19.3	18.3	9.8	16.5	9.2
THG	† THE HANOVER INSURANCE GROUP, INC.	DEC	8.0	7.4	8.7	8.7	4.4	3.8	2.9	2.7	3.4	3.2	1.2	1.1	13.2	11.8	14.6	8.0	7.4	2.4
PGR	[] THE PROGRESSIVE CORPORATION	DEC	7.0	13.4	10.2	8.2	5.9	4.4	4.7	8.9	7.2	5.6	4.1	3.1	19.0	36.9	31.9	25.2	17.5	13.1
TRV	[] THE TRAVELERS COMPANIES, INC.	DEC	10.5	8.4	8.3	8.3	7.1	11.0	3.0	2.3	2.4	2.4	2.0	3.0	12.6	9.8	10.7	10.8	8.8	12.9
UFCS	§ UNITED FIRE GROUP, INC.	DEC	7.6	NM	1.2	2.6	4.8	5.0	2.7	NM	0.5	1.0	1.2	1.2	9.5	NM	1.6	0.2	4.7	5.4
UIHC	§ UNITED INSURANCE HOLDINGS CORP.	DEC	NM	NM	NM	0.0	1.6	1.2	NM	NM	NM	0.0	0.5	0.6	NM	NM	NM	0.1	2.6	2.4
UVE	§ UNIVERSAL INSURANCE HOLDINGS, INC.	DEC	1.8	1.8	5.0	14.2	14.2	14.5	1.0	1.1	2.7	6.3	7.3	9.4	4.6	4.1	9.3	24.9	26.4	29.9
WRB	[] W. R. BERKLEY CORPORATION	DEC	10.8	6.6	8.6	8.3	7.1	7.9	3.2	1.9	2.6	2.6	2.3	2.6	15.9	8.6	11.8	11.9	10.5	12.4

				Return	on R	evenu	es (%)	<u> </u>		Retur	n on /	Assets	(%)			Retu	n on l	Equity	(%)	
Ticker	Company	Yr. End	2021	2020	2019	2018	2017	2016	2021	2020	2019	2018	2017	2016	2021	2020	2019	2018	2017	2016
INSUR	ANCE BROKERS																			
AON	[] AON PLC	DEC	10.3	17.8	13.9	10.5	12.3	14.8	3.9	6.1	5.2	4.3	4.7	5.2	55.2	57.4	41.0	24.8	8.5	21.6
AJG	[] ARTHUR J. GALLAGHER & CO.	DEC	11.4	12.1	9.7	9.4	8.0	7.2	2.7	3.7	3.4	3.9	3.2	3.5	12.9	15.0	14.6	15.2	13.0	11.7
BRO	† BROWN & BROWN, INC.	DEC	19.2	18.4	16.7	17.1	21.5	14.6	6.0	5.4	5.2	5.1	7.0	4.9	14.8	13.5	12.5	12.3	16.2	11.4
EHTH	§ EHEALTH, INC.	DEC	NM	7.8	13.2	0.1	13.3	0.2	NM	4.4	9.0	0.1	7.1	0.3	NM	6.7	16.1	0.1	14.0	0.4
MMC	[] MARSH & MCLENNAN COMPANIES, INC.	DEC	15.9	11.7	10.5	11.0	10.6	13.4	9.1	6.1	5.6	7.6	7.3	9.7	31.0	23.8	22.8	22.2	22.0	27.9
MULTI	LINE INSURANCE																			
AFG	† AMERICAN FINANCIAL GROUP, INC.	DEC	31.2	13.1	15.0	7.6	7.1	10.2	6.9	1.0	1.3	8.0	0.8	1.2	18.3	4.8	8.7	10.0	9.3	13.8
AIG	AMERICAN INTERNATIONAL GROUP, INC.	DEC	18.0	NM	6.8	NM	NM	NM	1.6	NM	0.6	NM	NM	NM	14.6	NM	6.6	0.2	NM	NM
ΑIZ	[] ASSURANT, INC.	DEC	13.5	4.6	4.1	3.1	8.1	7.5	4.0	1.0	0.9	0.6	1.6	1.9	10.7	8.9	5.7	5.4	12.4	13.1
HMN	§ HORACE MANN EDUCATORS CORPORATION	DEC	10.7	10.2	12.9	1.5	14.5	7.4	1.0	1.0	1.5	0.2	1.5	0.8	7.9	7.9	12.9	1.3	12.1	6.5
HIG	THE HARTFORD FINANCIAL SERVICES GROUP, INC	DEC	10.6	8.5	10.1	9.5	NM	5.5	3.1	2.3	2.9	2.9	NM	0.4	13.0	10.0	14.2	11.2	NM	3.5
REINS	URANCE																			
Υ	† ALLEGHANY CORPORATION	DEC	8.6	1.1	9.5	0.6	1.4	7.5	3.2	0.4	3.2	0.2	0.4	1.9	12.2	1.4	10.6	0.7	1.2	5.9
RE	[] EVEREST RE GROUP, LTD.	DEC	11.7	5.4	12.3	1.2	7.3	17.1	3.6	1.6	3.7	0.4	2.0	4.7	13.9	5.5	11.9	1.1	5.9	12.7
RGA	† REINSURANCE GROUP OF AMERICA, INCORPORAT	DEC	3.7	2.8	6.1	5.6	14.6	6.1	0.7	0.5	1.1	1.1	3.0	1.3	4.5	3.2	8.7	7.9	21.9	10.6
RNR	† RENAISSANCERE HOLDINGS LTD.	DEC	NM	14.8	17.8	10.9	NM	28.9	NM	2.5	2.8	1.2	NM	4.1	NM	9.9	11.8	4.2	NM	10.7
TPRE																				
OTHER	R COMPANIES WITH INSURANCE OPERATIONS																			
BRK.A	BERKSHIRE HATHAWAY INC.	DEC	32.5	17.3	32.0	1.6	18.7	11.2	9.4	4.9	10.0	0.6	6.4	3.9	18.8	9.8	20.9	1.2	14.2	9.0
JEF	† JEFFERIES FINANCIAL GROUP INC.	NOV	20.6	13.1	25.3	27.9	4.5	4.4	2.8	1.5	2.0	2.4	0.4	0.3	16.5	7.9	9.6	0.0	NM	NM

Note: Data as originally reported. CAGR-Compound annual growth rate.

[Company included in the S&P 500. †Company included in the S&P MidCap 400. §Company included in the S&P SmallCap 600. #Of the following calendar year.

Souce: S&P Capital IQ.

				Cı	urrent	Rati	0			Debt/	Capita	al Rati	o (%)		Deb	t as a %	of Ne	t Worki	ng Capi	al
Ticker	Company	Yr. End	2021	2020	2019	2018	2017	2016	2021	2020	2019	2018	2017	2016	2021	2020	2019	2018	2017	2016
PROPE	RTY AND CASUALTY INSURANCE																			
AMBC	§ AMBAC FINANCIAL GROUP, INC.	DEC	0.7	0.7	0.8	0.7	0.4	0.3	85.2	86.3	82.8	83.4	88.9	86.1	NM	NM	NM	NM	NM	NM
AMSF	§ AMERISAFE, INC.	DEC	2.5	2.3	2.0	1.8	1.7	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CB	[] CHUBB LIMITED	DEC	0.3	0.4	0.4	0.4	0.4	0.4	24.9	24.8	23.5	25.1	23.8	25.2	-26.3	-29.0	-27.7	-27.5	-25.8	-27.8
CINF	CINCINNATI FINANCIAL CORPORATION	DEC	0.7	1.2	1.3	1.2	1.2	1.3	6.1	7.3	7.8	9.5	9.0	10.3	-42.7	113.8	109.7	134.2	166.5	104.1
EIG	§ EMPLOYERS HOLDINGS, INC.	DEC	0.4	0.4	0.4	0.4	0.4	0.4	0.0	1.6	0.0	1.9	2.1	3.7	0.0	-1.6	0.0	-1.5	-1.5	-2.4
FAF	† FIRST AMERICAN FINANCIAL CORPORATION	DEC	0.3	0.4	0.4	0.3	0.4	0.3	29.4	25.7	19.5	15.0	17.4	19.6	-36.6	-42.9	-29.7	-16.5	-23.5	-22.8
HCI	§ HCI GROUP, INC.	DEC	1.2	1.2	1.0	1.3	1.1	1.2	13.1	50.4	49.7	58.0	55.1	38.8	42.0	170.3	NM	235.2	702.8	229.6
JRVR	§ JAMES RIVER GROUP HOLDINGS, LTD.	DEC	1.3	1.6	1.5	2.3	1.9	1.5	33.6	31.5	25.2	23.9	22.6	21.7	57.7	37.5	28.1	33.2	44.0	76.3
KMPR KNSL	† KEMPER CORPORATION §	DEC	0.5	1.1	0.9	8.0	8.0	0.7	17.4	20.4	16.4	22.3	21.9	16.6	-31.9	442.7	NM	NM	NM	-80.8
L	[] LOEWS CORPORATION	DEC	0.5	0.5	0.5	0.5	0.5	0.5	31.9	34.4	34.3	34.7	31.4	31.3	-58.2	-67.3	-82.9	-82.0	-90.1	-84.7
MCY	† MERCURY GENERAL CORPORATION	DEC	0.4	0.9	1.0	1.1	1.0	0.9	14.8	15.5	17.1	18.9	17.5	14.6	-20.0	NM	1,355.7	454.5	1,731.6	NM
ORI	† OLD REPUBLIC INTERNATIONAL CORPORATION	DEC	1.1	0.5	0.5	0.5	0.5	0.5	18.7	13.5	14.0	16.0	17.1	25.5	187.5	-13.0	-13.4	-14.3	-14.4	-24.3
PLMR	§ PALOMAR HOLDINGS, INC.	DEC	0.6	0.5	0.5	0.6	0.5	0.5	0.0	0.0	0.0	16.5	17.9	18.8	0.0	0.0	0.0	-39.0	-36.6	-58.7
PRA	§ PROASSURANCE CORPORATION	DEC	2.6	2.9	2.8	2.7	2.2	2.1	22.9	17.4	15.9	15.9	20.5	19.9	51.3	31.5	29.2	29.8	45.3	57.0
RLI	† RLICORP.	DEC	0.6	1.0	1.0	1.0	0.9	0.9	14.0	11.6	13.0	15.6	14.9	15.3	-38.0	NM	NM	1,642.6	NM	NM
SAFT	§ SAFETY INSURANCE GROUP, INC.	DEC	0.4	0.4	0.4	0.3	0.4	0.3	3.1	3.3	0.0	0.0	0.0	0.0	-4.3	-4.3	0.0	0.0	0.0	0.0
SIGI	† SELECTIVE INSURANCE GROUP, INC.	DEC	0.3	0.3	0.3	0.3	0.3	0.3	14.4	16.1	20.0	19.7	20.4	22.3	-11.9	-13.2	-14.4	-12.2	-12.5	-13.1
STC	§ STEWART INFORMATION SERVICES CORPORATION	DEC	1.7	2.4	3.3	0.5	0.4	0.5	25.6	9.0	12.4	13.0	13.2	13.3	181.6	31.8	36.0	-35.3	-29.6	-33.0
ALL	[] THE ALLSTATE CORPORATION	DEC	0.4	8.0	0.5	0.5	0.4	0.5	24.1	20.6	20.3	23.2	22.0	23.6	-26.1	-53.8	-28.3	-27.8	-27.5	-33.4
THG	† THE HANOVER INSURANCE GROUP, INC.	DEC	0.4	0.4	0.4	0.5	0.7	0.4	19.9	19.6	18.3	20.8	20.8	21.6	-12.0	-13.3	-12.0	-16.9	-19.4	-12.9
PGR	[] THE PROGRESSIVE CORPORATION	DEC	0.3	0.4	0.4	0.4	0.4	0.5	21.2	24.1	24.1	28.5	25.2	27.2	-15.6	-23.5	-19.6	-22.6	-23.1	-28.1
TRV	THE TRAVELERS COMPANIES, INC.	DEC	0.3	0.4	0.4	0.4	0.4	0.4	20.2	18.4	20.2	22.4	21.8	21.8	-14.7	-15.2	-16.3	-16.8	-17.8	-18.2
UFCS	§ UNITED FIRE GROUP, INC.	DEC	0.6	0.3	0.3	0.3	0.7	0.7	5.4	5.7	0.0	0.0	0.0	0.0	-10.8	-3.3	0.0	0.0	0.0	0.0
UIHC	§ UNITED INSURANCE HOLDINGS CORP.	DEC	0.9	0.8	0.7	0.7	0.8	0.5	32.0	27.5	23.3	22.9	23.1	18.3	-52.3	-31.0	-33.2	-39.5	-57.8	-18.7
UVE	§ UNIVERSAL INSURANCE HOLDINGS, INC.	DEC	0.6	0.5	0.5	0.6	0.6	0.5	24.2	14.8	19.9	22.3	10.9	3.9	-22.3	-11.5	-18.5	-22.9	-14.2	-4.4
WRB	[] W. R. BERKLEY CORPORATION	DEC	0.4	0.5	0.4	0.4	0.4	0.4	29.9	30.1	27.5	30.0	31.4	32.9	-23.1	-28.0	-22.7	-23.4	-26.7	-27.2

				Cı	ırrent	Rati	0			Debt/	Capita	al Rati	o (%)		Deb	ot as a 9	% of Net	Workir	ng Capit	al
Ticker	Company	Yr. End	2021	2020	2019	2018	2017	2016	2021	2020	2019	2018	2017	2016	2021	2020	2019	2018	2017	2016
INSUR	ANCE BROKERS																			
AON	[] AON PLC	DEC	1.0	1.1	1.1	1.1	1.1	1.1	94.7	67.5	66.9	61.1	54.9	54.4	NM	585.9	744.6	580.2	614.6	952.1
AJG	[] ARTHUR J. GALLAGHER & CO.	DEC	1.1	1.1	1.0	1.1	1.1	1.0	42.1	42.6	44.3	42.4	40.7	39.1	646.8	452.9	2,040.6	763.4	527.3	NM
BRO	† BROWN & BROWN, INC.	DEC	1.2	1.3	1.2	1.2	1.1	1.2	32.1	35.0	30.9	32.7	24.9	30.1	298.7	335.5	333.8	379.1	336.2	350.0
EHTH	§ EHEALTH, INC.	DEC	5.4	3.9	1.8	2.6	6.1	2.7	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0
MMC	[] MARSH & MCLENNAN COMPANIES, INC.	DEC	1.2	1.2	1.1	1.2	1.3	1.2	49.3	53.8	57.5	42.1	41.2	42.2	679.1	675.2	2,761.2	545.5	401.9	566.7
WLTW																				
MULTI-	LINE INSURANCE																			
AFG	† AMERICAN FINANCIAL GROUP, INC.	DEC	2.2	1.2	1.3	1.4	1.7	1.8	28.2	22.4	29.1	33.0	20.0	21.0	42.4	26.3	101.2	107.5	33.2	34.4
AIG	[] AMERICAN INTERNATIONAL GROUP, INC.	DEC	0.7	0.7	0.6	0.6	0.6	0.6	30.4	35.8	34.4	37.6	32.5	28.7	-68.2	-92.8	-96.0	-80.6	-73.7	-66.3
ΑIZ	[] ASSURANT, INC.	DEC	0.5	0.7	0.6	0.6	0.9	0.9	28.6	27.0	38.9	39.3	21.4	20.7	-15.7	-20.0	-38.6	-37.5	-92.1	NM
HMN	§ HORACE MANN EDUCATORS CORPORATION	DEC	2.7	2.8	2.8	0.3	0.2	0.2	45.0	20.9	23.2	18.7	16.5	16.0	69.0	24.8	25.0	-59.9	-55.6	-49.4
HIG	[] THE HARTFORD FINANCIAL SERVICES GROUP, INC.	DEC	2.1	2.1	1.9	2.2	1.0	1.0	21.7	19.0	21.1	25.0	26.7	21.6	61.6	58.4	69.7	62.7	69.3	58.0
REINS	URANCE																			
Υ	† ALLEGHANY CORPORATION	DEC	0.7	1.4	1.8	2.0	1.8	1.6	23.1	19.2	16.3	17.5	14.7	15.6	NM	160.4	84.6	67.6	84.4	117.0
RE	EVEREST RE GROUP, LTD.	DEC	1.1	1.7	1.8	2.1	2.2	2.1	24.3	16.9	6.5	7.5	7.0	7.3	338.6	62.7	23.1	20.2	22.9	31.7
RGA	† REINSURANCE GROUP OF AMERICA, INCORPORATED	DEC	1.1	1.0	8.0	0.9	8.0	8.0	22.8	21.6	23.6	29.1	27.2	35.6	498.3	2,750.7	NM	NM	NM	NM
RNR	† RENAISSANCERE HOLDINGS LTD.	DEC	2.4	1.6	1.6	1.7	1.8	2.0	10.3	9.4	11.1	12.3	14.8	10.3	6.5	10.8	13.1	14.4	16.5	12.4
TPRE																				
OTHER	COMPANIES WITH INSURANCE OPERATIONS																			
BRK.A	BERKSHIRE HATHAWAY INC.	DEC	4.1	4.3	4.1	3.7	3.7	3.3	17.4	20.7	19.6	21.9	22.9	23.5	69.0	78.8	73.9	80.0	84.0	86.5
JEF	† JEFFERIES FINANCIAL GROUP INC.	NOV	1.8	1.7	1.7	1.6	1.6	1.7	109.9	111.7	105.5	103.9	101.7	96.6	112.6	117.2	123.9	119.5	118.9	122.4

Note: Data as originally reported. CAGR-Compound annual growth rate.

[Company included in the S&P 500. †Company included in the S&P MidCap 400. §Company included in the S&P SmallCap 600. #Of the following calendar year.

Souce: S&P Capital IQ.

				Pri	ce/Earnings R	atio (High-Lov	v)			Dividen	d Payo	ut Rati	o (%)		D	vidend Yield	l (High-Lov	ı, %)	
Ticker	Company	Yr. End	2021	2020	2019	2018	2017	2016	2021	2020	2019	2018	2017 2016	2021	2020	2019	2018	2017	2016
PROPE	RTY AND CASUALTY INSURANCE																		
AMBC	§ AMBAC FINANCIAL GROUP, INC.	DEC	NM - NM	NM - NM	NM - NM	5 - 3	NM - NM	16 - 7	0.0	0.0	0.0	0.0	0.0 0.0	0.0 - 0.	0.0 -	0.0 0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
AMSF	§ AMERISAFE, INC.	DEC	20 - 15	17 - 11	15 - 11	18 - 14	28 - 21	16 - 12	34.2	24.2	20.9	23.7	33.3 17.7	11.6 - 9.	2 9.8 -	7.0 9.0 - 6.0	8.1 - 6.3	8.4 - 6.4	7.9 - 6.0
CB	[] CHUBB LIMITED	DEC	10 - 7	21 - 12	17 - 13	18 - 14	19 - 16	15 - 12	16.4	39.3	30.4	33.7	33.9 28.4	1.8 - 1.	5 2.2 -	1.6 3.2 - 1.8	2.4 - 1.9	2.4 - 1.8	2.2 - 1.8
CINF	CINCINNATI FINANCIAL CORPORATION	DEC	7 - 5	15 - 6	10 - 6	47 - 38	13 - 11	22 - 15	13.4	30.8	17.8	117.1	30.6 51.8	2.4 - 2.	0 3.0 -	2.0 4.9 - 2.1	2.9 - 1.9	3.2 - 2.6	2.9 - 2.4
EIG	§ EMPLOYERS HOLDINGS, INC.	DEC	10 - 7	11 - 7	9 - 8	11 - 9	16 - 12	12 - 7	24.3	25.5	18.0	18.9	19.5 10.8	2.7 - 2.	3 3.3 -	2.3 3.8 - 2.0	2.2 - 1.7	2.1 - 1.2	1.7 - 0.9
FAF	† FIRST AMERICAN FINANCIAL CORPORATION	DEC	7 - 5	11 - 5	10 - 7	15 - 10	15 - 10	14 - 10	17.2	28.6	26.6	37.6	37.7 38.4	4.1 - 2.	5 3.8 -	2.6 5.3 - 2.6	3.9 - 2.6	3.9 - 2.4	3.8 - 2.7
HCI	§ HCI GROUP, INC.	DEC	605 - 229	17 - 9	15 - 11	24 - 13	NM - NM	13 - 9	757.8	46.0	49.0	63.9	NM 42.9	2.7 - 1.	4 3.1 -	1.2 4.8 - 2.6	4.2 - 2.7	4.8 - 2.7	4.7 - 2.8
JRVR	§ JAMES RIVER GROUP HOLDINGS, LTD.	DEC	NM - NM	350 - 176	41 - 27	20 - 15	30 - 25	16 - 11	NM	768.1	95.8	56.6	82.4 35.4	4.8 - 0.	8 4.7 -	2.2 4.3 - 2.2	3.5 - 2.3	5.3 - 2.8	6.8 - 2.8
KMPR	† KEMPER CORPORATION	DEC	NM - NM	14 - 9	11 - 8	26 - 16	30 - 16	137 - 72	NM	19.2	12.8	29.7	40.9 292.9	2.8 - 1.	9 2.3 -	1.5 2.1 - 1.4	1.5 - 1.1	1.8 - 1.1	2.6 - 1.4
KNSL	§																		
L	[] LOEWS CORPORATION	DEC	10 - 7	NM - NM	18 - 14	27 - 21	15 - 13	25 - 18	4.1	NM	8.2	12.6	7.2 12.8	0.5 - 0.	4 0.6 -	0.4 0.9 - 0.4	0.6 - 0.4	0.6 - 0.5	0.6 - 0.5
MCY	† MERCURY GENERAL CORPORATION	DEC	15 - 11	8 - 5	11 - 8	NM - NM	24 - 20	46 - 33	56.6	37.3	43.4	NM	95.2 187.8	5.8 - 4.	5 5.6 -	3.7 7.4 - 4.7	5.3 - 3.9	5.9 - 4.1	4.7 - 3.9
ORI	† OLD REPUBLIC INTERNATIONAL CORPORATION	DEC	5 - 4	13 - 7	7 - 6	18 - 16	10 - 8	11 - 9	16.6	44.8	22.3	62.0	35.5 41.5	11.5 - 8.	8 10.6 -	7.1 10.3 - 3.4	4.0 - 3.3	4.0 - 3.4	4.2 - 3.6
PLMR	§ PALOMAR HOLDINGS, INC.	DEC	62 - 34	474 - 167	112 - 37	NA - NA	NA - NA	NA - NA	0.0	0.0	0.0	0.0	0.0 0.0	0.0 - 0.	0.0 -	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
PRA	§ PROASSURANCE CORPORATION	DEC	NM - NM	NM - NM	2428 - 1853	65 - 40	31 - 26	22 - 16	7.5	NM	9283.3	672.5	61.5 43.5	1.0 - 0.	7 1.3 -	0.7 6.4 - 1.0	5.0 - 3.8	16.8 - 3.9	11.6 - 9.4
RLI	† RLICORP.	DEC	19 - 16	31 - 20	23 - 15	55 - 41	26 - 21	27 - 21	32.2	27.3	21.3	60.2	34.9 30.2	3.0 - 2.	5 2.9 -	1.7 2.8 - 1.9	2.9 - 1.9	4.5 - 2.5	4.4 - 1.2
SAFT	§ SAFETY INSURANCE GROUP, INC.	DEC	10 - 8	10 - 7	16 - 12	18 - 13	20 - 16	17 - 12	41.3	39.5	52.9	58.7	72.9 65.4	4.6 - 3.	6 5.0 -	4.1 5.4 - 3.7	4.1 - 3.2	4.5 - 3.3	4.7 - 3.7
SIGI	† SELECTIVE INSURANCE GROUP, INC.	DEC	13 - 10	17 - 10	18 - 13	22 - 18	21 - 14	16 - 11	17.2	22.1	17.6	23.5	21.9 21.3	1.5 - 1.	2 1.6 -	1.2 2.2 - 1.3	1.4 - 1.0	1.3 - 1.1	1.6 - 1.1
STC	§ STEWART INFORMATION SERVICES CORPORATION	DEC	7 - 4	8 - 3	13 - 10	23 - 19	23 - 17	26 - 17	11.3	19.5	36.1	59.5	57.8 50.2	3.3 - 1.	9 2.8 -	1.7 5.6 - 2.5	3.6 - 2.7	3.1 - 2.5	3.4 - 2.5
ALL	[] THE ALLSTATE CORPORATION	DEC	28 - 20	7 - 4	8 - 6	18 - 13	11 - 8	16 - 12	62.5	13.9	16.2	34.6	18.0 32.1	3.0 - 2.	4 3.1 -	1.9 2.9 - 1.6	2.4 - 1.8	2.1 - 1.4	1.9 - 1.4
THG	† THE HANOVER INSURANCE GROUP, INC.	DEC	12 - 10	15 - 9	13 - 10	14 - 11	25 - 18	25 - 20	24.4	27.7	23.0	24.1	46.6 51.8	2.4 - 1.	9 2.5 -	2.0 3.1 - 1.8	2.3 - 1.8	2.1 - 1.7	2.5 - 1.9
PGR	[] THE PROGRESSIVE CORPORATION	DEC	19 - 15	10 - 7	12 - 9	16 - 11	21 - 13	20 - 17	112.6	27.7	42.1	25.6	24.8 50.3	5.3 - 1.	6 5.8 -	3.0 4.0 - 2.6	3.9 - 1.7	2.2 - 1.2	2.7 - 1.3
TRV	THE TRAVELERS COMPANIES, INC.	DEC	11 - 9	13 - 8	15 - 12	16 - 12	18 - 16	12 - 10	23.7	31.9	32.2	32.3	38.2 25.1	2.4 - 1.	9 2.5 -	2.2 4.0 - 2.3	2.7 - 2.1	2.5 - 1.9	2.5 - 2.1
UFCS	§ UNITED FIRE GROUP, INC.	DEC	11 - 6	NM - NM	94 - 71	55 - 37	25 - 19	26 - 18	18.7	NM	220.4	109.3	53.6 49.3	2.7 - 1.	6 5.0 -	1.7 6.9 - 2.8	3.1 - 2.2	2.8 - 2.0	2.8 - 2.0
UIHC	§ UNITED INSURANCE HOLDINGS CORP.		NM - NM	NM - NM	NM - NM	3291 - 2324	65 - 49	74 - 40	NM	NM		3540.7	88.6 87.3			3.0 5.5 - 1.9			
UVE	§ UNIVERSAL INSURANCE HOLDINGS, INC.	DEC	26 - 19	47 - 19	30 - 18	15 - 8	9 - 5	10 - 6	103.2	106.8	46.7	17.9	22.5 24.3	6.7 - 4.	0 6.1 -	4.7 6.9 - 2.6	3.2 - 1.7	2.7 - 1.6	4.2 - 2.4
WRB	[] W. R. BERKLEY CORPORATION	DEC	15 - 11	28 - 15	20 - 13	16 - 13	17 - 14	14 - 10	8.8	15.9	11.6	11.2	12.2 10.3	1.4 - 0.	5 0.8 -	0.6 3.9 - 0.7	3.0 - 1.7	2.9 - 2.0	2.5 - 0.7

		_		Price	e/Earnings R	atio (High-Lov	v)		D	ividend	l Payou	t Ratio	o (%)			Divid	end Yield	(High-Low	, %)	
Ticker	Company	Yr. End	2021	2020	2019	2018	2017	2016	2021	2020	2019	2018	2017 2016	2021	20	20	2019	2018	2017	2016
INSUR/	ANCE BROKERS																			
AON	[] AON PLC	DEC	57 - 36	28 - 17	33 - 22	36 - 28	32 - 23	22 - 16	35.6	20.9	26.8	33.7	29.7 24.7	0.9 - 0	.6 0.9	- 0.6	1.2 - 0.7	1.2 - 0.9	1.2 - 1.0	1.2 - 0.9
AJG	[] ARTHUR J. GALLAGHER & CO.	DEC	38 - 25	30 - 16	27 - 20	23 - 18	25 - 19	23 - 16	43.2	42.4	48.0	47.6	58.7 68.6	1.4 - 1	.1 1.7	- 1.1	2.6 - 1.5	2.4 - 1.8	2.5 - 2.1	3.1 - 2.3
BRO	† BROWN & BROWN, INC.	DEC	33 - 21	29 - 19	28 - 19	25 - 20	18 - 14	24 - 16	18.3	20.9	22.9	24.6	19.4 27.3	0.8 - 0	.6 0.9	- 0.6	1.1 - 0.7	1.2 - 0.9	1.2 - 1.0	1.3 - 1.1
EHTH	§ EHEALTH, INC.	DEC	NM - NM	NM - NM	38 - 12	3212 - 1093	20 - 8	874 - 450	0.0	0.0	0.0	0.0	0.0 0.0	0.0 - 0	0.0	- 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
MMC	[] MARSH & MCLENNAN COMPANIES, INC.	DEC	28 - 17	30 - 19	33 - 23	27 - 23	30 - 23	20 - 15	32.3	46.2	50.5	48.5	49.2 38.6	1.5 - 1	.2 1.7	- 1.3	2.4 - 1.5	2.2 - 1.7	2.2 - 1.7	2.0 - 1.8
WLTW																				
MULTI-I	LINE INSURANCE																			
AFG	† AMERICAN FINANCIAL GROUP, INC.	DEC	6 - 3	14 - 6	11 - 9	20 - 14	20 - 16	12 - 9	113.0	22.0	16.4	24.0	22.9 15.1	1.8 - 1	.5 2.5	- 1.4	7.0 - 2.1	3.6 - 2.8	3.1 - 2.4	2.9 - 2.3
AIG	[] AMERICAN INTERNATIONAL GROUP, INC.	DEC	6 - 3	NM - NM	15 - 10	NM - NM	NM - NM	NM - NM	11.8	NM	33.9	NM	NM NN	1 2.6 - 2	.0 3.5	- 2.1	6.8 - 2.3	3.5 - 2.2	3.2 - 2.0	2.2 - 1.9
AIZ	ASSURANT, INC.	DEC	7 - 5	20 - 11	23 - 15	28 - 21	11 - 9	10 - 7	11.8	39.2	44.5	59.0	22.9 22.2	1.9 - 1	4 2.2	- 1.5	3.1 - 1.8	2.9 - 1.9	2.6 - 2.0	2.5 - 2.0
HMN	§ HORACE MANN EDUCATORS CORPORATION	DEC	13 - 11	14 - 10	11 - 8	107 - 81	12 - 8	21 - 14	36.0	37.2	25.7	254.5	27.2 52.9	3.7 - 2	.9 3.4	- 2.7	3.8 - 2.5	3.3 - 2.4	3.0 - 2.3	3.2 - 2.3
HIG	[] THE HARTFORD FINANCIAL SERVICES GROUP, INC	DEC	11 - 7	13 - 5	11 - 7	12 - 8	NM - NM	21 - 16	21.4	27.5	21.8	21.0	NM 37.3	2.5 - 2	.0 2.9	- 1.9	5.0 - 2.0	2.9 - 1.9	2.7 - 1.7	2.0 - 1.6
REINSU	JRANCE																			
Υ	† ALLEGHANY CORPORATION	DEC	10 - 8	118 - 63	13 - 10	250 - 214	112 - 89	21 - 15	0.0	0.0	0.0	0.0	0.0 0.0	0.0 - 0	.0 0.0	- 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
RE	EVEREST RE GROUP, LTD.	DEC	8 - 6	23 - 13	11 - 8	120 - 94	23 - 18	9 - 7	17.9	48.4	23.2	242.8	42.9 19.6	2.5 - 2	.0 2.9	- 2.2	3.8 - 2.1	2.7 - 2.1	2.6 - 2.0	2.4 - 1.8
RGA	† REINSURANCE GROUP OF AMERICA, INCORPORAT	DEC	15 - 10	26 - 9	12 - 10	15 - 11	6 - 4	12 - 7	31.4	43.9	18.7	19.6	6.4 14.3	3.1 - 2	.3 3.1	- 2.1	4.9 - 1.7	1.9 - 1.5	1.9 - 1.2	1.6 - 1.2
RNR TPRE	† RENAISSANCERE HOLDINGS LTD.	DEC	NM - NM	13 - 8	12 - 8	29 - 24	NM - NM	12 - 9	NM	13.0	12.8	36.5	NM 14.7	1.1 - 0	.8 1.0	- 0.8	1.2 - 0.7	1.1 - 0.7	1.1 - 0.9	1.0 - 0.8
OTHER	COMPANIES WITH INSURANCE OPERATIONS																			
BRK.A	BERKSHIRE HATHAWAY INC.	DEC	8 - 6	13 - 9	7 - 6	137 - 115	11 - 9	17 - 13	0.0	0.0	0.0	0.0	0.0 0.0	0.0 - 0	0 00	- 00	0.0 - 0.0	00 - 00	00 - 00	0.0 - 0.0
JEF	† JEFFERIES FINANCIAL GROUP INC.	NOV	7 - 4	9 - 4	7 - 5	9 - 6	60 - 47	63 - 43	13.3	20.8			68.4 70.2				5.0 - 2.3			

Note: Data as originally reported. CAGR-Compound annual growth rate.

[Company included in the S&P 500.†Company included in the S&P MidCap 400. §Company included in the S&P SmallCap 600. #Of the following calendar year. Souce: S&P Capital Q.

		_		Earni	ngs per	Share	(\$)		Tar	ngible B	ook Val	ue per S	Share (\$	)	i		Share Price (I	ligh-Low, \$)		
Ticker	Company	Yr. End	2021	2020	2019	2018	2017	2016	2021	2020	2019	2018	2017	2016	2021	2020	2019	2018	2017	2016
PROPE	RTY AND CASUALTY INSURANCE																			
AMBC	§ AMBAC FINANCIAL GROUP, INC.	DEC	-0.6	-9.5	-4.7	4.0	-7.3	1.6	13.6	13.6	23.0	19.3	11.8	16.6	18.6 - 13.1	22.9 - 8.7	22.0 - 14.4	23.3 - 14.0	23.6 - 13.2	27.3 - 11.9
AMSF	§ AMERISAFE, INC.	DEC	3.4	4.5	4.8	3.7	2.4	4.1	20.6	22.7	22.3	21.3	22.1	23.7	67.1 - 50.6	80.7 - 48.0	72.0 - 53.4	68.0 - 50.5	69.4 - 51.2	66.3 - 46.9
CB	[] CHUBB LIMITED	DEC	19.3	7.8	9.7	8.5	8.2	8.9	88.3	84.8	75.2	62.9	62.8	56.2	197.9 - 144.0	167.7 - 87.4	162.4 - 124.5	157.5 - 119.5	156.0 - 127.2	133.9 - 106.8
CINF	[] CINCINNATI FINANCIAL CORPORATION	DEC	18.1	7.5	12.1	1.8	6.3	3.6	81.8	67.0	60.5	48.1	50.3	42.9	127.3 - 82.6	115.5 - 46.1	118.2 - 74.3	82.9 - 66.3	82.0 - 68.2	79.6 - 53.6
EIG	§ EMPLOYERS HOLDINGS, INC.	DEC	4.2	4.0	4.8	4.2	3.1	3.2	40.4	39.0	34.5	28.9	27.7	24.8	43.8 - 30.2	44.9 - 25.5	47.5 - 39.3	48.0 - 38.4	50.5 - 35.6	39.8 - 22.6
FAF	† FIRST AMERICAN FINANCIAL CORPORATION	DEC	11.1	6.2	6.2	4.2	3.8	3.1	30.8	24.9	23.1	17.1	15.3	12.3	79.8 - 48.7	66.8 - 29.4	64.4 - 43.5	62.7 - 42.0	57.5 - 36.5	43.6 - 31.7
HCI	§ HCI GROUP, INC.	DEC	0.2	3.5	3.3	2.3	-0.8	2.9	30.9	25.4	23.4	21.1	21.6	24.7	139.8 - 51.6	62.9 - 31.6	51.9 - 36.7	59.3 - 29.9	50.9 - 27.1	40.5 - 24.4
JRVR	§ JAMES RIVER GROUP HOLDINGS, LTD.	DEC	-4.9	0.2	1.3	2.1	1.4	2.5	13.6	18.8	18.4	16.3	16.0	16.1	56.1 - 24.4	57.4 - 25.3	52.2 - 34.3	43.5 - 32.2	46.2 - 37.2	42.2 - 25.9
KMPR	† KEMPER CORPORATION	DEC	-1.9	6.1	8.0	3.2	2.3	0.3	37.2	48.1	38.3	25.6	34.8	32.2	84.0 - 51.4	85.7 - 53.8	92.0 - 64.9	87.0 - 50.9	71.5 - 36.4	46.0 - 23.5
KNSL	§																			
L	[] LOEWS CORPORATION	DEC	6.1	-3.3	3.1	2.0	3.5	1.9	70.0	61.2	60.8	55.3	53.9	52.5	59.4 - 44.2	56.9 - 27.3	56.2 - 44.2	53.6 - 42.1	51.0 - 45.0	48.1 - 33.8
MCY	† MERCURY GENERAL CORPORATION	DEC	4.5	6.8	5.8	-0.1	2.6	1.3	37.7	35.7	31.5	28.2	30.7	30.5	67.9 - 50.4	55.7 - 33.5	65.2 - 46.7	61.8 - 41.4	64.5 - 51.9	61.2 - 43.0
ORI	† OLD REPUBLIC INTERNATIONAL CORPORATION	DEC	5.1	1.9	3.5	1.2	1.9	1.6	22.3	20.2	19.4	16.7	17.7	17.2	26.7 - 17.9	23.6 - 11.9	24.1 - 19.7	23.1 - 19.5	21.6 - 17.9	20.0 - 16.5
PLMR	§ PALOMAR HOLDINGS, INC.	DEC	1.8	0.2	0.5	1.1	0.2	0.4	15.1	13.8	9.3	5.6	4.6	4.3	115.4 - 60.1	121.9 - 39.2	56.7 - 18.1	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
PRA	§ PROASSURANCE CORPORATION	DEC	2.7	-3.3	0.0	0.9	2.0	2.8	24.2	22.9	22.9	23.0	24.3	28.2	29.2 - 17.4	37.6 - 12.7	45.5 - 34.1	57.1 - 35.0	63.5 - 50.7	63.5 - 45.8
RLI	† RLI CORP.	DEC	6.1	3.5	4.2	1.4	2.4	2.6	26.0	24.0	21.0	16.9	18.0	17.3	117.8 - 95.5	110.6 - 66.0	99.9 - 64.5	80.0 - 58.5	63.7 - 50.3	71.5 - 54.3
SAFT	§ SAFETY INSURANCE GROUP, INC.	DEC	8.8	9.2	6.5	5.4	4.1	4.3	62.5	59.4	52.6	47.0	46.1	44.3	88.0 - 72.8	95.9 - 65.5	104.0 - 77.6	99.7 - 70.5	84.0 - 65.8	75.1 - 52.2
SIGI	† SELECTIVE INSURANCE GROUP, INC.	DEC	6.5	4.1	4.5	3.0	2.8	2.7	46.1	42.3	36.8	30.3	29.1	26.3	91.5 - 62.8	70.9 - 37.1	81.3 - 58.1	67.2 - 53.6	62.4 - 38.5	44.0 - 29.3
STC	§ STEWART INFORMATION SERVICES CORPORATION	DEC	11.9	6.2	3.3	2.0	2.1	1.9	1.9	17.3	17.8	14.3	15.0	14.4	81.0 - 45.6	52.1 - 20.3	45.0 - 32.6	47.4 - 38.7	48.0 - 34.5	48.6 - 30.3
ALL	[] THE ALLSTATE CORPORATION	DEC	5.0	17.3	14.0	5.7	9.4	4.7	65.1	83.6	65.0	48.6	50.9	48.1	140.0 - 102.5	125.9 - 64.1	113.3 - 80.2	104.5 - 77.0	105.4 - 73.0	74.8 - 56.0
THG	† THE HANOVER INSURANCE GROUP, INC.	DEC	11.5	9.4	10.5	9.1	4.3	3.6	83.6	83.1	71.3	65.6	66.3	63.0	143.2 - 111.1	144.7 - 75.1	140.0 - 107.4	131.4 - 104.5	109.6 - 79.2	92.0 - 74.1
PGR	[] THE PROGRESSIVE CORPORATION	DEC	5.7	9.7	6.7	4.4	2.7	1.8	29.4	27.2	21.4	16.4	14.6	12.2	107.6 - 84.9	102.1 - 62.2	85.0 - 58.1	73.7 - 50.8	57.2 - 35.2	35.9 - 29.3
TRV	THE TRAVELERS COMPANIES, INC.	DEC	14.5	10.5	9.9	9.3	7.3	10.3	101.9	98.7	84.7	70.6	71.6	69.3	163.3 - 133.1	141.9 - 77.0	155.1 - 115.1	150.6 - 111.1	138.0 - 113.8	123.1 - 101.2
UFCS	§ UNITED FIRE GROUP, INC.	DEC	3.2	-4.5	0.6	1.1	2.0	1.9	34.8	32.7	35.5	34.5	38.1	36.1	36.4 - 19.9	47.5 - 18.8	56.2 - 40.9	61.6 - 39.0	49.9 - 39.0	50.8 - 35.2
UIHC	§ UNITED INSURANCE HOLDINGS CORP.	DEC	-1.4	-2.3	-0.7	0.0	0.3	0.3	5.1	7.0	9.3	9.7	10.0	10.0	8.2 - 2.8	12.7 - 4.3	17.0 - 10.7	22.4 - 15.7	17.8 - 13.0	20.0 - 9.5
UVE	§ UNIVERSAL INSURANCE HOLDINGS, INC.	DEC	0.7	0.6	1.4	3.3	3.0	2.8	13.8	14.4	15.1	14.4	12.7	10.6	17.5 - 12.6	28.1 - 10.8	40.9 - 23.6	50.5 - 26.8	29.2 - 15.1	28.6 - 15.9
WRB	[] W. R. BERKLEY CORPORATION	DEC	3.7	1.9	2.3	2.2	1.9	2.1	24.1	22.7	21.1	18.8	18.7	17.7	56.6 - 41.0	53.3 - 28.7	51.7 - 31.6	35.9 - 29.8	32.5 - 27.6	29.7 - 21.1

			Earni	ngs per	Share (	(\$)		т	angible E	Book Valu	e per Sh	are (\$)				Sh	are Price	(High-Low	, \$)					
Ticker INSUR	Company ANCE BROKERS	Yr. End	2021	2020	2019	2018	2017	2016	2021	2020	2019	2018	2017	2016	2021	2020	20	)19	20	118	2	017	20	16
AON	[] AON PLC	DEC	5.6	8.5	6.4	4.6	4.7	5.2	-36.6	-25.8	-24.0	-21.5	-22.2	-14.6	326.3 - 200.7	238.2 - 143.9	212.7	- 141.6	166.6	- 130.9	152.8	- 109.8	116.6	- 83.8
AJG	ARTHUR J. GALLAGHER & CO.	DEC	4.4	4.2	3.5	3.4	2.6	2.2	-19.7	-12.1	-14.8	-10.3	-8.7	-10.1	171.2 - 112.9	129.1 - 65.1		- 70.4		- 62.0		- 51.8	52.3	
BRO	† BROWN & BROWN, INC.	DEC	2.1	1.7	1.4	1.2	1.4	0.9	-5.7	-6.0	-4.7	-4.8	-2.8	-3.6	70.8 - 42.7	48.7 - 30.7		- 26.2		- 24.3		- 20.6	22.8	
EHTH	§ EHEALTH, INC.	DEC	-4.6	1.7	2.7	0.0	1.3	0.0	26.8	29.5	20.0	12.5	14.0	3.0	93.2 - 21.0	152.2 - 60.4	112.2			- 13.6		- 10.3	15.1	
MMC	MARSH & MCLENNAN COMPANIES, INC.	DEC	6.1	3.9	3.4	3.2	2.9	3.4	-17.1	-18.9	-20.1	-7.9	-6.9	-7.4	175.1 - 107.0	121.0 - 74.3	113.9	- 77.9	89.6	- 74.3	86.5	- 66.8	69.8	- 50.8
WLTW																								
MULTI-	LINE INSURANCE													1										
AFG	† AMERICAN FINANCIAL GROUP, INC.	DEC	23.3	8.2	9.9	5.9	5.3	7.3	54.9	76.2	66.7	52.7	57.8	53.9	146.6 - 79.2	115.0 - 44.0	111.9	- 88.7	121.7	- 84.2	109.4	- 85.6	88.5	- 64.9
AIG	[] AMERICAN INTERNATIONAL GROUP, INC.	DEC	10.8	-6.9	3.7	0.0	-6.5	-0.8	74.6	71.4	69.9	59.9	70.6	75.1	62.5 - 36.8	56.4 - 16.1		- 38.7	65.1			- 57.9	67.0	
AIZ	ASSURANT, INC.	DEC	22.8	7.0	5.9	4.0	9.4	9.1	39.4	45.9	46.1	35.0	58.5	54.1	172.2 - 121.6	142.6 - 76.3	134.3	- 88.3	111.4	- 82.3	107.0	- 86.0	94.4	- 64.4
HMN	§ HORACE MANN EDUCATORS CORPORATION	DEC	3.4	3.2	4.4	0.4	4.1	2.0	42.4	38.3	32.5	30.3	35.7	31.0	44.7 - 36.2	46.2 - 30.5	48.2	- 34.4	47.5	- 35.3	47.7	- 33.9	43.7	- 27.2
HIG	[] THE HARTFORD FINANCIAL SERVICES GROUP, INC.	DEC	6.6	4.8	5.7	4.9	-8.6	2.3	44.0	42.9	36.2	30.1	32.4	43.6	78.2 - 47.5	61.3 - 19.0	62.8	- 42.8	59.2	- 40.5	58.6	- 46.4	48.8	- 36.5
REINSI Y	JRANCE																							
RE	EVEREST RE GROUP, LTD.	DEC	34.6	12.8	24.7	2.2	11.7	23.7	258.2	243.3	223.9	193.4	205.0	197.4	289.7 - 209.6	294.3 - 157.3		- 204.8	264.9		277.2	- 208.8	219.5	
RGA	† REINSURANCE GROUP OF AMERICA, INCORPORATED	DEC	9.0	6.3	13.6	11.0	27.7	10.8	191.2	208.5	182.1	131.4	146.1	108.0	134.9 - 94.3	164.7 - 55.4		- 136.5	164.9	- 127.8	165.1	- 121.9	129.3	
RNR TPRE	† RENAISSANCERE HOLDINGS LTD.	DEC	-1.6	15.3	16.3	4.9	-6.2	11.4	126.7	133.5	114.6	98.5	93.7	102.3	175.1 - 137.7	202.7 - 113.3	201.4	- 127.2	142.6	- 116.5	152.0	- 120.6	137.2	- 107.3
OTHER BRK.A JEF	COMPANIES WITH INSURANCE OPERATIONS BERKSHIRE HATHAWAYINC. † JEFFERIES FINANCIAL GROUP INC.	DEC 5	59,459.8 2 6.1	6,667.8 4 2.7	9,828.5 3.0	2,446.2 2 3.2	7,325.5 1 0.5	4,645.1 0.3	272,480.0 2 35.5	19,336.8 30.0	191,497.1 1 26.3	43,494.7 1 26.6	42,136.4 1 21.5	02,445.7 21.2	455910.0 - 340816.1 44.5 - 22.9	352500.0 - 239440.0 24.7 - 11.2		- 286650.0 - 16.8		- 279410.0 - 16.2		- 237983.8 - 22.2	250786.0 24.2	

Note: Data as originally reported. CAGR-Compound arrural growth rate.

[Company included in the S&P 500. †Company included in the S&P MidCap 400. §Company included in the S&P SmallCap 600. #Of the following calendar year.

Souce: S&P Capital IQ.

The accuracy and completeness of information obtained from third-party sources, and the opinions based on such information, are not guaranteed.

## **Disclosures**

CFRA's Industry Surveys Reports (the "Industry Surveys") have been prepared by Accounting Research & Analytics, LLC and/or one of its affiliates. The Industry Surveys are published and originally distributed by Accounting Research & Analytics, LLC d/b/a CFRA ("CFRA US"), with the following exceptions: In the United Kingdom/European Union/European Economic Area, the Industry Surveys are published and originally distributed by CFRA U.K. Limited (company number 08456139 registered in England & Wales with its registered office address at New Derwent House, 69-73 Theobalds Road, London, WC1X 8TA, United Kingdom), which is regulated by the U.K. Financial Conduct Authority (No. 775151); in Malaysia, the Industry Surveys are published and originally distributed by CFRA MY Sdn Bhd (Company No. 683377-A) and regulated by Securities Commission Malaysia, No. CMSL/A0181/2007 ("CFRA Malaysia"). CFRA Malaysia is a wholly-owned subsidiary of CFRA US. For Recipients in Canada: This report is not prepared subject to Canadian disclosure requirements and may not be suitable for Canadian investors.

The content of this report and the opinions expressed herein are those of CFRA based upon publicly available information that CFRA believes to be reliable and the opinions are subject to change without notice. This analysis has not been submitted to, nor received approval from, the United States Securities and Exchange Commission or any other regulatory body. While CFRA exercised due care in compiling this analysis, CFRA AND ALL RELATED ENTITIES SPECIFICALLY DISCLAIM ALL WARRANTIES, EXPRESS OR IMPLIED, to the full extent permitted by law, regarding the accuracy, completeness, or usefulness of this information and assumes no liability with respect to the consequences of relying on this information for investment or other purposes.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of CFRA. The Content shall not be used for any unlawful or unauthorized purposes. CFRA and any third-party providers, as well as their directors, officers, shareholders, employees or agents do not guarantee the accuracy, completeness, timeliness or availability of the Content.

Past performance is not necessarily indicative of future results. This document may contain forward-looking statements or forecasts; such forecasts are not a reliable indicator of future performance.

This report is not intended to, and does not, constitute an offer or solicitation to buy and sell securities or engage in any investment activity. This report is for informational purposes only. Recommendations in this report are not made with respect to any particular investor or type of investor. Securities, financial instruments or strategies

mentioned herein may not be suitable for all investors and this material is not intended for any specific investor and does not take into account an investor's particular investment objectives, financial situations or needs. Before acting on any recommendation in this material, you should consider whether it is suitable for your particular circumstances and, if necessary, seek professional advice.

CFRA may license certain intellectual property or provide services to, or otherwise have a business relationship with, certain issuers of securities that are the subject of CFRA research reports, including exchange-traded investments whose investment objective is to substantially replicate the returns of a proprietary index of CFRA. In cases where CFRA is paid fees that are tied to the amount of assets invested in a fund or the volume of trading activity in a fund, investment in the fund may result in CFRA receiving compensation in addition to the subscription fees or other compensation for services rendered by CFRA, however, no part of CFRA's compensation for services is tied to any recommendation or rating. Additional information on a subject company may be available upon request.

CFRA's financial data provider is S&P Global Market Intelligence. THIS DOCUMENT CONTAINS COPYRIGHTED AND TRADE SECRET MATERIAL DISTRIBUTED UNDER LICENSE FROM S&P GLOBAL MARKET INTELLIGENCE. FOR RECIPIENT'S INTERNAL USE ONLY.

The Global Industry Classification Standard (GICS®) was developed by and/or is the exclusive property of MSCI, Inc. and S&P Global Market Intelligence. GICS is a service mark of MSCI and S&P Global Market Intelligence and has been licensed for use by CFRA.

Certain information in this report is provided by S&P Global, Inc. and/or its affiliates and subsidiaries (collectively "S&P Global"). Such information is subject to the following disclaimers and notices: "Copyright © 2023, S&P Global Market Intelligence (and its affiliates as applicable). All rights reserved. Nothing contained herein is investment advice and a reference to a particular investment or security, a credit rating or any observation concerning a security or investment provided by S&P Global is not a recommendation to buy, sell or hold such investment or security or make any other investment decisions. This may contain information obtained from third parties, including ratings from credit ratings agencies. Reproduction and distribution of S&P Global's information and third-party content in any form is prohibited except with the prior written permission of S&P Global or the related third party, as applicable. Neither S&P Global nor its third-party providers guarantee the completeness, timeliness or availability of any information, including ratings, and are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, or for the results obtained from the use of such information or content, S&P GLOBAL AND ITS THIRD-PARTY CONTENT PROVIDERS GIVE NO EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR

PURPOSE OR USE AND ALL S&P INFORMATION IS PROVIDED ON AN AS-IS BASIS. S&P GLOBAL AND ITS THIRD-PARTY CONTENT PROVIDERS SHALL NOT BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, EXEMPLARY, COMPENSATORY, PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES, COSTS, EXPENSES, LEGAL FEES, OR LOSSES (INCLUDING LOST INCOME OR PROFITS AND OPPORTUNITY COSTS OR LOSSES CAUSED BY NEGLIGENCE) IN CONNECTION WITH ANY USE OF THEIR INFORMATION OR CONTENT, INCLUDING RATINGS. Credit ratings are statements of opinions and are not statements of fact or recommendations to purchase, hold or sell securities. They do not address the suitability of securities or the suitability of securities for investment purposes and should not be relied on as investment advice."

Certain information in this report may be provided by Securities Evaluations, Inc. ("SE"), a wholly owned subsidiary of Intercontinental Exchange. SE is a registered investment adviser with the United States Securities and Exchange Commission (SEC). SE's advisory services include evaluated pricing and model valuation of fixed income securities, derivative valuations and Odd-Lot Pricing that consists of bid- and ask-side evaluated prices for U.S. Municipal and U.S. Corporate Securities (together called valuation services). Such information is subject to the following disclaimers and notices: "No content (including credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of SE. The Content shall not be used for any unlawful or unauthorized purposes. SE and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively SE Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. SE Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. SE PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION.

In no event shall SE Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages. Credit-related and other analyses and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact or recommendations

to purchase, hold, or sell any securities or to make any investment decisions. SE assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. SE's opinions and analyses do not address the suitability of any security. SE does not act as a fiduciary or an investment advisor. While SE has obtained information from sources it believes to be reliable, SE does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives. Valuations services are opinions and not statements of fact or recommendations to purchase, hold or sell any security or instrument, or to make any investment decisions. The information provided as part of valuations services should not be intended as an offer, promotion or solicitation for the purchase or sale of any security or other financial instrument nor should it be considered investment advice. Valuations services do not address the suitability of any security or instrument, and securities, financial instruments or strategies mentioned by SE may not be suitable for all investors. SE does not provide legal, accounting or tax advice, and clients and potential clients of valuation services should consult with an attorney and/or a tax or accounting professional regarding any specific legal, tax or accounting provision(s) applicable to their particular situations and in the countries and jurisdictions where they do business. SE has redistribution relationships that reflect evaluated pricing, derivative valuation and/or equity pricing services of other unaffiliated firms with which SE has contracted to distribute to its client base. Pricing and data provided by these third-party firms are the responsibilities of those firms, and not SE, and are produced under those firms' methodologies, policies and procedures. Valuations services provided by SE and products containing valuations services may not be available in all countries or jurisdictions. Copyright © 2023 by Intercontinental Exchange Inc. All rights reserved."

Redistribution or reproduction is prohibited without written permission. Copyright © 2023 CFRA. All rights reserved.