SEE

W. R. Berkley Corporation

2022 ANNUAL REPORT

IF YOU DON'T LOOK, YOU WON'T SEE.

Evening Shadows, Maxfield Parrish

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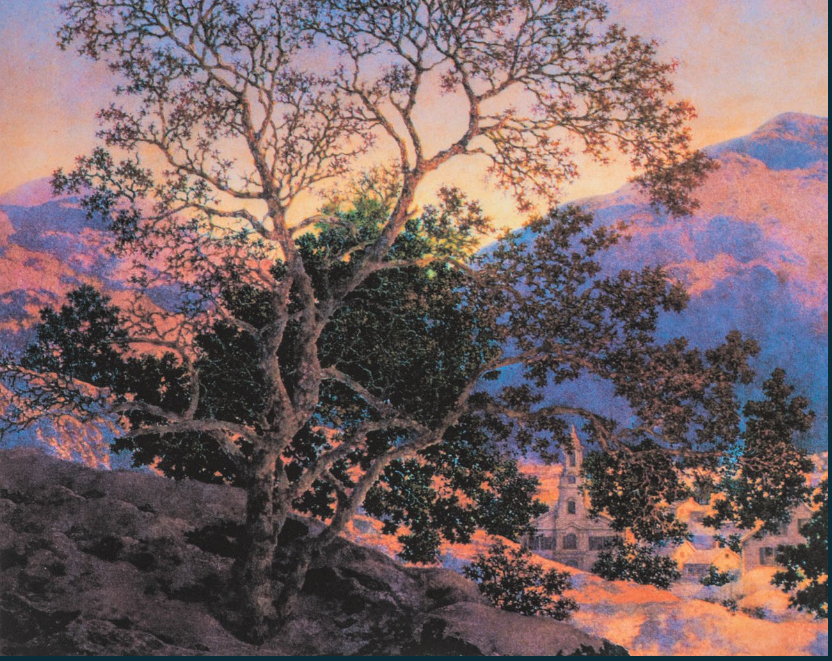


Evening Shadows, Maxfield Parrish

IF YOU DON'T LOOK, YOU WON'T SEE.

When you opened the cover, you may have thought you saw all there was to see—a lovely mountain scene. Maybe you even noticed the little church nestled in the middle. But look more closely, and you'll see an entire village secluded behind the trees.

Most people think insurance companies are all the same, but you have to really look closely at a company to see why it is different or special, or, conversely, why the risk is not as easy to assess as it appears on the surface.

Look carefully at our Company and you will see some of the things that make us special.

- Our clear objective has always been to maximize our long-term risk-adjusted return, which necessitates not only understanding our current exposures, but also anticipating what impacts the constantly changing environment can have on future exposures and maintaining a keen awareness of the risks from unforeseen events.

- As a specialty company with a decentralized structure, we are close to our customers and better able to understand their needs, provide customized, innovative solutions and make decisions quickly.

- We build our businesses around teams with knowledge and expertise and invest in their ongoing development. Many of our colleagues at our businesses have been with the Company for the majority of their careers or since the establishment of their operating unit.

- Our key incentive compensation plan, which requires managers to hold our stock as long as they are with the Company, means that management is in it for the long term and fully aligned with shareholders' interests.

Over the long term, we have focused on creating shareholder value by building outstanding teams of people and meeting the needs of our customers, all the while recognizing that we have an obligation to society. All of these activities are important contributors to our Company culture, which emphasizes that everything we do and every person who participates is important to our enterprise, and that always doing the right thing is the cornerstone of our success.

2022 FINANCIAL HIGHLIGHTS

By taking advantage of challenging opportunities and bringing together talented people and capital, we feel confident that we will be able to continue to deliver outstanding long-term returns.

COMBINED RATIO

Averaged 92.6% over the past 5 years

89.3%

TOTAL REVENUES

Increased by 45.3% over the past 5 years

$11.2B

RETURN ON STOCKHOLDERS' EQUITY

Averaged 14.0% over the past 5 years

20.8%

BOOK VALUE PER SHARE

Grew 55.0% before dividends and share repurchases over the past 5 years

$25.51

TO OUR SHAREHOLDERS

IF YOU
DON'T LOOK,
YOU WON'T
SEE

LEFT TO RIGHT:

W. Robert Berkley, Jr.
President and Chief Executive Officer

William R. Berkley
Executive Chairman

2022 was truly an outstanding year for W. R. Berkley Corporation. No matter what the measure used, this was a year for the record books. The results were a consequence of many decisions made over an extended period of time by all team members throughout the Company. As always, our primary target is to optimize our risk-adjusted return.

"No matter what the measure used, this was a year for the record books."

We focused first and foremost on continuing to improve underwriting results. We did this by examining each line of business, reducing expenses, and growing in our most profitable areas. Simultaneously, we took advantage of our assessment of the ongoing inflationary trends and positioned our fixed income portfolio with a short duration and high credit quality, which protected our balance sheet from the mark-to-market impact of increasing interest rates. Our common stock portfolio performed exceptionally well with the market being down approximately 20% and our portfolio being up approximately 10%. Our private equity investments also performed well, as did our real estate investments. We reported record premiums and all-time record earnings. Our return on capital exceeded 20%. It was an exceptional outcome in a challenging year. Our entire team is proud of what we accomplished.

TO OUR SHAREHOLDERS

TOTAL REVENUES
(dollars in billions)

INVESTMENTS
(dollars in billions)

RECORD UNDERWRITING INCOME

$1.0B

RECORD NET INCOME

$1.4B

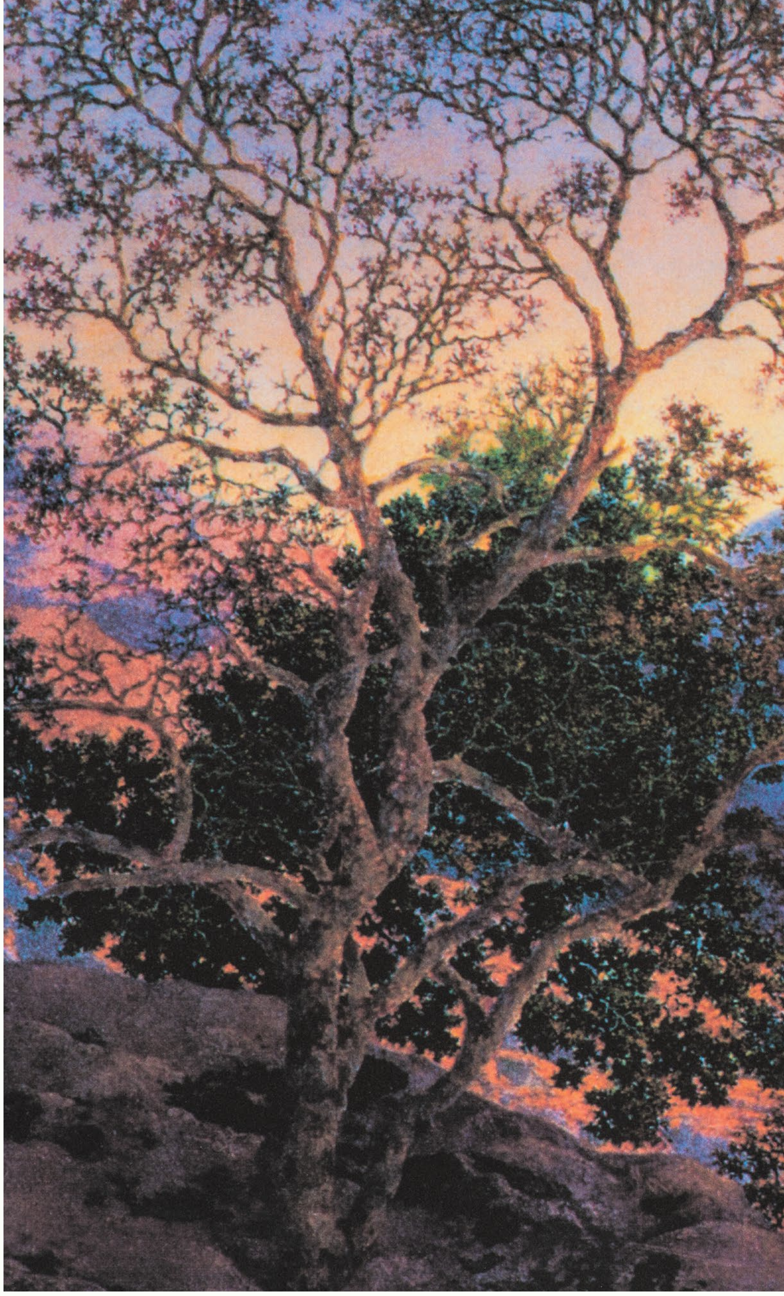
These outcomes are the result of the effort and commitment of our team. They do not just happen. It starts with us examining our view of the economy and the world. Social trends are an important part of this process as well as financial trends. Unfortunately, historically, our industry has spent most of its time looking backward. By looking at financial statements, we are focused on the rearview mirror rather than looking out the front windshield and extrapolating into the future. While we pay attention to the past, each of our businesses and everyone at the holding company is looking forward in assessing the accuracy of our past prognostications, all in order to better understand, anticipate, and plan for the future. The cornerstone of our structure is that each of our businesses does this from its own unique perspective. As the industry has become less uniform in its cyclicality and has become more statistically driven by line of business, the benefits of the expertise in our decentralized model have become even more important.

> **"These outcomes are the result of the effort and commitment of our team. They do not just happen."**

We do not only examine our business by line. We also look at how all the various external factors interact with that specific line of business in each industry or specialty niche that we serve. Accordingly, we carefully note how trends interact with each line of business's prior reserves in order to be sure that what we see in the rearview mirror is an accurate portrayal of what was actually happening.

We take this data, our knowledge and experience, and begin to build our strategic plan. We always start with our risk-adjusted return goal of 15%. This target is what we think is an appropriate return to our shareholders. It is made up of underwriting profits, investment income, and investment gains and losses. Each of these is assessed with what we perceive as an eye toward assessing the appropriate risk for the generation of income in every area of the business.

"Generally speaking, organically starting up new businesses or expanding some of our existing operations, as opposed to purchasing someone else's business, is a more attractive alternative from a risk-adjusted return perspective."



We establish targets for rate increases by line of business to be sure that the rate we charge allows us to at least maintain our profit margins, no matter how competitive the environment. All returns are not created equal, and we recognize that rate changes must always reflect changes in the risk profile of each individual line of business. No matter what the environment, our goal is to always offer an appropriately priced product. The better our assessment of profit margin, the faster we would like to grow. As long as there is an adequate risk-adjusted return, we want to grow as fast as possible.

There are times during this process that we find market opportunities that we do not currently address. Consequentially, we will expand some of our existing operations or search for new teams to create a business to optimize these opportunities. Generally speaking, organically starting up new businesses or expanding some of our existing operations, as opposed to purchasing someone else's business, is a more attractive alternative from a risk-adjusted return perspective. It does require patience, and from a financial reporting point of view, it results in delayed gratification. However, in the long term, it is financially more attractive, even though it may not look that way for a couple of years. This year, we started three new businesses, bringing the total number to 59. Every year circumstances arise to allow us to find such opportunities.

Our investment returns were also outstanding in 2022. We positioned ourselves at the beginning of the year to reflect our concerns about inflation and concomitant rising interest rates. We also moved our common stock portfolio to a defensive position. Simultaneously, with all of this activity, we ensured that the quality of our fixed-maturity portfolio was maintained at AA- to minimize adverse consequences in the event of a recession.

TO OUR SHAREHOLDERS

RESERVES FOR LOSSES AND LOSS EXPENSES
(dollars in billions)

COMMON STOCKHOLDERS' EQUITY*
(dollars in billions)

Net of $1.4 billion in special dividends and shares repurchased from 2018 to 2022

NET PREMIUMS WRITTEN

$10.0B

NET INVESTMENT INCOME

$779.2M

Our assessments proved to be fortuitous. Interest rates went up substantially with an inverted yield curve, but because of our portfolio's position, we did not suffer consequential capital losses. Our common stocks appreciated while the market depreciated and our cash flow and short-duration portfolio allowed us to reinvest at substantially higher rates.

We realized additional gains with the sale of significant real estate holdings in the UK and the USA. The overall result was that our investment portfolio, both in terms of investment income and capital gains, delivered exceptional results.

"The overall result was that our investment portfolio, both in terms of investment income and capital gains, delivered exceptional results."

The facts for 2022 were extraordinary: a return on equity of 20.8%; record underwriting income of $1 billion; and net income of $1.4 billion. Net premiums written grew 12.9% to $10 billion. Net investment income grew 16% to a record $779.2 million and operating cash flow was approximately $2.6 billion. It was, as you can see, a fabulous year. We are optimistic about 2023.

We want to thank our Board members for their constant support in these extremely uncertain times. We could not have achieved these results without the support of our agents and brokers with whom we work day to day to help meet our customers' needs. We also thank our shareholders for their support during this highly uncertain economic period. The efforts of our entire team were critical in achieving the results of 2022. We both express our sincerest thanks to the team and all the other contributors to this year's outstanding results.

William R. Berkley
Executive Chairman

W. Robert Berkley, Jr.
President and Chief Executive Officer

SELECTED FINANCIAL DATA

In thousands, except per share data

YEARS ENDED DECEMBER 31,	2018	2019	2020	2021	2022
Total Revenues	$7,691,651	$7,902,196	$8,098,925	$9,455,466	$11,166,499
Net Premiums Written	6,433,227	6,863,499	7,262,437	8,862,867	10,004,070
Net Investment Income	674,235	645,614	583,821	671,618	779,185
Net Investment Gains	154,488	120,703	103,000	90,632	202,397
Insurance Service Fees	117,757	92,680	88,777	93,857	110,544
Net Income to Common Stockholders	640,749	681,944	530,670	1,022,490	1,381,062

NET INCOME PER COMMON SHARE					
Basic	$2.25	$2.38	$1.89	$3.69	$4.99
Diluted	2.22	2.35	1.87	3.66	4.94
Return on Equity	11.8%	12.5%	8.7%	16.2%	20.8%

AT YEAR END					
Total Assets	$24,895,977	$26,643,428	$28,606,913	$32,086,414	$33,861,099
Total Investments	17,723,089	18,473,674	18,481,767	22,171,814	22,859,646
Reserves for Losses and Loss Expenses	11,966,448	12,583,249	13,784,430	15,390,888	17,011,223
Common Stockholders' Equity	5,437,851	6,074,939	6,310,802	6,653,011	6,748,332
Common Shares Outstanding	274,491	275,118	266,738	265,172	264,546
Common Stockholders' Equity Per Share	19.81	22.08	23.66	25.09	25.51

Per share data and common shares outstanding have been adjusted for the 3-for-2 common stock splits effected on April 2, 2019 and March 23, 2022.

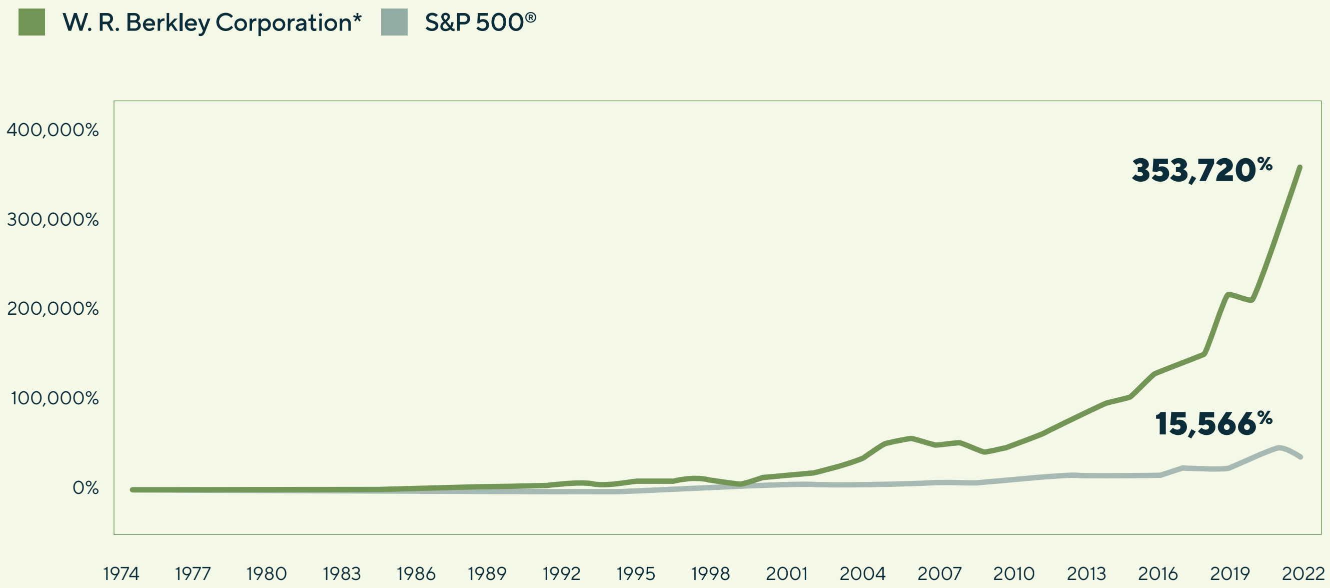
W. R. BERKLEY CORPORATION PERFORMANCE VS. S&P 500®

Cumulative Total Stock Return (Includes Dividends)

	W. R. Berkley Corporation	S&P 500	Difference
Year	(1)	(2)	(1)-(2)
1974	-43.2%	-26.4%	-16.8%
1975	-38.7%	1.0%	-39.7%
1976	0.5%	24.8%	-24.4%
1977	151.5%	15.6%	135.9%
1978	499.1%	23.0%	476.1%
1979	430.4%	45.4%	385.0%
1980	436.8%	92.3%	344.5%
1981	601.6%	82.7%	518.9%
1982	610.8%	121.8%	489.0%
1983	900.1%	171.5%	728.7%
1984	1,010.3%	188.0%	822.3%
1985	2,543.6%	279.0%	2,264.6%
1986	2,940.8%	349.5%	2,591.3%
1987	2,708.1%	372.5%	2,335.6%
1988	3,398.4%	450.9%	2,947.5%
1989	4,727.3%	625.5%	4,101.8%
1990	4,450.5%	603.0%	3,847.4%
1991	5,516.5%	817.4%	4,699.1%
1992	7,896.1%	887.2%	7,008.9%
1993	6,472.1%	986.9%	5,485.2%
1994	7,009.4%	1,001.0%	6,008.4%
1995	10,186.7%	1,415.0%	8,771.7%
1996	9,722.4%	1,763.4%	7,958.9%
1997	12,779.3%	2,385.8%	10,393.4%
1998	10,024.5%	3,096.8%	6,927.8%
1999	6,241.9%	3,768.1%	2,473.9%
2000	14,552.3%	3,416.1%	11,136.2%
2001	16,766.9%	2,997.7%	13,769.2%
2002	18,744.0%	2,313.1%	16,430.9%
2003	25,051.7%	3,005.6%	22,046.0%
2004	34,067.7%	3,344.2%	30,723.6%
2005	51,914.6%	3,512.9%	48,401.7%
2006	56,702.5%	4,083.8%	52,618.7%
2007	49,282.8%	4,313.9%	44,968.9%
2008	51,709.6%	2,680.7%	49,028.8%
2009	41,500.0%	3,417.6%	38,082.4%
2010	46,596.4%	3,948.8%	42,647.6%
2011	59,135.3%	4,033.8%	55,101.5%
2012	67,184.0%	4,695.2%	62,488.8%
2013	77,952.3%	6,248.9%	71,703.4%
2014	94,842.7%	7,118.1%	87,724.6%
2015	102,211.3%	7,217.7%	94,993.6%
2016	127,530.0%	8,095.8%	119,434.2%
2017	140,524.3%	9,884.9%	130,639.4%
2018	148,906.2%	9,447.6%	139,458.6%
2019	214,214.4%	12,454.1%	201,760.3%
2020	207,457.2%	14,764.1%	192,693.1%
2021	264,190.1%	19,030.8%	245,159.2%
2022	353,720.2%	15,566.2%	338,154.0%
Average Annual Gain 1974-2022	23.7%	12.4%	11.4%

Notes: W. R. Berkley Corporation's stock price has been adjusted for stock dividends paid from 1975 to 1983. Stock dividends were 6% in each year from 1975 to 1978, 14% in 1979, and 7% in each year from 1980 to 1983. The Company has paid cash dividends each year since 1978. Dividends have been compounded for W. R. Berkley Corporation.

CUMULATIVE TOTAL STOCK RETURN 1974—2022

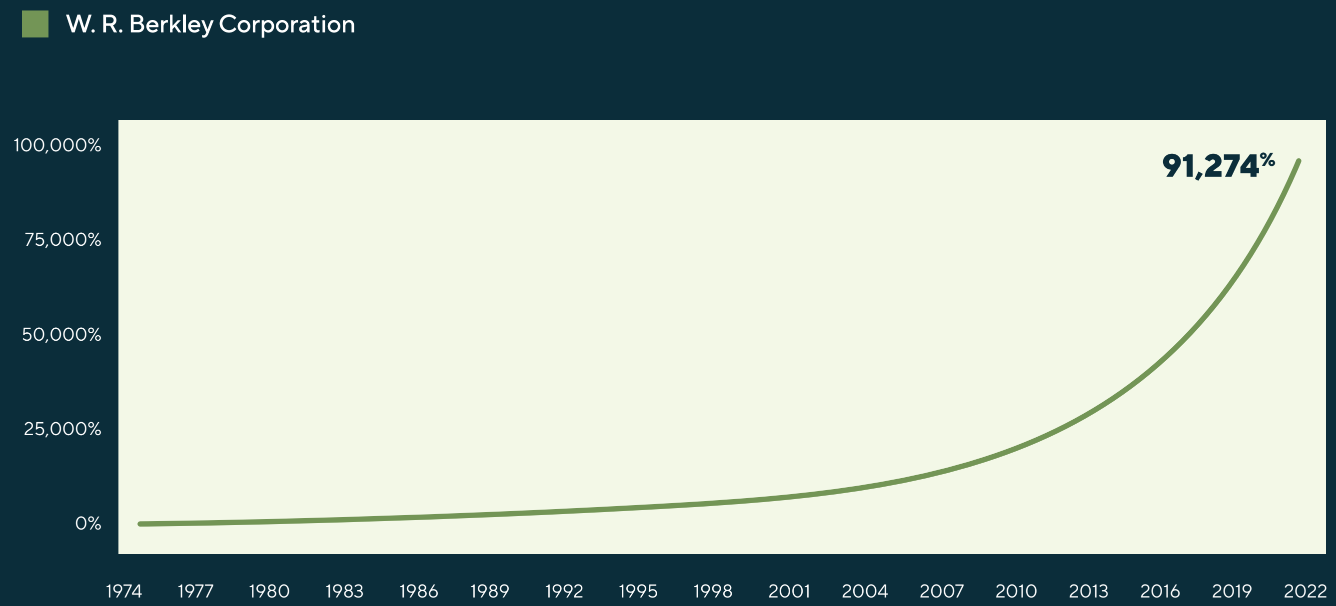


** Dividends Compounded*

CUMULATIVE GROWTH IN BOOK VALUE PER SHARE

(With Dividends Included)

Insurance companies are often measured by book value per share. We have grown book value per share with dividends included by an average of 16.3% since 1973.



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RISK BEFORE RETURN

OVER THE LAST 49 YEARS
AS A PUBLIC COMPANY:

14.6%

Average return on equity

18.1%

Compound average growth in total shareholder return

> Risk necessarily comes before return in our measurement of performance, because all risks are not created equal and you cannot achieve a stable, long-term return without first focusing on risk."

Throughout our history, we have maintained our focus on long-term risk-adjusted returns. For us, a long-term measurement of performance is critical, as in our industry outsized losses from unforeseen events can introduce volatility that could negate the value created in prior periods. No one can predict individual events, be it a court decision or a storm, but we can use data and analytics to objectively understand trends and observe direction. Being a data driven and analytical company enables us to manage in such a way that individual events, when they occur, have less of an adverse impact.

Equally significant is the fact that risk necessarily comes before return in our measurement of performance, because all risks are not created equal and you cannot achieve a stable, long-term return without first focusing on risk. Our focus has never wavered regardless of the economic or underwriting environment.

Look

Our business is all about managing risk. We strive to control our risk through individual risk selection, appropriate terms and conditions - including establishing limits of exposure and determining the terms of risk through policy wordings - and spreading risk. We need to have outstanding people in the right positions, from underwriting and claims to accounting and investing. We need to purchase reinsurance tailored to our book of business. We need to invest in appropriate assets. And we need to understand how our various exposures interact.

RISK BEFORE RETURN

Looking at the financial statements of any company will provide a general picture of how well it has performed. Yet for a property and casualty insurer, they only tell part of the story. It is no different than looking at the picture on our cover, where you don't initially see everything. If you look longer, you still might not notice or understand all of the details. To truly evaluate the drivers of our performance and our future outlook, you need to look at performance over a long period of time - not just five or ten years, but over fifteen, twenty or more years to span multiple insurance cycles. You need to understand the details of how our Company is managed and how those finer points translate into low volatility, strong returns and consistent growth in book value over that period of time.

> "Every day, we make small and large decisions in every business with a focus on long-term risk-adjusted returns."

See

If you look more closely at Berkley, you will see that we have been successful for 55 years precisely because we manage with a focus on risk-adjusted return. We understand that risks come in all forms, both from the things we know about and the things we don't, and that uncertainty makes those risks even greater.

We learn from the past through data and analytics, and we always look to the future. That means understanding the historical drivers of loss frequency and severity at a granular level to assess the nuances of specific lines of business in different territories or jurisdictions, as well as the unique characteristics of each industry in which our clients operate. At the same time, we monitor economic, social, political and judicial trends and adjust our strategies in anticipation of the changing environment's potential impact on our future performance.

It also means starting new businesses in sectors of the economy that we believe are, or have the potential to become, key contributors to a country's gross domestic product, or lines of business that address emerging risks. Each requires that we start with the right talent and expertise.

In our investment portfolio, focusing on risk-adjusted return means blending traditional security analysis with market and economic analysis and a view of the future.

1.7%

"Our book value grew by 1.7% in 2022, while global competitors lost 10%, 20%, 30% or more of equity."

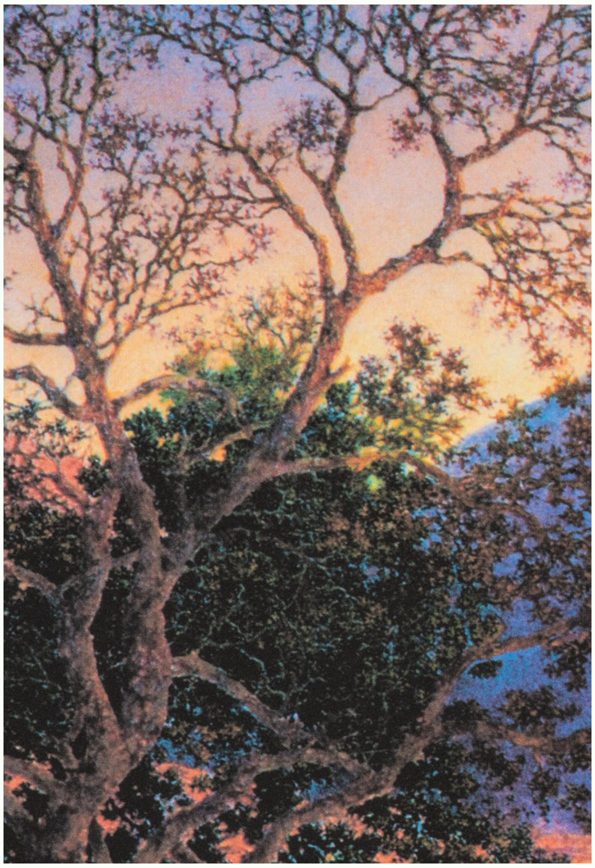
Understand

To understand how all of these actions impact our financial statements, one should consider what has happened when risks have manifested in industry shock losses and why, throughout our history, we have experienced a lower level of volatility than most other property and casualty companies.

"Looking at the financial statements of any company will provide a general picture of how well it has performed. Yet for a property and casualty insurer, they only tell part of the story."

Good underwriting, risk selection and aggregate exposure management, combined with strategic reinsurance purchasing, has resulted in our below-average catastrophe loss impacts. We shortened the duration of our fixed-maturity portfolio, while maintaining its high credit quality, in anticipation of inflation well before it began. These actions enabled us to maintain our balance sheet while positioning our investment income to increase rapidly as interest rates began rising. Our book value grew by 1.7% in 2022, while global competitors lost 10%, 20%, 30% or more of equity. We retrenched from the reinsurance market over the last 10 years, avoiding significant losses, and now have the opportunity to profitably deploy capital as market conditions harden.

These are just a few examples of the good decisions we have made in recent years. Every day, we make small and large decisions in every business with a focus on long-term risk-adjusted returns. Our vision isn't perfect, but our thoughtful analysis of our business and the changing world around us has helped us to produce a 14.6% long-term average return on equity and an 18.1% compound average growth in total shareholder return over the last 49 years as a public company.



IF YOU DON'T LOOK,
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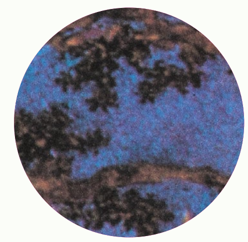
DECENTRALIZATION:
A COMPETITIVE ADVANTAGE

An insurance enterprise is essentially made up of two key components – capital and people. Our decentralized structure brings talented people together with capital and puts the decision-making in the hands of those closest to the customer. It is one of our greatest competitive advantages. By empowering our people, we have developed a collaborative and entrepreneurial culture and a sense of ownership that allows us to attract outstanding people with knowledge, expertise and integrity. As a result, we have been able to deliver superior underwriting results and outstanding risk-adjusted returns with below average volatility over a very long period of time.

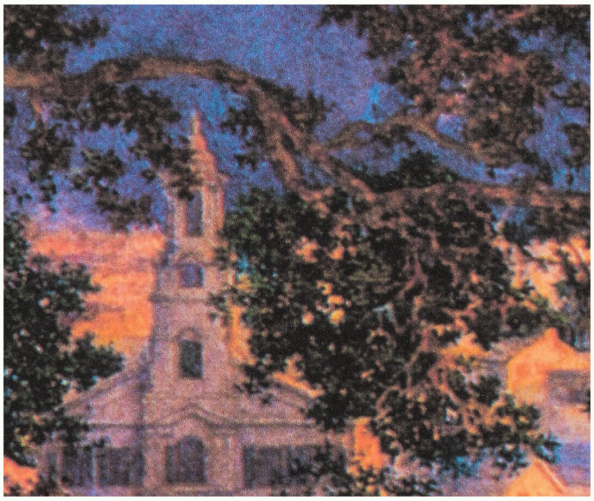
> **“Our decentralized structure brings talented people together with capital and puts the decision-making in the hands of those closest to the customer.”**



Look

On the surface, our decentralized structure may not seem very different from the operations at other insurance companies that may organize by account size or lines of business. We effectively build complete companies around the type of expertise needed to excel in specialized markets. Each individual, regardless of their role, understands that they are there to serve a particular type of customer in a specific way.

> “Our teams are empowered to make decisions that affect their business, allowing them to identify and respond quickly and effectively to changing market conditions.”



DECENTRALIZATION: A COMPETITIVE ADVANTAGE

Our people are specialists, not generalists, meaning that they have narrowly focused expertise in a product, industry or territory. This operating model makes it easy to find ways to solve problems for our customers and to cross-pollinate our deep knowledge across our various businesses.

59

BERKLEY IS COMPRISED OF 59 AUTONOMOUS BUSINESSES

+3

THREE NEW BUSINESSES WERE STARTED IN 2022

See

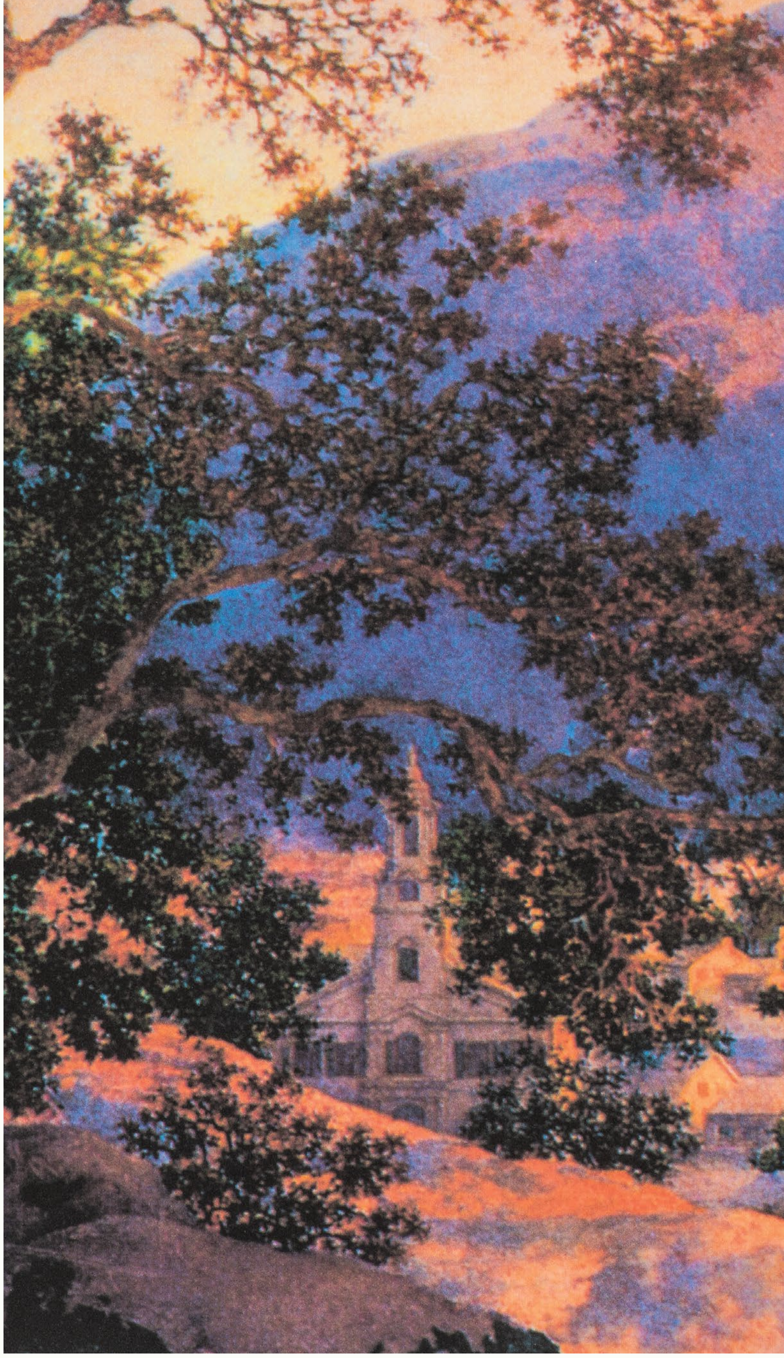
Over the years, we have found that bigger is not necessarily better and that our model delivers greater customer value. Each of our businesses provides insurance products and services to a distinct customer base defined by market, geography, line of business, or industry served. This specialization enables each team to draw upon expertise in, and develop a deep understanding of, the unique characteristics of their clients' business and specific lines of business in different territories or jurisdictions to best serve their customers' needs for coverage, risk management and claims handling.

"By customizing each of these functions to their differentiated customer bases, our businesses bring exceptional value and better outcomes to their clients."

By customizing each of these functions to their differentiated customer bases, our businesses bring exceptional value and better outcomes to their clients. It also creates a critical feedback loop that enables us to continually refine our underwriting, risk appetite and processes to drive outstanding results.

Because of their specialized expertise and autonomous operations, our teams are empowered to make decisions that affect their business, allowing them to identify and respond quickly and effectively to changing market conditions, emerging loss trends and their specific customers' needs. Understanding the nuances of smaller parts of the market is key to managing the insurance cycle in which these distinct markets no longer move in lock-step. It enables us to effectively emphasize those areas of the market with the best margin potential and de-emphasize others and constantly refine the book of business to optimize profitability, no matter if the market is hard or soft.

> "Our team members act with a sense of ownership, heart and passion. It has created a permanent competitive advantage that can only be acquired over many years."



Simultaneously, corporate teams centrally manage the investment portfolio and provide support in all functional areas as well as in enterprise risk management, reinsurance purchasing, information technology, human resources, and legal. These support structures provide the benefits of a large organization while allowing the businesses to maintain focus on their areas of expertise, creating efficiencies and knowledge sharing. Our corporate teams also provide strategic and financial oversight to ensure transparency and accountability.

Each team is responsible for and compensated based upon their own results, with long-term incentive compensation for senior leadership that is based on the same profitability metrics throughout the enterprise. As a result, the businesses are operated with an ownership perspective and clear accountability.

Understand

Our structure allows us to do more than share knowledge across the organization to help meet customer needs. It enables us to understand what is right for our various stakeholders and deliver better outcomes. For example, our goal in workers' compensation is to get an injured individual back to good health and back to work, not to pay as little as possible. Through decentralization, we empower our teams to make thoughtful decisions every day, in every aspect of our business, and do what is right, while generating strong risk-adjusted returns that build value over the long term and prepare us for whatever challenges and opportunities the future may hold. Our team members act with a sense of ownership, heart and passion. It has created a permanent competitive advantage that can only be acquired over many years.

IF YOU DON'T LOOK,
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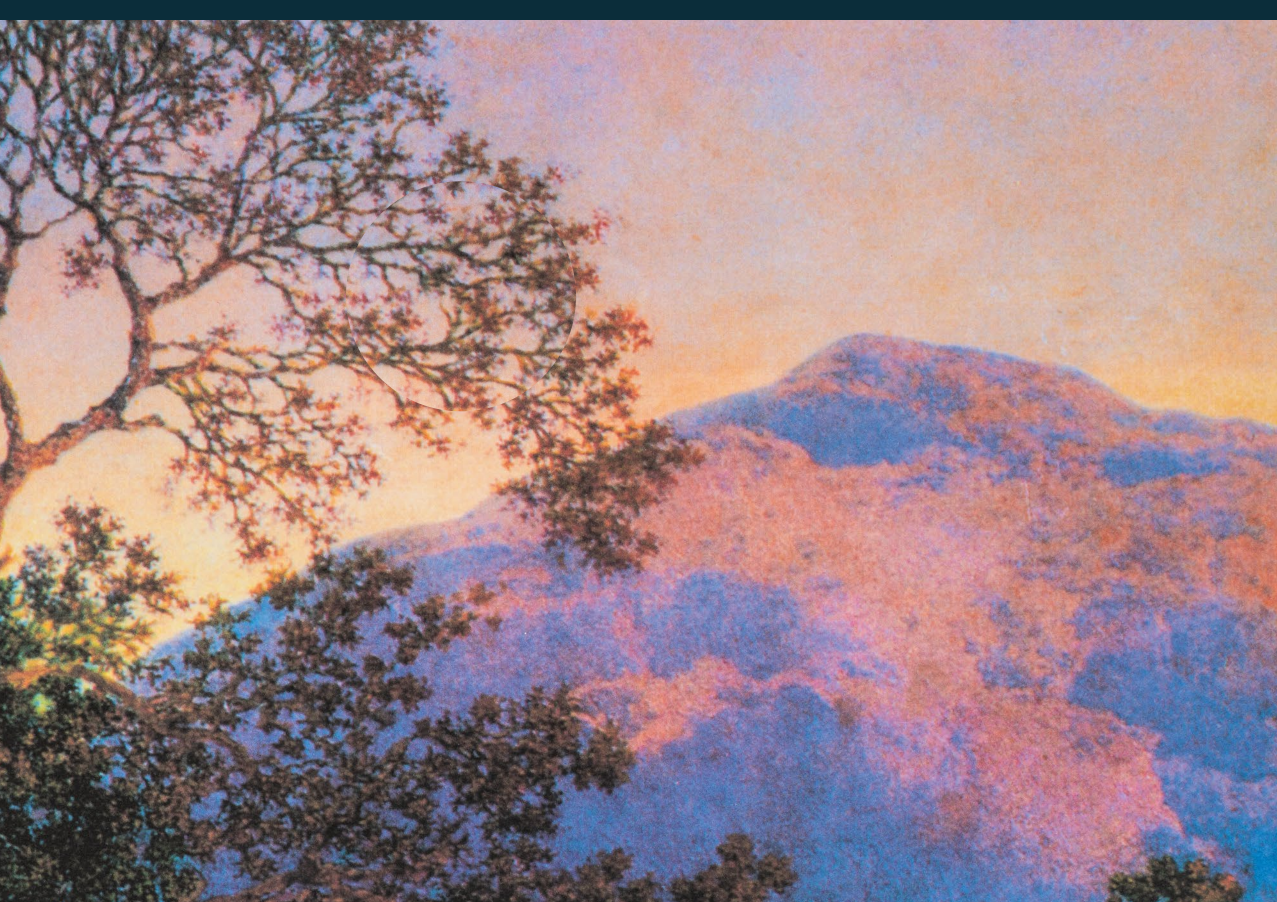
VALUING OUR PEOPLE



> "Many years ago, we trademarked the phrase 'Everything Counts, Everyone Matters®' to encapsulate that mindset and perpetuate it for future generations."

From the day it was founded, our business has been about people, and the expertise they bring to bear in all that we do. Every action we take makes a difference, from making strategic decisions to the way we answer the phones. Many years ago, we trademarked the phrase "Everything Counts, Everyone Matters®" to encapsulate that mindset and perpetuate it for future generations. With that in mind, our biggest investments in talent have been in developing our skills and maintaining our culture to allow our people to grow and thrive.

Look

Like many large organizations, we invest in our people and their well-being by providing comprehensive benefits packages tailored to the various jurisdictions in which our employees are located, including health, well-being, financial and professional development benefits. However, we go beyond those benefits to create an environment where people feel truly valued for their unique perspectives and capabilities, and are encouraged to be the best version of themselves in an environment of collaboration and collegiality.

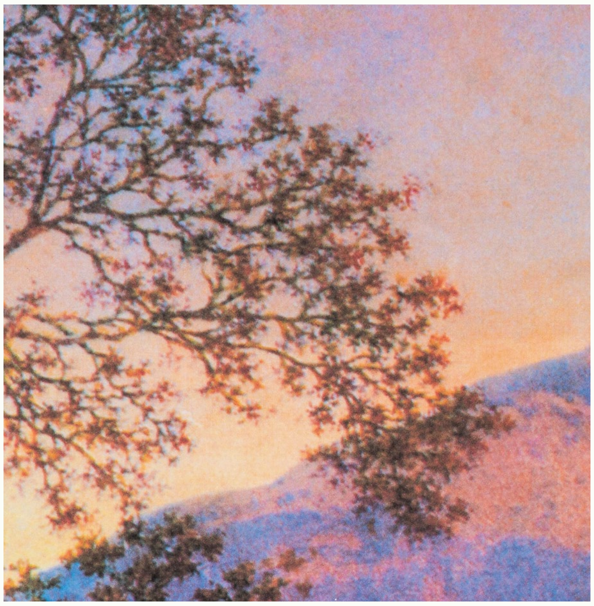
See

Look closely at the many activities we undertake and the stories we tell, and you will see that it is the thousands of little things we do within our organization that add up to a culture of excellence and feelings of loyalty, pride and belonging among those who call Berkley home.

VALUING OUR PEOPLE

People generally want to be a valued part of their team and are motivated by the encouragement and support of those around them. Providing access to ongoing education and resources to achieve professional designations is just the beginning. We offer internal courses, such as our long-standing management programs and presidents' meetings, as well as more recently developed mentoring, trainee and innovation leadership programs. Many of these offerings lead to new opportunities or leadership roles within our organization.

At our core, our organization embraces innovation, knowing that the very best ideas are more often born to those who are closest to the task, the customer, and their communities. Our formal Innovation Through People™ program builds on our entrepreneurial foundation to promote innovative thinking throughout the organization.



We are extending an invitation to all colleagues equally to engage in developing behaviors that foster an innovative mindset, a culture of creativity and resilience, and tools and structures for ideation, experimentation and measuring outcomes.

As important as diversity is to an organization, it is more than just statistics. We also focus on inclusion and belonging ("DIB"). Diversity at Berkley means that each individual is unique and valued. Inclusion means that we all work together to create a safe and supportive environment where all team members are treated fairly, respectfully, and are encouraged to share ideas and opinions. Belonging is how an individual feels – it requires awareness and action focused on bringing people "in." To those ends, we regularly introduce new diversity training, add educational materials in our online learning system, provide forums to share information, and hold live events to discuss DIB topics. We have also developed an interview series with our employees to recognize various diversity awareness celebrations throughout the year. By giving a voice to our employees and increasing the availability of learning resources on this topic, we aim to create a more aware and empowered workforce with a greater focus not only on improving our performance, but also on increasing our sensitivity and strengthening our culture.

"At our core, our organization embraces innovation, knowing that the very best ideas are more often born to those who are closest to the task, the customer, and their communities."

Ultimately, we strive to be an organization where "everyone knows your name," despite our size. We recognize the achievements of our team members who complete our development programs, receive certifications and awards within our innovation program, reach milestone anniversaries and

“It’s the thousands of little things we do within our organization that add up to a culture of excellence and feelings of loyalty, pride and belonging among those who call Berkley home.”

10+

Nearly 70% of Berkley employees that retired in 2022 had more than 10 years of service

5+

More than 70% of our senior leadership team has been with the company for more than 5 years

complete personal accomplishments. Supporting one another in times of crisis, whether through connectivity during big events like the COVID-19 pandemic or fundraising and providing moral support when individual tragedies occur, it is important for team members to know we have their backs.

Understand

Diversity goes beyond race, gender, or sexual orientation. It recognizes that we want all to belong. As we have become larger, we have formalized activities that we have engaged in since our founding to perpetuate our small company feel inside our global enterprise. We endeavor to create the feeling that that we know our employees, we see what makes them individually unique, special and valuable, and support them. We achieve better outcomes because we care more and work harder as a team and are honest with ourselves and others about reality. This is what has led to successful outcomes for our stakeholders over many decades.

OUR COMPANY

W. R. Berkley Corporation, founded in 1967, is one of the nation's premier commercial lines property casualty insurance providers. Each of the businesses within Berkley participates in a niche market requiring specialized knowledge about a territory or product.

Our competitive advantage lies in our long-term strategy of decentralized operations, allowing each of our businesses to identify and respond quickly and effectively to changing market conditions and local customer needs. This decentralized structure provides financial accountability and incentives to local management and enables us to attract and retain the highest-caliber professionals.

We have the expertise and resources to utilize our strengths in the present environment, and the flexibility to anticipate, innovate and respond to whatever opportunities and challenges the future may hold.

HOW WE ARE DIFFERENT

Risk-Adjusted Returns
Management company-wide is focused on obtaining the best potential returns with a real understanding of the amount of risk being assumed. Superior risk-adjusted returns are generated over the insurance cycle.

Accountability
The business is operated with an ownership perspective and a clear sense of fiduciary responsibility to shareholders.

People-Oriented Strategy
New businesses are started when opportunities are identified and, most importantly, when the right talent is found to lead a business. Of the Company's 59 businesses, 52 were developed internally and seven were acquired.

Responsible Financial Practices
Risk exposures are managed proactively. A strong balance sheet, including a high-quality investment portfolio, ensures ample resources to grow the business profitably whenever there are opportunities to do so.

Transparency
Consistent and objective standards are used to measure performance—and, the same standards are used regardless of the environment.

OUR BUSINESS

Today, as with yesterday and tomorrow, the combined expertise of underwriting, risk management, claims handling and investing will deliver outstanding risk-adjusted returns.

2022 Results

INSURANCE TOTAL REVENUES

$9.0B

INSURANCE PRE-TAX INCOME

$1.5B

REINSURANCE & MONOLINE EXCESS TOTAL REVENUES

$1.4B

REINSURANCE & MONOLINE EXCESS PRE-TAX INCOME

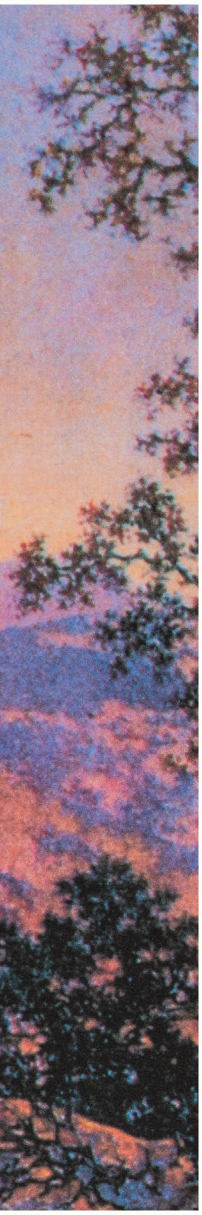
$317M

INSURANCE

Our Insurance businesses underwrite predominantly commercial insurance, including excess and surplus lines, admitted lines, and specialty personal lines, in the United States, as well as in the United Kingdom, Continental Europe, South America, Canada, Mexico, Scandinavia, Australia and Asia.

REINSURANCE & MONOLINE EXCESS

Our Reinsurance businesses provide facultative and treaty reinsurance, primarily in the United States, United Kingdom, Continental Europe, Australia, the Asia-Pacific Region and South Africa. Monoline Excess businesses solely retain risk on an excess basis.



SEGMENT OVERVIEW

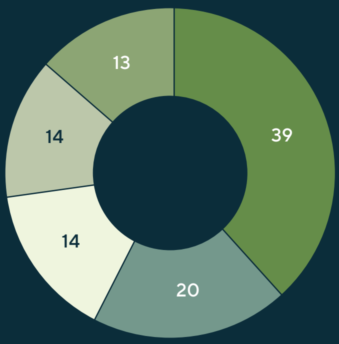
Each of our two business segments—Insurance and Reinsurance & Monoline Excess—comprise individual businesses that serve a market defined by geography, products, services or types of customers.

Our growth is based on meeting the needs of customers, maintaining a high-quality balance sheet and allocating capital to our best opportunities.

We combine capital with outstanding people and wrap it all in a culture that is focused on optimizing risk-adjusted returns. It creates a sustainable competitive advantage that can only be acquired over many years with consistent discipline.

2022
SEGMENT DATA

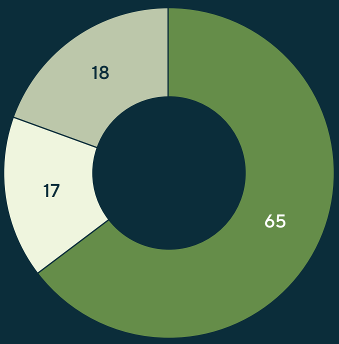
2022 Net Premiums Written by Major Line of Business (in percent)



INSURANCE

$8.8B

Other Liability
Short-tail Lines
Workers' Compensation
Commercial Automobile
Professional Liability



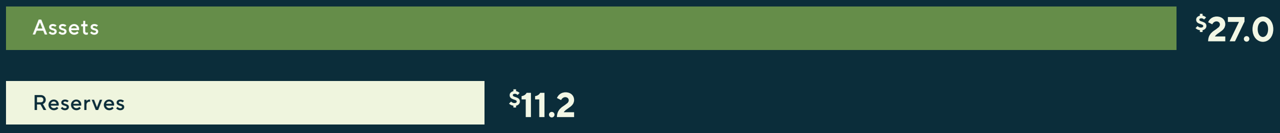
REINSURANCE & MONOLINE EXCESS

$1.2B

Casualty
Property
Monoline Excess

Assets and Net Reserves (dollars in billions)

INSURANCE



REINSURANCE & MONOLINE EXCESS

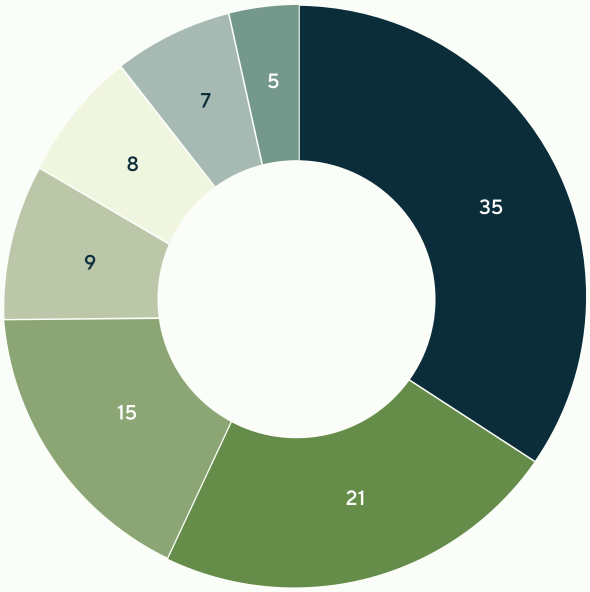
INVESTMENTS

Over the past few years, we shortened the duration of our fixed income portfolio to 2.4 years, while maintaining its high quality with an average rating of AA-. As a result, there has been less volatility in our book value from mark-to-market accounting and we are better able to manage the interest rate environment.

We manage our portfolio for total return, including capital gains. As investment income is an important component of our economic model, we will continue to seek out investment opportunities with above average risk-adjusted returns and to position our fixed-maturity portfolio to manage the yield curve as well as the impact of inflation.

Breakdown of Fixed-Maturity Securities (including cash, in percent)

- Corporate Bonds
- Asset-backed Securities
- State and Municipal Bonds
- Mortgage-backed Securities
- Cash and Cash Equivalents
- Foreign Bonds
- U.S. Government and Government Agency Bonds



Investment Data (dollars in millions)

Cash and Invested Assets	2021	2022
Invested Assets	$22,172	$22,860
Cash and Cash Equivalents	$1,569	$1,449
Total	**$23,741**	**$24,309**
Net Investment Income	$672	$779
Net Investment Gains	$91	$202

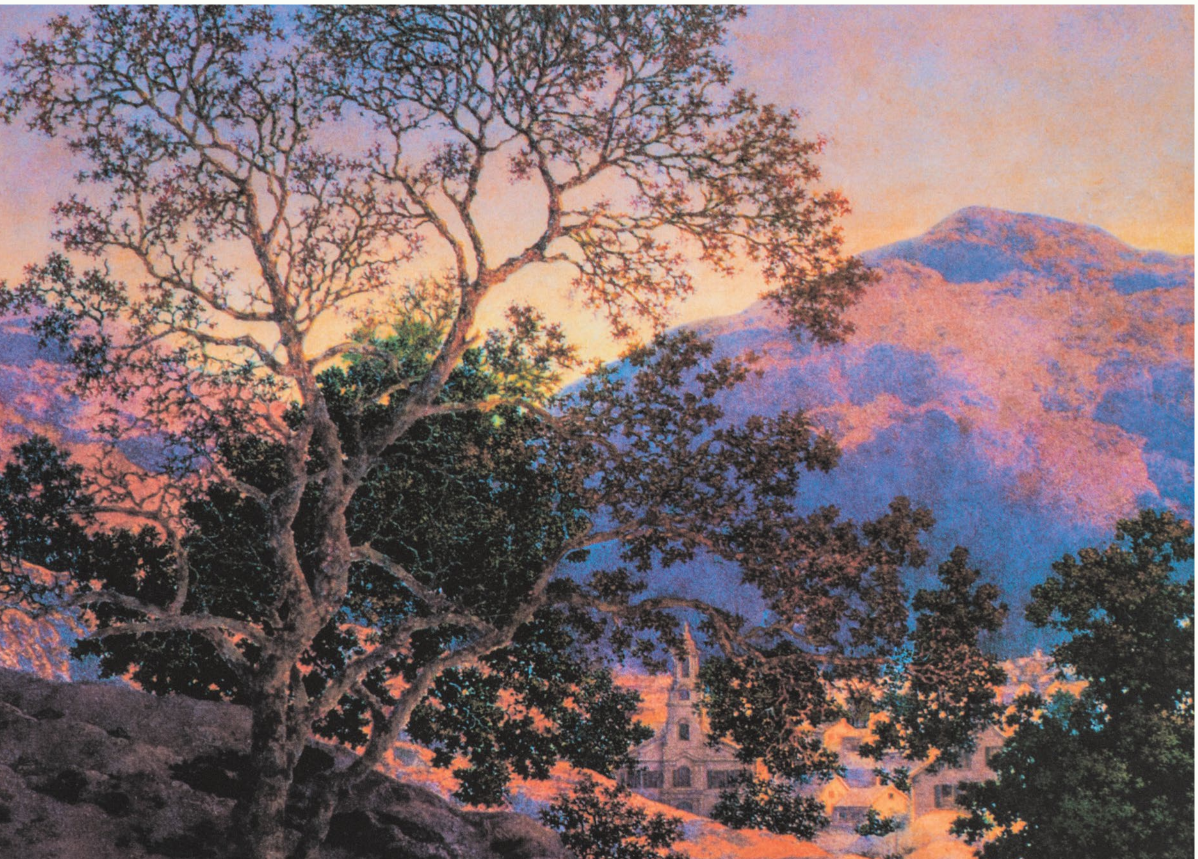
2022 Financial Information

FORM 10-K

W. R. Berkley Corporation

IF YOU DON'T LOOK, YOU WON'T SEE.

Evening Shadows, Maxfield Parrish



SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
Form 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 or 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2022
OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from ______ to ______.

Commission file number 1-15202

W. R. BERKLEY CORPORATION
(Exact name of registrant as specified in its charter)

Delaware		**22-1867895**
(State or other jurisdiction of incorporation or organization)		*(I.R.S. Employer Identification Number)*
475 Steamboat Road	**Greenwich, CT**	**06830**
(Address of principal executive offices)		*(Zip Code)*

Registrant's telephone number, including area code: (203) 629-3000

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $.20 per share	WRB	New York Stock Exchange
5.700% Subordinated Debentures due 2058	WRB-PE	New York Stock Exchange
5.100% Subordinated Debentures due 2059	WRB-PF	New York Stock Exchange
4.250% Subordinated Debentures due 2060	WRB-PG	New York Stock Exchange
4.125% Subordinated Debentures due 2061	WRB-PH	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.
Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act.
Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant’s executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

The aggregate market value of the registrant's common stock held by non-affiliates as of June 30, 2022, the last business day of the registrant’s most recently completed second fiscal quarter, was $14,340,165,170.

Number of shares of common stock, $.20 par value, outstanding as of February 15, 2023: 263,446,321

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Company’s definitive proxy statement, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2022, are incorporated herein by reference in Part III.

SAFE HARBOR STATEMENT
UNDER THE PRIVATE SECURITIES
LITIGATION REFORM ACT OF 1995

This is a “Safe Harbor” Statement under the Private Securities Litigation Reform Act of 1995. This document may contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Some of the forward-looking statements can be identified by the use of forward-looking words such as “believes,” “expects,” “potential,” “continued,” “may,” “will,” “should,” “seeks,” “approximately,” “predicts,” “intends,” “plans,” “estimates,” “anticipates” or the negative version of those words or other comparable words. Any forward-looking statements contained in this report including statements related to our outlook for the industry and for our performance for the year 2023 and beyond, are based upon our historical performance and on current plans, estimates and expectations. The inclusion of this forward-looking information should not be regarded as a representation by us that the future plans, estimates or expectations contemplated by us will be achieved. They are subject to various risks and uncertainties, including but not limited to:

- the cyclical nature of the property casualty industry;
- the impact of significant competition, including new entrants to the industry;
- the long-tail and potentially volatile nature of the insurance and reinsurance business;
- product demand and pricing;
- claims development and the process of estimating reserves;
- investment risks, including those of our portfolio of fixed maturity securities and investments in equity securities, including investments in financial institutions, municipal bonds, mortgage-backed securities, loans receivable, investment funds, including real estate, merger arbitrage, energy related and private equity investments;
- the effects of emerging claim and coverage issues;
- the uncertain nature of damage theories and loss amounts, including claims for cyber security-related risks;
- natural and man-made catastrophic losses, including as a result of terrorist activities;
- the ongoing effects of the COVID-19 pandemic;
- the impact of climate change, which may alter the frequency and increase the severity of catastrophe events;
- general economic and market activities, including inflation, interest rates and volatility in the credit and capital markets;
- the impact of conditions in the financial markets and the global economy, and the potential effect of legislative, regulatory, accounting or other initiatives taken in response to it, on our results and financial condition;
- foreign currency and political risks relating to our international operations;
- our ability to attract and retain key personnel and qualified employees;
- continued availability of capital and financing;
- the success of our new ventures or acquisitions and the availability of other opportunities;
- the availability of reinsurance;
- our retention under the Terrorism Risk Insurance Program Reauthorization Act of 2019 ("TRIPRA");
- the ability or willingness of our reinsurers to pay reinsurance recoverables owed to us;
- other legislative and regulatory developments, including those related to business practices in the insurance industry;
- credit risk relating to our policyholders, independent agents and brokers;
- changes in the ratings assigned to us or our insurance company subsidiaries by rating agencies;
- the availability of dividends from our insurance company subsidiaries;
- cyber security breaches of our information technology systems and the information technology systems of our vendors and other third parties;
- the effectiveness of our controls to ensure compliance with guidelines, policies and legal and regulatory standards; and
- other risks detailed in this Form 10-K and from time to time in our other filings with the Securities and Exchange Commission (“SEC”).

We describe these risks and uncertainties in greater detail in Item 1A, Risk Factors. These risks and uncertainties could cause our actual results for the year 2023 and beyond to differ materially from those expressed in any forward-looking statement we make. Any projections of growth in our revenues would not necessarily result in commensurate levels of earnings. Our future financial performance is dependent upon factors discussed elsewhere in this Form 10-K and our other SEC filings. Forward-looking statements speak only as of the date on which they are made.

PART I

ITEM 1. BUSINESS

W. R. Berkley Corporation is an insurance holding company that is among the largest commercial lines writers in the United States and operates worldwide in two segments of the property casualty insurance business:

- Insurance - Our Insurance business underwrite predominantly commercial insurance business, including excess and surplus lines, admitted lines and specialty personal lines throughout the United States, as well as insurance business in Asia, Australia, Canada, Continental Europe, Mexico, Scandinavia, South America and the United Kingdom.

- Reinsurance & Monoline Excess - Our Reinsurance businesses provide facultative and treaty reinsurance in the United States, as well as in the Asia Pacific region, Australia, Continental Europe, South Africa and the United Kingdom. Monoline Excess businesses retain risk solely on an excess basis.

Our two reporting segments are each composed of individual businesses that serve a market defined by geography, products, services or industry served. Each of our businesses is positioned close to its customer base and participates in a niche market requiring specialized knowledge. This strategy of decentralized operations allows each of our businesses to identify and respond quickly and effectively to changing market conditions and specific customer needs, while capitalizing on the benefits of centralized capital, investment and reinsurance management, and corporate actuarial, financial, enterprise risk management and legal staff support.

Our business approach is focused on meeting the needs of our customers, maintaining a high quality balance sheet, and allocating capital to our best opportunities. New businesses are started when opportunities are identified and when the right talent and expertise are found to lead a business. Of our 59 businesses, 52 have been organized and developed internally and seven have been added through acquisition.

Net premiums written, as reported based on United States generally accepted accounting principles ("GAAP"), for each of our reporting segments for each of the past three years were as follows:

	Year Ended December 31,		
(In thousands)	**2022**	**2021**	**2020**
Net premiums written:			
Insurance	$ 8,784,146	$ 7,743,814	$ 6,347,101
Reinsurance & Monoline Excess	1,219,924	1,119,053	915,336
Total	$ 10,004,070	$ 8,862,867	$ 7,262,437
Percentage of net premiums written:			
Insurance	87.8 %	87.4 %	87.4 %
Reinsurance & Monoline Excess	12.2	12.6	12.6
Total	100.0 %	100.0 %	100.0 %

Thirty-two of our insurance company subsidiaries are rated by A.M. Best Company, Inc. ("A.M. Best") and have financial strength ratings of A+ (Superior) (the second highest rating out of 15 possible ratings). A.M. Best's ratings are based upon factors of concern to policyholders, insurance agents and brokers and are not directed toward the protection of investors. A.M. Best states: "A Best's Financial Strength Rating (FSR) is an independent opinion of an insurer's financial strength and ability to meet its ongoing insurance policy and contract obligations. An FSR is not assigned to specific insurance policies or contracts and does not address any other risk." A.M. Best reviews its ratings on a periodic basis, and its ratings of the Company's subsidiaries are therefore subject to change.

Our twenty-three insurance company subsidiaries rated by Standard & Poor's ("S&P") have financial strength ratings of A+ (the seventh highest rating out of twenty-seven possible ratings).

Our Moody's financial strength ratings are A1 for Berkley Insurance Company, Berkley Regional Insurance Company and Admiral Insurance Company (the fifth highest rating out of twenty-one possible ratings).

Our twenty-five insurance company subsidiaries rated by Fitch Ratings ("Fitch") have insurer financial strength ratings of AA- (the fourth highest rating out of twenty-seven possible ratings).

The following sections describe our reporting segments and their businesses in greater detail. These businesses underwrite on behalf of one or more affiliated insurance companies within the group. The businesses are identified for descriptive purposes only and are not legal entities, but for marketing purposes may sometimes be referred to individually as "a Berkley company" or collectively as "Berkley companies." Unless otherwise indicated, all references in this Form 10-K to “Berkley,” “we,” “us,” “our,” the “Company” or similar terms refer to W. R. Berkley Corporation together with its subsidiaries and businesses. W. R. Berkley Corporation is a Delaware corporation formed in 1970.

Insurance

Our U.S.-based businesses predominantly underwrite commercial insurance business primarily throughout the United States, although many units offer coverage globally, focusing on the following general areas:

Excess & Surplus Lines: A number of our businesses are dedicated to the U.S. excess and surplus lines market. They serve a diverse group of customers that often have complex risk or unique exposures that typically fall outside the underwriting guidelines of the standard insurance market. Lines of business underwritten by our excess and surplus lines businesses include premises operations, commercial automobile, property, products liability, general liability and professional liability lines. Products are generally distributed through wholesale agents and brokers.

Industry Specialty: Certain other businesses focus on providing specialty coverages to customers within a particular industry that are best served by underwriters and claims professionals with specialized knowledge of that industry. They offer multiple lines of business with policies tailored to address the unique exposures of these industries, often with the flexibility of providing coverages on either an admitted or a non-admitted basis in the U.S., as well as internationally. Each business delivers its products through one or more distribution channels, including retail and wholesale agents, brokers, and managing general agents (MGAs), depending on the customer and the particular risks insured.

Product Specialty: Other businesses specialize in providing specific lines of insurance coverage, such as workers’ compensation or professional liability, to a wide range of customers. They offer insurance products, analytical tools and risk management services such as loss control and claims management that enable clients to manage their risk appropriately. Business is typically written on an admitted basis, although some businesses may offer non-admitted products in the U.S. and offer products internationally. Independent agents and brokers are the primary means of distribution.

Regional: Certain businesses offer standard insurance products and services focused on meeting the specific needs of a geographically differentiated customer base. Key clients are small-to-midsized businesses. These regionally focused businesses provide a broad array of commercial insurance products to customers primarily in 45 states and the District of Columbia and have developed expertise in niches that reflect local economies. They are organized geographically in order to provide them with the flexibility to adapt quickly to local market conditions and customer needs.

In addition, through our non-U.S. insurance businesses, we write business in more than 60 countries worldwide, with branches or offices in 43 cities outside the United States, in Asia, Australia, Canada, Continental Europe, Mexico, Scandinavia, South America and the United Kingdom. In each of our operating territories, we have built decentralized structures that allow products and services to be tailored to each regional customer base. Our businesses are managed by teams of professionals with expertise in local markets and knowledge of regional environments.

In addition to providing insurance products, certain businesses also provide a wide variety of fee-based services, including claims, administrative and consulting services.

Businesses comprising the Insurance segment are as follows:

Acadia Insurance is a Northeast regional property casualty underwriter offering a broad portfolio of products exclusively through local independent agents in Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island and Vermont. In addition to its general offerings, Acadia has specialized expertise in insuring regional industries such as construction, service contractors, lumber, and transportation.

Admiral Insurance provides excess and surplus lines coverage for commercial risks that generally consist of hard-to- place, specialized risks that involve moderate to high degrees of hazard. In both general liability and professional lines, Admiral has a broad line of products to meet the needs of existing as well as emerging opportunities. The distribution of products is limited solely to wholesale brokers.

Berkley Accident and Health underwrites accident and health insurance and reinsurance products in four primary areas: medical stop loss, managed care, special risk and group captive. It has a diversified product and service portfolio serving a range of clients from small employers, health care organizations, and membership groups to Fortune 500 companies.

Berkley Agribusiness offers insurance for larger commercial risks across the United States involved in the supply, storage, handling, processing and distribution of commodities related to the agriculture and food industries.

Berkley Alliance Managers offers tailored insurance coverages and comprehensive risk management solutions designed to enhance profitability and reduce susceptibility to loss in four target markets - Design Professionals, Construction Professionals, Accounting Professionals and miscellaneous non-medical Service Professionals.

Berkley Aspire provides excess and surplus lines coverage on a national basis to small to medium-sized insureds with low to moderate insurance risk. Its product lines include general liability, liquor liability and some property and inland marine coverage. It serves a limited distribution channel, including select Berkley business agents.

Berkley Asset Protection provides specialized insurance coverages for fine arts and jewelry exposures to commercial and individual clients.

Berkley Canada underwrites specialty, casualty and surety lines of business on behalf of the Canadian branch of Berkley Insurance Company. It specializes in commercial casualty and professional liability, and offers a broad portfolio of risk products that include commercial general liability, umbrella, professional liability, directors and officers, commercial property and surety, in addition to niche products for specific industries such as technology, life sciences and travel.

Berkley Construction Solutions provides excess liability coverage to residential and commercial contractors on a project or practice basis.

Berkley Custom Insurance focuses on the excess casualty insurance market and offers umbrella and excess liability coverages to clients from the small/middle market to Fortune 1000 companies in target classes of business including construction, manufacturing, retail/wholesale trade, finance, real estate, public entities and oil & gas.

Berkley Cyber Risk Solutions focuses on insurance and risk management products that respond to the changing cyber security vulnerabilities of organizations around the world. It offers specialty commercial cyber insurance coverages on a worldwide basis to clients of all sizes.

Berkley E&S Solutions provides general liability excess and surplus lines coverages for mid-market U.S. companies with generally hard-to-place, specialized risks that involve moderate to high degrees of hazard and require tailored terms, utilizing self-insurance retentions. The distribution of products is highly limited to a small number of individually appointed wholesale brokers.

Berkley Enterprise Risk Solutions provides custom workers' compensation programs to large, motivated employers operating in a broad range of industries. Loss sensitive and/or guaranteed cost programs are offered to employers with exposure predominately in California.

Berkley Entertainment underwrites property casualty insurance products, both on an admitted and non-admitted basis, for clients in the entertainment industry and sports-related organizations.

Berkley Environmental underwrites casualty and specialty environmental products for environmental customers including contractors, consultants, property owners and facilities operators.

Berkley Financial Specialists serves the insurance needs of companies in the financial services sector and beyond. Its Berkley Crime division provides crime and fidelity related insurance products for commercial organizations, financial sector businesses and governmental entities on a primary and excess basis. Its Financial Services segment provides management liability and fidelity products to financial institutions, insurance companies and asset management firms.

Berkley Fire & Marine offers a broad range of preferred inland marine and related property risks and services to customers throughout the United States. Products are distributed through independent agents and brokers.

Berkley Healthcare underwrites customized, comprehensive insurance solutions for the full spectrum of healthcare providers. Through Berkley Healthcare Medical Professional, it offers a wide range of medical professional coverages. Through Berkley Healthcare Financial Lines, it offers a comprehensive suite of financial lines coverages.

Berkley Human Services provides property casualty insurance coverages to human services organizations, including nonprofit and for-profit organizations. Its product offerings include traditional primary and excess coverages.

Berkley Industrial Comp specializes in writing workers' compensation insurance for diverse high hazard industries in select states. Its products are distributed by a select group of independent retail agents.

Berkley Insurance Asia underwrites specialty commercial insurance coverages to clients in North Asia and Southeast Asia through offices in Hong Kong, Singapore, Labuan and Shanghai.

Berkley Insurance Australia underwrites general insurance business in Australia, including professional indemnity insurance for companies of all sizes.

Berkley Latinoamérica provides property, casualty, automobile, surety, group life and workers' compensation products and services in its operating territories of Argentina, Brazil, the Caribbean, Colombia, Mexico and Uruguay.

Berkley Life Sciences offers a comprehensive spectrum of property casualty products to the life sciences industry on a global basis, including both primary and excess product liability coverages. It serves pharmaceutical and biotech companies, medical device companies, dietary supplement companies, medical and research related software developers, contract research and manufacturing organizations, research institutions and organizations, and other related businesses.

Berkley Luxury Group provides commercial package insurance programs for high-end cooperative, condominium, and quality rental apartment buildings and upscale restaurants in the New York, New Jersey, Chicago and Washington, D.C. metropolitan markets, as well as other select markets.

Berkley Management Protection offers a modular suite of management liability products for small and middle market companies through a bespoke and easy to use platform tailored to independent agents. The management liability coverages they provide include directors and officers, employment practices, fiduciary, cyber, crime and miscellaneous professional liability.

Berkley Mid-Atlantic Group provides commercial property casualty coverages to a wide variety of businesses in Delaware, the District of Columbia, Maryland, Ohio, Pennsylvania, and Virginia. Focusing on small and middle market accounts, it complements its standard writings with specialized products in areas such as construction.

Berkley Net Underwriters focuses on small and medium-sized commercial risks, using a web-based system to allow producers to quote, bind and service workers' compensation insurance products on behalf of Berkley member insurance companies.

Berkley North Pacific offers preferred insurance products and services to a broad range of small to medium size commercial entities. It operates through independent agents in Idaho, Montana, Oregon, Utah and Washington.

Berkley Offshore Underwriting Managers is a specialist global underwriter of energy and marine risks. Its three divisions provide specialty insurance products in the energy upstream, energy liability and marine sectors.

Berkley Oil & Gas provides property casualty products and risk services to the United States energy sector. Its customer base includes risks of all sizes that work in the oil patch, including operators, drillers, geophysical contractors, well-servicing contractors, and manufacturers/distributors of oil field products, as well as those in the renewable energy sector.

Berkley One provides a customizable suite of personal lines insurance solutions including home, condo/co-op, auto, liability and collectibles. Berkley One targets high net worth individuals and families with sophisticated risk management needs.

Berkley Product Protection offers a broad product suite, including Product Liability and Product Recall and Contamination, to assist clients in the manufacturing, wholesale and import space with their risk management and insurance needs.

Berkley Professional Liability specializes in professional liability insurance for publicly-traded and private entities on a worldwide basis. Its liability coverages include directors and officers, errors and omissions, fiduciary, employment practices, and sponsored insurance agents' errors and omissions. Berkley Transactional, a division of Berkley Professional Liability, underwrites a full suite of transactional insurance products, including representations and warranties insurance, and tax opinion insurance.

Berkley Program Specialists is a program management company offering both admitted and non-admitted insurance support on a nationwide basis for commercial casualty and property program administrators with specialized insurance expertise. Its book is built around blocks of homogeneous business, or programs, allowing for efficient processes, effective oversight of existing programs and sound implementation of new programs.

Berkley Public Entity specializes in providing excess coverage and services to individual governmental and scholastic entities and intergovernmental risk sharing groups. Products include general liability, automobile liability, law enforcement liability, public officials and educator's legal liability, employment practices liability, incidental medical, property and crime.

Berkley Risk provides at-risk and alternative risk insurance program management services for a broad range of groups and individuals including public entity pools, professional associations, captives and self-insured clients. As a third party administrator, it manages workers' compensation, liability and property claims nationwide.

Berkley Select specializes in underwriting professional liability insurance for law firms and accounting firms, as well as other professional firms and their practices. It also offers executive liability products, including directors and officers liability, employment practices and fiduciary liability, to small to middle market privately held and not-for-profit customers. Berkley Select provides these insurance products on both an admitted and surplus lines basis.

Berkley Small Business Solutions offers commercial insurance products for small businesses through a modern technology platform that leverages data and analytics. Its initial product offering focuses on preferred risks in the non-fleet transportation market.

Berkley Southeast offers a wide array of commercial lines products in six southeastern states: Alabama, Georgia, Mississippi, North Carolina, South Carolina and Tennessee, specializing in small to mid-sized accounts.

Berkley Surety provides a full spectrum of surety bonds for construction, environmental and commercial surety accounts in the U.S. and Canada, through an independent agency and broker platform across 20 field locations.

Berkley Technology Underwriters provides a broad range of first and third-party insurance programs for technology exposures and technology industries on both a local and global basis.

Carolina Casualty is a national provider of primary commercial insurance products and services to the transportation industry. It underwrites on an admitted basis in all 50 states and the District of Columbia. Its *Berkley Prime Transportation* business provides primary auto liability, auto physical damage and general liability to a broad array of trucking operations.

Continental Western Group is a Midwest regional property and casualty insurance operation based in Des Moines, Iowa, providing underwriting and risk management services to a broad array of regional businesses in thirteen Midwest states. In addition to its generalist portfolio, Continental Western offers specialty underwriting solutions for diversified agriculture, construction, light manufacturing, transportation, volunteer fire departments, rural utilities and public entities.

Gemini Transportation is a national provider of excess liability insurance for various domestic surface transportation businesses, including the railroad industry as well as the trucking, busing and other industries that use rubber-wheeled vehicles for over-the-road use.

Intrepid Direct provides business insurance coverages through a direct distribution model focused on the franchise market, with specialties including the restaurant, garage and fitness industries.

Key Risk specializes in writing workers' compensation insurance for diverse industries including healthcare, human services, transportation, temporary staffing, professional employer organizations and contractors requiring coverage under the United States Longshore and Harbor Workers' Compensation Act (USL&H). Its products are distributed by a select group of independent retail agents and wholesale brokers located throughout the United States.

Nautilus Insurance Group insures excess and surplus lines risks for small to medium-sized commercial risks with low to moderate susceptibility to loss. It writes commercial excess and surplus lines business nationwide and admitted lines commercial business in a limited number of states. A substantial portion of Nautilus' business is written through its close, long-standing network of general agents, who are chosen on a highly selective basis.

Preferred Employers Insurance focuses exclusively on workers' compensation products and services for businesses based in California. It serves thousands of customers covering a broad spectrum of industries throughout the state.

Union Standard offers preferred commercial property and casualty insurance products and services to a wide range of small to medium size commercial entities with a focus on the construction, farm/ranch, retail and service industries. It operates through independent agents in Arizona, Arkansas, New Mexico, Oklahoma and Texas.

Vela Insurance Services specializes in commercial casualty insurance on an excess and surplus lines basis. Its primary focus is on general liability insurance for construction, manufacturing and general casualty clients as well as products liability and miscellaneous professional liability coverages distributed through wholesale insurance brokers.

Verus Specialty Insurance offers general liability, professional liability and property coverages for small to mid-sized commercial risks in the excess and surplus lines insurance market through a select group of appointed wholesale brokers.

W R B Europe is comprised of specialist businesses offering a focused range of insurance products to markets in Continental Europe.

W / R / B Underwriting provides a broad range of insurance products to the Lloyd's marketplace, with a concentration in specialist classes of business including property, professional indemnity and financial lines.

The following table sets forth the percentage of gross premiums written by each Insurance business:

	Year Ended December 31,		
	2022	2021	2020
Acadia Insurance	5.2%	5.5%	6.0%
Admiral Insurance	6.2	5.9	5.6
Berkley Accident and Health	5.1	5.0	5.2
Berkley Agribusiness	0.8	0.8	1.2
Berkley Alliance Managers	2.7	2.8	2.8
Berkley Aspire	0.9	0.7	0.5
Berkley Asset Protection	1.0	0.8	0.8
Berkley Canada	1.2	1.2	1.1
Berkley Construction Solutions	0.4	—	—
Berkley Custom Insurance	3.1	3.2	3.5
Berkley Cyber Risk Solutions	0.9	0.8	0.5
Berkley E&S Solutions	—	—	—
Berkley Enterprise Risk Solutions	—	—	—
Berkley Entertainment	1.8	1.8	2.1
Berkley Environmental	5.6	5.2	5.4
Berkley Financial Specialists	0.6	0.6	0.8
Berkley Fire & Marine	0.7	0.8	0.8
Berkley Healthcare	1.8	1.8	1.7
Berkley Human Services	1.1	1.0	1.0
Berkley Industrial Comp	0.7	0.8	0.8
Berkley Insurance Asia	0.8	0.8	0.7
Berkley Insurance Australia	1.7	1.7	1.4
Berkley Latinoamérica	2.9	2.7	2.8
Berkley Life Sciences	0.5	0.5	0.5
Berkley Luxury Group	0.8	0.9	1.1
Berkley Management Protection	0.1	—	—
Berkley Mid-Atlantic Group	1.0	1.3	1.2
Berkley Net Underwriters	2.2	2.1	2.2
Berkley North Pacific	0.7	0.7	0.7
Berkley Offshore Underwriting Managers	1.4	1.5	1.5
Berkley Oil & Gas	3.5	3.0	3.2
Berkley One	1.8	1.2	0.7
Berkley Product Protection	0.3	0.4	0.4
Berkley Professional Liability	5.8	7.5	4.8
Berkley Program Specialists	1.7	2.0	1.7
Berkley Public Entity	0.6	0.6	0.5
Berkley Risk	0.3	0.2	0.3
Berkley Select	1.8	2.0	2.4
Berkley Small Business Solutions	—	—	—
Berkley Southeast	2.2	2.3	2.3
Berkley Surety	1.1	1.1	1.2
Berkley Technology Underwriters	0.6	0.6	0.7
Carolina Casualty	2.1	1.7	0.9
Continental Western Group	2.4	2.5	2.8
Gemini Transportation	3.1	3.0	3.4
Intrepid Direct	1.2	1.1	0.9
Key Risk	2.2	2.5	2.5
Nautilus Insurance Group	4.7	4.5	4.9
Preferred Employers Insurance	1.2	1.5	1.9
Union Standard	1.5	1.7	2.0
Vela Insurance Services	2.5	2.6	2.6
Verus Specialty Insurance	0.8	0.8	0.7
W R B Europe	1.0	1.1	1.0
W/R/B Underwriting	3.6	4.0	4.3
Other	2.1	1.2	2.0
Total	100.0%	100.0%	100.0%

The following table sets forth percentages of gross premiums written, by line, by our Insurance operations:

	Year Ended December 31,		
	2022	2021	2020
Other liability	37.0%	35.6%	36.0%
Short-tail lines (1)	23.2	22.2	23.3
Professional liability	15.5	17.3	14.6
Workers' compensation	11.7	12.4	14.3
Commercial auto	12.6	12.5	11.8
Total	100.0%	100.0%	100.0%

(1) Short-tail lines include commercial multi-peril (non-liability), inland marine, accident and health, fidelity and surety, boiler and machinery and other lines.

Reinsurance & Monoline Excess

We provide other insurance companies and self-insureds with assistance in managing their net risk through reinsurance on either a portfolio basis, through treaty reinsurance, or on an individual basis, through facultative reinsurance. Our monoline excess operations solely retain risk on an excess basis.

Businesses comprising the Reinsurance & Monoline Excess segment are as follows:

Berkley Re America provides treaty and facultative reinsurance solutions on a variety of product lines through reinsurance brokers to companies whose primary operations are within the United States and Canada.

Berkley Re Asia Pacific provides property and casualty reinsurance to the Asia Pacific marketplace. With offices in Brisbane, Sydney, Beijing, Labuan and Singapore, each branch focuses on excess of loss reinsurance, targeting both property and casualty treaty and facultative contracts, through multiple distribution channels.

Berkley Re Solutions is a direct casualty facultative reinsurance underwriter serving clients through a nationwide network of regional offices. Its facultative reinsurance products include automatic, semi-automatic and individual risk assumed reinsurance. It also provides its customers with turnkey products such as cyber, employment practices liability insurance ("EPLI"), liquor liability insurance and violent events coverage to help enhance their clients' product offerings, along with underwriting, claims, and actuarial consultation.

Berkley Re UK writes international property casualty treaty and property facultative accounts. Its territorial scope includes reinsured clients domiciled in the United Kingdom, Europe, Africa, the Middle East and the Caribbean.

Lloyd's Syndicate 2791 Participation represents the Company's minority participation in a Lloyd's syndicate that writes a broad range of mainly short-tail classes of business.

Midwest Employers Casualty provides excess workers' compensation insurance products to individual employers, groups and workers' compensation insurance companies across the United States. Its workers' compensation excess of loss products include self-insured excess of loss coverages and large deductible policies. Through its relationship with Berkley Net Underwriters, Midwest Employers Casualty also offers multi-state coverage for group self-insureds. It has developed sophisticated, proprietary analytical tools and risk management services designed to help its insureds lower their total cost of risk.

The following table sets forth the percentages of gross premiums written by each Reinsurance & Monoline Excess business:

	Year Ended December 31,		
	2022	2021	2020
Berkley Re America	34.6%	31.2%	31.6%
Berkley Re Asia Pacific	15.6	15.4	13.5
Berkley Re Solutions	12.5	13.8	14.4
Berkley Re UK	12.8	13.8	14.7
Lloyd's Syndicate 2791 Participation	6.1	6.8	6.0
Midwest Employers Casualty	18.4	19.0	19.8
Total	100.0%	100.0%	100.0%

The following table sets forth the percentages of gross premiums written, by line, by our Reinsurance & Monoline Excess operations:

	Year Ended December 31,		
	2022	2021	2020
Casualty	61.7%	61.8%	58.1%
Property	19.9	19.2	22.1
Monoline Excess	18.4	19.0	19.8
Total	100.0%	100.0%	100.0%

Results by Segment

Summary financial information about our segments is presented on a GAAP basis in the following table:

	Year Ended December 31,		
(In thousands)	2022	2021	2020
Insurance			
Revenue	$ 8,952,493	$ 7,578,592	$ 6,478,834
Income before income taxes	1,455,658	1,219,798	668,012
Reinsurance & Monoline Excess			
Revenue	1,386,639	1,203,647	1,009,203
Income before income taxes	316,527	270,563	205,587
Other (1)			
Revenue	827,367	673,227	610,888
Loss before income taxes	(52,504)	(207,456)	(168,797)
Total			
Revenue	$ 11,166,499	$ 9,455,466	$ 8,098,925
Income before income taxes	$ 1,719,681	$ 1,282,905	$ 704,802

(1) Represents corporate revenues and expenses, net investment gains and losses, and revenues and expenses from non-insurance businesses that are consolidated for financial reporting purposes.

The table below represents summary underwriting ratios on a GAAP basis for our segments. Loss ratio is losses and loss expenses incurred expressed as a percentage of net premiums earned. Expense ratio is underwriting expenses expressed as a percentage of net premiums earned. Underwriting expenses do not include expenses related to insurance services or unallocated corporate expenses. Combined ratio is the sum of the loss ratio and the expense ratio. The combined ratio represents a measure of underwriting profitability, excluding investment income. A number in excess of 100 indicates an underwriting loss; a number below 100 indicates an underwriting profit:

	Year Ended December 31,		
	2022	2021	2020
Insurance			
Loss ratio	61.3 %	61.1 %	64.9 %
Expense ratio	27.9	28.3	30.3
Combined ratio	89.2 %	89.4 %	95.2 %
Reinsurance & Monoline Excess			
Loss ratio	61.3 %	61.0 %	61.3 %
Expense ratio	28.4	29.7	31.8
Combined ratio	89.7 %	90.7 %	93.1 %
Total			
Loss ratio	61.3 %	61.1 %	64.5 %
Expense ratio	28.0	28.5	30.4
Combined ratio	89.3 %	89.6 %	94.9 %

Investments

Investment results, before income taxes, were as follows:

	Year Ended December 31,		
(In thousands)	2022	2021	2020
Average investments, at cost (1)	$ 24,438,112	$ 22,234,975	$ 20,012,182
Net investment income (1)	$ 779,185	$ 671,618	$ 583,821
Percent earned on average investments (1)	3.2 %	3.0 %	2.9 %
Net investment gains	$ 202,397	$ 90,632	$ 103,000
Change in unrealized investment (losses) gains (2)	$ (1,248,128)	$ (254,939)	$ 164,645

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(1) Includes investments, cash and cash equivalents, trading accounts receivable (payable) from brokers and clearing organizations, trading account securities sold but not yet purchased and unsettled purchases.

(2) Represents the change in unrealized investment (losses) gains for available for sale securities recognized in stockholders' equity.

For comparison, the following are the coupon returns for the Barclays U.S. Aggregate Bond Index and the dividend returns for the S&P 500® Index:

	Year Ended December 31,		
	2022	2021	2020
Barclays U.S. Aggregate Bond Index	2.7 %	2.3 %	2.8 %
S&P 500® Index	1.3	1.8	1.8

The percentages of the fixed maturity portfolio categorized by contractual maturity, based on fair value, on the dates indicated, are set forth below. Actual maturities may differ from contractual maturities because certain issuers may have the right to call or prepay certain obligations.

	Year Ended December 31,		
	2022	2021	2020
1 year or less	8.7%	9.5%	11.4%
Over 1 year through 5 years	47.2	46.1	38.9
Over 5 years through 10 years	23.4	25.2	25.0
Over 10 years	11.2	12.7	17.4
Mortgage-backed securities	9.5	6.5	7.3
Total	100.0%	100.0%	100.0%

At both December 31, 2022 and 2021, the fixed maturity portfolio, including cash and cash equivalents, had an effective duration of 2.4 years.

Loss and Loss Expense Reserves

To recognize liabilities for unpaid losses, either known or unknown, insurers establish reserves, which is a balance sheet account representing estimates of future amounts needed to pay claims and related expenses with respect to insured events which have occurred. Estimates and assumptions relating to reserves for losses and loss expenses are based on complex and subjective judgments, often including the interplay of specific uncertainties with related accounting and actuarial measurements. Such estimates are also susceptible to change as significant periods of time may elapse between the occurrence of an insured loss, the report of the loss to the insurer, the ultimate determination of the cost of the loss and the insurer's payment of that loss.

In general, when a claim is reported, claims personnel establish a "case reserve" for the estimated amount of the ultimate payment based upon known information about the claim at that time. The estimate represents an informed judgment based on general reserving practices and reflects the experience and knowledge of the claims personnel regarding the nature and value of the specific type of claim. Reserves are also established on an aggregate basis to provide for losses incurred but not reported ("IBNR") to the insurer, potential inadequacy of case reserves and the estimated expenses of settling claims, including legal and other fees and general expenses of administrating the claims adjustment process. Reserves are established based upon the then current legal interpretation of coverage provided.

In examining reserve adequacy, several factors are considered in estimating the ultimate economic value of losses. These factors include, among others, historical data, legal developments, changes in social attitudes and economic conditions, including the effects of inflation. The actuarial process relies on the basic assumption that past experience, adjusted judgmentally for the effects of current developments and anticipated trends, is an appropriate basis for predicting future outcomes. Reserve amounts are necessarily based on management's informed estimates and judgments using currently available data. As additional experience and other data become available and are reviewed, these estimates and judgments may be revised. This may result in reserve increases or decreases that would be reflected in our results in periods in which such estimates and assumptions are changed.

The risk and complexity of estimating loss reserves are greater when economic conditions are uncertain. It is especially difficult to estimate the impact of inflation on loss reserves given the current economic environment and related government actions. Whereas a slowing economy would generally lead to lower inflation or even deflation, increased government spending would generally lead to higher inflation. A change in our assumptions regarding inflation would result in reserve increases or decreases that would be reflected in our earnings in periods in which such assumptions are changed.

Reserves do not represent an exact calculation of liability. Rather, reserves represent an estimate of what management expects the ultimate settlement and claim administration will cost. While the methods for establishing the reserves are well tested over time, some of the major assumptions about anticipated loss emergence patterns are subject to unanticipated fluctuation. These estimates, which generally involve actuarial projections, are based on management's assessment of facts and circumstances then known, as well as estimates of trends in claims severity and frequency, judicial theories of liability and other factors, including the actions of third parties, which are beyond the Company's control. These variables are affected by external and internal events, such as inflation and economic volatility, judicial and litigation trends, reinsurance coverage, legislative changes and claim handling and reserving practices, which make it more difficult to accurately predict claim costs. The inherent uncertainties of estimating reserves are greater for certain types of liabilities where long periods of time elapse before a definitive determination of liability is made. Although the loss reserves included in the Company's financial statements represent management's best estimates, setting reserves is inherently uncertain and the Company cannot provide assurance that its current reserves will prove adequate in light of subsequent events.

The Company discounts its liabilities for certain workers' compensation reserves. The amount of workers' compensation reserves that were discounted was $1,267 million and $1,387 million at December 31, 2022 and 2021, respectively. The aggregate net discount for those reserves, after reflecting the effects of ceded reinsurance, was $416 million and $452 million at December 31, 2022 and 2021, respectively. At December 31, 2022, discount rates by year ranged from 0.7% to 6.5%, with a weighted average discount rate of 3.4%.

Substantially all discounted workers' compensation reserves (97% of total discounted reserves at December 31, 2022) are excess workers' compensation reserves. In order to properly match loss expenses with income earned on investment securities supporting the liabilities, reserves for excess workers' compensation business are discounted using risk-free discount rates determined by reference to the U.S. Treasury yield curve. These rates are determined annually based on the weighted average rate for the period. Once established, no adjustments are made to the discount rate for that period, and any increases or decreases in loss reserves in subsequent years are discounted at the same rate, without regard to when any such adjustments are recognized. The expected loss and loss expense payout patterns subject to discounting are derived from the Company's loss payout experience.

The Company also discounts reserves for certain other long-duration workers' compensation reserves (representing approximately 3% of total discounted reserves at December 31, 2022), including reserves for quota share reinsurance and reserves related to losses regarding occupational lung disease. These reserves are discounted at statutory rates permitted by the Department of Insurance of the State of Delaware.

To date, known environmental and asbestos claims have not had a material impact on the Company's operations, because its subsidiaries generally did not insure large industrial companies that are subject to significant environmental or asbestos exposures prior to 1986 when an absolute exclusion was incorporated into standard policy language.

The Company's net reserves for losses and loss expenses relating to environmental and asbestos claims on policies written before adoption of the absolute exclusion was $20 million at both December 31, 2022 and 2021. The estimation of these liabilities is subject to significantly greater than normal variation and uncertainty because it is difficult to make an actuarial estimate of these liabilities due to the absence of a generally accepted actuarial methodology for these exposures and the potential effect of significant unresolved legal matters, including coverage issues, as well as the cost of litigating the legal issues. Additionally, the determination of ultimate damages and the final allocation of such damages to financially responsible parties are highly uncertain.

The table below provides a reconciliation of the beginning of year and end of year property casualty reserves for the indicated years:

(In thousands)	2022	2021	2020
Net reserves at beginning of year	$ 12,848,362	$ 11,620,393	$ 10,697,998
Cumulative effect adjustment resulting from changes in accounting principles (1)	—	—	5,927
Restated net reserves at beginning of period	12,848,362	11,620,393	10,703,925
Net provision for losses and loss expenses:			
Claims occurring during the current year (2)	5,774,713	4,921,191	4,432,937
Increase in estimates for claims occurring in prior years (3)	54,511	863	627
Loss reserve discount amortization	32,526	31,906	35,142
Total	5,861,750	4,953,960	4,468,706
Net payments for claims:			
Current year	1,068,577	887,896	921,054
Prior years	3,279,333	2,777,798	2,677,595
Total	4,347,910	3,665,694	3,598,649
Foreign currency translation	(113,323)	(60,297)	46,411
Net reserves at end of year	14,248,879	12,848,362	11,620,393
Ceded reserves at end of year	2,762,344	2,542,526	2,164,037
Gross reserves at end of year	$ 17,011,223	$ 15,390,888	$ 13,784,430
Net change in premiums and losses occurring in prior years:			
Increase in estimates for claims occurring in prior years (3)	$ (54,511)	$ (863)	$ (627)
Retrospective premium adjustments for claims occurring in prior years (4)	18,106	7,510	16,807
Net premium and reserve development on prior years	$ (36,405)	$ 6,647	$ 16,180

(1) The cumulative effect adjustment resulting from changes in accounting principles relates to the allowance for expected credit losses on reinsurance recoverables that commenced on January 1, 2020 due to the adoption of ASU 2016-13.
(2) Claims occurring during the current year are net of loss reserve discounts of $35 million, $21 million and $10 million in 2022, 2021 and 2020, respectively.
(3) The change in estimates for claims occurring in prior years is net of loss reserve discount. On an undiscounted basis, the estimates for claims occurring in prior years increased by $16 million in 2022, and decreased by $19 million in 2021 and $21 million in 2020, respectively.
(4) For certain retrospectively rated insurance policies and reinsurance agreements, changes in loss and loss expenses for prior years are offset by additional or return premiums.

Also, see Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and note 14, Reserves for Losses and Loss Expenses included in our audited consolidated financial statements for further information regarding the changes in estimates for claims occurring in prior years.

A reconciliation between the reserves as of December 31, 2022 as reported in the accompanying consolidated GAAP financial statements and those reported on the basis of statutory accounting principles ("SAP") in the Company's U.S. regulatory filings is as follows:

(In thousands)		
Net reserves reported in U.S. regulatory filings on a SAP basis	$	13,640,489
Reserves for non-U.S. companies		679,246
Loss reserve discounting (1)		(78,336)
Ceded reserves		2,762,344
Allowance for expected credit losses on due from reinsurers		7,480
Gross reserves reported in the consolidated GAAP financial statements	$	17,011,223

(1) For statutory purposes, the Company discounts its workers' compensation reinsurance reserves at 2.5% as prescribed or permitted by the Department of Insurance of the State of Delaware. In its GAAP financial statements, the Company discounts excess workers' compensation reserves at the risk-free rate and assumed workers' compensation reserves at the statutory rate.

Reinsurance

We follow a common industry practice of reinsuring a portion of our exposures and paying to reinsurers a portion of the premiums received on the policies that we write. Reinsurance is purchased principally to reduce net liability on individual risks and to protect against catastrophic losses. Although reinsurance does not legally discharge an insurer from its primary liability for the full amount of the policies, it does make the assuming reinsurer contractually liable to the insurer to the extent of the reinsurance coverage. We monitor the financial condition of our reinsurers and attempt to place our coverages only with substantial, financially sound carriers. As a result, generally the reinsurers who reinsure our casualty insurance must have an A.M. Best rating of "A (Excellent)" or better with at least $1 billion in policyholder surplus and the reinsurers who cover our property insurance must have an A.M. Best rating of "A- (Excellent)" or better with at least $1 billion in policyholder surplus.

Regulation

U.S. Regulation

Our U.S. insurance subsidiaries are principally regulated by their domiciliary state insurance departments and are subject to varying degrees of regulation and supervision in the other U.S. jurisdictions in which they do business. As of January 1, 2023, there are six domiciliary states related to our U.S. insurance subsidiaries.

Overview. Our domestic insurance subsidiaries are subject to statutes which delegate regulatory, supervisory and administrative powers to state insurance commissioners. This regulation relates to such matters as the standards of solvency which must be met and maintained; the licensing of insurers and their agents; the nature of and limitations on investments; deposits of securities for the benefit of policyholders; approval of certain policy forms and premium rates; periodic examination of the affairs of insurance companies; annual and other reports required to be filed on the financial condition of insurers or for other purposes; establishment and maintenance of reserves for unearned premiums, loss expenses and losses; and requirements regarding numerous other matters. Our property casualty subsidiaries, other than our excess and surplus lines and reinsurance subsidiaries, must generally file all rates with the insurance department of each state in which they operate. Our excess and surplus lines and reinsurance subsidiaries generally operate free of rate and form regulation.

Legislative and Regulatory Activity Related to the COVID-19 Pandemic. In response to the outbreak of the COVID-19 pandemic in 2020, legislators in several states and in the United States Congress introduced proposals that would have mandated insurance coverage for certain pandemic-related losses, including business interruption losses, under previously-issued policies that were not designed or priced to provide such coverage. Federal lawmakers also discussed the possibility of a public-private partnership, and there appears to have been a broadly held and bipartisan consensus that pandemic risk is generally uninsurable absent some kind of publicly-funded backstop. While these state and federal proposals have not meaningfully progressed, there remains a risk that they might be revived, or that future variants of COVID-19 or concerns about the possibility of a future pandemic might prompt similar legislative and regulatory proposals. See “Risk Factors — Risks Related to Our Industry — The COVID-19 pandemic has materially and adversely affected our results of operations, and is expected to continue and therefore may materially and adversely affect our results of operations, financial position and liquidity.”

Holding Company Statutes. In addition to regulatory supervision of our insurance subsidiaries, we are subject to state statutes governing insurance holding company systems. Under the terms of applicable state statutes, any person or entity desiring to purchase more than a specified percentage (commonly 10%) of our outstanding voting securities would be required to obtain prior regulatory approval of the purchase. Typically, such statutes require that we periodically file information with the appropriate domiciliary state insurance commissioner, including information concerning our capital structure, ownership, financial condition and general business operations.

We must also annually submit to the lead state regulator for our group an “enterprise risk management report” which identifies the activities and circumstances of any affiliated company that might have a material adverse effect on the financial condition of our group or our U.S. licensed insurers.

In addition, all states have adopted changes to the holding company act that authorize U.S. insurance regulators to lead or participate in the group-wide supervision of certain international insurance groups. In November 2019, the International Association of Insurance Supervisors (“IAIS”), an international standard setter, adopted a global framework for the supervision of internationally active insurance groups, as discussed below under “International Regulation.” This framework includes a risk-based, group-wide global insurance capital standard (“ICS”), which is undergoing a five-year monitoring period that started in January 2020.

In the United States, the National Association of Insurance Commissioners (the “NAIC”) has developed a group capital calculation tool that uses a risk-based capital aggregation methodology for all entities in an insurance holding company system. The goal is to provide U.S. regulators with a method to aggregate the available capital and the minimum capital of each entity in a group in a way that applies to all companies regardless of their structure. In 2020, the NAIC adopted amendments to the model holding company act and regulation that implement the group capital calculation by requiring the ultimate controlling person of an insurer subject to holding company registration to file the group capital calculation with its lead state regulator. The annual filing requirement will become effective once the states have adopted the NAIC holding company amendments. This annual filing requirement became effective in Delaware, our lead state insurance regulator, on February 7, 2022.

All states have adopted the NAIC's Risk Management and Own Risk and Solvency Assessment Model Act (the “ORSA Model Act”), which requires an insurance holding company system’s chief risk officer to submit annually to its lead state insurance regulator an Own Risk and Solvency Assessment Summary Report (“ORSA Report”). The ORSA Report is a confidential internal assessment of the material and relevant risks associated with an insurer’s current business plan and the sufficiency of capital resources to support those risks. Under the ORSA Model Act, as enacted by the states, we are required to:

- regularly, no less than annually, conduct an ORSA to assess the adequacy of our risk management framework, and current and estimated projected future solvency position;
- internally document the process and results of the assessment; and
- provide an ORSA Report annually to the State of Delaware's Insurance Commissioner.

Cybersecurity Regulations. New York’s cybersecurity regulation applies to financial services institutions authorized by the New York State Department of Financial Services (the “NYDFS”), including our insurance subsidiaries licensed in New York. The regulation requires these entities to assess risks associated with their information systems and establish and maintain a cybersecurity program reasonably designed to protect consumers’ private data and the confidentiality, integrity and availability of the licensee’s information systems. In November 2022, the NYDFS proposed amendments to New York’s cybersecurity regulation, which, if adopted, would require additional reporting, governance and oversight measures to be implemented.

The NAIC has adopted the Insurance Data Security Model Law (the “Cybersecurity Model Law”) for consideration by state legislatures, which, when adopted by the states, establishes standards for data security, the investigation of cybersecurity events involving unauthorized access to, or the misuse of, certain nonpublic information, and reporting to insurance commissioners. The Cybersecurity Model Law imposes significant regulatory burdens intended to protect the confidentiality, integrity and availability of information systems. As of December 31, 2022, the Cybersecurity Model Law, or a form thereof, had been adopted by several states, including three of our U.S. insurance subsidiaries’ domiciliary states. A drafting note in the Cybersecurity Model Law states that a licensee’s compliance with New York's cybersecurity regulation is intended to constitute compliance with the Cybersecurity Model Law, but compliance remains a state-by-state issue and we would need to consider any differences in implementation and enforcement of the Cybersecurity Model Law as part of our compliance efforts. Additionally, the Federal Trade Commission amended the “Standards for Safeguarding Customer Information Rules (otherwise known as the “Safeguards Rule”) in 2021 to require covered financial institutions to implement certain data security measures and practices in their information security programs. Many of the requirements of the amended Safeguards Rule are similar to New York's cybersecurity regulation and the Cybersecurity Model Law, but there are some differences that may impose increased operational burdens and compliance costs. The amended Safeguards Rule will become effective in June 2023.

Certain other states are also developing or have developed regulations related to privacy and data security. For example, the California Consumer Privacy Act (“CCPA”), which became effective in January 2020, broadly regulates the collection, processing and disclosure of California residents’ personal information, imposes limits on the “sale” of personal information and grants California residents certain rights to, among other things, access and delete data about them in certain circumstances. The CCPA also established a private right of action, with potentially significant statutory damages, whereby businesses that fail to implement reasonable security measures to protect against breaches of personal information could be liable to affected consumers. California subsequently enacted the California Privacy Rights Act (“CPRA”), which came into full effect in January 2023. The CPRA amends the CCPA by imposing additional limitations and obligations with respect to covered businesses’ use and sharing of certain personal data. Compliance with the CCPA/CPRA may increase the cost of providing our products and services in California. Other states have considered – and some states have adopted - similar proposals. For instance, Virginia enacted a data privacy law in 2021 that became effective in January 2023. Additionally, Colorado, Connecticut and Utah have enacted data privacy laws that will come into effect later in 2023. These laws establish in those states many of the same data privacy and security requirements as other existing laws, such as the CCPA.

We cannot predict the impact, if any, that any current, proposed or future federal or state cybersecurity laws or regulations will have on our business, financial condition or results of operations.

Risk-Based Capital Requirements. The NAIC utilizes a Risk-Based Capital (“RBC”) formula that is designed to measure the adequacy of an insurer's statutory surplus in relation to the risks inherent in its business. The RBC formula develops a risk adjusted target level of adjusted statutory capital by applying certain factors to various asset, premium and reserve items. The NAIC RBC Model Law provides for four incremental levels of regulatory attention for insurers whose surplus is below the calculated RBC target. These levels of attention range in severity from requiring the insurer to submit a plan for corrective action to actually placing the insurer under regulatory control. The RBC of each of our domestic insurance subsidiaries was above the calculated RBC target level as of December 31, 2022.

Insurance Regulatory Information System. The NAIC also has developed a set of 13 financial ratios for property and casualty insurers referred to as the Insurance Regulatory Information System (“IRIS”). On the basis of statutory financial statements filed with state insurance regulators, the NAIC annually calculates these IRIS ratios to assist state insurance regulators in monitoring the financial condition of insurance companies. The NAIC has established an acceptable range for each of the IRIS financial ratios.

Guaranty Funds. Our U.S. insurance subsidiaries are also subject to assessment by state guaranty funds in states where we transact admitted business when an insurer in a particular jurisdiction has been judicially declared insolvent and the insolvent company's available funds are insufficient to pay policyholders and claimants the amounts to which they are entitled. The protection afforded under a state's guaranty fund to policyholders of the insolvent insurer varies from state to state. Generally, all licensed property casualty insurers are considered to be members of the fund, and assessments are based upon their pro rata share of direct written premiums in that state. The NAIC Post-Assessment Property and Liability Insurance Guaranty Association Model Act, a version of which has been adopted by all states, limits assessments to 2% of an insurer’s subject premiums and permits recoupment of assessments through rate setting. Likewise, several states (or underwriting organizations of which our insurance subsidiaries are required to be members) have limited assessment authority with regard to deficits in certain lines of business.

Additionally, state insurance laws and regulations require us to participate in mandatory property-liability “shared market,” “pooling” or similar arrangements that provide certain types of insurance coverage to individuals or others who otherwise are unable to purchase coverage voluntarily provided by private insurers. Shared market mechanisms include assigned risk plans and fair access to insurance requirement or “FAIR” plans. In addition, some states require insurers to participate in reinsurance pools for claims that exceed specified amounts. Our participation in these mandatory shared market or pooling mechanisms generally is related to the amount of our direct writings for the type of coverage written by the specific mechanism in the applicable state.

Dividends. We receive funds from our insurance company subsidiaries in the form of dividends and management fees for certain management services. Annual dividends in excess of maximum amounts prescribed by state statutes may not be paid without the approval of the insurance commissioner of the state in which an insurance subsidiary is domiciled. See "Management's Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital Resources."

Trade Practices. State insurance laws and regulations include numerous provisions governing trade practices and the marketplace activities of insurers, including provisions governing marketing and sales practices, policyholder services, claims management and complaint handling. State regulatory authorities generally enforce these provisions through periodic market conduct examinations.

Investment Regulation. Investments by our domestic insurance companies must comply with applicable laws and regulations which prescribe the kind, quality and concentration of investments. In general, these laws and regulations permit investments in federal, state and municipal obligations, corporate bonds, preferred and common equity securities, mortgage loans, real estate and certain other investments, subject to specified limits and certain other qualifications. Investments that do not comply with these limits and qualifications are deducted in our insurance subsidiaries' calculation of their statutory capital and surplus.

Terrorism Risk Insurance. The Terrorism Risk Insurance Act of 2002 established a Federal program that provides for a system of shared public and private compensation for insured losses resulting from acts of terrorism. Pursuant to the Terrorism Risk Insurance Program Reauthorization Act of 2019 ("TRIPRA"), the program was extended until December 31, 2027.

TRIPRA provides a federal backstop to all U.S. based property and casualty insurers for insurance related losses resulting from any act of terrorism on U.S. soil or against certain U.S. air carriers, vessels or foreign missions. TRIPRA is applicable to almost all commercial lines of property and casualty insurance but excludes commercial auto, burglary and theft, surety, professional liability and farm owners' multi-peril insurance. Insurers with direct commercial property and casualty insurance exposure in the United States are required to participate in the program and make available coverage for certified acts of terrorism. TRIPRA's definition of certified acts includes domestic terrorism. Federal participation will be triggered under TRIPRA when the Secretary of Treasury certifies an act of terrorism.

Under the program, the federal government will pay 80% of an insurer's covered losses in excess of the insurer's applicable deductible. The insurer's deductible is calculated as 20% of earned premium for the prior year for covered lines of commercial property and casualty insurance. Based on our 2022 earned premiums, our aggregate deductible under TRIPRA during 2023 will be approximately $1,310 million. The federal program will not pay losses for certified acts unless such losses exceed $200 million industry-wide for any calendar year after 2020. TRIPRA limits the federal government's share of losses at $100 billion for a program year. In addition, an insurer that has satisfied its deductible is not liable for the payment of losses in excess of the $100 billion cap.

Excess and Surplus Lines. The regulation of our U.S. subsidiaries' excess and surplus lines insurance business differs significantly from the regulation of our admitted business. Our surplus lines subsidiaries are subject to the surplus lines regulation and reporting requirements of the jurisdictions in which they are eligible to write surplus lines insurance. Although surplus lines business is generally less regulated than admitted business, principally with respect to rates and policy forms, strict regulations apply to surplus lines placements in the laws of every state and the regulation of surplus lines insurance may undergo changes in the future. Federal or state measures may be introduced to increase the oversight of surplus lines insurance in the future.

Climate Change and Financial Risks. The NAIC and state insurance regulators are evaluating issues related to the topic of climate risk. The NAIC's goal is to address climate-related risks through three areas of insurance regulation: financial risk analysis; insurance market availability and affordability; and consumer education and outreach. In New York, the NYDFS issued a circular letter in September 2020 that applies to both New York domestic and foreign authorized insurers, such as our insurance subsidiaries licensed in New York. The circular letter states that the NYDFS expects these insurers to integrate financial risks related to climate change into their governance frameworks, risk management processes, business strategies and scenario analysis, and develop their approach to climate-related financial disclosure. For example, an insurer should designate a board member or board committee, as well as a senior management function, to oversee the management of financial risks associated with climate change. The NYDFS also adopted an amendment to the regulation governing enterprise risk management, which applies to our insurance subsidiaries licensed in New York, that requires an insurance group's enterprise risk management function to address certain additional risks, including climate change risk.

In addition, the Federal Insurance Office (the "FIO") is authorized to monitor the U.S. insurance industry under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the "Dodd-Frank Act"), as discussed below under "Federal Regulation." The FIO is assessing how the insurance sector may help mitigate climate-related risks and achieve national climate-related goals.

Diversity and Corporate Governance.The NAIC and state insurance regulators are evaluating issues related to diversity within the insurance industry, such as the diversity of an insurer's board of directors and management. The NAIC is also examining practices in the insurance industry in order to determine how barriers are created that disadvantage or discriminate against people of color or historically underrepresented groups. On March 16, 2021, the NYDFS issued a circular letter stating that it expects the insurers it regulates, such as our insurance subsidiaries licensed in New York, to make diversity of their leadership a business priority and a key element of their corporate governance. See "Human Capital Resources" below.

Federal Regulation. The federal government and its regulatory agencies generally do not directly regulate the business of insurance, although federal initiatives could have an impact on our business in a variety of ways. The Dodd-Frank Act effected sweeping changes to financial services regulation in the United States, and created two new federal government bodies, the FIO and the Financial Stability Oversight Council (the "FSOC"). The FIO does not have general supervisory or regulatory authority over the business of insurance, although it has preemption authority over state insurance laws that conflict with certain international agreements, as discussed below. The FIO also has authority to represent the United States in international insurance matters and is authorized to monitor the U.S. insurance industry and identify potential regulatory gaps that could contribute to systemic risk. The Economic Growth, Regulatory Relief and Consumer Protection Act addresses the roles played by federal regulators at international insurance standard-setting forums, and it directs the Director of the FIO and the Board of Governors of the Federal Reserve to support increased transparency at international standard-setting regulatory forums (e.g., the IAIS). These federal regulations also instruct the FIO and the Federal Reserve to achieve consensus positions with the states through the NAIC prior to taking a position on any insurance proposal by a global insurance regulatory forum.

The Dodd-Frank Act authorizes the Secretary of the Treasury and U.S. Trade Representative to enter into international agreements of mutual recognition regarding the prudential regulation of insurance or reinsurance. The U.S. and the European Union ("EU") signed such a covered agreement (the "EU Covered Agreement") in September 2017. The EU Covered Agreement addresses three areas of prudential supervision: reinsurance, group supervision and the exchange of information between the U.S. and EU. Under the EU Covered Agreement, reinsurance collateral requirements no longer apply to qualifying EU reinsurers that sell reinsurance to the U.S. market, and U.S. reinsurers operating in the EU market are no longer subject to "local presence" requirements. The EU Covered Agreement establishes group supervision practices that apply only to U.S. and EU insurance groups operating in both territories. For instance, the EU Covered Agreement states that, provided the U.S. has adopted group supervision including worldwide group governance, solvency, capital and reporting, U.S.-headquartered insurance groups with operations in the EU will be supervised at the worldwide level only by U.S. insurance regulators, thereby precluding EU insurance supervisors from exercising solvency and capital requirements over the worldwide operations of those insurers.

In December 2018, the U.S. Department of the Treasury and the Office of the U.S. Trade Representative entered into a covered agreement with the U.K. (the "U.K. Covered Agreement," and together with the EU Covered Agreement, the "Covered Agreements") in anticipation of the U.K.'s exit from the EU. The U.K. Covered Agreement largely reflects the provisions of the EU Covered Agreement and incorporates the same timeframes within it.

Under the Dodd-Frank Act, the FIO has preemption authority over state insurance laws that conflict with the Covered Agreements as of September 1, 2022, such as state credit for reinsurance laws that result in non-U.S. reinsurers subject to the Covered Agreements being treated less favorably than U.S. reinsurers. The NAIC previously adopted amendments to its Credit for Reinsurance Model Law to satisfy the substantive and timing requirements of the Covered Agreements, which amendments have been enacted by all states. On September 30, 2022, the FIO reported that it did not recommend taking any preemption action as a result of inconsistency between the Covered Agreements and state credit for reinsurance laws, although it is still monitoring state measures implementing the NAIC's revisions to the Credit for Reinsurance Model Law. The FIO plans to publish an update to its preemption report during 2023. The amended Credit for Reinsurance Model Law also extends the zero reinsurance collateral provisions in the Covered Agreements to qualified reinsurers domiciled in U.S. jurisdictions that are accredited by the NAIC and to non-U.S. jurisdictions that have not entered into a covered agreement with the U.S. but which the NAIC has identified as "reciprocal jurisdictions" pursuant to the NAIC Qualified Jurisdiction Process.

We cannot currently predict the impact of these changes to the law or whether any other covered agreements will be successfully adopted, and cannot currently estimate the impact of these changes to the law and any such adopted covered agreements on our business, financial condition or operating results.

The FIO also can recommend that the FSOC designate an insurer as an entity posing risks to the United States' financial stability in the event of the insurer's material financial distress or failure, i.e., a "systemically important financial institution" or a "non-bank SIFI." An insurer so designated by the FSOC will be subject to Federal Reserve supervision and heightened prudential standards. There are currently no such non-bank SIFIs designated by the FSOC. The FSOC changed its process for designating non-bank SIFIs, effective in January 2020, by adopting an activities-based approach and moving away from the entities-based approach.

Based upon our current business model and balance sheet, we do not believe that we will be designated by the FSOC as such an institution. Although the potential impact of any future amendments to the Dodd-Frank Act on the U.S. insurance industry is not clear, our business could be affected by changes to the U.S. system of insurance regulation or our designation or the designation of insurers or reinsurers with which we do business as systemically important non-bank financial companies.

International Regulation

Our insurance subsidiaries based in the United Kingdom are regulated by the Prudential Regulation Authority (“PRA”) and/or the Financial Conduct Authority (“FCA”). The PRA’s primary objectives with regard to insurers are to promote the safety and soundness of insurers and to contribute to the securing of an appropriate degree of protection for current and future policyholders. The FCA has three operational objectives: (i) to secure an appropriate degree of protection for consumers, (ii) to protect and enhance the integrity of the United Kingdom’s financial system, and (iii) to promote effective competition in the interests of consumers in the financial services markets. The PRA and FCA employ a variety of regulatory tools to achieve their objectives, including periodic auditing and reporting requirements, risk assessment reviews, minimum solvency margins and individual capital assessment requirements, dividend restrictions, in certain cases, approval requirements governing the appointment of key officers, approval requirements governing controlling ownership interests and various other requirements.

Our Lloyd’s managing agency is also regulated by Lloyd’s, and the Lloyd’s syndicate business is subject to Lloyd’s supervision. Through Lloyd’s, we are licensed to write business in various countries throughout the world by virtue of Lloyd’s international licenses. In each such country, we are subject to the laws and insurance regulation of that country. Our insurance subsidiary based in Liechtenstein is regulated by the Financial Market Authority of Liechtenstein ("FMA"), which has regulatory tools analogous to those of the U.K. regulators noted above.

Additionally, U.K. and Liechtenstein laws and regulations also impact us as “controllers” of our European-regulated subsidiaries, whereby we are required to notify the appropriate authorities about significant events relating to such regulated subsidiaries’ controllers (i.e. persons or entities which have certain levels of direct or indirect voting power or economic interests in the regulated entities) as well as changes of control, and to submit annual reports regarding their controllers. The PRA/FCA’s Senior Managers and Certification Regime and analogous regulation in Liechtenstein further provide regulatory frameworks for standards of fitness and propriety, conduct and accountability for individuals in positions of responsibility at insurers. In addition, certain employees are individually registered at Lloyd’s.

Our insurance business throughout the EU and EEA is subject to “Solvency II,” an insurance regulatory regime governing, among other things, capital adequacy and risk management. Following the U.K.’s withdrawal from the EU, or Brexit, our Lloyd’s managing agency (and the U.K. branch of our Liechtenstein subsidiary) are now subject to a separate U.K. prudential regime, which is broadly identical to Solvency II from January 1, 2021. However, the two regimes are likely to diverge in the near future. The U.K. has undertaken a review of Solvency II and of the regulatory regime applicable to U.K. authorized insurers and reinsurers.

Following this review, on November 17, 2022, the U.K.’s HM Treasury published a finalized package of proposed reforms to the U.K.’s prudential regime, which covers a range of areas including the risk margin, matching adjustment requirements and regulatory reporting obligations. These reforms will be reflected in new U.K. legislation and regulation.

Similarly, the European Commission has undertaken its own review of Solvency II and, on September 22, 2021, published a package of proposed legislative reforms for amending the existing regulatory framework. The European Council published its agreed position on the European Commission’s proposed reforms in June 2022, which it is currently negotiating with the European Parliament, although the full extent of the changes will only be known once the package of legislative reforms is finalized.

Solvency II provides for the supervision of group solvency. Under Solvency II, it is possible that the U.S. parent of a European Union subsidiary could be subject to certain Solvency II requirements if the U.S. company is not already subject to regulations deemed “equivalent” to Solvency II. Currently, the U.S. system of insurance regulation relating to group supervision is not deemed “equivalent” to Solvency II by European Union authorities. The PRA will also perform separate, but comparable, supervision of group solvency under the U.K.’s own domestic prudential regime where a U.S. holding company is a parent of a subsidiary U.K. insurer or reinsurer.

The Liechtenstein financial services regulator, the FMA, is the group supervisor for our European-regulated subsidiaries. However, the Covered Agreements prohibit any EU supervisor or the PRA (as applicable) from exercising group-wide supervision at any level above the highest company organized in the country of that supervisor.

We must also comply with the EU General Data Protection Regulation (EU) 2016/879) (“GDPR”), which took effect in May 2018. The regulation's goal is to impose increased individual rights and protections for all personal data located in or originating from the EU. The Data Protection Act 2018 and the U.K. General Data Protection Regulation, which is the retained EU law version of the GDPR by virtue of the European Union (Withdrawal) Act 2018 and as amended by the Data Protection, Privacy and Electronic Communications (Amendments etc.) (EU Exit) Regulations 2019 (together, "U.K. GDPR"), regulate data protection for all individuals within the U.K. Both the GDPR and the U.K. GDPR are extraterritorial in that they apply to all businesses in the EU and the U.K. respectively and any business outside the EU and the U.K. that process EU and/or U.K. personal data of individuals in the EU and/or the U.K. Moreover, there are significant fines associated with non-compliance. In particular, we need to monitor our compliance with all relevant member states' laws and regulations, including where permitted derogations from the GDPR and the U.K. GDPR are introduced. The introduction of the GDPR and the U.K. GDPR, and any resultant changes in EU member states' or U.K. national laws and regulations, has increased our compliance obligations and has necessitated the review and implementation of policies and processes relating to our collection and use of data, and has required us to change our business practices regarding these matters.

In addition, we may become subject to or affected by regulatory policies adopted by the IAIS, an international standard setter consisting of supervisors and regulators from more than 200 jurisdictions. The IAIS has been working on several initiatives to consider changes to insurer solvency standards and group supervision of companies in a holding company system in response to the increasing globalization of the insurance sector. In November 2019, the IAIS formally adopted a global framework for the supervision of internationally active insurance groups ("IAIGs"), which is referred to as the Common Framework for the Supervision of Internationally Active Insurance Groups, or "ComFrame." ComFrame is intended to provide a framework of basic standards for IAIGs and a process for supervisors to cooperate in the supervision of IAIGs. Also in November 2019, the IAIS adopted a risk-based group-wide global insurance capital standard ("ICS") that will apply to IAIGs and ultimately form a part of ComFrame. The ICS commenced a five-year monitoring period in January 2020 which is being used for confidential reporting and discussion in supervisory colleges to provide feedback to the IAIS on the ICS's design and performance, but will not trigger any supervisory action. Following this monitoring period, the ICS is expected to be implemented in 2025 as a group-wide prescribed capital requirement for IAIGs and integrated into the rest of ComFrame. As noted above under "U.S. Regulation," it is unclear how the development of the ICS will interact with existing capital requirements for insurance companies in the United States and the NAIC's development of the group capital calculation.

Our international operations are also subject to varying degrees of regulation in Mexico, Australia and Canada and in certain other countries in Europe, South America, and Southeast Asia. Generally, our subsidiaries must satisfy local regulatory requirements. While each country imposes licensing, solvency, auditing and financial reporting requirements, the type and extent of the requirements differ substantially. Key areas where country regulations may differ include: (i) the type of financial reports to be filed; (ii) a requirement to use local intermediaries; (iii) the amount of reinsurance permissible; (iv) the scope of any regulation of policy forms and rates; and (v) the type and frequency of regulatory examinations.

Competition

The property casualty insurance and reinsurance businesses are highly competitive, with many insurance companies of various sizes, as well as other entities offering risk alternatives such as self-insured retentions or captive programs, transacting business in the United States and internationally. We compete directly with a large number of these companies. Competition in our industry is largely measured by the ability to provide insurance and services at a price and on terms that are reasonable and acceptable to the customer. Our strategy in this highly fragmented industry is to seek specialized areas or geographic regions where our businesses can gain a competitive advantage by responding quickly to changing market conditions. Our businesses establish their own pricing practices based upon a Company-wide philosophy to price products with the intent of making an underwriting profit.

Competition for insurance business within the United States comes from other specialty insurers, regional carriers, large national multi-line companies and reinsurers. Our specialty businesses compete with excess and surplus insurers as well as standard carriers. Our regional businesses compete with mutual and other regional stock companies as well as national carriers. Additionally, direct writers of property casualty insurance compete with our regional businesses by writing insurance through their salaried employees, generally at a lower acquisition cost than through independent agents such as those used by the Company. We compete internationally with native insurance operations both large and small, which in some cases are related to government entities, as well as with branches or local subsidiaries of multinational companies.

Competition for reinsurance business, which is especially strong, comes from domestic and foreign reinsurers, which produce their business either on a direct basis or through the broker market. These competitors include Swiss Re, Munich Re, Berkshire Hathaway, Partner Re and others.

In recent years, various institutional investors have increasingly sought to participate in the property and casualty insurance and reinsurance industries. Well-capitalized new entrants to the property and casualty insurance and reinsurance industries, or existing competitors that receive substantial infusions of capital, provide increasing competition, which may adversely impact our business and profitability. Further, an expanded supply of reinsurance capital may lower costs for insurers that rely on reinsurance and, as a consequence, those insurers may be able to price their products more competitively.

Human Capital Resources

As of January 15, 2023, we employed 8,186 individuals. Of this number, our subsidiaries employed 8,049 individuals and the remaining individuals were employed at the parent company.

We believe that our people are our greatest asset and that our corporate culture is the most important intangible driver of long-term value creation for our Company and the highest priority for pursuing long-term risk-adjusted returns and growth in stockholder value.

Human Capital Management: The Company fosters a performance culture. We are focused on creating a respectful, rewarding, diverse, and inclusive work environment that allows our employees to build meaningful and productive careers. The success of these human capital management objectives is essential to our strategy, as it is our people who drive our success. We invest in their growth as individuals and professionals through training and engagement, as well as in their well-being through robust health and wellness programs and a commitment to diversity.

The Company provides developmental opportunities for our employees through formal and informal programs that focus on enabling employees to build skills and thought leadership in specific facets of our business. Our leadership programs cultivate the talent of our high-potential, strong-performing employees as we strive to deepen, enhance and diversify the Company's leadership team.

We strive to align employee incentives with the risk and performance frameworks of the Company. The Company's "pay for performance" philosophy connects individual, business and Company results to employee compensation, providing employees with opportunities to share in the Company's overall growth and success. The Company offers employees a comprehensive benefits package, including health and wellness, financial, educational and life management benefits. In addition, we support employees in making an impact in their local communities and globally through environmental and social efforts that are meaningful to them.

Our Board of Directors engages with our senior leadership team, including our senior vice president - human resources, on a periodic basis across a range of human capital management issues, including succession planning and development, compensation, benefits, talent recruiting and retention, engagement, diversity and inclusion, and employee feedback.

Culture: The Board of Directors has recognized Accountability, People Oriented Strategy, Responsible Financial Practices, Risk-Adjusted Returns and Transparency as the elements of corporate culture necessary for the Company to achieve success. Our culture unifies our employees across our decentralized business model, positions us to serve our diverse clients globally and propels the Company's continuous evolution.

We are committed to fostering a unifying culture and encouraging innovation across our enterprise. Our culture encompasses the beliefs that (i) specialized knowledge and having a customer-centric focus are competitive advantages and (ii) an environment that promotes integrity, embraces the commitment to "always do right," fosters entrepreneurship and innovation, and values making thoughtful decisions for the long-term benefit of our enterprise. While there is no one "Berkley" way, each of our businesses has its own culture that embodies a shared set of values that define our enterprise. Our structure, with more than 55 distinct businesses, facilitates the prompt identification of and appropriate action with respect to addressing individual business or cultural issues arising within a business, without affecting the larger enterprise. Furthermore, our businesses are overseen by senior corporate business managers and senior corporate functional managers, including actuarial, claims, underwriting, compliance and finance, providing a governance oversight structure that makes it easier to identify such issues. Because our Board of Directors diligently exercises its risk management oversight through, among other activities, regular interactions with employees beyond corporate senior management, our directors have visibility into and receive timely feedback on cultural issues that may affect our business.

As significant owners of our Company who are required to hold their shares until separation from service, each of our directors and senior executives have a vested interest in cultivating talent and perpetuating a culture that facilitates the execution of our long-term objectives.

Other Information about the Company's Business

We maintain an interest in the acquisition and startup of complementary businesses and continue to evaluate possible acquisitions and new ventures on an ongoing basis. In addition, our businesses develop new coverages or enter lines of business to meet the needs of insureds.

Seasonal weather variations and other events affect the severity and frequency of losses sustained by the insurance and reinsurance businesses. Although the effect on our business of catastrophes such as tornadoes, hurricanes, hailstorms, wildfires, earthquakes and terrorist acts may be mitigated by reinsurance, they nevertheless can have a significant impact on the results of any one or more reporting periods.

We have no customer that accounts for 10 percent or more of our consolidated revenues.

Compliance by W. R. Berkley and its subsidiaries with federal, state and local provisions that have been enacted or adopted regulating the discharge of materials into the environment, or otherwise relating to protection of the environment, has not had a material effect upon our capital expenditures, earnings or competitive position.

The Company's internet address is www.berkley.com. The information on our website is not incorporated by reference in this annual report on Form 10-K. The Company's annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act and other reports filed by us or with respect to our securities by others are accessible free of charge through this website as soon as reasonably practicable after they have been electronically filed with or furnished to the SEC.

ITEM 1A. RISK FACTORS

Our businesses face significant risks. If any of the events or circumstances described as risks below occur, our businesses, results of operations and/or financial condition could be materially and adversely affected. In addition to those described below, our businesses may also be adversely affected by risks and uncertainties not currently known to us or that we currently consider immaterial.

Risks Relating to Our Industry

Our results may fluctuate as a result of many factors, including cyclical changes in the insurance and reinsurance industry.

The results of companies in the property casualty insurance industry historically have been subject to significant fluctuations and uncertainties in demand and pricing, causing cyclical changes in the insurance and reinsurance industry. The demand for insurance is influenced primarily by general economic conditions, while the supply of insurance is often directly related to available capacity or the perceived profitability of the business. We have faced significant competition in our business as a result of existing insurers seeking to gain or maintain market share as well as new entrants and capital providers. Recently, premium rates have increased for most lines of business, while they have decreased in others, most notably workers' compensation. The adequacy of premium rates is affected mainly by the severity and frequency of claims, which are influenced by many factors, including natural disasters, regulatory measures and court decisions that define and expand the extent of coverage, and the effects of economic and social inflation on the amount of claims payments due for injuries or losses. In addition, investment rates of return impact rate adequacy. These factors can have a significant impact on ultimate profitability because a property casualty insurance policy is priced before its costs are known as premiums usually are determined long before claims are reported. These factors could produce results that would have a negative impact on our results of operations and financial condition.

We face significant competitive pressures in our businesses, which can pressure premium rates in certain areas and could harm our ability to maintain or increase our profitability and premium volume in some parts of our business.

We compete with a large number of other companies in our selected lines of business. We compete, and will continue to compete, with major U.S. and non-U.S. insurers and reinsurers, other regional companies, as well as mutual companies, specialty insurance companies, underwriting agencies, diversified financial services companies and insurtech companies. Competitiveness in our businesses is based on many factors, including premium charges, ratings assigned by independent rating agencies, commissions paid to producers, the perceived financial strength of the company, other terms and conditions offered, services provided, ease of doing business, speed of claims payment and reputation and experience in the lines to be written. Periods of insurance industry consolidation may further increase competition in some parts of our business and may cause our insurance subsidiaries to incur greater customer retention and acquisition expenses, affecting the profitability of existing and new business.

Some of our competitors, particularly in the reinsurance business, have greater financial and/or marketing resources than we do. These competitors within the reinsurance market include Swiss Re, Munich Re, Berkshire Hathaway and Partner Re. We expect that perceived financial strength, in particular, will become more important as customers seek high quality reinsurers.

Recently, insurance prices have generally increased for most lines of business, excluding workers' compensation. However, loss costs have also increased and the duration and magnitude of the improving pricing environment remains uncertain. Despite rising interest rates, current price levels for certain lines of business may remain below the prices required for us to achieve our long-term return objectives. We expect to continue to face strong competition in our business.

In recent years, various types of investors have increasingly sought to participate in the property and casualty insurance and reinsurance industries. Well-capitalized new entrants to the property and casualty insurance and reinsurance industries, or existing competitors that receive substantial infusions of capital or access to third-party capital, provide increasing competition, which may adversely impact our business and profitability. Further, an expanded supply of capital may lower costs for insurers and, as a consequence, those insurers may be able to price their products more competitively. In addition, technology companies or other third parties have created, and may in the future create, technology-enabled business models, processes, platforms or alternate distribution channels that may adversely impact our competitive position in some parts of our business.

This intense competition could cause the supply and/or demand for insurance or reinsurance to change, which affect our ability to price our products at attractive rates and retain existing business or write new products at adequate rates or on terms and conditions acceptable to us. If we are unable to retain existing business or write new business at adequate rates or on terms and conditions acceptable to us, our results of operations could be materially and adversely affected.

Our actual claims losses may exceed our reserves for claims, which may require us to establish additional reserves.

Our gross reserves for losses and loss expenses were approximately $17.0 billion as of December 31, 2022. Our loss reserves reflect our best estimates of the cost of settling claims and related expenses with respect to insured events that have occurred.

Reserves do not represent an exact calculation of liability. Rather, reserves represent an estimate of what management expects the ultimate settlement and claims administration will cost for claims that have occurred, whether known or unknown. The major assumptions about anticipated loss emergence patterns are subject to unanticipated fluctuation. These estimates, which generally involve actuarial projections, are based on management's assessment of facts and circumstances then known, as well as estimates of future trends in claims severity and frequency, inflation, judicial theories of liability, reinsurance coverage, legislative changes and other factors, including the actions of third parties, which are beyond our control.

The inherent uncertainties of estimating reserves are greater for certain types of liabilities, where long periods of time elapse before a definitive determination of liability is made and settlement is reached. In periods with increased economic volatility, it becomes more difficult to accurately estimate claim costs. It is especially difficult to estimate the impact of inflation on loss reserves given the current economic environment and related government actions. Both inflation overall and medical cost inflation, which has historically been greater than inflation overall, can have an adverse impact. In addition, although the Company has estimated the potential COVID-19 impact to its contingency and event cancellation, workers’ compensation, and other lines of business under a number of possible scenarios, there remains uncertainty around COVID-19's ultimate impact on the Company and its related reserves.

Reserve estimates are continually refined in an ongoing process as experience develops and further claims are reported and settled. Adjustments to reserves are reflected in the results of the periods in which such estimates are changed. Because setting reserves is inherently uncertain, we cannot assure that our current reserves will prove adequate in light of subsequent events. Should we need to increase our reserves, our pre-tax income for the reporting period would decrease by a corresponding amount.

We discount our reserves for excess and assumed workers' compensation business because of the long period of time over which losses are paid. Discounting is intended to appropriately match losses and loss expenses to income earned on investment securities supporting liabilities. The expected loss and loss expense payout pattern subject to discounting is derived from our loss payout experience. Changes in the loss and loss expense payout pattern are recorded in the period they are determined. If the actual loss payout pattern is shorter than anticipated, the discount will be reduced and pre-tax income will decrease by a corresponding amount.

The effects of emerging claim and coverage issues on our business are uncertain.

As industry practices and economic, legal, judicial, social, technological and other environmental conditions change, unexpected and unintended issues related to claim and coverage may emerge. These issues may adversely affect our business by either extending coverage beyond our underwriting intent or by increasing the number or size of claims. Examples of emerging claims and coverage issues include, but are not limited to:

- judicial expansion of policy coverage and a greater propensity to grant claimants more favorable amounts and the impact of new theories of liability;
- plaintiffs targeting property and casualty insurers, including us, in purported class action litigation relating to claims-handling and other practices;
- social inflation trends, including higher and more frequent claims, more favorable judgments and legislated increases;
- medical developments that link health issues to particular causes, resulting in liability claims;
- claims relating to unanticipated consequences of current or new technologies, including cyber security related risks;
- claims relating to potentially changing climate conditions; and
- increased claims due to third party funding of litigation.

In some instances, these emerging issues may not become apparent for some time after we have issued the affected insurance policies. As a result, the full extent of liability under our insurance policies may not be known until many years after the policies are issued.

In addition, the potential passage of new legislation designed to expand the right to sue, to remove limitations on recovery, to extend the statutes of limitations or otherwise to repeal or weaken tort reforms could have an adverse impact on our business.

The effects of these and other unforeseen emerging claim and coverage issues are difficult to predict and could harm our business and materially and adversely affect our results of operations.

As a property casualty insurer, we face losses from natural and man-made catastrophes.

Property casualty insurers are subject to claims arising out of catastrophes that may have a significant effect on their results of operations, liquidity and financial condition. Catastrophe losses have had a significant impact on our results. For example, catastrophe losses net of reinsurance recoveries, including COVID-19 related losses, were $212 million in 2022, $202 million in 2021, and $340 million in 2020. Similarly, man-made catastrophes can also have a material impact on our financial results. Depending on market conditions and other factors, we may seek to increase our writing of property casualty insurance, and, accordingly, our exposure to catastrophic events would be increased.

Catastrophes can be caused by various events, including hurricanes, windstorms, earthquakes, tsunamis, hailstorms, explosions, severe winter weather and fires, pandemics, as well as terrorist and other man-made activities, including drilling, mining and other industrial accidents, the bankruptcy of a major company, war or other military actions, social unrest,
cyber events or terrorist activities. The incidence and severity of catastrophes are inherently unpredictable, and longer-term natural catastrophe trends may be changing due to climate change causing increased variability and unpredictability. The extent of losses from a catastrophe is a function of both the total amount of insured exposure in the area affected by the event and the severity of the event. Some catastrophes are restricted to small geographic areas; however, hurricanes, earthquakes, tsunamis and other disasters may produce significant damage in large, heavily populated areas. Catastrophes can cause losses in a variety of our property and casualty lines, and most of our past catastrophe-related claims have resulted from severe storms. Seasonal weather variations or the impact of climate change may affect the severity and frequency of our losses. Insurance companies are not permitted to reserve for a catastrophe until it has occurred. It is therefore possible that a catastrophic event or multiple catastrophic events could produce significant losses and have a material adverse effect on our results of operations and financial condition.

The COVID-19 pandemic has previously materially and adversely affected our results of operations, and, whether as a result of COVID-19's long-term effects, or new or emerging variants, or other potential pandemics, may further materially and adversely affect our results of operations, financial position and liquidity in the future.

The ongoing COVID-19 pandemic, including the related impact on the U.S. and global economies, materially and adversely affected our results of operations. The pandemic and its impact on our business may continue, and potentially even worsen, whether as a result of COVID-19's long-term effects, or new or emerging variants, or even other potential pandemics. We cannot predict the magnitude or duration of such impact, particularly given the uncertainties associated with COVID-19, including regarding the U.S. and global economies and the recovery from its devastating economic and other effects. The ultimate impact of COVID-19 on our results of operations, financial position and liquidity is not yet known, but includes the following:

Adverse Legislative and Regulatory Action. Legislative and regulatory initiatives in response to COVID-19 or other similar pandemics may adversely affect us, particularly in our workers’ compensation and property coverages businesses. For example, our business may be subject to, certain initiatives, including, but not limited to: legislative and regulatory action that seeks to retroactively mandate coverage for losses that our insurance policies would not otherwise cover and which were not priced to cover; legislative and regulatory action providing for shifting presumptions with respect to the burdens of proof for "essential" workers on workers' compensation coverages and varying definitions of "essential" workers; actions prohibiting us from cancelling insurance policies in accordance with our policy terms or non-renewing policies at their natural expiration; and/or orders to provide premium refunds, grant extended grace periods for premium payments, and provide extended time to pay past due premiums. Any such action would likely increase both our underwriting losses and our expenses and any legal challenges to any such action could take years to resolve.

Claim Losses Related to COVID-19 May Exceed Reserves. As of December 31, 2022, we recorded approximately $341 million for COVID-19-related losses. Our reserves do not represent an exact calculation of liability, but represent an estimate of what management expects the ultimate settlement and claims administration will cost for claims that have occurred, whether known or unknown. Accordingly, given the uncertainties still associated with COVID-19 and its impact, our reserves and the underlying estimated level of claim losses and costs arising from COVID-19 may materially change.

Claim Losses and Adjustment Expenses May Increase. As the effects of COVID-19 on industry practices and economic, legal, judicial, social and other environmental conditions occur, unexpected and unintended issues related to claims and coverages may emerge. These issues may adversely affect our business by extending coverage beyond our underwriting intent (including in the area of property coverages where physical damage requirements and communicable disease exclusions are currently being challenged) or by increasing the number and/or size of claims, each of which could adversely impact our results.

Reinsurance. We purchase reinsurance in order to transfer part of the risk that we have assumed by writing insurance policies to reinsurance companies in exchange for part of the premium we receive in connection with assuming such risk. Although reinsurance makes the reinsurer contractually liable to us to the extent the risk is transferred to the reinsurer, it does not relieve us of our liability to our policyholders. There may be uncertainty surrounding the availability of reinsurance coverage for COVID-19-related losses as our reinsurers may dispute the applicability of reinsurance to such losses (including the application of reinsurance reinstatements) and, as a result, our reinsurers may refuse to pay reinsurance recoverables related thereto or they may not pay them on a timely basis. In addition, we may be unable to renew our current reinsurance coverages or obtain appropriate new reinsurance covers with respect to certain exposures under our policies, including COVID-19-related exposures, and therefore our net exposures could increase, or if we are unwilling to bear such increase in net exposure, we may reduce our level of underwriting commitments.

Premium Volumes May Be Negatively Impacted. The demand for insurance is significantly influenced by general economic conditions. Consequently, any reduced economic activity relating to COVID-19 or other potential pandemics is likely to decrease demand for our insurance products and services and negatively impact our premium volumes (and, in certain cases, may result in return of premiums due to a decrease in exposures). This may continue for an indefinite period, with the magnitude of the impact impossible to predict. In addition, as we continue to evaluate the effects of COVID-19 on the insurance coverages we currently offer, our appetite for providing certain coverages in various jurisdictions may change, which could further negatively impact our premium volumes. Any such reduction in our premiums would likely cause our expense ratio to rise.

Investments. Further disruptions in global financial markets due to the continuing impact of COVID-19 or future pandemics could cause us to incur additional unrealized and/or realized investment losses, including impairments in our fixed maturity portfolio and other investments. In addition, the economic uncertainty may result in a decline in interest rates, which may negatively impact our net investment income from future investment activity.

Operational Disruptions and Costs. Our operations could be disrupted if key members of our senior management or a significant percentage of our workforce or the workforce of our agents, brokers, suppliers or other third party service providers are unable to continue to work because of illness, government directives or otherwise. In addition, our agents, brokers, suppliers and other third party service providers, which we rely on for key aspects of our operations, are subject to similar risks and uncertainties, which may interfere with their ability to fulfill their respective commitments and responsibilities to us in a timely manner and in accordance with the agreed-upon terms. Any remote working policies we implement may result in disruptions to our business routines, heightened risk to cybersecurity attacks and data security incidents and a greater dependency on internet and telecommunication access and capabilities.

Changing climate conditions may alter the frequency and increase the severity of catastrophic events and thereby adversely affect our financial condition and results.

Over the past several years, changing weather patterns and climatic conditions, such as global warming, appear to have contributed to the unpredictability, frequency and severity of natural disasters and created additional uncertainty as to future trends and exposures. There is a growing scientific consensus that global warming and other climate change are altering the frequency, severity and peril characteristics of catastrophic weather events, such as hurricanes, windstorms, floods and other natural disasters. Such changes make it more difficult for us to predict and model catastrophic events, reducing our ability to accurately price our exposure to such events and mitigate our risks. Any increase in the frequency or severity of natural disasters may adversely affect our financial condition and results.

We, as a primary insurer, may have significant exposure for terrorist acts.

To the extent an act of terrorism, whether a domestic or foreign act, is certified by the Secretary of Treasury, we may be covered under the Terrorism Risk Insurance Program Reauthorization Act of 2019 ("TRIPRA"), for up to 80% of our covered losses for certain property/casualty lines of insurance. However, any such coverage would be subject to a mandatory deductible based on 20% of earned premium for the prior year for the covered lines of commercial property and casualty insurance. Based on our 2022 earned premiums, our aggregate deductible under TRIPRA during 2023 is approximately $1,310 million. In addition, the coverage provided under TRIPRA does not apply to reinsurance that we write. To the extent that our reinsurers have excluded coverage for certain terrorist acts or have priced this coverage at rates that make purchasing such coverage economically infeasible, we may not have reinsurance protection and could be exposed to potential losses as a result of any acts of terrorism.

We are exposed to, and may face adverse developments involving, mass tort claims.

We are exposed to, and may face adverse developments involving, mass tort claims such as those relating to exposure to potentially harmful products or substances. We face potential exposure to mass tort claims, including claims related to exposure to potentially harmful products or substances, such as lead paint, polyfluoroalkyl substances, talc and opioids. Establishing loss reserves for mass tort claims is subject to uncertainties because of many factors, including adverse changes to the tort environment (e.g., increased and more aggressive attorney involvement in insurance claims, increased litigation, expanded theories of liability, higher jury awards, lawsuit abuse and third-party litigation finance, among others); evolving judicial interpretations, including application of various theories of joint and several liabilities; disputes concerning medical causation with respect to certain diseases; geographical concentration of the lawsuits asserting the claims; and the potential for a large rise in the total number of claims without underlying epidemiological developments suggesting an increase in disease rates. Because of the uncertainties set forth above, additional liabilities may arise for amounts in excess of the current loss reserves. In addition, our estimate of loss reserves may change. These additional liabilities or increases in estimates, or a range of either, could vary significantly from period to period and could materially and adversely affect our results of operations and/or our financial position.

We are subject to extensive governmental regulation, which increases our costs and could restrict the conduct of our business.

We are subject to extensive governmental regulation and supervision in both the United States and foreign jurisdictions. Most insurance regulations are designed to protect the interests of policyholders rather than stockholders and other investors. This system of regulation, generally administered in the United States by a department of insurance in each state in which we do business, relates to, among other things:

- standards of solvency, including risk-based capital measurements;
- restrictions on the nature, quality and concentration of investments;
- limitations on the amount of dividends, tax distributions, intercompany loans and other payments that can be made without prior regulatory approval;
- requirements pertaining to certain methods of accounting;
- evaluating enterprise risk to an insurer;
- rate and form regulation pertaining to certain of our insurance businesses;
- potential assessments for the provision of funds necessary for the settlement of covered claims under certain policies provided by impaired, insolvent or failed insurance companies; and
- involvement in the payment or adjudication of catastrophe or other claims beyond the terms of the policies.

State insurance departments conduct periodic examinations of the affairs of insurance companies and require the filing of annual and other reports relating to the financial condition of insurance companies, holding company issues and other matters. Our Insurance business internationally is also generally subject to a similar regulatory scheme in each of the jurisdictions where we conduct operations outside the United States.

Federal financial services modernization legislation and legislative and regulatory initiatives taken or which may be taken in response to conditions in the financial markets, global insurance supervision and other factors may lead to additional federal regulation of the insurance industry in the coming years.

The Dodd-Frank Act effected sweeping changes to financial services regulation in the United States. The Dodd-Frank Act established the Financial Stability Oversight Council ("FSOC"), which is authorized to recommend that certain systemically significant non-bank financial companies, including insurance companies, be regulated by the Board of Governors of the Federal Reserve. The Dodd-Frank Act also established a Federal Insurance Office ("FIO") which is authorized to study, monitor and report to Congress on the U.S. insurance industry and the significance of global reinsurance to the U.S. insurance market. The FIO also can recommend that the FSOC designate an insurer as an entity posing risks to the United States financial stability in the event of the insurer's material financial distress or failure. Our business could be affected by changes, whether as a result of potential changes to the Dodd-Frank Act, to the U.S. system of insurance regulation or our designation or the designation of insurers or reinsurers with which we do business as systemically significant non-bank financial companies.

The topic of climate risk has come under increased scrutiny by the NAIC and insurance regulators. For instance, in New York, the NYDFS issued a circular letter in September 2020 that applies to both New York domestic and foreign authorized insurers, such as our insurance subsidiaries licensed in New York. The circular letter states that the NYDFS expects these insurers to integrate financial risks related to climate change into their governance frameworks, risk management processes, business strategies and scenario analysis, and develop their approach to climate-related financial disclosure. The NYDFS also amended the regulation governing enterprise risk management, which applies to our insurance subsidiaries licensed in New York, that requires an insurance group's enterprise risk management function to address certain additional risks, including climate change risk. In addition, the FIO is assessing how the insurance sector may help mitigate climate-related risks and achieve national climate-related goals. These measures may subject us to increased oversight at the state and federal level.

State regulation is the primary form of regulation of insurance and reinsurance in the United States, although Congress has considered various proposals regarding federal regulation of insurance, in addition to the changes brought about by the Dodd-Frank Act, such as proposals for the creation of an optional federal charter for insurance companies. We may be subject to potentially increased federal oversight as a financial institution. In addition, the current U.S. administration and the volatile political environment may increase the chance of other federal legislative and regulatory changes that could affect us in ways we cannot predict.

With respect to international measures, Solvency II, the EU regime concerning the capital adequacy, risk management and regulatory reporting for insurers and reinsurers may affect our insurance businesses. Implementation of Solvency II in EU member states occurred on January 1, 2016, and as the Solvency II regime evolves over time, we may be required to utilize a significant amount of resources to ensure compliance. In particular, the European Commission has undertaken a review of Solvency II and on September 22, 2021, published a package of proposed legislative reforms for amending the existing regulatory framework. The European Council published its agreed position on the European Commission's proposed reforms in June 2022, and it is now discussing this proposed legislation with the European Parliament. In addition, despite the waiver of the Solvency II group capital requirements we received, Solvency II may have the effect of increasing the capital requirements of our EU domiciled insurers. Additionally, our capital requirements and compliance requirements may be adversely affected if the European Commission does not deem the insurance regulatory regimes of the jurisdictions outside the EU in which we have insurance or reinsurance companies domiciled to be "equivalent" to Solvency II.

Similar considerations apply to our U.K. subsidiaries, which are now subject to a separate U.K. prudential regime, which is broadly identical to Solvency II. However, the two regimes, and their respective requirements, are likely to diverge in the near future due to both the EU's review of Solvency II described above and HM Treasury's publication of a finalized package of reforms to the U.K.'s domestic prudential regime on November 17, 2022 (please see "International Regulation" above for more information). We therefore may be required to utilize additional resources to ensure compliance with the different rules in each regime.

If our compliance with Solvency II, the U.K.'s prudential regime or any other regulatory regime is challenged, we may be subject to monetary or other penalties. In addition, in order to ensure compliance with applicable regulatory requirements or as a result of any investigation, including remediation efforts, we could be required to incur significant expenses and undertake additional work, which in turn may divert resources from our business.

We may be unable to maintain all required licenses and approvals and our business may not fully comply with the wide variety of applicable laws and regulations or the relevant authority's interpretation of the laws and regulations. Also, some regulatory authorities have relatively broad discretion to grant, renew or revoke licenses and approvals. If we do not have the requisite licenses and approvals or do not comply with applicable regulatory requirements, the insurance regulatory authorities could preclude or temporarily suspend us from carrying on some or all of our activities or monetarily penalize us. Also, changes in the level of regulation of the insurance industry, whether federal, state or foreign, or changes in laws or regulations themselves or interpretations thereof by regulatory authorities, may further restrict the conduct of our business.

Risks Relating to Our Business

Our expanding international operations expose us to increased investment, political, legal/regulatory, and economic risks, including foreign currency and credit risk.

Our expanding international operations in the United Kingdom, Continental Europe, South America, Canada, Mexico, Scandinavia, the Asia-Pacific region, South Africa and Australia expose us to increased investment, political, legal/regulatory, and economic risks, including foreign currency and credit risk. Changes in the value of the U.S. dollar relative to other currencies could have an adverse effect on our results of operations and financial condition.

Our investments in non-U.S.-denominated assets are subject to fluctuations in non-U.S. securities and currency markets, and those markets can be volatile. Non-U.S. currency fluctuations also affect the value of any dividends paid by our non-U.S. subsidiaries to their parent companies in the U.S.

We face additional risks as a result of our international operations which could have an adverse effect on our results of operations and financial condition including: burdens and costs of compliance with a variety of foreign laws and regulations and the associated risk and costs of non-compliance; exposure to undeveloped or evolving legal systems, which may result in unpredictable or inconsistent application of laws and regulations; exposure to commercial, political, legal or regulatory corruption; political, economic or other instability in countries in which we conduct business, including possible terrorist acts; the imposition of tariffs, trade barriers or other protectionist laws or business practices that favor local competition, increased costs and adverse effects on our business; changes to visa or immigration policies; diminished ability to enforce our contractual rights; potential increased risk of data breaches; differences in cultural environments; sociopolitical instability; social, political or economic instability resulting from climate change; changes in regulatory requirements, including changes in regulatory treatment of certain products or services; exposure to local economic conditions and its impact on our clients' performance and creditworthiness; and restrictions on the repatriation of non-U.S. investments and earnings.

Our U.K. business could be specifically adversely impacted by the imposition of trade barriers between the EU and the U.K. following Brexit, which has already reduced the level of trade between the two markets and the U.K.'s overall trade exports, thereby negatively affecting the attractiveness of the U.K. market.

We may be unable to attract and retain key personnel and qualified employees.

We depend on our ability to attract and retain key personnel, including our President and CEO, Executive Chairman, senior executive officers, presidents of our businesses, experienced underwriters and other skilled employees who are knowledgeable about our business. If the quality of our underwriting team and other personnel decreases, we may be unable to maintain our current competitive position in the specialized markets in which we operate, and be unable to expand our operations into new products and markets.

We cannot guarantee that our reinsurers will pay in a timely fashion, if at all, and, as a result, we could experience losses.

We purchase reinsurance by transferring part of the risk that we have assumed, known as ceding, to a reinsurance company in exchange for part of the premium we receive in connection with the risk. Although reinsurance makes the reinsurer contractually liable to us to the extent the risk is transferred or ceded to the reinsurer, it does not relieve us, the reinsured, of our liability to our policyholders. Our reinsurers may not pay the reinsurance recoverables that they owe to us or they may not pay such recoverables on a timely basis. This failure to pay or failure to pay on a timely basis may be due to factors such as whether reinsurers, their affiliates or certain indemnitors have the financial capacity and willingness to make payments under the terms of a reinsurance treaty or contract. Accordingly, we bear credit risk with respect to our reinsurers, and if our reinsurers fail to pay us, our financial results would be adversely affected. Underwriting results and investment returns of some of our reinsurers may affect their future ability to pay claims. As of December 31, 2022, the amount due from our reinsurers was approximately $3,188 million, including amounts due from state funds and industry pools where it was intended that we would bear no risk. Certain of these amounts are secured by letters of credit or by funds held in trust on our behalf.

We are subject to credit risk relating to our policyholders, independent agents and brokers.

In addition to exposure to credit risk related to our reinsurance recoverables and investment portfolio, we are exposed to credit risk in several other areas of our business, including credit risk relating to policyholders, independent agents and brokers. For example our policyholders, independent agents or brokers may not pay a part of or the full amount of premiums owed to us or our brokers or other third party claim administrators may not deliver amounts owed on claims under our insurance and reinsurance contracts for which we have provided funds.

As credit risk is generally a function of the economy, we face a greater credit risk in an economic downturn. While we attempt to manage credit risks through underwriting guidelines, collateral requirements and other oversight mechanisms, our efforts may not be successful. For example, to reduce such credit risk, we require certain third parties to post collateral for some or all of their obligations to us. In cases where we receive pledged securities and the applicable counterparty is unable to honor its obligations, we may be exposed to credit risk on the securities pledged and/or the risk that our access to that collateral may be stayed as a result of bankruptcy. In cases where we receive letters of credit from banks as collateral and one of our counterparties is unable to honor its obligations, we are exposed to the credit risk of the banks that issued the letters of credit.

We are rated by A.M. Best, Standard & Poor's, Moody's, and Fitch, and a decline in these ratings could affect our standing in the insurance industry and cause our sales and earnings to decrease.

Ratings have become an increasingly important factor in establishing the competitive position of insurance companies. Certain of our insurance company subsidiaries are rated by A.M. Best, Standard & Poor's, Moody's and Fitch. Our ratings are subject to periodic review, and we cannot assure you that we will be able to retain our current or any future ratings, especially given that rating agencies may change their criteria or increase capital requirements for various rating levels. For instance, Standard & Poor's has recently proposed changes to its rating model which could impact our rating depending on final changes that are implemented.

If our ratings are reduced from their current levels by A.M. Best, Standard & Poor's, Moody's or Fitch, our competitive position in the insurance industry could suffer and it would be more difficult for us to market our products. A ratings downgrade could also adversely limit our access to capital markets, which may increase the cost of debt. A significant downgrade could result in a substantial loss of business as policyholders move to other companies with higher financial strength ratings.

If market conditions cause reinsurance to be more costly or unavailable, we may be required to bear increased risks or reduce the level of our underwriting commitments.

As part of our overall risk and capacity management strategy, we purchase reinsurance for certain amounts of risk underwritten by our insurance company subsidiaries, especially catastrophe risks and those risks with relatively high policy limits. We also purchase reinsurance on risks underwritten by others which we reinsure. Market conditions beyond our control determine the availability and cost of the reinsurance protection we seek to purchase, which may affect the level of our business and profitability. Our reinsurance contracts are generally subject to annual renewal, and we may be unable to maintain our current reinsurance contracts or to obtain other reinsurance contracts in adequate amounts and at favorable rates. In addition, we may be unable to obtain reinsurance on terms acceptable to us relating to certain lines of business that we intend to begin writing. If we are unable to renew our expiring contracts or to obtain new reinsurance contracts, either our net exposures would increase or, if we are unwilling to bear an increase in net exposures, we would have to reduce the level of our underwriting commitments, especially catastrophe exposed risks.

Depending on conditions in the financial markets and the general economy, we may be unable to raise debt or equity capital if needed.

If conditions in the financial markets and the general economy are unfavorable, which may result from disruptions, uncertainty or volatility in the capital and credit markets, we may be unable to access debt or equity capital on acceptable terms if needed, which could have a negative impact on our ability to invest in our insurance company subsidiaries and/or to take advantage of opportunities to expand our business, such as possible acquisitions and the creation of new ventures, and inhibit our ability to refinance our existing indebtedness if we desire to do so, on terms acceptable to us.

We may not find suitable acquisition candidates or new insurance ventures and even if we do, we may not successfully integrate any such acquired companies or successfully invest in such ventures.

As part of our present strategy, we continue to evaluate possible acquisition transactions and the start-up of complementary businesses on an ongoing basis, and at any given time we may be engaged in discussions with respect to possible acquisitions and new ventures. We cannot assure you that we will be able to identify suitable acquisition targets or insurance ventures, that such transactions will be financed and completed on acceptable terms or that our future acquisitions or start-up ventures will be successful. Our financial results could be adversely affected by acquired businesses not performing as projected, unforeseen liabilities, routine and unanticipated transaction-related charges, diversion of management time and resources to acquisition integration challenges or growth strategies, loss of key employees, challenges in integrating information technology systems of acquired companies with our own, amortization of expenses related to intangibles, charges for impairment of long-term assets or goodwill and indemnification. The process of integrating any companies we do acquire or investing in new ventures may have a material adverse effect on our results of operations and financial condition.

If we experience difficulties with our information technology, telecommunications or other computer systems, our ability to conduct our business could be negatively or severely impacted.

Our business is highly dependent upon our employees' ability to perform necessary business functions in an efficient and uninterrupted fashion. A shut-down of, or inability to access, one or more of our facilities, a power outage or a failure of one or more of our information technology, telecommunications or other computer systems could significantly impair our employees' ability to perform such functions on a timely basis. In the event of a disaster such as a natural catastrophe, terrorist attack or industrial accident, or the infection of our systems by a malicious computer virus, our systems could be inaccessible for an extended period of time. In addition, because our information technology and telecommunications systems interface with and depend on third-party systems, we could experience service denials or failures of controls if demand for our service exceeds capacity or a third-party system fails or experiences an interruption. If our business continuity plans or system security does not sufficiently address such a business interruption, system failure or service denial, our ability to write and process new and renewal business, provide customer service, pay claims in a timely manner or perform other necessary business functions could be significantly impaired and our business could be harmed.

Failure to maintain the security of information technology systems and confidential data may expose us to liability.

Although we have taken steps intended to protect our data and information technology systems and mitigate the risk of harm caused by cybersecurity incidents or breaches, no safeguards are perfect and any failure of these safeguards could cause a substantial disruption of our business operations, which could result in service interruptions, data security compromises, regulatory action, and other similar operational and legal issues, as well as substantial remediation and other costs. Our operations rely on the secure processing, storage and transmission of confidential and other information in our computer systems and networks. Cybersecurity breaches, including physical or electronic break-ins, computer viruses, malware, attacks by hackers, ransomware attacks, phishing attacks, supply chain attacks, breaches due to employee error or misconduct and other similar breaches can create system disruptions, shutdowns or unauthorized access to information maintained in our information technology systems and in the information technology systems of our vendors and other third parties. We have in the past experienced cybersecurity breaches of our information technology systems as well as the information technology systems of our vendors and other third parties, but, to our knowledge, we have not experienced any material cybersecurity breaches. We expect cybersecurity breaches to continue to occur in the future and we are constantly managing efforts to infiltrate and compromise our systems and data. Our electronic transmission of personal, confidential and proprietary information to third parties with whom we have business relationships and our outsourcing of certain technology and business process functions to third parties may expose us to enhanced risk related to data security. While we attempt to develop secure data transmission capabilities with these third-party vendors and others with whom we do business, our vendors and third parties could still suffer data breaches that could result in the exposure of sensitive data and the infiltration of our computer systems. Our failure to effectively protect sensitive personal and/or proprietary information, whether owing to breaches of our own systems or those of our vendors and other third parties, could result in significant monetary and reputational damages, material adverse effects to our financial condition, costly litigation, or other regulatory enforcement actions. These increased risks, and expanding regulatory requirements regarding data security, including required compliance with the GDPR, CCPA, CPRA and additional state-specific privacy statutes and regulations, could expose us to data loss, monetary and reputational damages and significant increases in compliance costs. As a result, our ability to conduct our business could be materially and adversely affected.

We could be adversely affected if our controls to ensure compliance with guidelines, policies and legal and regulatory standards are not effective.

Our business is highly dependent on our ability to engage on a daily basis in a large number of insurance underwriting, claim processing and investment activities, many of which are highly complex. These activities often are subject to internal guidelines and policies, as well as legal and regulatory standards, including those related to privacy, anti-corruption, anti-bribery and global finance and insurance matters. Our continued expansion into new international markets has brought about additional requirements. A control system, no matter how well designed and operated, can provide only reasonable assurance that the control system's objectives will be met. If our controls are not effective, it could lead to financial loss, unanticipated risk exposure (including underwriting, credit and investment risk) or damage to our reputation.

We could be adversely affected by changes in U.S. Federal income tax laws.

Tax legislation commonly referred to as the Tax Cuts and Jobs Act, which was signed into law on December 22, 2017, fundamentally overhauled the U.S. tax system by, among other significant changes, reducing the U.S. corporate income tax rate to 21%. In the context of the taxation of U.S. property/casualty insurance companies such as the Company, the Act also modified the loss reserve discounting rules and the proration rules that apply to reduce reserve deductions to reflect the lower corporate income tax rate. It is possible that other legislation could be introduced and enacted by the current Congress or future Congresses that could have an adverse impact on us. New regulations or pronouncements interpreting or clarifying provisions of the Act may be forthcoming. We cannot predict if, when or in what form such regulations or pronouncements may be provided, whether such guidance will have a retroactive effect or their potential impact on us.

Limitations in risk management and loss limitation methods may adversely impact our business.

We seek to effectively manage risk and limit our losses in a variety of ways including through effective underwriting, tailoring policy terms, and the use of reinsurance. However, there are certain limitations in these and similar tactics and as a result, loss levels may be higher than modeled or otherwise expected, which could have a material adverse effect on our business.

Increased scrutiny on social responsibility and the efforts we take to implement related measures, or the failure to take such measures, may adversely impact our business.

There is increased scrutiny from regulators and investors on the measures companies take to be socially responsible. Although we have made efforts to be responsible in this manner, for example through our commitment to fostering a unifying culture and encouraging innovation across our operating units, these types of pressures may nonetheless present challenges and have an adverse impact on our business. In addition, we may be subject to negative publicity based on a failure or perceived failure to achieve various social responsibility initiatives and goals relating to diversity, equity and inclusion, and commitment to long-term sustainability we may announce from time to time, or based on an actual or perceived increase in related risks as a result of our or our industry’s business activities.

Risks Relating to Our Investments

A significant amount of our assets is invested in fixed maturity securities and is subject to market fluctuations.

Our investment portfolio consists substantially of fixed maturity securities. As of December 31, 2022, our investment in fixed maturity securities was approximately $17.6 billion, or 72.4% of our total investment portfolio, including cash and cash equivalents. As of that date, our portfolio of fixed maturity securities consisted of the following types of securities: U.S. Government securities (5.1%); state and municipal securities (16.8%); corporate securities (38.1%); asset-backed securities (22.6%); mortgage-backed securities (9.4%) and foreign government (8.0%).

The fair value of these assets and the investment income from these assets fluctuate depending on general economic and market conditions. The fair value of fixed maturity securities generally decreases as interest rates rise. If a significant increase in interest rates were to occur, the fair value of our fixed maturity securities would be negatively impacted, while investment income earned from future investments in fixed-maturity securities would be higher. Conversely, if interest rates decline, the fair value of our fixed-maturity securities would be positively impacted and investment income earned from future investments in fixed maturity securities will be lower. Some fixed maturity securities, such as mortgage-backed and other asset-backed securities, also carry prepayment risk as a result of interest rate fluctuations. In low interest rate environments, we may not be able to successfully reinvest the proceeds from maturing securities at yields commensurate with our target performance goals.

The value of investments in fixed maturity securities is subject to impairment as a result of deterioration in the credit worthiness of the issuer, default by the issuer (including states and municipalities) in the performance of its obligations in respect of the securities and/or increases in market interest rates. To a large degree, the credit risk we face is a function of the economy; accordingly, we face a greater risk in an economic downturn or recession. During periods of market disruption, it may be difficult to value certain of our securities, particularly if trading becomes less frequent and/or market data becomes less observable. There may be certain asset classes that were in active markets with significant observable data that become illiquid due to the then current financial environment. In such cases, more securities may require additional subjectivity and management judgment.

Although the historical rates of default on state and municipal securities have been relatively low, our state and municipal fixed maturity securities could be subject to a higher risk of default or impairment due to declining municipal tax bases and revenue. Many states and municipalities operate under deficits or projected deficits, the severity and duration of which could have an adverse impact on both the valuation of our state and municipal fixed maturity securities and the issuer's ability to perform its obligations thereunder. Additionally, our investments are subject to losses as a result of a general decrease in commercial and economic activity for an industry sector in which we invest, as well as risks inherent in particular securities.

Although we attempt to manage these risks through the use of investment guidelines and other oversight mechanisms and by diversifying our portfolio and emphasizing preservation of principal, our efforts may not be successful. Impairments, defaults and/or rate increases could reduce our net investment income and net realized investment gains or result in investment losses. Investment returns are currently, and will likely continue to remain, under pressure due to economic uncertainty, more generally, and the shape of the yield curve. As a result, our exposure to the risks described above could materially and adversely affect our results of operations, liquidity and financial condition.

We have invested a portion of our assets in equity securities, merger arbitrage securities, investment funds, private equity, loans and real estate related assets, which are subject to significant volatility and may decline in value.

We invest a portion of our investment portfolio in equity securities, merger arbitrage securities, investment funds, private equity, loans and real estate related assets. At December 31, 2022, our investment in these assets was approximately $5.3 billion, or 21.6%, of our investment portfolio, including cash and cash equivalents.

Merger and arbitrage trading securities were $0.9 billion, or 3.9% of our investment portfolio, including cash and cash equivalents at December 31, 2022. Merger arbitrage involves investing in the securities of publicly held companies that are the targets in announced tender offers and mergers. Merger arbitrage differs from other types of investments in its focus on transactions and events believed likely to bring about a change in value over a relatively short time period, usually four months or less. Our merger arbitrage positions are exposed to the risk associated with the completion of announced deals, which are subject to regulatory as well as political and other risks.

Real estate related investments, including directly owned, investment funds and loans receivable, were $1.7 billion, or 7.1% of our investment portfolio, including cash and cash equivalents, at December 31, 2022. We also invest in real estate, financial services, energy, transportation and other investment funds. The values of these investments are subject to fluctuation based on changes in the economy and interest rates in general and the related asset valuations in particular. In addition, our investments in real estate related assets and other alternative investments are less liquid than our other investments.

These investments are subject to significant volatility as a result of the conditions in the financial and commodity markets and the global economy.

Risks Relating to Limitations on Dividends from Subsidiaries and Anti-Takeover Provisions

We are an insurance holding company and, therefore, may not be able to receive dividends in needed amounts.

As an insurance holding company, our principal assets are the shares of capital stock of our insurance company subsidiaries. We have to rely on dividends from our insurance company subsidiaries to meet our obligations for paying principal and interest on outstanding debt obligations, paying dividends to stockholders and repurchasing our shares and paying corporate expenses. The payment of dividends by our insurance company subsidiaries is subject to regulatory restrictions and competitive pressures on maintaining financial strength ratings and will depend on the surplus and future earnings of these subsidiaries. During 2023, the maximum amount of dividends that can be paid without regulatory approval is approximately $1.2 billion. Future regulatory actions could further restrict our insurance subsidiaries' ability to pay us dividends. As a result, in the future we may not be able to receive dividends from these subsidiaries at times and in amounts necessary to meet our obligations, pay dividends or repurchase shares.

Laws and regulations of the jurisdictions in which we conduct business could delay, deter or prevent an attempt to acquire control of us that stockholders might consider to be desirable, and may restrict a stockholder's ability to purchase our common stock.

Generally, United States insurance holding company laws require that, before a person can acquire control of an insurance company, prior written approval must be obtained from the insurance regulatory authority in the state in which that insurance company is domiciled. Pursuant to applicable laws and regulations, "control" over an insurer is generally presumed to exist if any person, directly or indirectly, owns, controls, holds the power to vote, or holds proxies representing 10% or more of the voting securities of that insurer or any parent company of such insurer. Indirect ownership includes ownership of the shares of our common stock. Thus, the insurance regulatory authorities of the states in which our insurance subsidiaries are domiciled are likely to apply these restrictions on acquisition of control to any proposed acquisition of our common stock. Some states require a person seeking to acquire control of an insurer licensed but not domiciled in that state to make a filing prior to completing an acquisition if the acquirer and its affiliates, on the one hand, and the target insurer and its affiliates, on the other hand, have specified market shares in the same lines of insurance in that state. Additionally, many foreign jurisdictions where we conduct business impose similar restrictions and requirements.

These provisions can also lead to the imposition of conditions on an acquisition that could delay or prevent its consummation. These laws may discourage potential acquisition proposals and may delay, deter or prevent a change in control of us through transactions, and in particular unsolicited transactions, that some or all of our stockholders might consider to be desirable.

Certain provisions in our organizational documents may have the effect of hindering, delaying or preventing third party takeovers and thus may prevent our stockholders from receiving premium prices for their shares in an unsolicited takeover or make it more difficult for third parties to replace our current management.

Provisions of our Restated Certificate of Incorporation and By-Laws, as well as state insurance statutes, may hinder, delay or prevent unsolicited acquisitions or changes of our control. These provisions may also have the effect of making it more difficult for third parties to cause the replacement of our current management without the concurrence of our board of directors.

These provisions include:

- our classified board of directors and the ability of our board to increase its size and to appoint directors to fill newly created directorships;
- the requirement that the holders of 80% of our shares must approve mergers and other transactions between us and the holder of 5% or more of our shares, unless the transaction was approved by our board of directors prior to such holder's acquisition of 5% of our shares; and
- the need for advance notice in order to raise business or make nominations at stockholders' meetings.

These provisions may discourage potential acquisition proposals and may delay, deter or prevent a change in control of us through transactions, and in particular unsolicited transactions, that some or all of our stockholders might consider to be desirable.

ITEM 1B. UNRESOLVED STAFF COMMENTS

There are no unresolved written comments that were received from the SEC staff 180 days or more before the end of our fiscal year relating to our periodic or current reports under the Securities Exchange Act of 1934.

ITEM 2. PROPERTIES

W. R. Berkley and its subsidiaries own or lease office buildings or office space suitable to conduct their operations. At December 31, 2022, the Company had aggregate office space of 4,295,165 square feet, of which 1,048,136 were owned and 3,247,029 were leased.

Rental expense for the Company's operations was approximately $43,383,000, $44,051,000 and $44,291,000 for 2022, 2021 and 2020, respectively. Future minimum lease payments, without provision for sublease income, are $32,282,796 in 2023, $33,528,105 in 2024 and $599,371,375 thereafter.

ITEM 3. LEGAL PROCEEDINGS

The Company's subsidiaries are subject to disputes, including litigation and arbitration, arising in the ordinary course of their insurance and reinsurance businesses. The Company's estimates of the costs of settling such matters are reflected in its aggregate reserves for losses and loss expenses, and the Company does not believe that the ultimate outcome of such matters will have a material adverse effect on its financial condition or results of operations.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

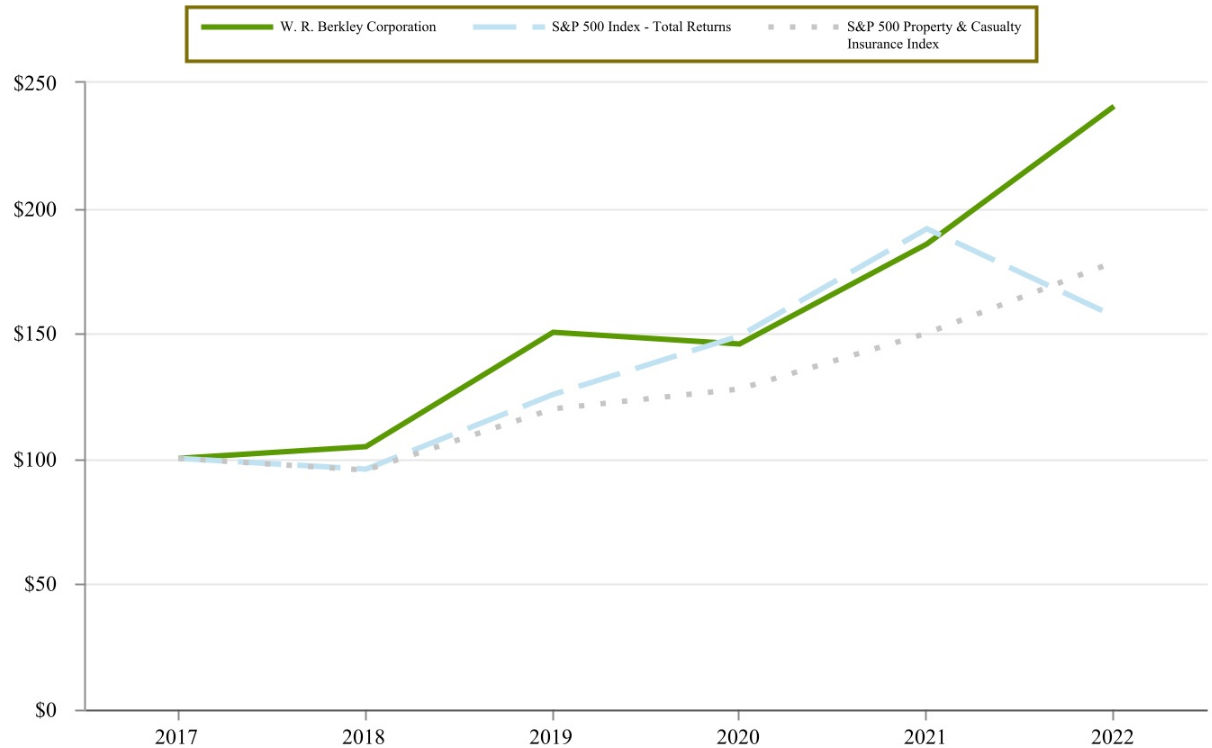
In 2022, the Board declared regular quarterly cash dividends of $0.09 per share in the first quarter, and $0.10 per share in each of the remaining three quarters, and special dividends of $0.50 per share in the second quarter. Subject to availability, the Board currently expects to continue such regular quarterly cash dividends.

The approximate number of record holders of the common stock on February 15, 2023 was 323.

The chart below shows a comparison of 5 year cumulative total return.

Comparison of 5 Year Cumulative Total Return

Assumes initial investment of $100 on January 1, 2017, with dividends reinvested.



As of December 31, 2022, the S&P 500® Property and Casualty Insurance Index consists of Allstate Corporation, Arch Capital Group Ltd. (added Nov. 2022), Chubb, Ltd., Cincinnati Financial Corporation, Progressive Corporation, The Travelers Companies, Inc., and W. R. Berkley Corporation (added Dec. 2019).

		2017	2018	2019	2020	2021	2022
W. R. Berkley Corporation	Cum $	100.00	104.61	150.46	145.72	185.56	240.56
S&P 500 Index - Total Returns	Cum $	100.00	95.61	125.70	148.81	191.48	156.69
S&P 500 Property and Casualty Insurance Index	Cum $	100.00	95.31	119.97	127.56	149.90	178.27

Set forth below is a summary of the shares repurchased by the Company during the fourth quarter of 2022 and the remaining number of shares authorized for purchase by the Company during such period.

	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that may yet be Purchased Under the Plans or Programs
October 2022	325,596	$ 69.22	325,596	14,568,100
November 2022	938,494	69.29	938,494	13,629,606
December 2022	—	—	—	13,629,606

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Overview

W. R. Berkley Corporation is an insurance holding company that is among the largest commercial lines writers in the United States and operates worldwide in two segments of the property and casualty business: Insurance and Reinsurance & Monoline Excess. Our decentralized structure provides us with the flexibility to respond quickly and efficiently to local or specific market conditions and to pursue specialty business niches. It also allows us to be closer to our customers in order to better understand their individual needs and risk characteristics. While providing our business units with certain operating autonomy, our structure allows us to capitalize on the benefits of economies of scale through centralized capital, investment, reinsurance, enterprise risk management, and actuarial, financial and corporate legal staff support. The Company’s primary sources of revenues and earnings are its insurance operations and its investments.

An important part of our strategy is to form new businesses to capitalize on various opportunities. Over the years, the Company has formed numerous businesses that are focused on important parts of the economy in the U.S., including healthcare, cyber security, energy and agriculture, and on growing international markets, including the Asia-Pacific region, South America and Mexico.

The profitability of the Company’s insurance business is affected primarily by the adequacy of premium rates. The ultimate adequacy of premium rates is not known with certainty at the time an insurance policy is issued because premiums are determined before claims are reported. The ultimate adequacy of premium rates is affected mainly by the severity and frequency of claims, which are influenced by many factors, including natural and other disasters, regulatory measures and court decisions that define and change the extent of coverage and the effects of economic or social inflation on the amount of compensation for injuries or losses. General insurance prices are also influenced by available insurance capacity, i.e., the level of capital employed in the industry, and the industry’s willingness to deploy that capital.

The Company’s profitability is also affected by its investment income and investment gains. The Company’s invested assets are invested principally in fixed maturity securities. The return on fixed maturity securities is affected primarily by general interest rates, as well as the credit quality and duration of the securities.

The Company also invests in equity securities, merger arbitrage securities, investment funds, private equity, loans and real estate related assets. The Company's investments in investment funds and its other alternative investments have experienced, and the Company expects to continue to experience, greater fluctuations in investment income. The Company's share of the earnings or losses from investment funds is generally reported on a one-quarter lag in order to facilitate the timely completion of the Company's consolidated financial statements.

On February 25, 2022, the Company announced that its Board of Directors approved a 3-for-2 common stock split which was paid in the form of a stock dividend to holders of record as of March 9, 2022. The additional shares were issued on March 23, 2022. Shares outstanding and per share amounts in this Form 10-K reflect such 3-for-2 common stock split.

On March 7, 2022, the Company sold a real estate investment consisting of an office building located in London for £718 million. The Company realized a pretax gain of $317 million in the first quarter of 2022, before transaction expenses and the impact of foreign currency, including the reversal of the currency translation adjustment. The gain was $251 million after such adjustments.

The COVID-19 pandemic, including the related impact on the U.S. and global economies, continued to adversely affect our results of operations. At the same time, COVID-19 has led to reduced loss frequency in certain lines of business (which partially returned to pre-pandemic levels as many economies and legal systems have reopened). The ultimate impact of COVID-19 on the economy and the Company’s results of operations, financial position and liquidity is not within the Company’s control and remains unclear due to, among other factors, its ongoing impact and uncertainty in connection with its claims, reserves and reinsurance recoverables.

Critical Accounting Estimates

The following presents a discussion of accounting policies and estimates relating to reserves for losses and loss expenses, assumed reinsurance premiums and other-than-temporary impairments of investments. Management believes these policies and estimates are the most critical to its operations and require the most difficult, subjective and complex judgments.

Reserves for Losses and Loss Expenses. To recognize liabilities for unpaid losses, either known or unknown, insurers establish reserves, which is a balance sheet account representing estimates of future amounts needed to pay claims and related expenses with respect to insured events which have occurred. Estimates and assumptions relating to reserves for losses and loss expenses are based on complex and subjective judgments, often including the interplay of specific uncertainties with related accounting and actuarial measurements. Such estimates are also susceptible to change as significant periods of time may elapse between the occurrence of an insured loss, the report of the loss to the insurer, the ultimate determination of the cost of the loss and the insurer’s payment of that loss.

In general, when a claim is reported, claims personnel establish a “case reserve” for the estimated amount of the ultimate payment based upon known information about the claim at that time. The estimate represents an informed judgment based on general reserving practices and reflects the experience and knowledge of the claims personnel regarding the nature and value of the specific type of claim. Reserves are also established on an aggregate basis to provide for losses incurred but not reported (“IBNR”) to the insurer, potential inadequacy of case reserves and the estimated expenses of settling claims, including legal and other fees and general expenses of administrating the claims adjustment process. Reserves are established based upon the then current legal interpretation of coverage provided.

In examining reserve adequacy, several factors are considered in estimating the ultimate economic value of losses. These factors include, among other things, historical data, legal developments, changes in social attitudes and economic conditions, including the effects of inflation. The actuarial process relies on the basic assumption that past experience, adjusted judgmentally for the effects of current developments and anticipated trends, is an appropriate basis for predicting future outcomes. Reserve amounts are based on management’s informed estimates and judgments using currently available data. As additional experience and other data become available and are reviewed, these estimates and judgments may be revised. This may result in reserve increases or decreases that would be reflected in our results in periods in which such estimates and assumptions are changed.

Reserves do not represent a certain calculation of liability. Rather, reserves represent an estimate of what management expects the ultimate settlement and claim administration will cost. While the methods for establishing reserves are well tested over time, the major assumptions about anticipated loss emergence patterns are subject to uncertainty. These estimates, which generally involve actuarial projections, are based on management’s assessment of facts and circumstances then known, as well as estimates of trends in claims severity and frequency, judicial theories of liability and other factors, including the actions of third parties which are beyond the Company’s control. These variables are affected by external and internal events, such as inflation and economic volatility, judicial and litigation trends, reinsurance coverage, legislative changes and claim handling and reserving practices, which make it more difficult to accurately predict claim costs. The inherent uncertainties of estimating reserves are greater for certain types of liabilities where long periods of time elapse before a definitive determination of liability is made. Because setting reserves is inherently uncertain, the Company cannot provide assurance that its current reserves will prove adequate in light of subsequent events.

Loss reserves included in the Company’s financial statements represent management’s best estimates based upon an actuarially derived point estimate and other considerations. The Company uses a variety of actuarial techniques and methods to derive an actuarial point estimate for each business. These methods include paid loss development, incurred loss development, paid and incurred Bornhuetter-Ferguson methods and frequency and severity methods. In circumstances where one actuarial method is considered more credible than the others, that method is used to set the point estimate. For example, the paid loss and incurred loss development methods rely on historical paid and incurred loss data. For new lines of business, where there is insufficient history of paid and incurred claims data, or in circumstances where there have been significant changes in claim practices, the paid and incurred loss development methods would be less credible than other actuarial methods. The actuarial point estimate may also be based on a judgmental weighting of estimates produced from each of the methods considered. Industry loss experience is used to supplement the Company’s own data in selecting “tail factors” and in areas where the Company’s own data is limited. The actuarial data is analyzed by line of business, coverage and accident or policy year, as appropriate, for each business.

The establishment of the actuarially derived loss reserve point estimate also includes consideration of qualitative factors that may affect the ultimate losses. These qualitative considerations include, among others, the impact of re-underwriting initiatives, changes in the mix of business, changes in distribution sources and changes in policy terms and conditions. Examples of changes in terms and conditions that can have a significant impact on reserve levels are the use of aggregate policy limits, the expansion of coverage exclusions, whether or not defense costs are within policy limits, and changes in deductibles and attachment points.

The key assumptions used to arrive at the best estimate of loss reserves are the expected loss ratios, rate of loss cost inflation, and reported and paid loss emergence patterns. Expected loss ratios represent management's expectation of losses at the time the business is priced and written, before any actual claims experience has emerged. This expectation is a significant determinant of the estimate of loss reserves for recently written business where there is little paid or incurred loss data to consider. Expected loss ratios are generally derived from historical loss ratios adjusted for the impact of rate changes, loss cost trends and known changes in the type of risks underwritten. Expected loss ratios are estimated for each key line of business within each business. Expected loss cost inflation is particularly important for the long-tail lines, such as excess casualty, and claims with a high medical component, such as workers' compensation. Reported and paid loss emergence patterns are used to project current reported or paid loss amounts to their ultimate settlement value. Loss development factors are based on the historical emergence patterns of paid and incurred losses, and are derived from the Company's own experience and industry data. The paid loss emergence pattern is also significant to excess and assumed workers' compensation reserves because those reserves are discounted to their estimated present value based upon such estimated payout patterns. Management believes the estimates and assumptions it makes in the reserving process provide the best estimate of the ultimate cost of settling claims and related expenses with respect to insured events which have occurred; however, different assumptions and variables could lead to significantly different reserve estimates.

Loss frequency and severity are measures of loss activity that are considered in determining the key assumptions described in our discussion of loss and loss expense reserves, including expected loss ratios, rate of loss cost inflation and reported and paid loss emergence patterns. Loss frequency is a measure of the number of claims per unit of insured exposure, and loss severity is a measure of the average size of claims. Factors affecting loss frequency include the effectiveness of loss controls and safety programs and changes in economic activity or weather patterns. Factors affecting loss severity include changes in policy limits, retentions, rate of inflation and judicial interpretations.

Another factor affecting estimates of loss frequency and severity is the loss reporting lag, which is the period of time between the occurrence of a loss and the date the loss is reported to the Company. The length of the loss reporting lag affects our ability to accurately predict loss frequency (loss frequencies are more predictable for lines with short reporting lags) as well as the amount of reserves needed for incurred but not reported losses (less IBNR is required for lines with short reporting lags). As a result, loss reserves for lines with short reporting lags are likely to have less variation from initial loss estimates. For lines with short reporting lags, which include commercial automobile, primary workers' compensation, other liability (claims-made) and property business, the key assumption is the loss emergence pattern used to project ultimate loss estimates from known losses paid or reported to date. For lines of business with long reporting lags, which include other liability (occurrence), products liability, excess workers' compensation and liability reinsurance, the key assumption is the expected loss ratio since there is often little paid or incurred loss data to consider. Historically, the Company has experienced less variation from its initial loss estimates for lines of businesses with short reporting lags than for lines of business with long reporting lags.

The key assumptions used in calculating the most recent estimate of the loss reserves are reviewed each quarter and adjusted, to the extent necessary, to reflect the latest reported loss data, current trends and other factors observed. If the actual level of loss frequency and severity are higher or lower than expected, the ultimate losses will be different than management's estimate. The following table reflects the impact of changes (which could be favorable or unfavorable) in frequency and severity, relative to our assumptions, on our loss estimate for claims occurring in 2022:

(In thousands)	**Frequency (+/-)**		
Severity (+/-)	**1%**	**5%**	**10%**
1%	$ 116,072	$ 349,370	$ 640,993
5%	349,370	591,908	895,081
10%	640,993	895,081	1,212,690

Our net reserves for losses and loss expenses of approximately $14.2 billion as of December 31, 2022 relate to multiple accident years. Therefore, the impact of changes in frequency or severity for more than one accident year could be higher or lower than the amounts reflected above. The impact of such changes would likely be manifested gradually over the course of many years, as the magnitude of the changes became evident.

Approximately $3.0 billion, or 21%, of the Company's net loss reserves as of December 31, 2022 relate to the Reinsurance & Monoline Excess segment. There is a higher degree of uncertainty and greater variability regarding estimates of excess workers' compensation and assumed reinsurance loss reserves. In the case of excess workers' compensation, our policies generally attach at $1 million or higher. The claims which reach our layer therefore tend to involve the most serious injuries and many remain open for the lifetime of the claimant, which extends the claim settlement tail. These claims also occur less frequently but tend to be larger than primary claims, which increases claim variability. In the case of assumed reinsurance our loss reserve estimates are based, in part, upon information received from ceding companies. If information received from ceding companies is not timely or correct, the Company's estimate of ultimate losses may not be accurate. Furthermore, due to delayed reporting of claim information by ceding companies, the claim settlement tail for assumed reinsurance is also extended. Management considers the impact of delayed reporting and the extended tail in its selection of loss development factors for these lines of business.

Information received from ceding companies is used to set initial expected loss ratios, to establish case reserves and to estimate reserves for incurred but not reported losses on assumed reinsurance business. This information, which is generally provided through reinsurance intermediaries, is gathered through the underwriting process and from periodic claim reports and other correspondence with ceding companies. The Company performs underwriting and claim audits of selected ceding companies to determine the accuracy and completeness of information provided to the Company. The information received from the ceding companies is supplemented by the Company's own loss development experience with similar lines of business as well as industry loss trends and loss development benchmarks.

Following is a summary of the Company's reserves for losses and loss expenses by business segment as of December 31, 2022 and 2021:

(In thousands)	**2022**	**2021**
Insurance	$ 11,233,924	$ 10,060,420
Reinsurance & Monoline Excess	3,014,955	2,787,942
Net reserves for losses and loss expenses	14,248,879	12,848,362
Ceded reserves for losses and loss expenses	2,762,344	2,542,526
Gross reserves for losses and loss expenses	$ 17,011,223	$ 15,390,888

Following is a summary of the Company's net reserves for losses and loss expenses by major line of business as of December 31, 2022 and 2021:

(In thousands)	**Reported Case Reserves**	**Incurred But Not Reported**	**Total**
December 31, 2022			
Other liability	$ 1,808,700	$ 3,826,444	$ 5,635,144
Workers' compensation (1)	1,023,961	899,215	1,923,176
Professional liability	501,572	1,243,604	1,745,176
Commercial automobile	629,149	528,398	1,157,547
Short-tail lines (2)	403,974	368,907	772,881
Total Insurance	4,367,356	6,866,568	11,233,924
Reinsurance & Monoline Excess (1) (3)	1,551,687	1,463,268	3,014,955
Total	$ 5,919,043	$ 8,329,836	$ 14,248,879
December 31, 2021			
Other liability	$ 1,724,907	$ 3,319,665	$ 5,044,572
Workers' compensation (1)	1,016,014	903,448	1,919,462
Professional liability	468,680	1,019,344	1,488,024
Commercial automobile	504,821	424,382	929,203
Short-tail lines (2)	322,917	356,242	679,159
Total Insurance	4,037,339	6,023,081	10,060,420
Reinsurance & Monoline Excess (1) (3)	1,475,623	1,312,319	2,787,942
Total	$ 5,512,962	$ 7,335,400	$ 12,848,362

(1) Reserves for excess and assumed workers' compensation business are net of an aggregate net discount of $416 million and $452 million as of December 31, 2022 and 2021, respectively.

(2) Short-tail lines include commercial multi-peril (non-liability), inland marine, accident and health, fidelity and surety, boiler and machinery and other lines.

(3) Reinsurance & Monoline Excess includes property and casualty reinsurance as well as operations that solely retain risk on an excess basis.

The Company evaluates reserves for losses and loss expenses on a quarterly basis. Changes in estimates of prior year losses are reported when such changes are made. The changes in prior year loss reserve estimates are generally the result of ongoing analysis of recent loss development trends. Original estimates are increased or decreased as additional information becomes known regarding individual claims and aggregate claim trends.

Certain of the Company's insurance and reinsurance contracts are retrospectively rated, whereby the Company collects more or less premiums based on the level of loss activity. For those contracts, changes in loss and loss expenses for prior years may be fully or partially offset by additional or return premiums.

Net prior year development (i.e, the sum of prior year reserve changes and prior year earned premiums changes) for each of the last three years ended December 31, are as follows:

(In thousands)	**2022**	**2021**	**2020**
Increase in prior year loss reserves	$ (54,511)	$ (863)	$ (627)
Increase in prior year earned premiums	18,106	7,510	16,807
Net (unfavorable) favorable prior year development	$ (36,405)	$ 6,647	$ 16,180

The COVID-19 global pandemic has impacted, and may further impact, the Company's results through its effect on claim frequency and severity. Loss cost trends have been impacted and may be further impacted by COVID-19-related claims in certain lines of business. Losses incurred from COVID-19-related claims have been offset, to a certain extent, by lower claim frequency in certain lines of our businesses; however, as the economy and legal systems have reopened, the benefit of lower claim frequency has partially abated. The ultimate net impact of COVID-19 on the Company remains uncertain. New variants of the COVID-19 virus continue to create risks with respect to loss costs and the potential for renewed impact of the other effects of COVID-19 associated with economic conditions, inflation, and social distancing and work from home rules.

Most of the COVID-19-related claims reported to the Company to date involve certain short-tailed lines of business, including contingency and event cancellation, business interruption, and film production delay. The Company has also received COVID-19-related claims for longer-tailed casualty lines of business such as workers' compensation and other liability; however, the estimated incurred loss impact for these reported claims are not material at this time. Given the continuing uncertainty regarding the pandemic's pervasiveness, the future impact that the pandemic may have on claim frequency and severity remains uncertain at this time.

The Company has estimated the potential COVID-19 impact to its contingency and event cancellation, workers' compensation, and other lines of business under a number of possible scenarios; however, due to COVID-19's continued evolving impact, there remains uncertainty around the Company's COVID-19 reserves. In addition, should the pandemic continue or worsen as a result of new COVID-19 variants or otherwise, governments in the jurisdictions where we operate may impose restrictions, including lockdowns, as well as renew their efforts to expand policy coverage terms beyond the policy's intended coverage. Accordingly, losses arising from these actions, and the other factors described above, could exceed the Company's reserves established for those related policies.

As of December 31, 2022, the Company had recognized losses for COVID-19-related claims activity, net of reinsurance, of approximately $341 million, of which $290 million relates to the Insurance segment and $51 million relates to the Reinsurance & Monoline Excess segment. Such $341 million of COVID-19-related losses included $337 million of reported losses and $4 million of IBNR. For the year ended December 31, 2022, the Company recognized current accident year losses for COVID-19-related claims activity, net of reinsurance, of approximately $5 million, of which $3 million relates to the Insurance segment and $2 million relates to the Reinsurance & Monoline Excess segment.

Unfavorable prior year development (net of additional and return premiums) was $36 million in 2022.

Insurance – Reserves for the Insurance segment developed unfavorably by $40 million in 2022 (net of additional and return premiums). The unfavorable development in the segment primarily related to COVID-19 losses at two businesses. These businesses wrote policies providing coverage for event cancellation and film production delay which were heavily impacted by losses directly caused by the COVID-19 pandemic. Most of this COVID-19 related unfavorable development emerged during the third quarter as a result of settlements of claims at values higher than our expectations. However, the Company believes that as a result of these settlements the remaining level of uncertainty around the ultimate value of its known COVID-19 claims has been significantly reduced.

The unfavorable development mentioned above also includes favorable prior year development for the Insurance segment primarily attributable to the 2020 and 2021 accident years and unfavorable development on the 2015 through 2019 accident years. The favorable development on the 2020 and 2021 accident years was concentrated in certain casualty lines of business including general liability, professional liability, and workers' compensation. The Company experienced lower reported claim frequency in these lines of business during 2020 and 2021 relative to historical averages, and continued to experience lower reported incurred losses relative to its expectations for these accident years as they developed during 2022. These trends began in 2020 and we believe were caused by the impacts of the COVID-19 pandemic, including for example, lockdowns, reduced driving/traffic and increased work from home. Due to the ongoing uncertainty regarding the ultimate impacts of the pandemic on accident years 2020 and 2021 incurred losses, the Company has been cautious in reacting to these lower trends in setting and updating its loss ratio estimates for these years. As these accident years have continued to mature, the Company has continued to recognize some of the favorable reported experience in its ultimate loss estimates made during 2022.

The unfavorable development on the 2015 through 2019 accident years was concentrated in the general liability and professional liability, including medical professional, lines of business, as well as commercial auto liability. The development was driven by a larger than expected number of large losses reported. The Company believes social inflation is contributing to an increase in the frequency of large losses for these accident years. Social inflation can include higher settlement demands from plaintiffs, use of tactics such as litigation funding by the plaintiffs' bar, negative public sentiment towards large businesses and corporations, and erosion of tort reforms, among others.

Reinsurance & Monoline Excess – Reserves for the Reinsurance & Monoline Excess segment developed favorably by $4 million in 2022 (net of additional and return premiums). The overall favorable development for the segment was driven mainly by favorable development in excess workers compensation, substantially offset by unfavorable development in the professional liability and non-proportional reinsurance assumed liability lines of business. The favorable excess workers' compensation development was spread across most prior accident years, including 2012 and prior years, and was driven by a review of the Company's claim reporting patterns as well as a number of favorable claim settlements relative to expectations. The unfavorable professional liability and non-proportional reinsurance assumed liability development was concentrated mainly in accident years 2016 through 2018 and was associated primarily with our U.S. assumed reinsurance business and related to accounts insuring construction projects and professional liability exposures.

Favorable prior year development (net of additional and return premiums) was $7 million in 2021.

Insurance – Reserves for the Insurance segment developed favorably by $20 million in 2021 (net of additional and return premiums). The overall favorable development in 2021 was attributable to favorable development on the 2020 accident year, partially offset by adverse development on the 2016 through 2019 accident years.

The favorable development on the 2020 accident year was largely concentrated in the commercial auto liability and other liability lines of business, including commercial multi-peril liability. During 2020 the Company achieved larger rate increases in these lines of business than were contemplated in its budget and in its initial loss ratio selections. The Company also experienced significantly lower reported claim frequency in these lines in 2020 relative to historical averages, and lower reported incurred losses relative to its expectations. We believe that the lower claim frequency and lower reported incurred losses were caused by the impacts of the COVID-19 pandemic, for example, lockdowns, reduced driving and traffic, work from home, and court closures. However, due to the uncertainty regarding the ultimate impacts of the pandemic on accident year 2020 incurred losses, the Company elected not to react to these lower reported trends during 2020. As more information became available and the 2020 accident year continued to mature, during 2021 the Company started to recognize favorable accident year 2020 development in response to the continuing favorable reported loss experience relative to its expectations.

The adverse development on the 2016 through 2019 accident years is concentrated largely in the other liability line of business, including commercial multi-peril liability, but is also seen to a lesser extent in commercial auto liability. The adverse development for these accident years is driven by a higher than expected number of large losses reported, and particularly impacted the directors and officers liability, lawyers professional liability, and excess and surplus lines casualty classes of business. We also believe that increased social inflation is contributing to the increased number of large losses, for example, higher jury awards on cases which go to trial, and the corresponding higher demands from plaintiffs and higher values required to reach settlement on cases which do not go to trial.

Reinsurance & Monoline Excess – Reserves for the Reinsurance & Monoline Excess segment developed unfavorably by $13 million in 2021. The unfavorable development in the segment was driven by the non-proportional reinsurance assumed liability and other liability lines of business, related primarily to accident years 2017 through 2019, and was partially offset by favorable development in excess workers' compensation business which was spread across many prior accident years. The unfavorable non-proportional reinsurance assumed liability and other liability development was associated with our U.S. and U.K. assumed reinsurance business, and related primarily to accounts insuring construction projects and professional liability exposures.

Favorable prior year development (net of additional and return premiums) was $16 million in 2020.

Insurance - Reserves for the Insurance segment developed favorably by $24 million in 2020 (net of additional and return premiums). Continuing the pattern seen in recent years, the overall favorable development in 2020 resulted from more significant favorable development on workers' compensation business, which was partially offset by unfavorable development on professional liability, including excess professional liability

For workers' compensation, the favorable development was spread across almost all prior accident years, including prior to 2011, but was most significant in accident years 2016 through 2019. The favorable workers' compensation development reflects a continuation of the benign loss cost trends experienced during recent years, particularly the favorable claim frequency trends (i.e., number of reported claims per unit of exposure). The long term trend of declining workers' compensation frequency can be attributable to improved workplace safety. Loss severity trends were also aided by our continued investment in claims handling initiatives such as medical case management services and vendor savings through usage of preferred provider networks and pharmacy benefit managers. Reported workers' compensation losses in 2020 continued to be below our expectations at most of our businesses, and were below the assumptions underlying our initial loss ratio picks and our previous reserve estimates for most prior accident years.

For professional liability business, unfavorable development was driven mainly by large losses reported in the directors and officers ("D&O"), lawyers professional and excess hospital professional liability lines of business. For these lines of business, we continue to see an increase in the number of large losses reported and a lengthening of the reporting "tail" beyond historical levels. We believe a contributing cause is rising social inflation in the form of, for example, higher jury awards on cases that go to trial, and the corresponding higher demands from plaintiffs and higher values required to reach settlement on cases that do not go to trial. The unfavorable development for professional liability affected mainly accident years 2016 through 2018.

Reinsurance & Monoline Excess – Reserves for the Reinsurance & Monoline Excess segment developed unfavorably by $8 million in 2020. The unfavorable development in the segment was driven by non-proportional assumed liability business written in both the U.S. and U.K., and was partially offset by favorable development on excess workers' compensation business. The unfavorable non-proportional assumed liability development was concentrated in accident years 2014 through 2018, and related primarily to accounts insuring construction projects and professional liability exposures.

Reserve Discount. The Company discounts its liabilities for certain workers' compensation reserves. The amount of workers' compensation reserves that were discounted was $1,267 million and $1,387 million at December 31, 2022 and 2021, respectively. The aggregate net discount for those reserves, after reflecting the effects of ceded reinsurance, was $416 million and $452 million at December 31, 2022 and 2021, respectively. At December 31, 2022, discount rates by year ranged from 0.7% to 6.5%, with a weighted average discount rate of 3.4%.

Substantially all discounted workers' compensation reserves (97% of total discounted reserves at December 31, 2022) are excess workers' compensation reserves. In order to properly match loss expenses with income earned on investment securities supporting the liabilities, reserves for excess workers' compensation business are discounted using risk-free discount rates determined by reference to the U.S. Treasury yield curve. These rates are determined annually based on the weighted average rate for the period. Once established, no adjustments are made to the discount rate for that period, and any increases or decreases in loss reserves in subsequent years are discounted at the same rate, without regard to when any such adjustments are recognized. The expected loss and loss expense payout patterns subject to discounting are derived from the Company's loss payout experience.

The Company also discounts reserves for certain other long-duration workers' compensation reserves (representing approximately 3% of total discounted reserves at December 31, 2022), including reserves for quota share reinsurance and reserves related to losses regarding occupational lung disease. These reserves are discounted at statutory rates prescribed or permitted by the Department of Insurance of the State of Delaware.

Assumed Reinsurance Premiums. The Company estimates the amount of assumed reinsurance premiums that it will receive under treaty reinsurance agreements at the inception of the contracts. These premium estimates are revised as the actual amount of assumed premiums is reported to the Company by the ceding companies. As estimates of assumed premiums are made or revised, the related amount of earned premiums, commissions and incurred losses associated with those premiums are recorded. Estimated assumed premiums receivable were approximately $60 million at both December 31, 2022 and 2021. The assumed premium estimates are based upon terms set forth in reinsurance agreements, information received from ceding companies during the underwriting and negotiation of agreements, reports received from ceding companies and discussions and correspondence with reinsurance intermediaries. The Company also considers its own view of market conditions, economic trends and experience with similar lines of business. These premium estimates represent management's best estimate of the ultimate amount of premiums to be received under its assumed reinsurance agreements.

Allowance for Expected Credit Losses on Investments.

Fixed Maturity Securities – For fixed maturity securities in an unrealized loss position where the Company intends to sell, or it is more likely than not that it will be required to sell the security before recovery in value, the amortized cost basis is written down to fair value through net investment gains (losses). For fixed maturity securities in an unrealized loss position where the Company does not intend to sell, or it is more likely than not that it will not be required to sell the security before recovery in value, the Company evaluates whether the decline in fair value has resulted from credit losses or all other factors (non-credit factors). In making this assessment, the Company considers the extent to which fair value is less than amortized cost, changes to the rating of the security by a rating agency, and adverse conditions specifically related to the security, among other factors. If this assessment indicates that a credit loss exists, the present value of cash flows expected to be collected from the security are compared to the amortized cost basis of the security. If the present value of cash flows expected to be collected is less than the amortized cost basis, an allowance for expected credit losses is recorded for the credit loss through net investment gains (losses), limited by the amount that the fair value is less than the amortized cost basis. Effective January 1, 2020, the allowance is adjusted for any change in expected credit losses and subsequent recoveries through net investment gains (losses). The impairment related to non-credit factors is recognized in other comprehensive income (loss).

The Company's credit assessment of allowance for expected credit losses uses a third party model for available for sale and held to maturity securities, as well as loans receivable. The allowance for expected credit losses is generally based on the performance of the underlying collateral under various economic and default scenarios that involve subjective judgments and estimates by management. Modeling these securities involves various factors, such as projected default rates, the nature and realizable value of the collateral, if any, the ability of the issuer to make scheduled payments, historical performance and other relevant economic and performance factors. A discounted cash flow analysis is used to ascertain the amount of the allowance for expected credit losses, if any. In general, the model reverts to the rating-level long-term average marginal default rates based on 10 years of historical data, beyond the forecast period. For other inputs, the model in most cases reverts to the baseline long-term assumptions linearly over 5 years beyond the forecast period. The long-term assumptions are based on the historical averages.

The Company classifies its fixed maturity securities by credit rating, primarily based on ratings assigned by credit rating agencies. For purposes of classifying securities with different ratings, the Company uses the average of the credit ratings assigned, unless in limited situations the Company's own analysis indicates an internal rating is more appropriate. Securities that are not rated by a rating agency are evaluated and classified by the Company on a case-by-case basis.

A summary of the Company's non-investment grade fixed maturity securities that were in an unrealized loss position at December 31, 2022 is presented in the table below.

($ in thousands)	Number of Securities	Aggregate Fair Value	Unrealized Loss
Foreign government	36	$ 119,332	$ 73,900
Corporate	10	39,347	4,649
State and municipal	1	12,247	2,756
Mortgage-backed securities	14	4,464	269
Asset-backed securities	1	16	10
Total	62	$ 175,406	$ 81,584

As of December 31, 2022, the Company has recorded an allowance for expected credit losses on fixed maturity securities of $37 million. The Company has evaluated the remaining fixed maturity securities in an unrealized loss position and believes the unrealized losses are due primarily to temporary market and sector-related factors rather than to issuer-specific factors. None of these securities are delinquent or in default under financial covenants. Based on its assessment of these issuers, the Company expects them to continue to meet their contractual payment obligations as they become due.

Loans Receivable – For loans receivable, the Company estimates an allowance for expected credit losses based on relevant information about past events, including historical loss experience, current conditions and forecasts that affect the expected collectability of the amortized cost of the financial asset. The allowance for expected credit losses is presented as a reduction to amortized cost of the financial asset in the consolidated balance sheet and changes to the estimate for expected credit losses are recognized through net investment gains (losses). Loans receivable are reported net of an allowance for expected credit losses of $2 million as of both December 31, 2022 and 2021.

Fair Value Measurements. The Company's fixed maturity available for sale securities, equity securities, and its trading account securities are carried at fair value. Fair value is defined as "the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date". The Company utilizes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date. Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for similar assets in active markets. Level 3 inputs are unobservable inputs for the asset or liability. Unobservable inputs may only be used to measure fair value to the extent that observable inputs are not available. The fair value of the vast majority of the Company's portfolio is based on observable data (other than quoted prices) and, accordingly, is classified as Level 2.

In classifying particular financial securities in the fair value hierarchy, the Company uses its judgment to determine whether the market for a security is active and whether significant pricing inputs are observable. The Company determines the existence of an active market by assessing whether transactions occur with sufficient frequency and volume to provide reliable pricing information. The Company determines whether inputs are observable based on the use of such information by pricing services and external investment managers, the uninterrupted availability of such inputs, the need to make significant adjustments to such inputs and the volatility of such inputs over time. If the market for a security is determined to be inactive or if significant inputs used to price a security are determined to be unobservable, the security is categorized in Level 3 of the fair value hierarchy.

Because many fixed maturity securities do not trade on a daily basis, the Company utilizes pricing models and processes which may include benchmark curves, benchmarking of like securities, sector groupings and matrix pricing. Market inputs used to evaluate securities include benchmark yields, reported trades, broker/dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers and reference data. Quoted prices are often unavailable for recently issued securities that are infrequently traded or securities that are only traded in private transactions. For publicly traded securities for which quoted prices are unavailable, the Company determines fair value based on independent broker quotations and other observable market data. For securities traded only in private negotiations, the Company determines fair value based primarily on the cost of such securities, which is adjusted to reflect prices of recent placements of securities of the same issuer, financial data, projections and business developments of the issuer and other relevant information.

The following is a summary of pricing sources for the Company's fixed maturity securities available for sale as of December 31, 2022:

(In thousands)	**Carrying Value**	**Percent of Total**
Pricing source:		
Independent pricing services	$ 17,025,723	97.1 %
Syndicate manager	62,966	0.4
Directly by the Company based on:		
Observable data	447,364	2.5
Total	$ 17,536,053	100.0 %

Independent pricing services - Substantially all of the Company's fixed maturity securities available for sale were priced by independent pricing services (generally one U.S. pricing service plus additional pricing services with respect to a limited number of foreign securities held by the Company). The prices provided by the independent pricing services are generally based on observable market data in active markets (e.g., broker quotes and prices observed for comparable securities). The determination of whether markets are active or inactive is based upon the volume and level of activity for a particular asset class. The Company reviews the prices provided by pricing services for reasonableness based upon current trading levels for similar securities. If the prices appear unusual to the Company, they are re-examined and the value is either confirmed or revised. In addition, the Company periodically performs independent price tests of a sample of securities to ensure proper valuation and to verify our understanding of how securities are priced. As of December 31, 2022, the Company did not make any adjustments to the prices provided by the pricing services. Based upon the Company's review of the methodologies used by the independent pricing services, these securities were classified as Level 2.

Syndicate manager – The Company has a 15% participation in a Lloyd's syndicate, and the Company's share of the securities owned by the syndicate is priced by the syndicate's manager. The majority of the securities are liquid, short duration fixed maturity securities. The Company reviews the syndicate manager's pricing methodology and audited financial statements and holds discussions with the syndicate manager as necessary to confirm its understanding and agreement with security prices. Based upon the Company's review of the methodologies used by the syndicate manager, these securities were classified as Level 2.

Observable data – If independent pricing is not available, the Company prices the securities directly. Prices are based on observable market data where available, including current trading levels for similar securities and non-binding quotations from brokers. The Company generally requests two or more quotes. If more than one quote is received, the Company sets a price within the range of quotes received based on its assessment of the credibility of the quote and its own evaluation of the security. The Company generally does not adjust quotes obtained from brokers. Since these securities were priced based on observable data, they were classified as Level 2.

Cash flow model – If the above methodologies are not available, the Company prices securities using a discounted cash flow model based upon assumptions as to prevailing credit spreads, interest rates and interest rate volatility, time to maturity and subordination levels. Discount rates are adjusted to reflect illiquidity where appropriate. These securities were classified as Level 3.

Results of Operations for the Years Ended December 31, 2022 and 2021

Business Segment Results

Following is a summary of gross and net premiums written, net premiums earned, loss ratios (losses and loss expenses incurred expressed as a percentage of net premiums earned), expense ratios (underwriting expenses expressed as a percentage of net premiums earned) and GAAP combined ratios (sum of loss ratio and expense ratio) for each of our business segments for the years ended December 31, 2022 and 2021. The GAAP combined ratio represents a measure of underwriting profitability, excluding investment income. A GAAP combined ratio in excess of 100 indicates an underwriting loss; a number below 100 indicates an underwriting profit.

(In thousands)	2022	2021
Insurance		
Gross premiums written	$ 10,583,785	$ 9,471,667
Net premiums written	8,784,146	7,743,814
Net premiums earned	8,369,062	7,077,708
Loss ratio	61.3 %	61.1 %
Expense ratio	27.9	28.3
GAAP combined ratio	89.2	89.4
Reinsurance & Monoline Excess		
Gross premiums written	$ 1,325,267	$ 1,228,467
Net premiums written	1,219,924	1,119,053
Net premiums earned	1,192,367	1,028,323
Loss ratio	61.3 %	61.0 %
Expense ratio	28.4	29.7
GAAP combined ratio	89.7	90.7
Consolidated		
Gross premiums written	$ 11,909,052	$ 10,700,134
Net premiums written	10,004,070	8,862,867
Net premiums earned	9,561,429	8,106,031
Loss ratio	61.3 %	61.1 %
Expense ratio	28.0	28.5
GAAP combined ratio	89.3	89.6

Net Income to Common Stockholders. The following table presents the Company's net income to common stockholders and net income per diluted share for the years ended December 31, 2022 and 2021.

(In thousands, except per share data)	2022	2021
Net income to common stockholders	$ 1,381,062	$ 1,022,490
Weighted average diluted shares	279,461	279,749
Net income per diluted share	$ 4.94	$ 3.66

The Company reported net income of $1,381 million in 2022 compared to $1,022 million in 2021. The $359 million increase in net income was primarily due to an after-tax increase in underwriting income of $145 million mainly due to the growth in premium rates and exposure as well as reductions in expense ratio driven by net earned premium growth outpacing expense growth, an after-tax increase in net investment gains of $90 million primarily due to the sale of a real estate investment in London as well as change in market value of equity securities, an after-tax increase in net investment income of $87 million primarily due to rising interest rates and a larger investment portfolio related to fixed maturity securities, an after-tax increase in foreign currency gains of $20 million, an after-tax reduction in interest expenses of $14 million due to debt repayment and refinancings, an after-tax reduction on debt extinguishment expense of $9 million for debt redeemed in 2021, an after-tax increase in profit from insurance service businesses of $5 million, an after-tax increase of $5 million in minority interest and a reduction of $2 million in tax expense due to a change in the effective tax rate, partially offset by an after-tax increase in corporate expenses of $17 million mainly due to performance-based compensation costs and an after-tax decrease in profits from non-insurance businesses of $1 million. The number of weighted average diluted shares decreased by 0.3 million for 2022 compared to 2021 mainly reflecting shares repurchased in 2021 and 2022.

Premiums. Gross premiums written were $11,909 million in 2022, an increase of 11% from $10,700 million in 2021. The increase was due to the growth in the Insurance segment of $1,112 million and $97 million in the Reinsurance & Monoline

Excess segment. Approximately 82% of premiums expiring were renewed in both 2022 and 2021.

Average renewal premium rates for insurance and facultative reinsurance increased 6.4% in 2022 and 9.1% in 2021, when adjusted for changes in exposures. Average renewal premium rates for insurance and facultative reinsurance excluding workers' compensation increased 7.5% in 2022 and 10.4% in 2021, when adjusted for changes in exposures.

A summary of gross premiums written in 2022 compared with 2021 by line of business within each business segment follows:

- Insurance gross premiums increased 12% to $10,584 million in 2022 from $9,472 million in 2021. Gross premiums increased $539 million (16%) for other liability, $354 million (17%) for short-tail lines, $143 million (12%) for commercial auto, $70 million (6%) for workers' compensation and $6 million (0.4%) for professional liability.
- Reinsurance & Monoline Excess gross premiums increased 8% to $1,325 million in 2022 from $1,228 million in 2021. Gross premiums written increased $58 million (8%) for casualty lines, $28 million (12%) for property lines and $11 million (5%) for monoline excess.

Net premiums written were $10,004 million in 2022, an increase of 13% from $8,863 million in 2021. Ceded reinsurance premiums as a percentage of gross written premiums were 16% in 2022 and 17% in 2021.

Premiums earned increased 18% to $9,561 million in 2022 from $8,106 million in 2021. Insurance premiums (including the impact of rate changes) are generally earned evenly over the policy term, and accordingly recent rate increases will be earned over the upcoming quarters. Premiums earned in 2022 are related to business written during both 2022 and 2021. Audit premiums were $312 million in 2022 compared with $195 million in 2021.

Net Investment Income. Following is a summary of net investment income for the years ended December 31, 2022 and 2021:

	Amount		Average Annualized Yield	
(In thousands)	**2022**	**2021**	**2022**	**2021**
Fixed maturity securities, including cash and cash equivalents and loans receivable	$ 549,281	$ 382,001	2.9 %	2.2 %
Investment funds	145,099	220,014	8.9	15.8
Equity securities	52,600	32,020	4.9	5.0
Arbitrage trading account	45,213	37,676	4.0	5.3
Real estate	(3,087)	7,703	(0.2)	0.4
Gross investment income	789,106	679,414	3.2	3.1
Investment expenses	(9,921)	(7,796)	—	—
Total	$ 779,185	$ 671,618	3.2 %	3.0 %

Net investment income increased 16% to $779 million in 2022 from $672 million in 2021 due primarily to an $167 million increase in income from fixed maturity securities mainly driven by rising interest rates and a larger investment portfolio, a $21 million increase from equity securities and a $7 million increase from the arbitrage trading account, partially offset by a $75 million decrease in income from investment funds primarily due to financial service funds, an $11 million decrease in real estate and a $2 million increase in investment expenses. Investment funds are reported on a one quarter lag. The average annualized yield for fixed maturity securities was 2.9% in 2022 and 2.2% in 2021. The effective duration of the fixed maturity portfolio was 2.4 years at both December 31, 2022 and 2021. The Company maintained the shortened duration of its fixed maturity security portfolio, thereby reducing the potential impact of mark-to-market on the portfolio and positioning the Company to react quickly to changes in the current interest rate environment. Average invested assets, at cost (including cash and cash equivalents), were $24.4 billion in 2022 and $22.2 billion in 2021.

Insurance Service Fees. The Company earns fees from an insurance distribution business, a third-party administrator, and as a servicing carrier of workers' compensation assigned risk plans for certain states. Insurance service fees increased to $111 million in 2022 from $94 million in 2021 due to organic growth within the business.

Net Realized and Unrealized Gains on Investments. The Company buys and sells securities and other investment assets on a regular basis in order to maximize its total return on investments. Decisions to sell securities and other investment assets are based on management’s view of the underlying fundamentals of specific investments as well as management’s expectations regarding interest rates, credit spreads, currency values and general economic conditions. Net realized and unrealized gains on investments were $217 million in 2022 compared with $107 million in 2021. In 2022, the gains reflected net realized gains on investments of $218 million (primarily due to a $251 million net gain from sale of a real estate investment in London after transaction expenses and the foreign currency impact including reversal of the currency translation adjustment), partially offset by a change in unrealized losses on equity securities of $1 million. In 2021, the gains reflected net realized gains on investments of $145 million (primarily due to the sale of certain real estate assets and the disposition of an investment fund), partially offset by an increase in unrealized losses on equity securities of $38 million.

Change in Allowance for Expected Credit Losses on Investments. Based on credit factors, the allowance for expected credit losses is increased or decreased depending on the percentage of unrealized loss relative to amortized cost by security, changes in rating of the security by a rating agency, and adverse conditions specifically related to the security, among other factors. For the year ended December 31, 2022, the pre-tax change in allowance for expected credit losses on investments increased by $15 million ($12 million after-tax), which is reflected in net investment gains, primarily due to change in estimate. For the year ended December 31, 2021, the pre-tax change in allowance for expected credit losses on investments increased by $16 million ($13 million after-tax), which is reflected in net investment gains, primarily related to foreign government securities which did not previously have an allowance.

Revenues from Non-Insurance Businesses. Revenues from non-insurance businesses were derived from businesses engaged in the distribution of promotional merchandise, world-wide textile solutions, and aviation-related businesses that provide services to aviation markets, including (i) the distribution, manufacturing, repair and overhaul of aircraft parts and components, (ii) the sale of new and used aircraft, and (iii) avionics, fuel, maintenance, storage and charter services. Revenues from non-insurance businesses were $510 million in 2022 and $489 million in 2021. The increase mainly relates to the business recovery from COVID-19 on promotional merchandise and textile business as well as a newly acquired commercial and residential textile business in 2022, partially offset by a decrease for the aviation-related business.

Losses and Loss Expenses. Losses and loss expenses increased to $5,862 million in 2022 from $4,954 million in 2021. The consolidated loss ratio was 61.3% in 2022 and 61.1% in 2021. Catastrophe losses, net of reinsurance recoveries, were $212 million (including current accident year losses of approximately $5 million related to COVID-19) in 2022 compared with $202 million in 2021 (including losses of approximately $58 million related to COVID-19). Adverse prior year reserve development (net of premium offsets) was $36 million in 2022 and favorable prior year reserve development was $7 million in 2021 (refer to Note 14 of our consolidated financial statements for more detail). The loss ratio excluding catastrophe losses and prior year reserve development was 58.7% in both 2022 and 2021.

A summary of loss ratios in 2022 compared with 2021 by business segment follows:

- Insurance - The loss ratio of 61.3% in 2022 was 0.2 points higher than the loss ratio of 61.1% in 2021. Catastrophe losses were $127 million in 2022 compared with $150 million in 2021. The Company reflected a best estimate (net of reinsurance) based upon available information for current accident year COVID-19-related losses of approximately $3 million. Adverse prior year reserve development was $40 million in 2022, driven by two businesses that wrote policies providing coverage for event cancellation, and film production delay which were heavily impacted by losses directly caused by the COVID-19 pandemic and favorable prior year reserve development was $20 million in 2021. The loss ratio excluding catastrophe losses and prior year reserve development was 59.3% in both 2022 and 2021.

- Reinsurance & Monoline Excess - The loss ratio of 61.3% in 2022 was 0.3 points higher than the loss ratio of 61.0% in 2021. Catastrophe losses were $85 million in 2022 compared with $52 million in 2021.The Company reflected a best estimate (net of reinsurance) based upon available information for current accident year COVID-19-related losses of approximately $2 million. Favorable prior year reserve development was $4 million in 2022, and adverse prior year reserve development was $13 million in 2021. The loss ratio excluding catastrophe losses and prior year reserve development decreased 0.2 points to 54.5% in 2022 from 54.7% in 2021.

Other Operating Costs and Expenses. Following is a summary of other operating costs and expenses:

(In thousands)	**2022**	**2021**
Policy acquisition and insurance operating expenses	$ 2,673,903	$ 2,306,727
Insurance service expenses	96,419	86,003
Net foreign currency gains	(50,930)	(25,725)
Debt extinguishment costs	—	11,521
Other costs and expenses	242,113	220,744
Total	$ 2,961,505	$ 2,599,270

Policy acquisition and insurance operating expenses are comprised of commissions paid to agents and brokers, premium taxes and other assessments and internal underwriting costs. Policy acquisition and insurance operating expenses increased 16% from 2021, while net premiums earned increased 18% over that period. The expense ratio (underwriting expenses expressed as a percentage of net premiums earned) was 28.0% in 2022, down from 28.5% in 2021. The improvement is primarily attributable to higher net premiums earned outpacing compensation expense growth. However, to the extent our net premiums earned decrease or travel and entertainment expenses increase, our expense ratio would be expected to increase.

Service expenses, which represent the costs associated with the fee-based businesses, was $96 million in 2022 and $86 million in 2021 due to the organic growth within the business.

Net foreign currency gains result from transactions denominated in a currency other than a businesses' functional currency. Net foreign currency gains was $51 million in 2022 and $26 million in 2021, mainly related to the strengthening of the U.S. dollar compared to the majority of other currencies.

Debt extinguishment costs of $12 million in 2021 related to the redemption of $400 million of subordinated debentures in March and June 2021 that were due in 2056.

Other costs and expenses represent general and administrative expenses of the parent company and other expenses not allocated to business segments, including the cost of certain long-term incentive plans and new business ventures. Other costs and expenses increased to $242 million in 2022 from $221 million in 2021, primarily due to the increase in performance-based compensation costs in 2022.

Expenses from Non-Insurance Businesses. Expenses from non-insurance businesses represent costs associated with businesses engaged in the distribution of promotional merchandise, world-wide textile solutions, and aviation-related businesses that include (i) cost of goods sold related to aircraft and products sold and services provided and (ii) general and administrative expenses. Expenses from non-insurance businesses were $493 million in 2022 compared to $472 million in 2021. The increase mainly relates to the business recovery from COVID-19 on promotional merchandise and textile business as well as a newly acquired residential and commercial textile business in 2022, partially offset by a decrease for the aviation-related business.

Interest Expense. Interest expense was $130 million in 2022 and $147 million in 2021. In March 2021, the Company issued $400 million aggregate principal amount of 3.55% senior notes due 2052 and redeemed its $110 million aggregate principal amount of 5.90% subordinated debentures due 2056. In June 2021, the Company redeemed the $290 million aggregate principal amount of its 5.75% subordinated debentures due 2056. In September 2021, the Company issued $350 million aggregate principal amount of 3.15% senior notes due 2061.

In the first quarter of 2022, the Company repaid at maturity its $77 million aggregate principal amount of 8.7% senior notes in January and its $350 million aggregate principal amount of 4.625% senior notes in March. The above redemptions during the year ended December 31, 2021 resulted in debt extinguishment costs of $12 million. Additionally, in the second quarter of 2021, the Company sold a real estate asset, which resulted in a $102 million reduction of the Company's non-recourse debt that was supporting the property.

The repayment at maturity and redemption of senior notes and debentures and issuance of additional senior notes and debentures in 2022 and 2021 decreased interest expense in 2022.

Income Taxes. The effective income tax rate was 19.5% in 2022 and 19.6% in 2021. The lower effective income tax rate for 2022 was primarily due to a net reduction in the Company's valuation allowance against foreign tax credits and foreign net operating losses. The effective income tax rate reflects tax benefits attributable to tax-exempt investment income and equity-based compensation in both periods. See Note 17 of the Consolidated Financial Statements for a reconciliation of the income tax expense and the amounts computed by applying the Federal income tax rate of 21%.

The Company has not provided U.S. deferred income taxes on the undistributed earnings of approximately $169 million of its non-U.S. subsidiaries since these earnings are intended to be permanently reinvested in the non-U.S. subsidiaries. In the future, if such earnings were distributed the Company projects that the incremental tax, if any, will be immaterial.

On August 16, 2022, the Inflation Reduction Act of 2022 was enacted. Among other things, the legislation introduced a corporate alternative minimum tax on certain corporations. The tax is applicable for taxable years beginning after December 31, 2022 and imposes a 15% minimum tax on a corporation's applicable financial statement income. We are continuing to evaluate the overall impact of this tax legislation on our operations and U.S. federal income tax position at this time.

Results of Operations for the Years Ended December 31, 2021 and 2020

For a comparison of the Company's results of operations for the year ended December 31, 2021 to the year ended December 31, 2020, see Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations in the Company's Annual Report on Form 10-K for the year ended December 31, 2021, which was filed with the Securities and Exchange Commission on February 24, 2022.

Investments

As part of its investment strategy, the Company establishes a level of cash and highly liquid short-term and intermediate-term securities that, combined with expected cash flow, it believes is adequate to meet its payment obligations. In addition to fixed-maturity securities, the Company invests in equity securities, merger arbitrage securities, investment funds, private equity, loans and real estate related assets. The Company's investments in investment funds and its other alternative investments have experienced, and the Company expects to continue to experience, greater fluctuations in investment income.

The Company also attempts to maintain an appropriate relationship between the effective duration of the investment portfolio and the approximate duration of its liabilities (i.e., policy claims and debt obligations). The effective duration of the investment portfolio was 2.4 years at both December 31, 2022 and 2021, respectively. The Company’s investment portfolio and investment-related assets as of December 31, 2022 were as follows:

($ in thousands)	**Carrying Value**	**Percent of Total**
Fixed maturity securities:		
U.S. government and government agencies	$ 892,258	3.7 %
State and municipal:		
Special revenue	1,721,497	7.1
Local general obligation	441,097	1.8
State general obligation	416,713	1.7
Corporate backed	199,639	0.8
Pre-refunded (1)	158,840	0.6
Total state and municipal	2,937,786	12.0
Mortgage-backed securities:		
Agency	901,332	3.7
Commercial	528,609	2.2
Residential-Prime	235,315	1.0
Residential-Alt A	3,762	—
Total mortgage-backed securities	1,669,018	6.9
Asset-backed securities	3,982,773	16.4
Corporate:		
Industrial	3,252,999	13.4
Financial	2,470,372	10.2
Utilities	551,048	2.3
Other	429,573	1.7
Total corporate	6,703,992	27.6
Foreign government	1,401,522	5.8
Total fixed maturity securities	17,587,349	72.4
Equity securities available for sale:		
Common stocks	982,751	4.0
Preferred stocks	203,143	0.8
Total equity securities available for sale	1,185,894	4.8
Investment funds	1,608,548	6.6
Cash and cash equivalents	1,449,346	6.0
Real estate	1,340,622	5.5
Arbitrage trading account	944,230	3.9
Loans receivable	193,002	0.8
Total investments	$ 24,308,991	100.0 %

(1) Pre-refunded securities are securities for which an escrow account has been established to fund the remaining payments of principal and interest through maturity. Such escrow accounts are funded almost exclusively with U.S. Treasury and U.S. government agency securities.

Fixed Maturity Securities. The Company’s investment policy with respect to fixed maturity securities is generally to purchase instruments with the expectation of holding them to their maturity. However, management of the available for sale portfolio is considered necessary to maintain an approximate matching of assets and liabilities as well as to adjust the portfolio as a result of changes in financial market conditions and tax considerations.

The Company's philosophy related to holding or selling fixed maturity securities is based on its objective of maximizing total return. The key factors that management considers in its investment decisions as to whether to hold or sell fixed maturity securities are its view of the underlying fundamentals of specific securities as well as its expectations regarding interest rates, credit spreads and currency values. In a period in which management expects interest rates to rise, the Company may sell longer duration securities in order to mitigate the impact of an interest rate rise on the fair value of the portfolio. Similarly, in a period in which management expects credit spreads to widen, the Company may sell lower quality securities, and in a period in which management expects certain foreign currencies to decline in value, the Company may sell securities denominated in those foreign currencies. The sale of fixed maturity securities in order to achieve the objective of maximizing total return may result in realized gains; however, there is no reason to expect these gains to continue in future periods.

Equity Securities. Equity securities primarily represent investments in common and preferred stocks in companies with potential growth opportunities in different sectors, mainly in the financial institutions and energy sectors.

Investment Funds. At December 31, 2022, the carrying value of investment funds was $1,609 million, including investments in financial services funds of $466 million, other funds of $370 million (which includes a deferred compensation trust asset of $30 million), transportation funds of $337 million, real estate funds of $205 million, energy funds of $116 million, and infrastructure funds of $115 million. Investment funds are primarily reported on a one-quarter lag.

Real Estate. Real estate is directly owned property held for investment. At December 31, 2022, real estate properties in operation included a long-term ground lease in Washington D.C., an office complex in New York City and the completed portion of a mixed-use project in Washington D.C. In addition, part of the previously mentioned mixed-use project in Washington D.C. is under development. The Company expects to fund further development costs for the project with a combination of its own funds and external financing. During the first quarter of 2022, the Company sold an office building in London.

Arbitrage Trading Account. The arbitrage trading account is comprised of direct investments in arbitrage securities. Merger arbitrage is the business of investing in the securities of publicly held companies that are the targets in announced tender offers and mergers.

Loans Receivable. Loans receivable, net of allowance for expected credit losses, had an amortized cost of $193 million and an aggregate fair value of $188 million at December 31, 2022. The amortized cost of loans receivable is net of an allowance for expected credit losses of $2 million as of December 31, 2022. Loans receivable include real estate loans of $174 million that are secured by commercial and residential real estate located primarily in London and New York. Real estate loans generally earn interest at fixed or stepped interest rates and have maturities through 2026. Loans receivable include commercial loans of $19 million that are secured by business assets and have fixed interest rates with varying maturities not exceeding 10 years.

Liquidity and Capital Resources

Cash Flow. Cash flow provided from operating activities increased to $2,569 million in 2022 from $2,184 million in 2021, primarily due to an increase in premium receipts partially offset by increased loss and loss expense payments.

The Company's insurance subsidiaries' principal sources of cash are premiums, investment income, service fees and proceeds from sales and maturities of portfolio investments. The principal uses of cash are payments for claims, taxes, operating expenses and dividends. The Company expects its insurance subsidiaries to fund the payment of losses with cash received from premiums, investment income and fees. The Company generally targets an average duration for its investment portfolio that is within 1.5 years of the average duration of its liabilities so that portions of its investment portfolio mature throughout the claim cycle and are available for the payment of claims if necessary. In the event operating cash flow and proceeds from maturities and prepayments of fixed maturity securities are not sufficient to fund claim payments and other cash requirements, the remainder of the Company's cash and investments is available to pay claims and other obligations as they become due. The Company's investment portfolio is highly liquid, with approximately 76% invested in cash, cash equivalents and marketable fixed maturity securities as of December 31, 2022. If the sale of fixed maturity securities were to become necessary, a realized gain or loss equal to the difference between the cost and sales price of securities sold would be recognized.

Debt. At December 31, 2022, the Company had senior notes, subordinated debentures and other debt outstanding with a carrying value of $2,837 million and a face amount of $2,862 million. In the first quarter of 2022, the Company repaid at maturity its $77 million aggregate principal amount of 8.7% senior notes in January and its $350 million aggregate principal amount of 4.625% senior notes in March. The maturities of the outstanding debt are $5 million in 2024, $2 million in 2025, $250 million in 2037, $350 million in 2044, $470 million in 2050, $400 million in 2052, $185 million in 2058, $300 million in 2059, $250 million in 2060, and $650 million in 2061.

On April 1, 2022, the Company entered into a senior unsecured revolving credit facility that provides for revolving, unsecured borrowings up to an aggregate of $300 million with a $50 million sublimit for letters of credit. The Company may increase the amount available under the facility to a maximum of $500 million subject to obtaining lender commitments for the increase and other customary conditions. Borrowings under the facility may be used for working capital and other general corporate purposes. All borrowings under the facility must be repaid by April 1, 2027, except that letters of credit outstanding on that date may remain outstanding until April 1, 2028 (or such later date approved by all lenders). Our ability to utilize the facility is conditioned on the satisfaction of representations, warranties and covenants that are customary for facilities of this type. As of December 31, 2022, there were no borrowings outstanding under the facility.

Equity. At December 31, 2022, total common stockholders’ equity was $6.7 billion, common shares outstanding were 264,546,100 and stockholders’ equity per outstanding share was $25.51. The Company repurchased 1,370,394 and 1,752,619 shares of its common stock in 2022 and 2021, respectively. The aggregate cost of the repurchases was $94 million in 2022 and $122 million in 2021. In 2022, the Board declared regular quarterly cash dividends of $0.09 per share in the first quarter, and $0.10 per share in each of the remaining three quarters, as well as special dividends of $0.50 per share in the second quarter, for a total of $235 million in aggregate dividends in 2022.

Total Capital. Total capitalization (equity, debt and subordinated debentures) was $9.6 billion at December 31, 2022. The percentage of the Company’s capital attributable to senior notes, subordinated debentures and other debt was 30% and 33% at December 31, 2022 and 2021, respectively.

Federal and Foreign Income Taxes

The Company files a consolidated income tax return in the U.S. and foreign tax returns in each of the countries in which it has overseas operations. At December 31, 2022, the Company had a gross deferred tax asset of $801 million (which primarily relates to unrealized losses on investments, loss and loss expense reserves and unearned premium reserves). The Company also has a $47 million valuation allowance against the gross deferred tax asset and a gross deferred tax liability of $425 million (which primarily relates to deferred policy acquisition costs, and various investment funds) resulting in a net deferred tax asset of $329 million. The realization of this asset is dependent upon the Company's ability to generate sufficient taxable income in future periods. Based on historical results and the prospects for future operations, management anticipates that it is more likely than not that future taxable income will be sufficient for the realization of this asset.

Reinsurance

The Company follows customary industry practice of reinsuring a portion of its exposures in exchange for paying reinsurers a part of the premiums received on the policies it writes. Reinsurance is purchased by the Company principally to reduce its net liability on individual risks and to protect against catastrophic losses. Although reinsurance does not legally discharge an insurer from its primary liability for the full amount of the policies, it does make the assuming reinsurer liable to the insurer to the extent of the reinsurance coverage. The Company monitors the financial condition of its reinsurers and attempts to place its coverages only with financially sound carriers. Reinsurance coverage and retentions vary depending on the line of business, location of the risk and nature of loss. The Company's reinsurance purchases include the following:

- Property reinsurance treaties - The Company purchases property reinsurance to reduce its exposure to large individual property losses and catastrophe events. Following is a summary of significant property reinsurance treaties in effect as of January 1, 2023: The Company's property per risk reinsurance generally covers losses between $2.5 million and $80 million. The Company's catastrophe excess of loss reinsurance program provides protection for net losses in excess of between $65 million and $80 million up to $500 million for the majority of U.S. business written by its Insurance segment businesses and U.S. and non-U.S. business written by Lloyd's Syndicate, excluding offshore energy; this includes some co-participation in lower layers. For terrorism, we currently retain the first $95 million and then fully insure above this to our desired limit of $400 million. For 2023, some of our property cat reinsurance is placed via an industry loss warranty (ILW) cover and the equivalent W. R. Berkley limit and retention (and resulting net position) are estimated based on our market share and modeled outcome when applying the ILW layering. The Company's catastrophe reinsurance agreements are subject to certain limits, exclusions and reinstatement premiums.
- Casualty reinsurance treaties - The Company purchases casualty reinsurance to reduce its exposure to large individual casualty losses, workers' compensation catastrophe losses and casualty losses involving multiple claimants or insureds for the majority of business written by its U.S. companies. A significant casualty treaty (casualty catastrophe) in effect as of January 1, 2023 provides significant protection for losses between $10 million and $60 million from single events with claims involving two or more insurable interests or for systemic events involving multiple insureds and/or policy years. The treaty also covers casualty contingency losses in excess of $5 million and up to $100 million. For losses involving two or more claimants for primary workers' compensation business, coverage is generally in place for losses between $10 million and $500 million. For excess workers' compensation business, such coverage is generally in place for losses between $25 million and $500 million. Our workers' compensation catastrophe reinsurance program is a shared cover for both excess and primary workers' compensation business.
- Facultative reinsurance - The Company also purchases facultative reinsurance on certain individual policies or risks that are in excess of treaty reinsurance capacity.
- Other reinsurance - Depending on the business, the Company purchases specific additional reinsurance to supplement the above programs.
- Effective January 1, 2023, Lifson Re will continue to be a participant on the majority of the Company's reinsurance placements for a 30.0% share of the placed amounts. This pertains to all traditional treaty reinsurance/retrocessional placements for both property and casualty business where there is more than one open market reinsurer participating. Lifson Re has been capitalized with $380 million of equity from a small group of sophisticated global investors with long-term investment horizons, including a minority participation by the Company. Lifson Re will participate on a fully collateralized basis.

The Company places a number of its casualty treaties on a "risk attaching" basis. Under risk attaching treaties, all claims from policies incepting during the period of the reinsurance contract are covered even if they occur after the expiration date of the reinsurance contract. If the Company is unable to renew or replace its existing reinsurance coverage, protection for unexpired policies would remain in place until their expiration. In such case, the Company could revise its underwriting strategy for new business to reflect the absence of reinsurance protection. The casualty catastrophe treaty highlighted above was purchased on a losses discovered basis. Property catastrophe and workers' compensation catastrophe reinsurance is generally placed on a "losses occurring basis," whereby only claims occurring during the period are covered. If the Company is unable to renew or replace these reinsurance coverages, unexpired policies would not be protected, though we frequently have the option to purchase run-off coverage in our treaties.

Following is a summary of earned premiums and loss and loss expenses ceded to reinsurers for each of the three years ended December 31, 2022:

	Year Ended December 31,		
(In thousands)	**2022**	**2021**	**2020**
Earned premiums	$ 1,883,263	$ 1,805,341	$ 1,499,948
Losses and loss expenses	1,269,338	1,236,960	955,630

Ceded earned premiums increased 4.3% in 2022 to $1,883 million. The ceded losses and loss expenses ratio decreased 2 points to 67% in 2022 from 69% in 2021.

The following table presents the credit quality of amounts due from reinsurers as of December 31, 2022.

(In thousands) **Reinsurer**	**Rating (1)**		**Amount**
Amounts due in excess of $20 million:			
Lloyd's of London	A+	$	347,927
Berkshire Hathaway	AA+		332,034
Munich Re	AA-		306,530
Partner Re	A+		275,410
Hannover Re Group	AA-		191,264
Swiss Re	AA-		189,591
Renaissance Re	A+		163,973
Everest Re	A+		155,847
Liberty Mutual	A		96,402
Axis Capital	A+		81,538
Korean Re	A		59,884
Fairfax Financial	A-		55,228
Axa Insurance	AA-		46,058
Arch Capital Group	A+		45,663
Sompo Holdings Group	A+		36,157
Helvetia Holdings Group	A+		30,823
Markel Corp Group	A		30,216
Validus Holdings Group	A		24,548
TOA Re	A+		22,945
Other reinsurers:			
Rated A- or better			163,198
Secured (2)			332,502
All Others			27,299
Subtotal		$	3,015,037
Residual market pools (3)			180,757
Allowance for expected credit losses			(8,064)
Total		$	3,187,730

(1) S&P rating, or if not rated by S&P, A.M. Best rating.

(2) Secured by letters of credit or other forms of collateral.

(3) Many states require licensed insurers that provide workers' compensation insurance to participate in programs that provide workers' compensation to employers that cannot procure coverage from an insurer on a voluntary basis. Insurers can fulfill this residual market obligation by participating in pools where results are shared by the participating companies. The Company acts as a servicing carrier for workers' compensation pools in certain states. As a servicing carrier, the Company writes residual market business directly and then cedes 100% of this business to the respective pool. As a servicing carrier, the Company receives fee income for its services. The Company does not retain underwriting risk, and credit risk is limited as ceded balances are jointly shared by all the pool members.

Contractual Obligations

Following is a summary of the Company's contractual obligations as of December 31, 2022:

(In thousands) **Estimated Payments By Periods**	**2023**	**2024**	**2025**	**2026**	**2027**	**Thereafter**
Gross reserves for losses	$ 4,586,303	$ 3,268,257	$ 2,461,737	$ 1,788,739	$ 1,439,989	$ 3,895,626
Operating lease obligations	47,024	41,788	32,928	25,973	16,472	68,912
Purchase obligations	148,593	51,602	51,456	53,819	52,821	55,395
Subordinated debentures	—	—	—	—	—	1,035,000
Senior notes and other debt	—	5,300	1,954	—	—	1,820,000
Interest payments	125,580	125,580	125,580	125,580	125,580	3,154,164
Other long-term liabilities	2,489	2,228	2,035	1,859	1,698	20,232
Total	$ 4,909,989	$ 3,494,755	$ 2,675,690	$ 1,995,970	$ 1,636,560	$ 10,049,329

The estimated payments for reserves for losses and loss expenses in the above table represent the projected (undiscounted) payments for gross loss and loss expense reserves related to losses incurred as of December 31, 2022. The estimated payments in the above table do not consider payments for losses to be incurred in future periods. These amounts include reserves for reported losses and reserves for incurred but not reported losses. Estimated amounts recoverable from reinsurers are not reflected. The estimated payments by year are based on historical loss payment patterns.The actual payments may differ from the estimated amounts due to changes in ultimate loss reserves and in the timing of the settlement of those reserves. In addition, at December 31, 2022, the Company had commitments to invest up to $402 million and $146 million in certain investment funds and real estate construction projects, respectively. These amounts are not included in the above table.

The Company utilizes letters of credit to back certain reinsurance payments and obligations. Outstanding letters of credit were $5 million as of December 31, 2022. The Company has made certain guarantees to state regulators that the statutory capital of certain subsidiaries will be maintained above certain minimum levels.

Off-Balance Sheet Arrangements

An off-balance sheet arrangement is any transaction, agreement or other contractual arrangement involving an unconsolidated entity under which a company has (1) made guarantees, (2) a retained or contingent interest in transferred assets, (3) an obligation under derivative instruments classified as equity or (4) any obligation arising out of a material variable interest in an unconsolidated entity that provides financing, liquidity, market risk or credit risk support to the Company, or that engages in leasing, hedging or research and development arrangements with the Company. The Company has no arrangements of these types that management believes may have a material current or future effect on our financial condition, liquidity or results of operations.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market Risk. The fair value of the Company's investments is subject to risks of fluctuations in credit quality and interest rates. The Company uses various models and stress test scenarios to monitor and manage interest rate risk. The Company attempts to manage its interest rate risk by maintaining an appropriate relationship between the effective duration of the investment portfolio and the approximate duration of its liabilities (i.e., policy claims and debt obligations). The effective duration for the fixed maturity portfolio (including cash and cash equivalents) was 2.4 years at both December 31, 2022 and 2021.

In addition, the fair value of the Company's international investments is subject to currency risk. The Company attempts to manage its currency risk by matching its foreign currency assets and liabilities where considered appropriate.

The following table outlines the groups of fixed maturity securities and their effective duration at December 31, 2022:

($ in thousands)	Effective Duration (Years)	Fair Value
Mortgage-backed securities	4.5	$ 1,669,056
State and municipal	3.3	2,942,025
U.S. government and government agencies	3.1	892,258
Corporate	2.7	6,703,992
Foreign government	2.2	1,401,522
Loans receivable	1.3	187,981
Asset-backed securities	0.9	3,982,773
Cash and cash equivalents	0.0	1,449,346
Total	2.4	$ 19,228,953

Duration is a common measure of the price sensitivity of fixed maturity securities to changes in interest rates. The Company determines the estimated change in fair value of the fixed maturity securities, assuming parallel shifts in the yield curve for treasury securities while keeping spreads between individual securities and treasury securities static. The estimated fair value at specified levels at December 31, 2022 would be as follows:

(In thousands)

Change in interest rates:	Estimated Fair Value	Change in Fair Value
300 basis point rise	$ 17,931,180	$ (1,297,772)
200 basis point rise	18,344,941	(884,011)
100 basis point rise	18,778,053	(450,899)
Base scenario	19,228,952	—
100 basis point decline	19,692,291	463,339
200 basis point decline	20,161,330	932,378
300 basis point decline	20,632,243	1,403,291

Arbitrage investing differs from other types of investments in that its focus is on transactions and events believed likely to bring about a change in value over a relatively short time period (usually four months or less). The Company believes that this makes arbitrage investments less vulnerable to changes in general stock market conditions. Potential changes in market conditions are also mitigated by the implementation of hedging strategies, including short sales.

Additionally, the arbitrage positions are generally hedged against market declines by purchasing put options, selling call options or entering into swap contracts. The Company's merger arbitrage securities are primarily exposed to the risk of completion of announced deals, which are subject to regulatory as well as transactional and other risks.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors
W. R. Berkley Corporation:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of W. R. Berkley Corporation and subsidiaries (the Company) as of December 31, 2022 and 2021, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2022, and the related notes and financial statement schedules II to VI (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2022, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 24, 2023 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of a critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Reserves for losses and loss expenses

As discussed in Notes 1 and 14 to the consolidated financial statements, the Company estimates the reserves for losses and loss expenses (reserves) using a variety of actuarial techniques and methods. The key assumptions used to arrive at the best estimate of recorded reserves are expected loss ratios, rate of loss cost inflation, reported and paid loss emergence patterns, loss frequency and severity, and the loss reporting lag. Such amounts are adjusted for certain qualitative factors. The reserves as of December 31, 2022 were $17.0 billion.

We identified the assessment of the estimate of reserves as a critical audit matter because it involved significant measurement uncertainty, which required complex auditor judgement. Specialized actuarial skills and knowledge were required to evaluate the actuarial method or methods and assumptions used. Assumptions included loss development factors; the weighting of actuarial methods when more than one was used; the impact of qualitative factors; and whether payments are fixed and reliably determinable for certain reserves subject to discounting.

The following are the primary procedures we performed to address the critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls over the Company's reserving process. This included controls over the Company's process to develop the Company's best estimate of reserves based on actuarial methodologies and assumptions employed by the Company's actuaries. We involved actuarial professionals with specialized skills and knowledge, who assisted in:

- examining the Company's actuarial methodologies for compliance with Actuarial Standards of Practice;
- evaluating the Company's ability to discount certain reserves by comparing the expected payout pattern of claims paid to actual claims paid;
- evaluating the Company's actuarial point estimate by performing independent actuarial analyses for certain of the larger, more complex businesses;
- evaluating the Company's actuarial point estimate by examining the Company actuaries' process, and key assumptions for certain of the remaining businesses;
- developing an independent range of reserves based on actuarial methodologies and assumptions and comparing to the Company's recorded reserves;
- evaluating the Company's recorded reserves and year-over-year movements of the Company's reserves relative to, and within, the independently developed range of reserves.

/S/ KPMG LLP

We have served as the Company's auditor since 1972.

New York, New York
February 24, 2023

W. R. BERKLEY CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME

(In thousands, except per share data)	Year Ended December 31, 2022	2021	2020
REVENUES:			
Net premiums written	$ 10,004,070	$ 8,862,867	$ 7,262,437
Change in net unearned premiums	(442,641)	(756,836)	(331,594)
Net premiums earned	9,561,429	8,106,031	6,930,843
Net investment income	779,185	671,618	583,821
Net investment gains:			
Net realized and unrealized gains on investments	217,311	106,958	73,514
Change in allowance for expected credit losses on investments	(14,914)	(16,326)	29,486
Net investment gains	202,397	90,632	103,000
Revenues from non-insurance businesses	509,548	489,151	389,888
Insurance service fees	110,544	93,857	88,777
Other income	3,396	4,177	2,596
Total revenues	11,166,499	9,455,466	8,098,925
OPERATING COSTS AND EXPENSES:			
Losses and loss expenses	5,861,750	4,953,960	4,468,706
Other operating costs and expenses	2,961,505	2,599,270	2,390,392
Expenses from non-insurance businesses	493,189	472,151	384,488
Interest expense	130,374	147,180	150,537
Total operating costs and expenses	9,446,818	8,172,561	7,394,123
Income before income taxes	1,719,681	1,282,905	704,802
Income tax expense	(334,727)	(251,890)	(171,817)
Net income before noncontrolling interests	1,384,954	1,031,015	532,985
Noncontrolling interests	(3,892)	(8,525)	(2,315)
Net income to common stockholders	$ 1,381,062	$ 1,022,490	$ 530,670
NET INCOME PER SHARE:			
Basic	$ 4.99	$ 3.69	$ 1.89
Diluted	$ 4.94	$ 3.66	$ 1.87

See accompanying notes to consolidated financial statements.

W. R. BERKLEY CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In thousands)	Year Ended December 31, 2022	2021	2020
Net income before noncontrolling interests	$ 1,384,954	$ 1,031,015	$ 532,985
Other comprehensive (loss) gain.:			
Change in unrealized translation adjustments	1,179	(20,969)	29,927
Change in unrealized investment (losses) gains, net of taxes	(983,803)	(198,812)	140,250
Other comprehensive (loss) gain	(982,624)	(219,781)	170,177
Comprehensive income	402,330	811,234	703,162
Noncontrolling interests	(3,890)	(8,523)	(2,313)
Comprehensive income to common stockholders	$ 398,440	$ 802,711	$ 700,849

See accompanying notes to consolidated financial statements.

W. R. BERKLEY CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

(In thousands, except share data)	December 31, 2022	December 31, 2021
Assets		
Investments:		
Fixed maturity securities (amortized cost of $18,715,483 and $16,471,304; allowance for expected credit losses of $37,466 and $22,625 at December 31, 2022 and 2021)	$ 17,587,349	$ 16,602,673
Investment funds	1,608,548	1,480,612
Real estate	1,340,622	1,852,508
Arbitrage trading account	944,230	1,179,606
Equity securities	1,185,894	941,243
Loans receivable (net of allowance for expected credit losses of $1,791 and $1,718 at December 31, 2022 and 2021)	193,002	115,172
Total investments	22,859,645	22,171,814
Cash and cash equivalents	1,449,346	1,568,843
Premiums and fees receivable (net of allowance for expected credit losses of $30,660 and $25,218 at December 31, 2022 and 2021)	2,779,244	2,522,972
Due from reinsurers (net of allowance for expected credit losses of $8,064 and $7,713 at December 31, 2022 and 2021)	3,187,730	2,923,026
Deferred policy acquisition costs	763,486	676,145
Prepaid reinsurance premiums	696,468	676,915
Trading account receivable from brokers and clearing organizations	233,863	—
Property, furniture and equipment	423,232	419,883
Goodwill	185,509	169,652
Accrued investment income	166,784	122,938
Current federal and foreign income taxes	39,123	23,570
Deferred federal and foreign income taxes	340,647	57,425
Other assets	736,022	753,231
Total assets	$ 33,861,099	$ 32,086,414
Liabilities and Equity		
Liabilities:		
Reserves for losses and loss expenses	$ 17,011,223	$ 15,390,888
Unearned premiums	5,297,654	4,847,160
Due to reinsurers	523,131	514,980
Trading account securities sold but not yet purchased	—	1,169
Trading account payable to brokers and clearing organizations	—	53,636
Current federal and foreign income taxes	34,350	21,068
Deferred federal and foreign income taxes	11,646	17,470
Senior notes and other debt	1,828,823	2,259,416
Subordinated debentures	1,008,371	1,007,652
Other liabilities	1,377,740	1,305,245
Total liabilities	27,092,938	25,418,684
Equity:		
Preferred stock, par value $.10 per share:		
Authorized 5,000,000 shares; issued and outstanding — none	—	—
Common stock, par value $.20 per share:		
Authorized 1,250,000,000 shares and 750,000,000 shares, respectively, issued and outstanding, net of treasury shares, 264,546,100 and 265,170,882 shares, respectively	105,803	105,803
Additional paid-in capital	997,534	981,104
Retained earnings	10,161,005	9,015,135
Accumulated other comprehensive loss	(1,264,581)	(281,955)
Treasury stock, at cost, 264,468,528 and 263,843,868 shares, respectively	(3,251,429)	(3,167,076)
Total common stockholders' equity	6,748,332	6,653,011
Noncontrolling interests	19,829	14,719
Total equity	6,768,161	6,667,730
Total liabilities and equity	$ 33,861,099	$ 32,086,414

See accompanying notes to consolidated financial statements.

W. R. BERKLEY CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(In thousands, except per share data)	Year Ended December 31, 2022	2021	2020
COMMON STOCK:			
Beginning and end of period	$ 105,803	$ 105,803	$ 105,803
ADDITIONAL PAID IN CAPITAL:			
Beginning of period	$ 981,104	$ 977,215	$ 1,020,774
Restricted stock units issued	(32,622)	(44,041)	(38,491)
Restricted stock units expensed	49,052	47,930	48,567
Change in controlling financial interest of a subsidiary	—	—	(53,635)
End of period	$ 997,534	$ 981,104	$ 977,215
RETAINED EARNINGS:			
Beginning of period	$ 9,015,135	$ 8,348,381	$ 7,932,372
Cumulative effect adjustment resulting from changes in accounting principles	—	—	(30,514)
Net income to common stockholders	1,381,062	1,022,490	530,670
Dividends ($0.89, $1.34, and $0.31 per share, respectively)	(235,192)	(355,736)	(84,147)
End of period	$ 10,161,005	$ 9,015,135	$ 8,348,381
ACCUMULATED OTHER COMPREHENSIVE LOSS:			
Unrealized investment (losses) gains:			
Beginning of period	$ 90,900	$ 289,714	$ 124,514
Cumulative effect adjustment resulting from changes in accounting principles	—	—	24,952
Change in unrealized (losses) gains on securities without an allowance for expected credit losses	(955,435)	(208,938)	108,244
Change in unrealized (losses) gains on securities with an allowance for expected credit losses	(28,370)	10,124	32,004
End of period	(892,905)	90,900	289,714
Currency translation adjustments:			
Beginning of period	(372,855)	(351,886)	(381,813)
Net change in period	1,179	(20,969)	29,927
End of period	(371,676)	(372,855)	(351,886)
Total accumulated other comprehensive loss	$ (1,264,581)	$ (281,955)	$ (62,172)
TREASURY STOCK:			
Beginning of period	$ (3,167,076)	$ (3,058,425)	$ (2,726,711)
Stock exercised/vested	9,428	13,264	13,917
Stock issued	359	511	726
Stock repurchased	(94,140)	(122,426)	(346,357)
End of period	$ (3,251,429)	$ (3,167,076)	$ (3,058,425)
NONCONTROLLING INTERESTS:			
Beginning of period	$ 14,719	$ 14,995	$ 43,403
Contributions (distributions)	1,220	(8,799)	(30,721)
Net income	3,892	8,525	2,315
Other comprehensive loss, net of tax	(2)	(2)	(2)
End of period	$ 19,829	$ 14,719	$ 14,995

See accompanying notes to consolidated financial statements.

W. R. BERKLEY CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)	Year Ended December 31, 2022	2021	2020
CASH FROM OPERATING ACTIVITIES:			
Net income to common stockholders	$ 1,381,062	$ 1,022,490	$ 530,670
Adjustments to reconcile net income to net cash from operating activities:			
Net investment gains	(202,397)	(90,632)	(103,000)
Depreciation and amortization	55,872	129,682	135,065
Noncontrolling interests	3,892	8,525	2,315
Investment funds	(145,099)	(220,015)	(54,253)
Stock incentive plans	49,411	46,680	49,658
Change in:			
Arbitrage trading account	(53,291)	(268,649)	(67,943)
Premiums and fees receivable	(268,171)	(364,395)	(173,618)
Reinsurance accounts	(266,307)	(433,644)	(313,525)
Deferred policy acquisition costs	(88,844)	(121,663)	(38,691)
Current income taxes	(3,534)	(43,890)	49,021
Deferred income taxes	(64,712)	7,630	(34,057)
Reserves for losses and loss expenses	1,684,254	1,635,774	1,176,049
Unearned premiums	466,590	786,627	415,956
Other	19,878	89,467	43,039
Net cash from operating activities	2,568,604	2,183,987	1,616,686
CASH FLOWS (USED IN) FROM INVESTING ACTIVITIES:			
Proceeds from sale of fixed maturity securities	797,948	1,842,139	3,832,555
Proceeds from sale of equity securities	82,319	126,980	114,763
Distributions from (contributions to) investment funds	24,623	101,050	(3,042)
Proceeds from maturities and prepayments of fixed maturity securities	4,891,179	6,067,230	3,864,327
Purchase of fixed maturity securities	(8,036,680)	(10,716,748)	(7,551,591)
Purchase of equity securities	(340,482)	(464,645)	(253,031)
Real estate (purchased) sold	(45,920)	166,886	178,934
Change in loans receivable	(83,212)	(27,421)	1,467
Net additions to property, furniture and equipment	(52,684)	(66,634)	(38,171)
Change in balances due from security brokers	14,337	(17,983)	(26,515)
Cash received in connection with business disposition	906,789	—	—
Payment for business purchased, net of cash acquired	(49,572)	—	—
Net cash (used in) from investing activities	(1,891,355)	(2,989,146)	119,696
CASH FLOWS (USED IN) FROM FINANCING ACTIVITIES:			
Net (payments) proceeds from issuance of debt	(3,309)	1,034,107	741,637
Repayment of senior notes and other debt	(426,503)	(504,952)	(652,751)
Cash dividends to common stockholders	(235,192)	(355,736)	(84,147)
Purchase of common treasury shares	(94,140)	(122,426)	(346,357)
Other, net	(12,848)	(45,162)	(56,225)
Net cash (used in) from financing activities	(771,992)	5,831	(397,843)
Net impact on cash due to change in foreign exchange rates	(24,754)	(4,195)	10,117
Net (decrease) increase in cash and cash equivalents	(119,497)	(803,523)	1,348,656
Cash and cash equivalents at beginning of year	1,568,843	2,372,366	1,023,710
Cash and cash equivalents at end of year	$ 1,449,346	$ 1,568,843	$ 2,372,366

See accompanying notes to consolidated financial statements.

W. R. BERKLEY CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

For the years ended December 31, 2022, 2021 and 2020

(1) Summary of Significant Accounting Policies

(A) Principles of consolidation and basis of presentation

The consolidated financial statements, which include the accounts of W. R. Berkley Corporation and its subsidiaries (the "Company"), have been prepared on the basis of U.S. generally accepted accounting principles ("GAAP"). All significant intercompany transactions and balances have been eliminated. Reclassifications have been made in the 2021 and 2020 financial statements as originally reported to conform to the presentation of the 2022 financial statements. Shares outstanding and per share amounts have been adjusted to reflect the 3-for-2 common stock split effected on March 23, 2022. In the fourth quarter of 2022, the Company adjusted the proceeds from sale of fixed maturity securities and purchase of fixed maturity securities lines within the consolidated statements of cash flows for an incremental inter-company elimination which resulted in no impact on the total amount of investing activities. For the years ended December 31, 2021 and 2020, the Company did not correct these line items as the effects were not material and had no impact on the total amount of investing activities.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the revenues and expenses reflected during the reporting period. The most significant items on our balance sheet that involve a greater degree of accounting estimates that are subject to change in the future are the valuation of investments, allowance for expected credit losses on investments, reserves for losses and loss expenses and premium estimates. Actual results could differ from those estimates.

(B) Revenue recognition

Insurance premiums are recognized as written at the inception of the policy. Reinsurance premiums are estimated based upon information received from ceding companies, and subsequent differences from such estimates are recorded in the period they are determined. Insurance and reinsurance premiums are primarily earned on a pro rata basis over the policy term. Fees for services are earned over the period that the services are provided. Premiums and fees receivable are reported net of an allowance for expected credit losses, with the allowance being estimated based on current and future expected conditions, historical loss data and specific identification of collectability concerns where applicable. Changes in the allowance are reported within other operating costs and expenses.

Audit premiums are recognized when they are reliably determinable. The change in accruals for earned but unbilled audit premiums increased (decreased) net premiums written and premiums earned by $25 million, $10 million and $(27) million in 2022, 2021 and 2020, respectively.

Revenues from non-insurance businesses are derived from businesses engaged in the distribution of promotional merchandise, world-wide textile solutions, and aircraft services provided to the general, commercial and military aviation markets. These aircraft services include (i) the distribution, manufacturing, repair and overhaul of aircraft parts and components, (ii) the sale of new and used aircraft, and (iii) avionics, fuel, maintenance, storage and charter services. Revenue is recognized upon the shipment of products and parts, the delivery of aircraft, the delivery of fuel, and over the completion period of services.

Insurance service fee revenue represents servicing fees for program administration and claims management services provided by the Company, including workers' compensation assigned risk plans, as well as insurance brokerage and risk management services. Fees for program administration, claims management and risk management services are primarily recognized ratably over the related contract period for which the underlying services are rendered. Commissions for insurance brokerage are generally recognized when the underlying insurance policy is effective.

(C) Cash and cash equivalents

Cash equivalents consist of funds invested in money market accounts and investments with an effective maturity of three months or less when purchased.

(D) Investments

Fixed maturity securities classified as available for sale are carried at estimated fair value, with unrealized gains and losses, net of applicable income taxes, excluded from earnings and reported as a component of comprehensive income and a separate component of stockholders' equity. Fixed maturity securities that the Company has the positive intent and ability to hold to maturity are classified as held to maturity and reported at amortized cost. Investment income from fixed maturity securities is recognized based on the constant effective yield method. Premiums and discounts on mortgage-backed securities are adjusted for the effects of actual and anticipated prepayments on a retrospective basis.

Equity securities with readily determinable fair values are measured at fair value, with changes in the fair value recognized in net income within net realized and unrealized gains on investments.

Fixed maturity securities that the Company purchased with the intent to sell in the near-term are classified as trading account securities and are reported at estimated fair value. Realized and unrealized gains and losses from trading activity are reported as net investment income and are recorded at the trade date. Short sales and short call options are presented as trading securities sold but not yet purchased. Unsettled trades and the net margin balances held by the clearing broker are presented as a trading account receivable from brokers and clearing organizations.

Investment funds are carried under the equity method of accounting. The Company's share of the earnings or losses of investment funds is primarily reported on a one-quarter lag in order to facilitate the timely completion of the Company's consolidated financial statements.

Loans receivable primarily represent commercial real estate mortgage loans and bank loans and are carried at amortized cost. The accrual of interest on loans receivable is discontinued if the loan is 90 days past due based on the contractual terms of the loan unless the loan is adequately secured and in process of collection. In general, loans are placed on non-accrual status or charged off at an earlier date if collection of principal or interest is considered doubtful. Interest on these loans is accounted for on a cash basis until qualifying for return to accrual status. Loans are returned to accrual status when all principal and interest amounts contractually due are brought current and future payments are reasonably assured.

Fair value is defined as “the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.” Fair value of investments is determined based on a fair value hierarchy that prioritizes the use of observable inputs over the use of unobservable inputs and requires the use of observable inputs when available. (See Note 13 of the Notes to Consolidated Financial Statements.)

Realized gains or losses represent the difference between the cost of securities sold and the proceeds realized upon sale and are recorded at the trade date. The Company uses primarily the first-in, first-out method to determine the cost of securities sold.

For available for sale securities in an unrealized loss position where the Company intends to sell, or it is more likely than not that it will be required to sell the security before recovery in value, the amortized cost basis is written down to fair value through net investment gains. For available for sale securities in an unrealized loss position where the Company does not intend to sell, or it is more likely than not that it will not be required to sell the security before recovery in value, the Company evaluates whether the decline in fair value has resulted from credit losses or all other factors (non-credit factors). In making this assessment, the Company considers the extent to which fair value is less than amortized cost, changes to the rating of the security by a rating agency, and adverse conditions specifically related to the security, among other factors. If this assessment indicates that a credit loss exists, the present value of cash flows expected to be collected from the security are compared to the amortized cost basis of the security. If the present value of cash flows expected to be collected is less than the amortized cost basis, an allowance for expected credit losses is recorded for the credit loss through net investment gains, limited by the amount that the fair value is less than the amortized cost basis. The allowance is adjusted for any change in expected credit losses and subsequent recoveries through net investment gains. The impairment related to non-credit factors is recognized in comprehensive income (loss).

For financial assets carried at amortized cost, which includes held to maturity securities and loans receivable, the Company estimates an allowance for expected credit losses based on relevant information about past events, including historical loss experience, current conditions and forecasts that affect the expected collectability of the amortized cost of the financial asset. The allowance for expected credit losses is presented as a reduction to amortized cost of the financial asset in the consolidated balance sheet and changes to the estimate for expected credit losses are recognized through net investment gains.

The Company’s credit assessment of allowance for expected credit losses uses a third party model for available for sale and held to maturity securities, as well as loans receivable. The allowance for expected credit losses is generally based on the performance of the underlying collateral under various economic and default scenarios that involve subjective judgments and estimates by management. Modeling these securities involves various factors, such as projected default rates, the nature and realizable value of the collateral, if any, the ability of the issuer to make scheduled payments, historical performance and other relevant economic and performance factors. A discounted cash flow analysis is used to ascertain the amount of the allowance for expected credit losses, if any. In general, the model reverts to the rating-level long-term average marginal default rates based on 10 years of historical data, beyond the forecast period. For other inputs, the model in most cases reverts to the baseline long-term assumptions linearly over 5 years beyond the forecast period. The long-term assumptions are based on the historical averages.

The Company reports accrued investment income separately from fixed maturity securities, and has elected not to measure an allowance for expected credit losses for accrued investment income. Accrued investment income is written off through net investment income at the time the issuer of the bond defaults or is expected to default on payments.

Real estate held for investment purposes is initially recorded at the purchase price, which is generally fair value, and is subsequently reported at cost less accumulated depreciation. Real estate taxes, interest and other costs incurred during development and construction are capitalized. Buildings are depreciated on a straight-line basis over the estimated useful lives of the building. Minimum rental income is recognized on a straight-line basis over the lease term. Income and expenses from real estate are reported as net investment income. The carrying value of real estate is reviewed for impairment and an impairment loss is recognized if the estimated undiscounted cash flows from the use and disposition of the property are less than the carrying value of the property.

(E) Per share data

The Company presents both basic and diluted net income per share (“EPS”) amounts. Basic EPS is calculated by dividing net income by weighted average number of common shares outstanding during the year (including 11,416,856 common shares held in a grantor trust). The common shares held in the grantor trust are for delivery upon settlement of vested but mandatorily deferred restricted stock units ("RSUs"). Shares held by the grantor trust do not affect diluted shares outstanding since the shares deliverable under vested RSUs were already included in diluted shares outstanding. Diluted EPS is based upon the weighted average number of basic and common equivalent shares outstanding during the year and is calculated using the treasury stock method for stock incentive plans. Common equivalent shares are excluded from the computation in periods in which they have an anti-dilutive effect.

(F) Deferred policy acquisition costs

Acquisition costs associated with the successful acquisition of new and renewed insurance and reinsurance contracts are deferred and amortized ratably over the terms of the related contracts. Ceding commissions received on reinsurance contracts are netted against acquisition costs and are recognized ratably over the life of the contract. Deferred policy acquisition costs are presented net of unearned ceding commissions. Deferred policy acquisition costs are comprised primarily of commissions, as well as employment-related underwriting costs and premium taxes. Deferred policy acquisition costs are reviewed to determine if they are recoverable from future income and, if not, are charged to expense. The recoverability of deferred policy acquisition costs is evaluated separately by each of our operating companies. Future investment income is taken into account in measuring the recoverability of deferred policy acquisition costs.

(G) Reserves for losses and loss expenses

Reserves for losses and loss expenses are an accumulation of amounts determined on the basis of (1) evaluation of claims for business written directly by the Company; (2) estimates received from other companies for reinsurance assumed by the Company; and (3) estimates for losses incurred but not reported (based on Company and industry experience). These estimates are periodically reviewed and, as experience develops and new information becomes known, the reserves are adjusted as necessary. Such adjustments are reflected in the statements of income in the period in which they are determined. The Company discounts its reserves for excess and assumed workers' compensation claims using a risk-free or statutory rate. (See Note 14 of Notes to Consolidated Financial Statements.)

(H) Reinsurance ceded

The unearned portion of premiums ceded to reinsurers is reported as prepaid reinsurance premiums and earned ratably over the policy term. The estimated amounts of reinsurance recoverable on unpaid losses are reported as due from reinsurers. To the extent any reinsurer does not meet its obligations under reinsurance agreements, the Company must discharge its liability. Amounts due from reinsurers are reflected net of funds held where the right of offset is present. The Company has provided an allowance for expected credit losses for estimated uncollectible reinsurance. The allowance is estimated based on the composition of the recoverable balance, considering reinsurer credit ratings, collateral received from financial institutions and funds withheld arrangements, length of collection periods, probability of default methodology, and specific identification of collectability concerns. Changes in the allowance are reported within losses and loss expenses.

(I) Deposit accounting

Contracts that do not meet the risk transfer requirements of GAAP are accounted for using the deposit accounting method. Under this method, an asset or liability is recognized at the inception of the contract based on consideration paid or received. The amount of the deposit asset or liability is adjusted at subsequent reporting dates using the interest method with a corresponding credit or charge to interest income or expense. Deposit liabilities for assumed reinsurance contracts were $33 million and $35 million at December 31, 2022 and 2021, respectively.

(J) Federal and foreign income taxes

The Company files a consolidated income tax return in the U.S. and foreign tax returns in countries where it has overseas operations. The Company's method of accounting for income taxes is the asset and liability method. Under this method, deferred tax assets and liabilities are measured using tax rates currently in effect or expected to apply in the years in which those temporary differences are expected to reverse. Interest and penalties, if any, are reported as income tax expense. The Company believes there are no tax positions that would require disclosure under GAAP. Deferred tax assets are reduced by a valuation allowance if it is more likely than not that all or a portion of the deferred tax assets will not be realized.

(K) Foreign currency

Gains and losses resulting from foreign currency transactions (transactions denominated in a currency other than the entity's functional currency) are reported on the statements of income as other operating costs and expenses. Unrealized gains or losses resulting from translating the results of non-U.S. dollar denominated operations are reported in accumulated other comprehensive income. Revenues and expenses denominated in currencies other than U.S. dollars are generally translated at the weighted average exchange rate during the year. Assets and liabilities are translated at the rate of exchange in effect at the balance sheet date.

(L) Property, furniture and equipment

Property, furniture and equipment are carried at cost less accumulated depreciation. Depreciation is calculated using the estimated useful lives of the respective assets. Depreciation expense was $52 million, $52 million and $53 million for 2022, 2021 and 2020, respectively.

(M) Comprehensive income

Comprehensive income encompasses all changes in stockholders' equity (except those arising from transactions with stockholders) and includes net income, net unrealized holding gains or losses on available for sale securities and unrealized foreign currency translation adjustments.

(N) Goodwill and other intangible assets

Goodwill and other intangible assets are tested for impairment on an annual basis and at interim periods where circumstances require. The Company's impairment test as of December 31, 2022 indicated that there were no material impairment losses related to goodwill and other intangible assets. Intangible assets of $102 million and $85 million are included in other assets as of December 31, 2022 and 2021, respectively.

(O) Restricted stock units

The costs resulting from all share-based payment transactions with employees are recognized in the consolidated financial statements using a fair-value-based measurement method. Compensation cost is recognized for financial reporting purposes over the period in which the employee is required to provide service in exchange for the award (generally the vesting period).

(P) Statements of cash flows

Interest payments were $138 million, $141 million and $155 million in 2022, 2021 and 2020, respectively. Income taxes paid were $295 million, $244 million and $103 million in 2022, 2021 and 2020, respectively. Other non-cash items include unrealized investment gains and losses. (See Note 11 of Notes to Consolidated Financial Statements.)

(Q) Recent accounting pronouncements

Recently adopted accounting pronouncements:

All accounting and reporting standards that became effective in 2022 were either not applicable to the Company or their adoption did not have a material impact on the Company.

Accounting and reporting standards that are not yet effective:

All recently issued but not yet effective accounting and reporting standards are either not applicable to the Company or are not expected to have a material impact on the Company.

(2) Acquisitions

In March 2022, the Company acquired an 80.0% ownership interest for $51.1 million in a company engaged in residential and commercial textiles. The fair value of the assets acquired and liabilities assumed have been estimated based on a third party valuation.

The following table summarizes the estimated fair value of net assets acquired and liabilities assumed for the business combination completed in 2022:

(In thousands)		**2022**
Cash and cash equivalents	$	1,564
Real estate, furniture and equipment		6,000
Intangible assets		25,600
Goodwill		15,857
Other assets		20,349
Total assets acquired		69,370
Other liabilities assumed		(12,420)
Noncontrolling interest		(5,814)
Net assets acquired	$	51,136

(3) Consolidated Statements of Comprehensive (Loss) Income

The following tables present the components of the changes in accumulated other comprehensive (loss) income as of and for the years ended December 31, 2022 and 2021:

(In thousands)					
December 31, 2022	**Unrealized Investment (Losses) Gains**		**Currency Translation Adjustments**		**Accumulated Other Comprehensive Loss**
Changes in AOCI					
Beginning of period	$ 90,900		$ (372,855)		$ (281,955)
Other comprehensive (loss) income before reclassifications	(1,054,838)		1,179		(1,053,659)
Amounts reclassified from AOCI	71,035		—		71,035
Other comprehensive (loss) income	(983,803)		1,179		(982,624)
Unrealized investment loss related to noncontrolling interest	(2)		—		(2)
Ending balance	$ (892,905)		$ (371,676)		$ (1,264,581)
Amounts reclassified from AOCI					
Pre-tax	$ 89,918	(1)	$ —		$ 89,918
Tax effect	(18,883)	(2)	—		(18,883)
After-tax amounts reclassified	$ 71,035		$ —		$ 71,035
Other comprehensive (loss) income					
Pre-tax	$ (1,248,128)		$ 1,179		$ (1,246,949)
Tax effect	264,325		—		264,325
Other comprehensive (loss) income	$ (983,803)		$ 1,179		$ (982,624)

(In thousands)					
December 31, 2021	**Unrealized Investment Gains (Losses)**		**Currency Translation Adjustments**		**Accumulated Other Comprehensive Loss**
Changes in AOCI					
Beginning of period	$ 289,714		$ (351,886)		$ (62,172)
Other comprehensive loss before reclassifications	(222,359)		(20,969)		(243,328)
Amounts reclassified from AOCI	23,547		—		23,547
Other comprehensive loss	(198,812)		(20,969)		(219,781)
Unrealized investment loss related to non-controlling interest	(2)		—		(2)
Ending balance	$ 90,900		$ (372,855)		$ (281,955)
Amounts reclassified from AOCI					
Pre-tax	$ 29,806	(1)	$ —		$ 29,806
Tax effect	(6,259)	(2)	—		(6,259)
After-tax amounts reclassified	$ 23,547		$ —		$ 23,547
Other comprehensive loss					
Pre-tax	$ (254,939)		$ (20,969)		$ (275,908)
Tax effect	56,127		—		56,127
Other comprehensive loss	$ (198,812)		$ (20,969)		$ (219,781)

(1) Net investment gains in the consolidated statements of income.
(2) Income tax expense in the consolidated statements of income.

(4) Investments in Fixed Maturity Securities

At December 31, 2022 and 2021, investments in fixed maturity securities were as follows:

(In thousands)	Amortized Cost	Allowance for Expected Credit Losses (1)	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Carrying Value
December 31, 2022						
Held to maturity:						
State and municipal	$ 47,802	$ (114)	$ 4,239	$ —	$ 51,927	$ 47,688
Residential mortgage-backed	3,608	—	38	—	3,646	3,608
Total held to maturity	51,410	(114)	4,277	—	55,573	51,296
Available for sale:						
U.S. government and government agency	960,479	—	937	(69,158)	892,258	892,258
State and municipal:						
Special revenue	1,837,309	—	3,662	(119,474)	1,721,497	1,721,497
State general obligation	387,709	—	2,651	(21,335)	369,025	369,025
Pre-refunded	156,106	—	2,741	(7)	158,840	158,840
Corporate backed	210,228	—	334	(10,923)	199,639	199,639
Local general obligation	454,983	—	2,967	(16,853)	441,097	441,097
Total state and municipal	3,046,335	—	12,355	(168,592)	2,890,098	2,890,098
Mortgage-backed securities:						
Residential	1,308,019	(18)	395	(171,595)	1,136,801	1,136,801
Commercial	547,757	—	215	(19,363)	528,609	528,609
Total mortgage-backed securities	1,855,776	(18)	610	(190,958)	1,665,410	1,665,410
Asset-backed securities	4,132,365	—	2,730	(152,322)	3,982,773	3,982,773
Corporate:						
Industrial	3,491,645	(1,704)	4,439	(241,381)	3,252,999	3,252,999
Financial	2,585,247	(2,997)	5,505	(117,383)	2,470,372	2,470,372
Utilities	586,066	—	1,307	(36,325)	551,048	551,048
Other	441,230	—	—	(11,657)	429,573	429,573
Total corporate	7,104,188	(4,701)	11,251	(406,746)	6,703,992	6,703,992
Foreign government	1,564,930	(32,633)	4,283	(135,058)	1,401,522	1,401,522
Total available for sale	18,664,073	(37,352)	32,166	(1,122,834)	17,536,053	17,536,053
Total investments in fixed maturity securities	$ 18,715,483	$ (37,466)	$ 36,443	$ (1,122,834)	$ 17,591,626	$ 17,587,349

(In thousands)	Amortized Cost	Allowance for Expected Credit Losses (1)	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Carrying Value
December 31, 2021						
Held to maturity:						
State and municipal	$ 69,539	$ (387)	$ 10,813	$ —	$ 79,965	$ 69,152
Residential mortgage-backed	4,829	—	632	—	5,461	4,829
Total held to maturity	74,368	(387)	11,445	—	85,426	73,981
Available for sale:						
U.S. government and government agency	851,128	—	8,509	(4,294)	855,343	855,343
State and municipal:						
Special revenue	2,016,382	—	62,961	(5,706)	2,073,637	2,073,637
State general obligation	388,110	—	23,152	(1,015)	410,247	410,247
Pre-refunded	202,633	—	14,891	(574)	216,950	216,950
Corporate backed	166,943	—	7,191	(1,532)	172,602	172,602
Local general obligation	401,974	—	29,455	(732)	430,697	430,697
Total state and municipal	3,176,042	—	137,650	(9,559)	3,304,133	3,304,133
Mortgage-backed securities:						
Residential	940,744	—	9,896	(11,321)	939,319	939,319
Commercial	125,709	—	3,388	(341)	128,756	128,756
Total mortgage-backed securities	1,066,453	—	13,284	(11,662)	1,068,075	1,068,075
Asset-backed securities	4,504,950	—	4,409	(18,794)	4,490,565	4,490,565
Corporate:						
Industrial	3,231,520	(16)	62,751	(21,092)	3,273,163	3,273,163
Financial	1,739,282	—	30,709	(6,591)	1,763,400	1,763,400
Utilities	396,242	—	13,262	(3,202)	406,302	406,302
Other	154,210	—	125	(1,525)	152,810	152,810
Total corporate	5,521,254	(16)	106,847	(32,410)	5,595,675	5,595,675
Foreign government	1,277,109	(22,222)	7,508	(47,494)	1,214,901	1,214,901
Total available for sale	16,396,936	(22,238)	278,207	(124,213)	16,528,692	16,528,692
Total investments in fixed maturity securities	$ 16,471,304	$ (22,625)	$ 289,652	$ (124,213)	$ 16,614,118	$ 16,602,673

(1) Represents the amount of impairment that has resulted from credit-related factors. The change in the allowance for expected credit losses is recognized in the consolidated statements of income. Amount excludes unrealized losses relating to non-credit factors.

The following table presents the rollforward of the allowance for expected credit losses for held to maturity securities for the years ended December 31, 2022 and 2021:

(In thousands)	State and Municipal 2022	State and Municipal 2021
Allowance for expected credit losses, beginning of period	$ 387	$ 798
Change in allowance for expected credit losses	(273)	(411)
Allowance for expected credit losses, end of period	$ 114	$ 387

The following table presents the rollforward of the allowance for expected credit losses for available for sale securities for the years ended December 31, 2022 and 2021:

(In thousands)	2022 Foreign Government	2022 Corporate	2022 Mortgage-Backed	2022 Total	2021 Foreign Government	2021 Corporate	2021 Total
Allowance for expected credit losses, beginning of period	$ 22,222	$ 16	$ —	$ 22,238	$ 1,264	$ 518	$ 1,782
Expected credit losses on securities for which credit losses were not previously recorded	1,910	2,648	21	4,579	19,072	16	19,088
Expected credit losses (gains) on securities for which credit losses were previously recorded	8,534	2,042	(3)	10,573	2,438	(513)	1,925
Reduction due to disposals	(33)	(5)	—	(38)	(552)	(5)	(557)
Allowance for expected credit losses, end of period	$ 32,633	$ 4,701	$ 18	$ 37,352	$ 22,222	$ 16	$ 22,238

During the year ended December 31, 2022, the Company increased the allowance for expected credit losses for available for sale securities utilizing its credit loss assessment process and inputs used in its credit loss model due to an increase in unrealized losses primarily associated with foreign government securities. During the year ended December 31, 2021, the Company increased the allowance for expected credit losses primarily due to foreign government securities that had no reserve in prior periods.

The amortized cost and fair value of fixed maturity securities at December 31, 2022, by contractual maturity, are shown below. Actual maturities may differ from contractual maturities because certain issuers may have the right to call or prepay obligations.

(In thousands)	Amortized Cost (1)	Fair Value
Due in one year or less	$ 1,570,480	$ 1,527,090
Due after one year through five years	8,746,271	8,299,945
Due after five years through ten years	4,395,236	4,119,772
Due after ten years	2,143,998	1,975,763
Mortgage-backed securities	1,859,384	1,669,056
Total	$ 18,715,369	$ 17,591,626

(1) Amortized cost is reduced by the allowance for expected credit losses of $114 thousand related to held to maturity securities.

At December 31, 2022 and 2021, there were no investments, other than investments in United States government and government agency securities, which exceeded 10% of common stockholders' equity. At December 31, 2022, investments with a carrying value of $1,910 million were on deposit in custodial or trust accounts, of which $1,218 million was on deposit with insurance regulators, $656 million was on deposit in support of the Company's underwriting activities at Lloyd's, $31 million was on deposit as security for reinsurance clients and $5 million was on deposit as security for letters of credit issued in support of the Company's reinsurance operations.

(5) Investments in Equity Securities

At December 31, 2022 and 2021, investments in equity securities were as follows:

(In thousands)	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Carrying Value
December 31, 2022					
Common stocks	$ 855,987	$ 192,165	$ (65,401)	$ 982,751	$ 982,751
Preferred stocks	259,341	1,053	(57,251)	203,143	203,143
Total	$ 1,115,328	$ 193,218	$ (122,652)	$ 1,185,894	$ 1,185,894
December 31, 2021					
Common stocks	$ 619,896	$ 92,401	$ (16,894)	$ 695,403	$ 695,403
Preferred stocks	250,149	7,874	(12,183)	245,840	245,840
Total	$ 870,045	$ 100,275	$ (29,077)	$ 941,243	$ 941,243

(6) Arbitrage Trading Account

At December 31, 2022 and 2021, the fair value and carrying value of the arbitrage trading account were $944 million and $1,180 million, respectively. The primary focus of the trading account is merger arbitrage. Merger arbitrage is the business of investing in the securities of publicly held companies which are the targets in announced tender offers and mergers. Arbitrage investing differs from other types of investing in its focus on transactions and events believed likely to bring about a change in value over a relatively short time period (usually four months or less).

The Company uses put options and call options in order to mitigate the impact of potential changes in market conditions on the merger arbitrage trading account. These options are reported at fair value. As of December 31, 2022, the fair value of short option contracts outstanding was $0.1 thousand (notional amount of $10 thousand). Other than with respect to the use of these trading account securities, the Company does not make use of derivatives.

(7) Net Investment Income

Net investment income consists of the following:

(In thousands)	2022	2021	2020
Investment income (loss) earned on:			
Fixed maturity securities, including cash and cash equivalents and loans receivable	$ 549,281	$ 382,001	$ 426,563
Investment funds	145,099	220,014	54,253
Arbitrage trading account	45,213	37,676	77,931
Real estate	(3,087)	7,703	24,027
Equity securities	52,600	32,020	10,172
Gross investment income	789,106	679,414	592,946
Investment expense	(9,921)	(7,796)	(9,125)
Net investment income	$ 779,185	$ 671,618	$ 583,821

(8) Investment Funds

The Company evaluates whether it is an investor in a variable interest entity ("VIE"). Such entities do not have sufficient equity at risk to finance their activities without additional subordinated financial support, or the equity investors, as a group, do not have the characteristics of a controlling financial interest (primary beneficiary). The Company determines whether it is the primary beneficiary of an entity subject to consolidation based on a qualitative assessment of the VIE's capital structure, contractual terms, nature of the VIE's operations and purpose, and the Company's relative exposure to the related risks of the VIE on the date it becomes initially involved in the VIE and on an ongoing basis. The Company is not the primary beneficiary in any of its investment funds, and accordingly, carries its interests in investments funds under the equity method of accounting.

The Company’s maximum exposure to loss with respect to these investments is limited to the carrying amount reported on the Company’s consolidated balance sheet and its unfunded commitments of $402 million as of December 31, 2022.

Investment funds consist of the following:

	Carrying Value as of December 31,		Income (Loss) From Investment Funds For the Year Ended		
(In thousands)	**2022**	**2021**	**2022**	**2021**	**2020**
Financial services	$ 465,683	$ 431,818	$ 34,030	$ 98,893	$ 34,763
Transportation	336,753	336,688	53,180	42,424	(616)
Real estate	204,644	273,690	48,723	29,484	7,543
Energy	116,432	150,224	1,425	22,118	(11,039)
Infrastructure	115,428	12,314	4,603	1,372	1,672
Other funds	369,608	275,878	3,138	25,723	21,930
Total	$ 1,608,548	$ 1,480,612	$ 145,099	$ 220,014	$ 54,253

The Company's share of the earnings or losses of investment funds is primarily reported on a one-quarter lag in order to facilitate the timely completion of the Company's consolidated financial statements.

Financial services investment funds include the Company’s minority investment in Lifson Re, a Bermuda reinsurance company. Effective January 1, 2021, Lifson Re participated on a fully collateralized basis in a majority of the Company’s reinsurance placements for a 22.5% share of placed amounts. The percentage increased from 22.5% to 30.0% effective July 1, 2022. This pertains to all traditional reinsurance/retrocessional placements for both property and casualty business where there is more than one open market reinsurer participating. For the years ended December 31, 2022 and 2021, the Company ceded approximately $399 million and $245 million, respectively, of written premiums to Lifson Re.

Other funds include deferred compensation trust assets of $30 million and $34 million in 2022 and 2021, respectively. These assets support other liabilities reflected in the balance sheet of an equal amount for employees who have elected to defer a portion of their compensation. The change in the net asset value of the trust is recorded in other funds within net investment income with an offsetting equal amount within corporate expenses.

(9) Real Estate

Investment in real estate represents directly owned property held for investment, as follows:

	As of December 31,	
(In thousands)	**2022**	**2021**
Properties in operation	$ 1,114,167	$ 1,626,826
Properties under development	226,455	225,682
Total	$ 1,340,622	$ 1,852,508

In 2022, properties in operation included a long-term ground lease in Washington, D.C., an office complex in New York City and the completed portion of a mixed-use project in Washington D.C. Properties in operation are net of accumulated depreciation and amortization of $33,206,000 and $57,391,000 as of December 31, 2022 and 2021, respectively. Related depreciation expense was $12,269,000 and $19,688,000 for the years ended December 31, 2022 and 2021, respectively. Future minimum rental income expected on operating leases relating to properties in operation is $32,282,796 in 2023, $33,528,105 in 2024, $31,015,149 in 2025, $29,250,535 in 2026, $28,334,384 in 2027 and $510,771,307 thereafter.

During the first quarter of 2022, the Company sold a real estate investment in London (proceeds from the real estate and related entity is presented on the business disposition line within the consolidated statements of cash flows).

A mixed-use project in Washington, D.C. had been under development in 2022 and 2021, with the completed portion as noted above reported in properties in operation as of December 31, 2022.

(10) Loans Receivable

At December 31, 2022 and 2021, loans receivable were as follows:

(In thousands)	As of December 31, 2022	As of December 31, 2021
Amortized cost (net of allowance for expected credit losses):		
Real estate loans	$ 173,616	$ 89,431
Commercial loans	19,386	25,741
Total	$ 193,002	$ 115,172
Fair value:		
Real estate loans	$ 168,595	$ 90,793
Commercial loans	19,386	25,741
Total	$ 187,981	$ 116,534

The real estate loans are secured by commercial and residential real estate primarily located in London and New York. These loans generally earn interest at fixed or stepped interest rates and have maturities through 2026. The commercial loans are with small business owners who have secured the related financing with the assets of the business. Commercial loans primarily earn interest on a fixed basis and have varying maturities generally not exceeding 10 years.

Loans receivable in non-accrual status was none and $0.2 million as of December 31, 2022 and 2021, respectively.

The following table presents the rollforward of the allowance for expected credit losses for loans receivable for the years ended December 31, 2022 and 2021:

	2022			2021		
(In thousands)	Real Estate Loans	Commercial Loans	Total	Real Estate Loans	Commercial Loans	Total
Allowance for expected credit losses, beginning of period	$ 1,362	$ 356	$ 1,718	$ 1,683	$ 3,754	$ 5,437
Change in allowance for expected credit losses	(262)	335	73	(321)	(3,398)	(3,719)
Allowance for expected credit losses, end of period	$ 1,100	$ 691	$ 1,791	$ 1,362	$ 356	$ 1,718

The Company monitors the performance of its loans receivable and assesses the ability of the borrower to pay principal and interest based upon loan structure, underlying property values, cash flow and related financial and operating performance of the property and market conditions.

In evaluating the real estate loans, the Company considers their credit quality indicators, including loan to value ratios, which compare the outstanding loan amount to the estimated value of the property, the borrower's financial condition and performance with respect to loan terms, the position in the capital structure, the overall leverage in the capital structure and other market conditions.

(11) Net Investment Gains

Net investment gains were as follows:

(In thousands)	2022	2021	2020
Net investment gains:			
Fixed maturity securities:			
Gains	$ 4,224	$ 18,981	$ 27,819
Losses	(11,654)	(6,975)	(56,096)
Equity securities (1):			
Net realized (losses) gains on investment sales	(12,879)	16,365	32,647
Change in unrealized losses	(632)	(38,455)	(25,868)
Investment funds	12,407	44,778	31,481
Real estate (2)	293,525	94,911	101,554
Loans receivable	(32)	(881)	—
Other	(67,648)	(21,766)	(38,023)
Net realized and unrealized gains on investments in earnings before allowance for expected credit losses	217,311	106,958	73,514
Change in allowance for expected credit losses on investments:			
Fixed maturity securities	(14,841)	(20,045)	33,134
Loans receivable	(73)	3,719	(3,648)
Change in allowance for expected credit losses on investments	(14,914)	(16,326)	29,486
Net investment gains	202,397	90,632	103,000
Income tax expense	(42,670)	(17,710)	(21,630)
After-tax net investment gains	$ 159,727	$ 72,922	$ 81,370
Change in unrealized investment (losses) gains:			
Fixed maturity securities without allowance for expected credit losses	$ (1,216,292)	$ (262,221)	$ 134,129
Fixed maturity securities with allowance for expected credit losses	(28,370)	10,124	32,004
Investment funds	(2,019)	(1,270)	2,280
Other	(1,447)	(1,572)	(3,768)
Total change in unrealized investment (losses) gains	(1,248,128)	(254,939)	164,645
Income tax benefit (expense)	264,325	56,127	(24,395)
Noncontrolling interests	(2)	(2)	(2)
After-tax change in unrealized investment (losses) gains	$ (983,805)	$ (198,814)	$ 140,248

(1) The net realized gains or losses on investment sales represent the total gains or losses from the purchase dates of the equity securities. The change in unrealized (losses) gains consists of two components: (i) the reversal of the gain or loss recognized in previous periods on equity securities sold and (ii) the change in unrealized gain or loss resulting from mark-to-market adjustments on equity securities still held.

(2) During March 2022, the Company realized a gain on the sale of a real estate investment in London, U.K. of $251 million, net of transaction expenses and the foreign currency impact, including the reversal of the currency translation adjustment.

(12) Fixed Maturity Securities in an Unrealized Loss Position

The following tables summarize all fixed maturity securities in an unrealized loss position at December 31, 2022 and 2021 by the length of time those securities have been continuously in an unrealized loss position.

	Less Than 12 Months		12 Months or Greater		Total	
(In thousands)	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
December 31, 2022						
U.S. government and government agency	$ 285,391	$ 10,219	$ 453,520	$ 58,939	$ 738,911	$ 69,158
State and municipal	1,720,443	89,272	598,797	79,320	2,319,240	168,592
Mortgage-backed securities	1,099,549	75,430	473,318	115,528	1,572,867	190,958
Asset-backed securities	1,569,647	48,390	2,176,638	103,932	3,746,285	152,322
Corporate	3,690,856	150,115	2,349,281	256,631	6,040,137	406,746
Foreign government	477,672	29,815	711,786	105,243	1,189,458	135,058
Fixed maturity securities	$ 8,843,558	$ 403,241	$ 6,763,340	$ 719,593	$ 15,606,898	$ 1,122,834
December 31, 2021						
U.S. government and government agency	$ 487,712	$ 4,026	$ 17,021	$ 268	$ 504,733	$ 4,294
State and municipal	502,333	7,403	29,547	2,156	531,880	9,559
Mortgage-backed securities	558,751	6,900	106,130	4,762	664,881	11,662
Asset-backed securities	3,832,944	18,503	75,385	291	3,908,329	18,794
Corporate	2,582,860	29,322	51,095	3,088	2,633,955	32,410
Foreign government	758,975	15,793	82,057	31,701	841,032	47,494
Fixed maturity securities	$ 8,723,575	$ 81,947	$ 361,235	$ 42,266	$ 9,084,810	$ 124,213

Substantially all of the securities in an unrealized loss position are rated investment grade, except for the securities in the foreign government classification. A significant amount of the unrealized loss on foreign government securities is the result of changes in currency exchange rates.

Fixed Maturity Securities — A summary of the Company’s non-investment grade fixed maturity securities that were in an unrealized loss position at December 31, 2022 is presented in the table below:

($ in thousands)	Number of Securities	Aggregate Fair Value	Gross Unrealized Loss
Foreign government	36	$ 119,332	$ 73,900
Corporate	10	39,347	4,649
State and municipal	1	12,247	2,756
Mortgage-backed securities	14	4,464	269
Asset-backed securities	1	16	10
Total	62	$ 175,406	$ 81,584

For fixed maturity securities that management does not intend to sell or to be required to sell, the portion of the decline in value that is considered to be due to credit factors is recognized in earnings, and the portion of the decline in value that is considered to be due to non-credit factors is recognized in other comprehensive income.

The Company has evaluated its fixed maturity securities in an unrealized loss position and believes the unrealized losses are due primarily to temporary market and sector-related factors rather than to issuer-specific factors. None of these securities are delinquent or in default under financial covenants. Based on its assessment of these issuers, the Company expects them to continue to meet their contractual payment obligations as they become due.

(13) Fair Value Measurements

The Company’s fixed maturity and equity securities classified as available for sale and its trading account securities are carried at fair value. Fair value is defined as “the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date”. The Company utilizes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels, as follows:

Level 1 - Quoted prices (unadjusted) in active markets for identical assets or liabilities that the Company has the ability to access at the measurement date.

Level 2 - Quoted prices for similar assets or valuations based on inputs that are observable.

Level 3 - Estimates of fair value based on internal pricing methodologies using unobservable inputs. Unobservable inputs are only used to measure fair value to the extent that observable inputs are not available.

Substantially all of the Company’s fixed maturity securities were priced by independent pricing services. The prices provided by the independent pricing services are estimated based on observable market data in active markets utilizing pricing models and processes, which may include benchmark yields, reported trades, broker/dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, sector groupings, matrix pricing and reference data. The pricing services may prioritize inputs differently on any given day for any security based on market conditions, and not all inputs are available for each security evaluation on any given day. The pricing services used by the Company have indicated that they will only produce an estimate of fair value if objectively verifiable information is available. The determination of whether markets are active or inactive is based upon the volume and level of activity for a particular asset class. The Company reviews the prices provided by pricing services for reasonableness and periodically performs independent price tests of a sample of securities to ensure proper valuation.

If prices from independent pricing services are not available for fixed maturity securities, the Company estimates the fair value. For Level 2 securities, the Company utilizes pricing models and processes which may include benchmark yields, sector groupings, matrix pricing, reported trades, broker/dealer quotes, issuer spreads, two-sided markets, bids, offers and reference data. Where broker quotes are used, the Company generally requests two or more quotes and sets a price within the range of quotes received based on its assessment of the credibility of the quote and its own evaluation of the security. The Company generally does not adjust quotes received from brokers. For securities traded only in private negotiations, the Company determines fair value based primarily on the cost of such securities, which is adjusted to reflect prices of recent placements of securities of the same issuer, financial projections, credit quality and business developments of the issuer and other relevant information.

For Level 3 securities, the Company generally uses a discounted cash flow model to estimate the fair value of fixed maturity securities. The cash flow models are based upon assumptions as to prevailing credit spreads, interest rate and interest rate volatility, time to maturity and subordination levels. Projected cash flows are discounted at rates that are adjusted to reflect illiquidity, where appropriate.

The following tables present the assets and liabilities measured at fair value as of December 31, 2022 and 2021 by level:

(In thousands)	Total	Level 1	Level 2	Level 3
December 31, 2022				
Assets:				
Fixed maturity securities available for sale:				
U.S. government and government agency	$ 892,258	$ —	$ 892,258	$ —
State and municipal	2,890,098	—	2,890,098	—
Mortgage-backed securities	1,665,410	—	1,665,410	—
Asset-backed securities	3,982,773	—	3,982,773	—
Corporate	6,703,992	—	6,703,992	
Foreign government	1,401,522	—	1,401,522	—
Total fixed maturity securities available for sale	17,536,053	—	17,536,053	—
Equity securities:				
Common stocks	982,751	978,991	1,161	2,599
Preferred stocks	203,143	—	191,844	11,299
Total equity securities	1,185,894	978,991	193,005	13,898
Arbitrage trading account	944,230	822,192	118,448	3,590
Total	$ 19,666,177	$ 1,801,183	$ 17,847,506	$ 17,488
Liabilities:				
Trading account securities sold but not yet purchased	$ —	$ —	$ —	$ —
December 31, 2021				
Assets:				
Fixed maturity securities available for sale:				
U.S. government and government agency	$ 855,343	$ —	$ 855,343	$ —
State and municipal	3,304,133	—	3,304,133	—
Mortgage-backed securities	1,068,075	—	1,068,075	—
Asset-backed securities	4,490,565	—	4,490,565	—
Corporate	5,595,675	—	5,595,675	—
Foreign government	1,214,901	—	1,214,901	—
Total fixed maturity securities available for sale	16,528,692	—	16,528,692	—
Equity securities:				
Common stocks	695,403	684,470	1,639	9,294
Preferred stocks	245,840	—	234,544	11,296
Total equity securities	941,243	684,470	236,183	20,590
Arbitrage trading account	1,179,606	1,153,079	26,527	—
Total	$ 18,649,541	$ 1,837,549	$ 16,791,402	$ 20,590
Liabilities:				
Trading account securities sold but not yet purchased	$ 1,169	$ 1,137	$ 32	$ —

The following tables summarize changes in Level 3 assets and liabilities for the years ended December 31, 2022 and 2021:

(In thousands)	Beginning Balance	Gains (Losses) Included in: Earnings (Losses)	Gains (Losses) Included in: Other Comprehensive Income (Losses)	Impairments	Purchases	Sales	Paydowns/Maturities	Transfers In / Out	Ending Balance
Year ended December 31, 2022									
Assets:									
Fixed maturity securities available for sale:									
Corporate	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Total	—	—	—	—	—	—	—	—	—
Equity securities:									
Common stocks	9,294	(6,695)	—	—	—	—	—	—	2,599
Preferred stocks	11,296	3	—	—	925	(925)	—	—	11,299
Total	20,590	(6,692)	—	—	925	(925)	—	—	13,898
Arbitrage trading account	—	(179)	—	—	4,685	(917)	—	1	3,590
Total	$ 20,590	$ (6,871)	$ —	$ —	$ 5,610	$ (1,842)	$ —	$ 1	$ 17,488
Liabilities:									
Trading account securities sold but not yet purchased	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Year ended December 31, 2021									
Assets:									
Fixed maturity securities available for sale:									
Corporate	$ 1,000	$ —	$ —	$ —	$ —	$ (1,000)	$ —	$ —	$ —
Total	1,000	—	—	—	—	(1,000)	—	—	—
Equity securities:									
Common stocks	9,215	640	—	—	—	(561)	—	—	9,294
Preferred stocks	9,331	(35)	—	—	2,000	—	—	—	11,296
Total	18,546	605	—	—	2,000	(561)	—	—	20,590
Arbitrage trading account	—	8	—	—	—	(8)	—	—	—
Total	$ 19,546	$ 613	$ —	$ —	$ 2,000	$ (1,569)	$ —	$ —	$ 20,590
Liabilities:									
Trading account securities sold but not yet purchased	$ —	$ 1	$ —	$ —	$ (1)	$ —	$ —	$ —	$ —

For the years ended December 31, 2022 and 2021, there were no fixed maturity security transferred into or out of Level 3.

(14) Reserves for Losses and Loss Expenses

The Company's reserves for losses and loss expenses are comprised of case reserves and incurred but not reported liabilities (IBNR). When a claim is reported, a case reserve is established for the estimated ultimate payment based upon known information about the claim. As more information about the claim becomes available over time, case reserves are adjusted up or down as appropriate. Reserves are also established on an aggregate basis to provide for IBNR liabilities and expected loss reserve development on reported claims.

Loss reserves included in the Company’s financial statements represent management’s best estimates based upon an actuarially derived point estimate and other considerations. The Company uses a variety of actuarial techniques and methods to derive an actuarial point estimate for each business. These methods may include paid loss development, incurred loss development, paid and incurred Bornhuetter-Ferguson methods and frequency and severity methods. In circumstances where one actuarial method is considered more credible than the others, that method is used to set the point estimate. The actuarial point estimate may also be based on a judgmental weighting of estimates produced from each of the methods considered. Industry loss experience is used to supplement the Company’s own data in selecting “tail factors” in areas where the Company’s own data is limited. The actuarial data is analyzed by line of business, coverage and accident or policy year, as appropriate, for each business.

The establishment of the actuarially derived loss reserve point estimate also includes consideration of qualitative factors that may affect the ultimate losses. These qualitative considerations include, among others, the impact of re-underwriting initiatives, changes in claims handling procedures, changes in the mix of business, changes in distribution sources and changes in policy terms and conditions.

The key assumptions used to arrive at the best estimate of loss reserves are the expected loss ratios, rate of loss cost inflation, and reported and paid loss emergence patterns. Expected loss ratios represent management’s expectation of losses at the time the business is priced and written, before any actual claims experience has emerged. This expectation is a significant determinant of the estimate of loss reserves for recently written business where there is little paid or incurred loss data to consider. Expected loss ratios are generally derived from historical loss ratios adjusted for the impact of rate changes, loss cost trends and known changes in the type of risks underwritten. Expected loss ratios are estimated for each key line of business within each business. Expected loss cost inflation is particularly important for the long-tail lines, such as excess casualty, and claims with a high medical component, such as workers’ compensation. Reported and paid loss emergence patterns are used to project current reported or paid loss amounts to their ultimate settlement value. Loss development factors are based on the historical emergence patterns of paid and incurred losses, and are derived from the Company’s own experience and industry data. The paid loss emergence pattern is also significant to excess and assumed workers’ compensation reserves because those reserves are discounted to their estimated present value based upon such estimated payout patterns.

Loss frequency and severity are measures of loss activity that are considered in determining the key assumptions described in our discussion of loss and loss expense reserves, including expected loss ratios, rate of loss cost inflation and reported and paid loss emergence patterns. Loss frequency is a measure of the number of claims per unit of insured exposure, and loss severity is a measure of the average size of claims. Factors affecting loss frequency include the effectiveness of loss controls and safety programs and changes in economic activity or weather patterns. Factors affecting loss severity include changes in policy limits, retentions, rate of inflation and judicial interpretations.

Another factor affecting estimates of loss frequency and severity is the loss reporting lag, which is the period of time between the occurrence of a loss and the date the loss is reported to the Company. The length of the loss reporting lag affects our ability to accurately predict loss frequency (loss frequencies are more predictable for lines with short reporting lags) as well as the amount of reserves needed for incurred but not reported losses (less IBNR is required for lines with short reporting lags). As a result, loss reserves for lines with short reporting lags are likely to have less variation from initial loss estimates. For lines with short reporting lags, which include commercial automobile, primary workers’ compensation, other liability (claims-made) and property business, the key assumption is the loss emergence pattern used to project ultimate loss estimates from known losses paid or reported to date. For lines of business with long reporting lags, which include other liability (occurrence), products liability, excess workers’ compensation and liability reinsurance, the key assumption is the expected loss ratio since there is often little paid or incurred loss data to consider. Historically, the Company has experienced less variation from its initial loss estimates for lines of businesses with short reporting lags than for lines of business with long reporting lags.

The key assumptions used in calculating the most recent estimate of the loss reserves are reviewed each quarter and adjusted, to the extent necessary, to reflect the latest reported loss data, current trends and other factors observed.

A claim may be defined as an event, as a claimant (number of parties claiming damages from an event) or by exposure type (e.g., an event may give rise to two parties, each claiming loss for bodily injury and property damage).

The most commonly used claim count method is by event. Most of the Company's businesses use the number of events to define and quantify the number of claims. However, in certain lines of business, where it is common for multiple parties to claim damages arising from a single event, a business may quantify claims on the basis of the number of separate parties involved in an event. This may be the case with businesses writing substantial automobile or transportation exposure.

Claim counts for assumed reinsurance will vary based on whether the business is written on a facultative or treaty basis. Further variability as respects treaty claim counts may be reflective of the nature of the treaty, line of business coverage, and type of participation such as quota share or excess of loss contracts. Accordingly, the claim counts have been excluded from the below Reinsurance & Monoline Excess segment tables due to this variability.

The claim count information set forth in the tables presented below may not provide an accurate reflection of ultimate loss payouts by product line.

The following tables present undiscounted incurred and paid claims development as of December 31, 2022, net of reinsurance, as well as cumulative claim frequency and the total of incurred but not reported liabilities (IBNR). The information about incurred and paid claims development for the years ended December 31, 2013 to 2021 is presented as supplementary information. To enhance the comparability of the loss development data, the Company has removed the impact of foreign exchange rate movements by using the December 31, 2022 exchange rate for all periods.

Insurance

Other Liability
(In thousands)

	Loss and Loss Expenses Incurred, Net of Reinsurance										As of December 31, 2022	
	For the Year Ended December 31,											
	Unaudited											
Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	IBNR	Cumulative Number of Reported Claims
2013	$ 749,261	$ 788,581	$ 779,908	$ 779,706	$ 800,593	$ 806,914	$ 801,689	$ 805,915	$ 807,998	$ 809,358	$ 21,362	26
2014		844,832	845,564	843,501	848,138	861,313	867,400	862,749	861,382	862,630	35,808	28
2015			948,389	984,262	958,734	961,761	964,301	974,345	981,071	1,010,796	55,430	27
2016				1,016,106	1,009,051	1,018,253	1,029,821	1,043,948	1,059,897	1,091,569	96,310	28
2017					1,065,550	1,099,396	1,121,833	1,138,785	1,178,604	1,249,129	142,974	28
2018						1,103,900	1,131,549	1,121,317	1,156,157	1,232,803	181,880	27
2019							1,240,560	1,237,336	1,237,824	1,294,681	292,625	28
2020								1,339,565	1,212,790	1,158,880	489,718	22
2021									1,534,580	1,390,790	841,854	23
2022										1,823,680	1,507,284	20
Total										$ 11,924,316		

	Cumulative Paid Claims and Claim Adjustment Expenses, Net of Reinsurance									
	For the Year Ended December 31,									
	Unaudited									
Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2013	$ 63,243	$ 188,023	$ 330,127	$ 470,566	$ 585,608	$ 646,257	$ 691,495	$ 717,908	$ 738,858	$ 761,461
2014		78,705	190,419	337,426	478,924	592,828	678,490	728,718	758,098	781,533
2015			82,638	210,151	381,328	536,855	674,665	755,641	814,191	872,657
2016				69,407	208,828	389,862	557,998	676,735	766,515	870,981
2017					79,887	255,603	453,097	638,934	774,738	930,630
2018						86,798	264,299	435,729	615,753	806,869
2019							88,195	275,343	471,239	704,928
2020								72,232	225,068	423,283
2021									76,612	267,685
2022										93,519
Total										$ 6,513,546
Reserves for loss and loss adjustment expenses before 2013, net of reinsurance										125,357
Reserves for loss and loss adjustment expenses, net of reinsurance										$ 5,536,127

Workers' Compensation
(In thousands)

	Loss and Loss Expenses Incurred, Net of Reinsurance										As of December 31, 2022	
	For the Year Ended December 31,											
	Unaudited											
Accident Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**IBNR**	**Cumulative Number of Reported Claims**
2013	$ 552,570	$ 547,295	$ 546,995	$ 543,238	$ 547,000	$ 542,274	$ 541,926	$ 540,322	$ 538,503	$ 534,948	$ 11,473	53
2014		639,436	637,307	627,767	617,242	615,435	604,030	600,194	602,000	598,977	21,528	57
2015			712,800	690,525	650,997	641,169	626,432	620,741	617,478	612,687	29,213	58
2016				702,716	696,339	684,700	660,520	651,278	657,972	654,385	36,834	58
2017					762,093	733,505	689,622	673,216	683,880	682,153	41,944	58
2018						778,964	724,697	715,055	724,056	721,170	43,766	56
2019							784,281	721,018	732,762	734,034	67,254	54
2020								725,245	716,430	704,008	96,322	42
2021									742,687	701,703	149,447	45
2022										772,620	348,348	41
Total										$ 6,716,685		

	Cumulative Paid Claims and Claim Adjustment Expenses, Net of Reinsurance									
	For the Year Ended December 31,									
	Unaudited									
Accident Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
2013	$ 117,900	$ 277,538	$ 363,028	$ 414,160	$ 447,894	$ 466,580	$ 479,104	$ 489,075	$ 496,809	$ 502,181
2014		148,405	319,743	412,611	471,235	503,915	521,141	531,475	538,914	547,894
2015			139,320	323,744	421,734	477,541	512,933	531,512	544,849	557,215
2016				142,998	338,835	446,072	504,850	537,861	558,934	572,669
2017					153,456	362,299	468,817	525,753	559,198	583,258
2018						171,006	397,464	508,546	574,889	613,675
2019							184,715	397,376	515,914	581,003
2020								172,478	380,454	485,203
2021									172,729	384,867
2022										180,982
Total										$ 5,008,947
Reserves for loss and loss adjustment expenses before 2013, net of reinsurance										214,233
Reserves for loss and loss adjustment expenses, net of reinsurance										$ 1,921,971

Professional Liability
(In thousands)

	Loss and Loss Expenses Incurred, Net of Reinsurance										As of December 31, 2022	
	For the Year Ended December 31,											
	Unaudited											
Accident Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**IBNR**	**Cumulative Number of Reported Claims**
2013	$ 265,061	$ 244,556	$ 241,046	$ 246,943	$ 267,978	$ 276,566	$ 281,888	$ 279,824	$ 279,870	$ 283,216	$ 4,681	7
2014		250,740	244,574	257,309	241,376	236,961	255,850	254,868	254,243	253,244	12,284	7
2015			257,946	256,595	272,899	274,546	290,141	281,718	282,065	286,271	19,949	8
2016				309,417	323,222	360,110	400,799	438,065	467,545	463,102	33,241	9
2017					333,267	332,400	338,723	377,410	384,416	393,409	53,786	10
2018						334,848	322,176	333,408	359,566	382,409	73,828	10
2019							336,129	332,385	345,614	354,283	93,387	11
2020								394,107	375,577	337,961	159,767	11
2021									524,879	471,266	315,877	11
2022										648,941	543,483	10
Total										$ 3,874,102		

	Cumulative Paid Claims and Claim Adjustment Expenses, Net of Reinsurance									
	For the Year Ended December 31,									
	Unaudited									
Accident Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
2013	$ 23,295	$ 63,503	$ 118,767	$ 176,079	$ 204,955	$ 246,616	$ 255,863	$ 261,106	$ 267,776	$ 273,094
2014		19,225	83,063	137,341	174,524	197,272	213,888	225,236	234,459	237,145
2015			20,331	85,047	139,205	186,688	215,408	232,143	239,150	246,031
2016				28,517	102,173	201,019	254,872	296,863	356,812	404,742
2017					36,503	96,312	162,829	243,088	261,225	306,713
2018						28,101	99,598	155,212	198,697	244,284
2019							31,674	97,466	147,985	200,521
2020								28,106	80,408	129,168
2021									28,586	86,056
2022										33,446
Total										$ 2,161,200
	Reserves for loss and loss adjustment expenses before 2013, net of reinsurance									36,484
	Reserves for loss and loss adjustment expenses, net of reinsurance									$ 1,749,386

Commercial Automobile
(In thousands)

	Loss and Loss Expenses Incurred, Net of Reinsurance										As of December 31, 2022	
	For the Year Ended December 31,											
	Unaudited											
Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	IBNR	Cumulative Number of Reported Claims
2013	$ 327,514	$ 349,136	$ 368,894	$ 376,243	$ 366,646	$ 366,166	$ 365,275	$ 364,207	$ 364,439	$ 364,607	$ 103	44
2014		363,891	385,241	416,802	414,732	412,120	411,920	407,470	406,589	407,970	403	47
2015			389,577	415,446	421,522	429,608	430,557	428,981	426,107	427,923	1,362	53
2016				429,329	429,074	440,334	441,408	438,192	437,884	439,682	2,244	52
2017					430,440	428,419	430,198	434,170	439,991	444,472	4,800	47
2018						442,610	462,544	478,966	494,315	521,667	10,720	46
2019							483,019	488,291	504,813	530,876	22,483	45
2020								523,736	428,759	442,163	31,172	30
2021									614,422	596,810	111,412	38
2022										792,553	342,905	40
Total										$ 4,968,723		

	Cumulative Paid Claims and Claim Adjustment Expenses, Net of Reinsurance									
	For the Year Ended December 31,									
	Unaudited									
Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2013	$ 142,929	$ 218,596	$ 267,253	$ 321,855	$ 342,961	$ 352,792	$ 361,499	$ 362,252	$ 362,624	$ 364,147
2014		155,564	237,648	326,854	364,054	392,658	400,577	403,273	404,259	405,004
2015			159,987	263,663	323,429	368,448	396,018	409,426	415,170	418,993
2016				183,160	277,665	339,657	388,554	407,989	418,499	426,955
2017					180,545	267,326	326,861	371,761	401,844	419,545
2018						180,056	281,475	350,110	412,874	463,117
2019							185,236	290,124	374,479	440,378
2020								142,815	228,357	308,451
2021									180,860	319,941
2022										253,206
Total										$ 3,819,737
					Reserves for loss and loss adjustment expenses before 2013, net of reinsurance					3,731
					Reserves for loss and loss adjustment expenses, net of reinsurance					$ 1,152,717

Short-tail lines
(In thousands)

	Loss and Loss Expenses Incurred, Net of Reinsurance										As of December 31, 2022	
	For the Year Ended December 31,											
	Unaudited											
Accident Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**IBNR**	**Cumulative Number of Reported Claims**
2013	$ 565,391	$ 573,905	$ 565,810	$ 549,518	$ 548,169	$ 544,681	$ 542,863	$ 542,148	$ 541,857	$ 541,728	$ 1,125	25
2014		691,971	697,845	659,563	658,252	659,230	659,568	662,012	660,250	658,557	1,549	30
2015			736,523	726,287	723,206	721,789	713,899	712,361	710,663	710,978	3,842	32
2016				771,390	775,308	762,460	757,009	751,530	753,952	752,604	3,363	34
2017					752,727	753,326	747,630	747,003	746,603	747,869	8,195	42
2018						759,634	748,931	746,265	744,544	742,289	11,491	48
2019							721,073	701,241	691,015	684,708	18,311	43
2020								900,683	904,580	922,333	24,934	38
2021									828,187	832,183	57,246	36
2022										944,842	235,121	32
Total										$ 7,538,091		

	Cumulative Paid Claims and Claim Adjustment Expenses, Net of Reinsurance									
	For the Year Ended December 31,									
	Unaudited									
Accident Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
2013	$ 310,750	$ 480,140	$ 526,031	$ 527,789	$ 534,569	$ 535,756	$ 536,416	$ 537,582	$ 538,985	$ 539,081
2014		368,865	587,607	609,948	628,440	643,619	650,816	653,272	653,784	654,089
2015			392,921	608,748	664,084	686,029	695,563	701,341	708,065	708,214
2016				416,611	669,891	711,385	726,549	731,651	738,390	739,244
2017					445,285	689,662	718,538	730,688	734,509	741,685
2018						414,910	661,741	708,214	725,138	725,228
2019							404,975	615,869	645,374	657,819
2020								460,434	784,670	845,714
2021									405,512	698,092
2022										472,024
Total										$ 6,781,190
Reserves for loss and loss adjustment expenses before 2013, net of reinsurance										4,727
Reserves for loss and loss adjustment expenses, net of reinsurance										$ 761,628

Reinsurance & Monoline Excess

Casualty
(In thousands)

	Loss and Loss Expenses Incurred, Net of Reinsurance										As of December 31, 2022
	For the Year Ended December 31,										
	Unaudited										
Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	IBNR
2013	$ 318,365	$ 269,340	$ 272,475	$ 282,307	$ 291,105	$ 298,317	$ 302,595	$ 301,415	$ 302,672	$ 302,135	$ 12,543
2014		319,454	318,904	318,443	330,382	324,693	324,150	335,883	336,990	341,649	16,184
2015			259,019	231,430	230,085	252,277	293,094	303,261	304,805	309,317	19,728
2016				240,655	252,638	245,268	267,850	301,663	301,355	310,451	24,928
2017					231,082	220,699	238,883	261,482	281,254	298,486	36,491
2018						221,193	210,397	230,790	246,898	261,148	44,474
2019							236,318	230,460	239,131	240,848	72,504
2020								299,602	293,345	289,878	136,865
2021									359,952	346,736	243,222
2022										446,676	402,204
Total										$ 3,147,324	

	Cumulative Paid Claims and Claim Adjustment Expenses, Net of Reinsurance									
	For the Year Ended December 31,									
	Unaudited									
Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2013	$ 28,945	$ 63,745	$ 108,852	$ 144,331	$ 178,060	$ 205,553	$ 225,882	$ 241,573	$ 254,273	$ 263,467
2014		21,297	68,374	115,779	155,070	197,996	227,448	252,155	271,512	284,360
2015			17,888	48,442	91,140	141,254	178,521	205,289	233,643	250,880
2016				19,904	61,770	100,200	140,299	171,719	205,354	225,077
2017					16,469	40,085	69,350	123,614	147,311	175,059
2018						11,076	40,953	77,498	109,474	141,553
2019							14,560	39,091	64,020	94,856
2020								20,750	49,664	81,789
2021									10,918	43,838
2022										11,595
Total										$ 1,572,474
					Reserves for loss and loss adjustment expenses before 2013, net of reinsurance					417,861
					Reserves for loss and loss adjustment expenses, net of reinsurance					$ 1,992,711

Monoline Excess
(In thousands)

	Loss and Loss Expenses Incurred, Net of Reinsurance										As of December 31, 2022
	For the Year Ended December 31,										
	Unaudited										
Accident Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**IBNR**
2013	$ 63,995	$ 50,355	$ 48,143	$ 44,162	$ 40,207	$ 35,120	$ 31,752	$ 29,758	$ 25,701	$ 23,306	$ 5,184
2014		63,561	57,650	49,570	45,823	41,671	42,541	42,618	40,652	35,707	7,484
2015			69,977	57,897	50,099	45,115	39,682	39,781	36,774	30,104	8,683
2016				72,657	70,281	71,404	64,957	65,485	65,222	61,432	13,634
2017					76,701	80,508	70,749	71,025	66,795	62,647	16,529
2018						77,820	72,505	71,448	66,180	57,847	20,826
2019							78,929	77,482	76,242	73,978	21,878
2020								84,354	83,468	80,452	35,638
2021									98,110	87,980	48,670
2022										98,923	66,865
Total										$ 612,376	

	Cumulative Paid Claims and Claim Adjustment Expenses, Net of Reinsurance									
	For the Year Ended December 31,									
	Unaudited									
Accident Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
2013	$ 647	$ 1,897	$ 3,588	$ 3,008	$ 3,396	$ 4,418	$ 5,349	$ 6,476	$ 8,805	$ 9,490
2014		377	2,341	3,354	4,175	5,808	7,595	11,154	11,938	13,491
2015			2,069	2,481	3,272	4,099	4,416	5,083	5,421	6,457
2016				2,498	4,783	5,573	5,928	7,685	9,883	11,819
2017					6,282	12,810	15,356	17,327	18,375	19,275
2018						6,141	8,230	9,368	10,359	12,414
2019							6,241	10,884	12,728	15,436
2020								4,869	8,699	10,471
2021									4,586	6,026
2022										5,898
Total										$ 110,777
Reserves for loss and loss adjustment expenses before 2013, net of reinsurance										644,712
Reserves for loss and loss adjustment expenses, net of reinsurance										$ 1,146,311

Property
(In thousands)

	Loss and Loss Expenses Incurred, Net of Reinsurance For the Year Ended December 31, Unaudited										As of December 31, 2022
Accident Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**IBNR**
2013	$ 141,380	$ 112,616	$ 114,100	$ 111,937	$ 112,572	$ 111,890	$ 109,697	$ 107,552	$ 106,316	$ 105,711	$ 72
2014		112,907	96,492	97,195	99,941	99,176	98,838	99,244	97,315	96,656	177
2015			127,118	117,452	131,625	130,301	129,398	131,071	130,642	131,342	1,061
2016				167,901	174,423	181,634	180,885	186,159	184,150	185,249	1,482
2017					206,560	200,394	199,410	197,978	191,867	192,379	1,209
2018						108,220	112,068	103,104	105,101	102,953	1,754
2019							103,113	77,062	81,858	81,014	3,637
2020								114,590	117,867	116,774	3,946
2021									133,938	146,761	28,634
2022										167,039	78,818
Total										$ 1,325,878	

	Cumulative Paid Claims and Claim Adjustment Expenses, Net of Reinsurance For the Year Ended December 31, Unaudited									
Accident Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
2013	$ 36,577	$ 74,572	$ 92,625	$ 101,538	$ 104,323	$ 106,043	$ 107,603	$ 104,403	$ 104,388	$ 105,059
2014		38,780	66,829	82,119	88,257	91,390	93,099	94,565	95,198	95,633
2015			53,474	89,121	109,051	118,552	122,566	125,439	126,848	127,995
2016				78,920	133,516	157,404	168,506	175,949	178,060	182,411
2017					72,126	141,340	171,675	179,749	182,609	185,823
2018						33,991	65,079	82,259	87,736	94,870
2019							23,081	54,499	68,457	71,054
2020								26,574	65,575	86,888
2021									15,235	71,797
2022										25,584
Total										$ 1,047,114
Reserves for loss and loss adjustment expenses before 2013, net of reinsurance										1,036
Reserves for loss and loss adjustment expenses, net of reinsurance										$ 279,800

The reconciliation of the net incurred and paid claims development tables to the reserves for losses and loss expenses in the consolidated balance sheet is as follows:

(In thousands)	**December 31, 2022**
Undiscounted reserves for loss and loss expenses, net of reinsurance:	
Other liability	$ 5,536,127
Workers' compensation	1,921,971
Professional liability	1,749,386
Commercial automobile	1,152,717
Short-tail lines	761,628
Other	124,586
Insurance	11,246,415
Casualty	1,992,711
Monoline excess	1,146,311
Property	279,800
Reinsurance & Monoline Excess	3,418,822
Total undiscounted reserves for loss and loss expenses, net of reinsurance	$ 14,665,237

(In thousands)	**December 31, 2022**
Due from reinsurers on unpaid claims:	
Other liability	$ 730,029
Workers' compensation	221,769
Professional liability	1,019,810
Commercial automobile	67,895
Short-tail lines	414,549
Other	97,511
Insurance	2,551,563
Casualty	108,390
Monoline excess	35,926
Property	66,465
Reinsurance & Monoline Excess	210,781
Total due from reinsurers on unpaid claims	$ 2,762,344

(In thousands)	December 31, 2022
Loss reserve discount:	
Other liability	$ —
Workers' compensation	(12,491)
Professional liability	—
Commercial automobile	—
Short-tail lines	—
Other	—
Insurance	(12,491)
Casualty	(84,668)
Monoline excess	(319,199)
Property	—
Reinsurance & Monoline Excess	(403,867)
Total loss reserve discount	$ (416,358)
Total gross reserves for loss and loss expenses	$ 17,011,223

The following is supplementary information regarding average historical claims duration as of December 31, 2022:

Insurance

	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance									
Years	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Other liability	6.9 %	13.7 %	16.3 %	16.0 %	13.1 %	9.2 %	6.7 %	4.2 %	2.7 %	2.8 %
Workers' compensation	23.5 %	29.9 %	15.7 %	9.1 %	5.5 %	3.2 %	2.1 %	1.7 %	1.5 %	1.0 %
Professional liability	7.4 %	17.6 %	17.7 %	15.7 %	9.1 %	10.3 %	5.1 %	2.6 %	3.0 %	1.9 %
Commercial automobile	36.1 %	20.9 %	15.5 %	11.5 %	6.7 %	2.8 %	1.6 %	0.4 %	0.1 %	0.4 %
Short-tail lines	54.7 %	32.8 %	5.8 %	2.0 %	1.0 %	0.8 %	0.4 %	0.1 %	0.2 %	— %

Reinsurance & Monoline Excess

	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance									
Years	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Casualty	5.7 %	10.9 %	12.5 %	13.7 %	11.0 %	9.3 %	7.4 %	5.5 %	4.0 %	3.0 %
Monoline excess	6.1 %	4.7 %	3.1 %	1.7 %	2.6 %	3.3 %	4.6 %	3.5 %	7.2 %	2.9 %
Property	30.5 %	33.2 %	16.1 %	5.8 %	3.6 %	1.7 %	1.6 %	0.3 %	0.1 %	— %

The table below provides a reconciliation of the beginning and ending reserve balances:

(In thousands)	2022	2021	2020
Net reserves at beginning of year	$ 12,848,362	$ 11,620,393	$ 10,697,998
Cumulative effect adjustment resulting from changes in accounting principles (1)	—	—	5,927
Restated net reserves at beginning of period	12,848,362	11,620,393	10,703,925
Net provision for losses and loss expenses:			
Claims occurring during the current year (2)	5,774,713	4,921,191	4,432,937
Increase in estimates for claims occurring in prior years (3)	54,511	863	627
Loss reserve discount accretion	32,526	31,906	35,142
Total	5,861,750	4,953,960	4,468,706
Net payments for claims:			
Current year	1,068,577	887,896	921,054
Prior year	3,279,333	2,777,798	2,677,595
Total	4,347,910	3,665,694	3,598,649
Foreign currency translation	(113,323)	(60,297)	46,411
Net reserves at end of year	14,248,879	12,848,362	11,620,393
Ceded reserve at end of year	2,762,344	2,542,526	2,164,037
Gross reserves at end of year	$ 17,011,223	$ 15,390,888	$ 13,784,430
Net change in premiums and losses occurring in prior years:			
Increase in estimates for claims occurring in prior years (3)	$ (54,511)	$ (863)	$ (627)
Retrospective premium adjustments for claims occurring in prior years (4)	18,106	7,510	16,807
Net premium and reserve development on prior years	$ (36,405)	$ 6,647	$ 16,180

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(1) The cumulative effect adjustment resulting from changes in accounting principals relates to the allowance for expected credit losses on reinsurance recoverables that commenced on January 1, 2020 due to the adoption of ASU 2016-13. See Note 1 for more details.

(2) Claims occurring during the current year are net of loss reserve discounts of $35 million, $21 million and $10 million in 2022, 2021, and 2020, respectively.

(3) The change in estimates for claims occurring in prior years is net of loss reserve discount. On an undiscounted basis, the estimates for claims occurring in prior years increased by $16 million in 2022, decreased by $19 million in 2021, and decreased by $21 million in 2020, respectively.

(4) For certain retrospectively rated insurance polices and reinsurance agreements, changes in loss and loss expenses for prior years are offset by additional or return premiums.

The COVID-19 global pandemic has impacted, and may further impact, the Company’s results through its effect on claim frequency and severity. Loss cost trends have been impacted and may be further impacted by COVID-19-related claims in certain lines of business. Losses incurred from COVID-19-related claims have been offset, to a certain extent, by lower claim frequency in certain lines of our businesses; however, as the economy and legal systems have reopened, the benefit of lower claim frequency has partially abated. The ultimate net impact of COVID-19 on the Company remains uncertain. New variants of the COVID-19 virus continue to create risks with respect to loss costs and the potential for renewed impact of the other effects of COVID-19 associated with economic conditions, inflation, and social distancing and work from home rules.

Most of the COVID-19-related claims reported to the Company to date involve certain short-tailed lines of business, including contingency and event cancellation, business interruption, and film production delay. The Company has also received COVID-19-related claims for longer-tailed casualty lines of business such as workers’ compensation and other liability; however, the estimated incurred loss impact for these reported claims are not material at this time. Given the continuing uncertainty regarding the pandemic's pervasiveness, the future impact that the pandemic may have on claim frequency and severity remains uncertain at this time.

The Company has estimated the potential COVID-19 impact to its contingency and event cancellation, workers’ compensation, and other lines of business under a number of possible scenarios; however, due to COVID-19’s continued evolving impact, there remains uncertainty around the Company's COVID-19 reserves. In addition, should the pandemic continue or worsen as a result of new COVID-19 variants or otherwise, governments in the jurisdictions where we operate may impose restrictions, including lockdowns, as well as renew their efforts to expand policy coverage terms beyond the policy's intended coverage. Accordingly, losses arising from these actions, and the other factors described above, could exceed the Company's reserves established for those related policies.

As of December 31, 2022, the Company had recognized losses for COVID-19-related claims activity, net of reinsurance, of approximately $341 million, of which $290 million relates to the Insurance segment and $51 million relates to the Reinsurance & Monoline Excess segment. Such $341 million of COVID-19-related losses included $337 million of reported losses and $4 million of IBNR. For the year ended December 31, 2022, the Company recognized current accident year losses for COVID-19-related claims activity, net of reinsurance, of approximately $5 million, of which $3 million relates to the Insurance segment and $2 million relates to the Reinsurance & Monoline Excess segment.

Unfavorable prior year development (net of additional and return premiums) was $36 million in 2022.

Insurance – Reserves for the Insurance segment developed unfavorably by $40 million in 2022 (net of additional and return premiums). The unfavorable development in the segment primarily related to COVID-19 losses at two businesses. These businesses wrote policies providing coverage for event cancellation and film production delay which were heavily impacted by losses directly caused by the COVID-19 pandemic. Most of this COVID-19 related unfavorable development emerged during the third quarter as a result of settlements of claims at values higher than our expectations. However, the Company believes that as a result of these settlements the remaining level of uncertainty around the ultimate value of its known COVID-19 claims has been significantly reduced.

The unfavorable development mentioned above also includes favorable prior year development for the Insurance segment primarily attributable to the 2020 and 2021 accident years and unfavorable development on the 2015 through 2019 accident years. The favorable development on the 2020 and 2021 accident years was concentrated in certain casualty lines of business including general liability, professional liability, and workers' compensation. The Company experienced lower reported claim frequency in these lines of business during 2020 and 2021 relative to historical averages, and continued to experience lower reported incurred losses relative to our expectations for these accident years as they developed during 2022. These trends began in 2020 and we believe were caused by the impacts of the COVID-19 pandemic, including for example, lockdowns, reduced driving/traffic and increased work from home. Due to the ongoing uncertainty regarding the ultimate impacts of the pandemic on accident years 2020 and 2021 incurred losses, the Company has been cautious in reacting to these lower trends in setting and updating its loss ratio estimates for these years. As these accident years have continued to mature, the Company has continued to recognize some of the favorable reported experience in its ultimate loss estimates made during 2022.

The unfavorable development on the 2015 through 2019 accident years was concentrated in the general liability and professional liability, including medical professional, lines of business, as well as commercial auto liability. The development was driven by a larger than expected number of large losses reported. The Company believes social inflation is contributing to an increase in the frequency of large losses for these accident years. Social inflation can include higher settlement demands from plaintiffs, use of tactics such as litigation funding by the plaintiffs' bar, negative public sentiment towards large businesses and corporations, and erosion of tort reforms, among others.

Reinsurance & Monoline Excess – Reserves for the Reinsurance & Monoline Excess segment developed favorably by $4 million in 2022 (net of additional and return premiums). The overall favorable development for the segment was driven mainly by favorable development in excess workers compensation, substantially offset by unfavorable development in the professional liability and non-proportional reinsurance assumed liability lines of business. The favorable excess workers' compensation development was spread across most prior accident years, including 2012 and prior years, and was driven by a review of the Company's claim reporting patterns as well as a number of favorable claim settlements relative to expectations. The unfavorable professional liability and non-proportional reinsurance assumed liability development was concentrated mainly in accident years 2016 through 2018 and was associated primarily with our U.S. assumed reinsurance business and related to accounts insuring construction projects and professional liability exposures.

Favorable prior year development (net of additional and return premiums) was $7 million in 2021.

Insurance – Reserves for the Insurance segment developed favorably by $20 million in 2021 (net of additional and return premiums). The overall favorable development in 2021 was attributable to favorable development on the 2020 accident year, partially offset by adverse development on the 2016 through 2019 accident years.

The favorable development on the 2020 accident year was largely concentrated in the commercial auto liability and other liability lines of business, including commercial multi-peril liability. During 2020 the Company achieved larger rate increases in these lines of business than were contemplated in its budget and in its initial loss ratio selections. The Company also experienced significantly lower reported claim frequency in these lines in 2020 relative to historical averages, and lower reported incurred losses relative to its expectations. We believe that the lower claim frequency and lower reported incurred losses were caused by the impacts of the COVID-19 pandemic, for example, lockdowns, reduced driving and traffic, work from home, and court closures. However, due to the uncertainty regarding the ultimate impacts of the pandemic on accident year 2020 incurred losses, the Company elected not to react to these lower reported trends during 2020. As more information became available and the 2020 accident year continued to mature, during 2021 the Company started to recognize favorable accident year 2020 development in response to the continuing favorable reported loss experience relative to its expectations.

The adverse development on the 2016 through 2019 accident years is concentrated largely in the other liability line of business, including commercial multi-peril liability, but is also seen to a lesser extent in commercial auto liability. The adverse development for these accident years is driven by a higher than expected number of large losses reported, and particularly impacted the directors and officers liability, lawyers professional liability, and excess and surplus lines casualty classes of business. We also believe that increased social inflation is contributing to the increased number of large losses, for example, higher jury awards on cases which go to trial, and the corresponding higher demands from plaintiffs and higher values required to reach settlement on cases which do not go to trial.

Reinsurance & Monoline Excess – Reserves for the Reinsurance & Monoline Excess segment developed unfavorably by $13 million in 2021. The unfavorable development in the segment was driven by the non-proportional reinsurance assumed liability and other liability lines of business, related primarily to accident years 2017 through 2019, and was partially offset by favorable development in excess workers' compensation business which was spread across many prior accident years. The unfavorable non-proportional reinsurance assumed liability and other liability development was associated with our U.S. and U.K. assumed reinsurance business, and related primarily to accounts insuring construction projects and professional liability exposures.

Favorable prior year development (net of additional and return premiums) was $16 million in 2020.

Insurance - Reserves for the Insurance segment developed favorably by $24 million in 2020 (net of additional and return premiums). Continuing the pattern seen in recent years, the overall favorable development in 2020 resulted from more significant favorable development on workers' compensation business, which was partially offset by unfavorable development on professional liability, including excess professional liability

For workers' compensation, the favorable development was spread across almost all prior accident years, including prior to 2011, but was most significant in accident years 2016 through 2019. The favorable workers' compensation development reflects a continuation of the benign loss cost trends experienced during recent years, particularly the favorable claim frequency trends (i.e., number of reported claims per unit of exposure). The long term trend of declining workers' compensation frequency can be attributable to improved workplace safety. Loss severity trends were also aided by our continued investment in claims handling initiatives such as medical case management services and vendor savings through usage of preferred provider networks and pharmacy benefit managers. Reported workers' compensation losses in 2020 continued to be below our expectations at most of our businesses, and were below the assumptions underlying our initial loss ratio picks and our previous reserve estimates for most prior accident years.

For professional liability business, unfavorable development was driven mainly by large losses reported in the directors and officers ("D&O"), lawyers professional and excess hospital professional liability lines of business. For these lines of business, we continue to see an increase in the number of large losses reported and a lengthening of the reporting "tail" beyond historical levels. We believe a contributing cause is rising social inflation in the form of, for example, higher jury awards on cases that go to trial, and the corresponding higher demands from plaintiffs and higher values required to reach settlement on cases that do not go to trial. The unfavorable development for professional liability affected mainly accident years 2016 through 2018.

Reinsurance & Monoline Excess – Reserves for the Reinsurance & Monoline Excess segment developed unfavorably by $8 million in 2020. The unfavorable development in the segment was driven by non-proportional assumed liability business written in both the U.S. and U.K., and was partially offset by favorable development on excess workers' compensation business. The unfavorable non-proportional assumed liability development was concentrated in accident years 2014 through 2018, and related primarily to accounts insuring construction projects and professional liability exposures.

Environmental and Asbestos — To date, known environmental and asbestos claims have not had a material impact on the Company's operations, because its subsidiaries generally did not insure large industrial companies that are subject to significant environmental or asbestos exposures prior to 1986 when an absolute exclusion was incorporated into standard policy language.

The Company's net reserves for losses and loss expenses relating to asbestos and environmental claims on policies written before adoption of the absolute exclusion was $20 million at both December 31, 2022 and 2021. The estimation of these liabilities is subject to significantly greater than normal variation and uncertainty because it is difficult to make an actuarial estimate of these liabilities due to the absence of a generally accepted actuarial methodology for these exposures and the potential effect of significant unresolved legal matters, including coverage issues, as well as the cost of litigating the legal issues. Additionally, the determination of ultimate damages and the final allocation of such damages to financially responsible parties are highly uncertain.

Discounting — The Company discounts its liabilities for certain workers' compensation reserves. The amount of workers' compensation reserves that were discounted was $1,267 million and $1,387 million at December 31, 2022 and 2021, respectively. The aggregate net discount for those reserves, after reflecting the effects of ceded reinsurance, was $416 million and $452 million at December 31, 2022 and 2021, respectively. At December 31, 2022, discount rates by year ranged from 0.7% to 6.5%, with a weighted average discount rate of 3.4%.

Substantially all discounted workers' compensation reserves (97% of total discounted reserves at December 31, 2022) are excess workers' compensation reserves. In order to properly match loss expenses with income earned on investment securities supporting the liabilities, reserves for excess workers' compensation business are discounted using risk-free discount rates determined by reference to the U.S. Treasury yield curve. These rates are determined annually based on the weighted average rate for the period. Once established, no adjustments are made to the discount rate for that period, and any increases or decreases in loss reserves in subsequent years are discounted at the same rate, without regard to when any such adjustments are recognized. The expected loss and loss expense payout patterns subject to discounting are derived from the Company's loss payout experience.

The Company also discounts reserves for certain other long-duration workers' compensation reserves (representing approximately 3% of total discounted reserves at December 31, 2022), including reserves for quota share reinsurance and reserves related to losses regarding occupational lung disease. These reserves are discounted at statutory rates prescribed or permitted by the Department of Insurance of the State of Delaware.

(15) Premiums and Reinsurance Related Information

The Company reinsures a portion of its insurance exposures in order to reduce its net liability on individual risks and catastrophe losses. Reinsurance coverage and retentions vary depending on the line of business, location of the risk and nature of loss. The Company's reinsurance purchases include the following: property reinsurance treaties that reduce exposure to large individual property losses and catastrophe events; casualty reinsurance treaties that reduce its exposure to large individual casualty losses, workers' compensation catastrophe losses and casualty losses involving multiple claimants or insureds; and facultative reinsurance that reduces exposure on individual policies or risks for losses that exceed treaty reinsurance capacity. Depending on the business, the Company purchases specific additional reinsurance to supplement the above programs.

The following is a summary of reinsurance financial information:

(In thousands)	2022	2021	2020
Written premiums:			
Direct	$ 10,695,138	$ 9,531,050	$ 7,874,050
Assumed	1,213,914	1,169,084	973,597
Ceded	(1,904,982)	(1,837,267)	(1,585,210)
Total net written premiums	$ 10,004,070	$ 8,862,867	$ 7,262,437
Earned premiums:			
Direct	$ 10,217,891	$ 8,825,568	$ 7,489,470
Assumed	1,226,801	1,085,804	941,321
Ceded	(1,883,263)	(1,805,341)	(1,499,948)
Total net earned premiums	$ 9,561,429	$ 8,106,031	$ 6,930,843
Ceded losses and loss expenses incurred	$ 1,269,338	$ 1,236,960	$ 955,630
Ceded commission earned	$ 477,437	$ 449,739	$ 358,253

The following table presents the rollforward of the allowance for expected credit losses for premiums and fees receivable for the years ended December 31, 2022 and 2021:

(In thousands)	2022	2021
Allowance for expected credit losses, beginning of period	$ 25,218	$ 22,883
Change in allowance for expected credit losses	5,442	2,335
Allowance for expected credit losses, end of period	$ 30,660	$ 25,218

Estimated amounts due from reinsurers are reported net of an allowance for expected credit losses of $8.1 million, $7.7 million and $7.8 million as of December 31, 2022, 2021 and 2020, respectively. The following table presents the rollforward of the allowance for expected credit losses associated with due from reinsurers for the years ended December 31, 2022 and 2021:

(In thousands)	2022	2021
Allowance for expected credit losses, beginning of period	$ 7,713	$ 7,801
Change in allowance for expected credit losses	351	(88)
Allowance for expected credit losses, end of period	$ 8,064	$ 7,713

The following table presents the amounts due from reinsurers as of December 31, 2022:

(In thousands)

Lloyd’s of London	$	347,927
Berkshire Hathaway		332,034
Munich Re		306,530
Partner Re		275,410
Hannover Re Group		191,264
Swiss Re		189,591
Lifson Re		180,724
Renaissance Re		163,973
Everest Re		155,847
Liberty Mutual		96,402
Axis Capital		81,538
Korean Re		59,884
Fairfax Financial		55,228
Axa Insurance		46,058
Arch Capital Group		45,663
Sompo Holdings Group		36,157
Helvetia Holdings Group		30,823
Markel Corp Group		30,216
Validus Holdings Group		24,548
TOA Re		22,945
Other reinsurers less than $20,000		342,275
Subtotal		3,015,037
Residual market pools (1)		180,757
Allowance for expected credit losses		(8,064)
Total	$	3,187,730

(1) Many states require licensed insurers that provide workers' compensation insurance to participate in programs that provide workers' compensation to employers that cannot procure coverage from an insurer on a voluntary basis. Insurers can fulfill this residual market obligation by participating in pools where results are shared by the participating companies. The Company acts as a servicing carrier for workers' compensation pools in certain states. As a servicing carrier, the Company writes residual market business directly and then cedes 100% of this business to the respective pool. As a servicing carrier, the Company receives fee income for its services. The Company does not retain underwriting risk, and credit risk is limited as ceded balances are jointly shared by all the pool members.

(16) Indebtedness

Indebtedness consisted of the following as of December 31, 2022 (the difference between the face value and the carrying value is unamortized discount and debt issuance costs):

(In thousands)	Interest Rate	Face Value	Carrying Value 2022	Carrying Value 2021
Senior notes and other debt due on:				
January 1, 2022 (1)	8.700%	$ —	$ —	$ 76,503
March 15, 2022 (1)	4.625%	—	—	349,923
February 15, 2037	6.250%	250,000	248,446	248,336
August 1, 2044	4.750%	350,000	346,020	345,836
May 12, 2050	4.000%	470,000	490,721	491,478
March 30, 2052	3.550%	400,000	394,213	394,015
September 30, 2061	3.150%	350,000	342,945	342,761
Subsidiary debt and other (2)	Various	6,478	6,478	10,564
Total senior notes and other debt		$ 1,826,478	$ 1,828,823	$ 2,259,416
Subordinated debentures due on:				
March 30, 2058	5.700%	$ 185,000	$ 179,328	$ 179,166
December 30, 2059	5.100%	300,000	291,179	290,941
September 30, 2060	4.250%	250,000	244,523	244,378
March 30, 2061	4.125%	300,000	293,341	293,167
Total subordinated debentures		$ 1,035,000	$ 1,008,371	$ 1,007,652

(1) In the first quarter of 2022, the Company repaid at maturity its $77 million aggregate principal amount of 8.7% senior notes in January and its $350 million aggregate principal amount of 4.625% senior notes in March.
(2) Subsidiary debt is due as follows: $5 million in 2024 and $2 million in 2025, partially offset by the unamortized cost of $0.8 million due to entering into the $300 million senior unsecured revolving credit facility.

On April 1, 2022, the Company entered into a senior unsecured revolving credit facility that provides for revolving, unsecured borrowings up to an aggregate of $300 million with a $50 million sublimit for letters of credit. The Company may increase the amount available under the facility to a maximum of $500 million subject to obtaining lender commitments for the increase and other customary conditions. Borrowings under the facility may be used for working capital and other general corporate purposes. All borrowings under the facility must be repaid by April 1, 2027, except that letters of credit outstanding on that date may remain outstanding until April 1, 2028 (or such later date approved by all lenders). Our ability to utilize the facility is conditioned on the satisfaction of representations, warranties and covenants that are customary for facilities of this type. As of December 31, 2022, there were no borrowings outstanding under the facility.

(17) Income Taxes

Income tax expense (benefit) consists of:

(In thousands)	Current Expense	Deferred (Benefit) Expense	Total
December 31, 2022			
Domestic	$ 295,849	$ (27,544)	$ 268,305
Foreign	42,890	23,532	66,422
Total expense (benefit)	$ 338,739	$ (4,012)	$ 334,727
December 31, 2021			
Domestic	$ 239,090	$ 2,752	$ 241,842
Foreign	—	10,048	10,048
Total expense	$ 239,090	$ 12,800	$ 251,890
December 31, 2020			
Domestic	$ 162,305	$ 17	$ 162,322
Foreign	23,375	(13,880)	9,495
Total expense (benefit)	$ 185,680	$ (13,863)	$ 171,817

Income before income taxes from domestic operations was $1,240 million, $1,224 million and $831 million for the years ended December 31, 2022, 2021 and 2020, respectively. Income (loss) before income taxes from foreign operations was $480 million, $59 million and ($126) million for the years ended December 31, 2022, 2021 and 2020, respectively.

A reconciliation of the income tax expense and the amounts computed by applying the Federal and foreign income tax rate of 21% for 2022, 2021 and 2020 to pre-tax income are as follows:

(In thousands)	2022	2021	2020
Computed "expected" tax expense	$ 361,133	$ 269,410	$ 148,008
Tax-exempt investment income	(10,815)	(11,380)	(12,770)
Change in valuation allowance	(28,064)	2,974	46,238
Impact of foreign tax rates	(453)	(2,368)	6,753
State and local taxes	8,976	4,230	2,561
Other, net	3,950	(10,976)	(18,973)
Total expense	$ 334,727	$ 251,890	$ 171,817

At December 31, 2022 and 2021, the tax effects of differences that give rise to significant portions of the deferred tax asset and deferred tax liability are as follows:

(In thousands)	2022	2021
Deferred tax asset:		
Loss reserve discounting	$ 192,181	$ 162,636
Unearned premiums	180,326	163,143
Unrealized investment losses	228,456	—
Net operating losses & foreign tax credits	58,182	88,502
Other-than-temporary impairments	5,935	5,176
Employee compensation plans	63,313	61,301
Other	72,536	54,269
Gross deferred tax asset	800,929	535,027
Less valuation allowance	(47,166)	(75,230)
Deferred tax asset	753,763	459,797
Deferred tax liability:		
Amortization of intangibles	13,973	12,787
Loss reserve discounting - transition rule	14,843	19,796
Deferred policy acquisition costs	157,055	137,893
Unrealized investment gains	—	36,850
Property, furniture and equipment	45,887	43,186
Investment funds	125,525	101,999
Other	67,479	67,331
Deferred tax liability	424,762	419,842
Net deferred tax asset	$ 329,001	$ 39,955

The Company had a current tax net receivable of $5 million and $3 million at December 31, 2022 and 2021, respectively. At December 31, 2022, the Company had foreign net operating loss carryforwards of $4 million that begin to expire in 2027 and an additional $225 million that have no expiration date. At December 31, 2022, the Company had a valuation allowance of $47 million as compared to $75 million at December 31, 2021. The Company has provided a valuation allowance against the utilization of foreign tax credits and the future net operating loss carryforward benefits of certain foreign operations. The statute of limitations for the Company's U.S. Federal income tax returns has closed for all years through December 31, 2018.

The realization of the deferred tax asset is dependent upon the Company's ability to generate sufficient taxable income in future periods. Based on historical results and the prospects for future current operations, management anticipates that it is more likely than not that future taxable income will be sufficient for the realization of this asset.

The Tax Cuts and Jobs Act of 2017 (the "Tax Act") provided for a reduction of the U.S. corporate income tax rate from 35% to 21% effective January 1, 2018. The U.S. tax law requires insurance reserves to be discounted for tax purposes. The Tax Act modified this computation. The IRS issued revised discount factors to be applied to the 2017 reserves, which increased the beginning of year 2018 deferred tax asset for loss reserve discounting. Under the related transition rule, a deferred tax liability was established which will be included in taxable income over the eight year period that began in 2018.

The Company has not provided U.S. deferred income taxes on the undistributed earnings of approximately $169 million of its non-U.S. subsidiaries since these earnings are intended to be permanently reinvested in the non-U.S. subsidiaries. In the future, if such earnings were distributed the Company projects that the incremental tax, if any, will be immaterial.

(18) Dividends from Subsidiaries and Statutory Financial Information

The Company's insurance subsidiaries are restricted by law as to the amount of dividends they may pay without the approval of regulatory authorities. The Company's lead insurer, Berkley Insurance Company ("BIC"), directly or indirectly owns all of the Company's other insurance companies. During 2023, the maximum amount of dividends that can be paid by BIC without such approval is approximately $1.2 billion.

BIC's combined net income and statutory capital and surplus, as determined in accordance with statutory accounting practices ("SAP"), are as follows:

(In thousands)	2022	2021	2020
Net income	$ 1,358,813	$ 1,040,342	$ 771,990
Statutory capital and surplus	$ 8,330,587	$ 6,817,535	$ 6,188,121

The significant variances between SAP and GAAP are that for statutory purposes bonds are carried at amortized cost, unrealized gains and losses on equity securities are recorded in surplus, acquisition costs are charged to income as incurred, deferred Federal income taxes are subject to limitations, excess and assumed workers' compensation reserves are discounted at different discount rates and certain assets designated as "non-admitted assets" are charged against surplus. The Commissioner of Insurance of the State of Delaware has allowed BIC to recognize a non-tabular discount on certain workers' compensation loss reserves, which is a permitted practice that differs from SAP. The effect of using this permitted practice was an increase to BIC's statutory capital and surplus by $171 million at December 31, 2022.

The National Association of Insurance Commissioners ("NAIC") has risk-based capital ("RBC") requirements that require insurance companies to calculate and report information under a risk-based formula which measures statutory capital and surplus needs based on a regulatory definition of risk in a company's mix of products and its balance sheet. This guidance is used to calculate two capital measurements: Total Adjusted Capital and RBC Authorized Control Level. Total Adjusted Capital is equal to the Company's statutory capital and surplus excluding capital and surplus derived from the use of permitted practices that differ from statutory accounting practices. RBC Authorized Control Level is the capital level used by regulatory authorities to determine whether remedial action is required. Generally, no remedial action is required if Total Adjusted Capital is 200% or more of the RBC Authorized Control Level. At December 31, 2022, BIC's Total Adjusted Capital of $8.2 billion was 408% of its RBC Authorized Control Level.

See Note 4, Investments in Fixed Maturity Securities, for a description of assets held on deposit as security.

(19) Common Stockholders' Equity

The weighted average number of shares used in the computation of net income per share was as follows:

(In thousands)	2022	2021	2020
Basic	276,852	277,430	280,386
Diluted	279,461	279,749	283,145

Treasury shares have been excluded from average outstanding shares from the date of acquisition. The weighted average number of basic shares outstanding includes the impact of 11,416,856 common shares held in a grantor trust. The common shares held in the grantor trust are for delivery upon settlement of vested but mandatorily deferred restricted stock units ("RSUs"). Shares held by the grantor trust do not affect diluted shares outstanding since shares deliverable under vested RSUs were already included in diluted shares outstanding. The difference in calculating basic and diluted net income per share is attributable entirely to the dilutive effect of stock-based compensation plans. Changes in shares of common stock outstanding, net of treasury shares, are presented below. Shares of common stock issued and outstanding do not include shares related to unissued restricted stock units (including shares held in the grantor trust).

	2022	2021	2020
Balance, beginning of year	265,170,882	266,737,725	275,117,861
Shares issued	745,612	1,062,086	1,164,816
Shares repurchased	(1,370,394)	(2,628,929)	(9,544,952)
Balance, end of year	264,546,100	265,170,882	266,737,725

The amount of dividends paid is dependent upon factors such as the receipt of dividends from our subsidiaries, our results of operations, cash flow, financial condition and business needs, the capital and surplus requirements of our subsidiaries, and applicable insurance regulations that limit the amount of dividends that may be paid by our regulated insurance subsidiaries.

(20) Fair Value of Financial Instruments

The following table presents the carrying amounts and estimated fair values of the Company's financial instruments as of December 31, 2022 and 2021:

	2022		2021	
(In thousands)	Carrying Value	Fair Value	Carrying Value	Fair Value
Assets:				
Fixed maturity securities	$ 17,587,349	$ 17,591,626	$ 16,602,673	$ 16,614,118
Equity securities	1,185,894	1,185,894	941,243	941,243
Arbitrage trading account	944,230	944,230	1,179,606	1,179,606
Loans receivable	193,002	187,981	115,172	116,534
Cash and cash equivalents	1,449,346	1,449,346	1,568,843	1,568,843
Trading accounts receivable from brokers and clearing organizations	233,863	233,863	—	—
Due from broker	3,609	3,609	20,448	20,448
Liabilities:				
Due to broker	—	—	53,636	53,636
Trading account securities sold but not yet purchased	—	—	1,169	1,169
Senior notes and other debt	1,828,823	1,439,188	2,259,416	2,526,630
Subordinated debentures	1,008,371	805,600	1,007,652	1,095,600

The estimated fair values of the Company's fixed maturity securities, equity securities available for sale and arbitrage trading account securities are based on various valuation techniques that rely on fair value measurements as described in Note 13 above. The fair value of loans receivable is estimated by using current institutional purchaser yield requirements for loans with similar credit characteristics, which is considered a Level 2 input. The fair value of the senior notes and other debt and the subordinated debentures is based on spreads for similar securities, which is considered a Level 2 input.

(21) Commitments, Litigation and Contingent Liabilities

In the ordinary course of business, the Company is subject to disputes, litigation and arbitration arising from its insurance and reinsurance businesses. These matters are generally related to insurance and reinsurance claims and are considered in the establishment of loss and loss expense reserves. In addition, the Company may also become involved in legal actions which seek extra-contractual damages, punitive damages or penalties, including claims alleging bad faith in handling of insurance claims. The Company expects its ultimate liability with respect to such matters will not be material to its financial condition. However, adverse outcomes on such matters are possible, from time to time, and could be material to the Company's results of operations in any particular financial reporting period.

At December 31, 2022, the Company had commitments to invest up to $402 million and $146 million in certain investment funds and real estate construction projects, respectively.

(22) Leases

Lessees are required to recognize a right-of-use asset and a lease liability for leases with terms of more than 12 months on the balance sheet. All leases disclosed within this note are classified as operating leases. Recognized right-of-use asset and lease liability are reported within other assets and other liabilities, respectively, in the consolidated balance sheet. Lease expense is reported in other operating costs and expenses in the consolidated statement of income and accounted for on a straight-line basis over the lease term.

To determine the discount rate used to calculate present value of future minimum lease payments, the Company uses its incremental borrowing rate during the lease commencement period in line with the respective lease duration. In certain cases, the Company has the option to renew the lease. Lease renewal future payments are included in the present value of the future minimum lease payments when the Company determines it is reasonably certain to renew.

The main leases entered into by the Company are for office space used by the Company's operating units across the world. Additionally, the Company, to a lesser extent, has equipment leases mainly for office equipment. Further information relating to operating lease expense and other operating lease information is as follows:

	For the Year Ended December 31,	
(In thousands)	**2022**	**2021**
Leases:		
Lease cost	$ 43,383	$ 44,051
Cash paid for amounts included in the measurement of lease liabilities reported in operating cash flows	$ 43,871	$ 45,592
Right-of-use assets obtained in exchange for new lease liabilities	$ 28,075	$ 38,929

	As of December 31,	
($ in thousands)	**2022**	**2021**
Right-of-use assets	$ 169,271	$ 172,180
Lease liabilities	$ 204,088	$ 208,729
Weighted-average remaining lease term	7.1 years	7.2 years
Weighted-average discount rate	4.40 %	4.83 %

Contractual maturities of the Company's future minimum lease payments are as follows:

(In thousands)		December 31, 2022
Contractual Maturities:		
2023	$	47,024
2024		41,788
2025		32,928
2026		25,973
2027		16,472
Thereafter		68,912
Total undiscounted future minimum lease payments		233,097
Less: Discount impact		29,009
Total lease liability	$	204,088

(23) Stock Incentive Plan

Pursuant to the Company's stock incentive plan, the Company may issue restricted stock units ("RSUs") to employees of the Company and its subsidiaries. The RSUs generally vest three to five years from the award date and are subject to other vesting and forfeiture provisions contained in the award agreement. The following table summarizes RSU information for the three years ended December 31, 2022:

	2022	2021	2020
RSUs granted and unvested at beginning of period:	5,144,519	5,706,504	6,186,390
Granted	1,024,960	1,272,990	1,443,680
Vested	(1,258,680)	(1,523,960)	(1,667,382)
Canceled	(292,373)	(311,016)	(256,184)
RSUs granted and unvested at end of period:	4,618,426	5,144,519	5,706,504

Upon vesting, shares of the Company's common stock equal to the number of vested RSUs are issued or deferred to a later date, depending on the terms of the specific award agreement. As of December 31, 2022, 11,403,456 RSUs had been deferred. RSUs that have not yet vested and vested RSUs that have been deferred are not considered to be issued and outstanding shares.

The fair value of RSUs at the date of grant are recorded as unearned compensation, a component of stockholders' equity, and expensed over the vesting period. Following is a summary of changes in unearned compensation for the three years ended December 31, 2022:

(In thousands)		2022		2021		2020
Unearned compensation at beginning of year	$	135,535	$	132,310	$	128,390
RSUs granted, net of cancellations		60,628		56,711		54,270
RSUs expensed		(47,611)		(46,441)		(47,108)
RSUs forfeitures		(6,492)		(7,045)		(3,242)
Unearned compensation at end of year	$	142,060	$	135,535	$	132,310

(24) Compensation Plans

The Company and its subsidiaries have profit sharing plans in which substantially all employees participate. The plans provide for minimum annual contributions of 5% of eligible compensation; contributions above the minimum are discretionary and vary with each participating businesses's profitability. Employees become eligible to participate in the plan on the first day of the calendar quarter following the first full calendar quarter after the employee's date of hire provided the employee has completed 250 hours of service during the calendar quarter. The plans provide that 40% of the contributions vest immediately and that the remaining 60% vest at varying percentages based upon years of service. Profit sharing expense was $62 million, $50 million and $48 million in 2022, 2021 and 2020, respectively.

The Company has a long-term incentive compensation plan ("LTIP") that provides for compensation to key executives based on the growth in the Company's book value per share over a five year period.

The following table summarizes the outstanding LTIP awards as of December 31, 2022:

	Units Outstanding	Maximum Value	Inception to date earned through December 31, 2022 on outstanding units
2018 grant	188,500	$ 18,850,000	$ 18,850,000
2019 grant	205,000	20,500,000	17,164,589
2020 grant	216,000	21,600,000	13,943,707
2021 grant	221,750	22,175,000	11,426,223
2022 grant	241,000	24,100,000	6,232,260

The following table summarizes the LTIP expense for each of the three years ended December 31, 2022:

(In thousands)	2022	2021	2020
2015 grant	$ —	$ —	$ (168)
2016 grant	—	(117)	3,176
2017 grant	—	6,012	2,914
2018 grant	4,299	5,503	2,776
2019 grant	6,904	5,309	2,490
2020 grant	6,653	5,065	2,276
2021 grant	6,574	4,906	—
2022 grant	6,232	—	—
Total	$ 30,662	$ 26,678	$ 13,464

(25) Supplemental Financial Statement Data

Other operating costs and expenses consist of the following:

(In thousands)	2022	2021	2020
Amortization of deferred policy acquisition costs	$ 1,038,903	$ 961,628	$ 904,955
Insurance operating expenses	1,635,000	1,345,099	1,206,058
Insurance service expenses	96,419	86,003	85,724
Net foreign currency (gains) losses	(50,930)	(25,725)	363
Debt extinguishment costs	—	11,521	8,440
Other costs and expenses	242,113	220,744	184,852
Total	$ 2,961,505	$ 2,599,270	$ 2,390,392

(26) Industry Segments

The Company's reportable segments include the following two business segments, plus a corporate segment:

- Insurance - predominantly commercial insurance business, including excess and surplus lines, admitted lines and specialty personal lines throughout the United States, as well as insurance business in Asia, Australia, Canada, Continental Europe, Mexico, Scandinavia, South America and the United Kingdom.

- Reinsurance & Monoline Excess - reinsurance business on a facultative and treaty basis, primarily in the United States, United Kingdom, Continental Europe, Australia, the Asia-Pacific region and South Africa, as well as operations that solely retain risk on an excess basis.

The accounting policies of the segments are the same as those described in the summary of significant accounting policies. Income tax expense and benefits are calculated based upon the Company's overall effective tax rate.

Summary financial information about the Company's reporting segments is presented in the following table. Income before income taxes by segment includes allocated investment income. Identifiable assets by segment are those assets used in or allocated to the operation of each segment.

(In thousands)	Revenues: Earned Premiums (1)	Revenues: Investment Income	Revenues: Other	Revenues: Total (2)	Pre-Tax Income (Loss)	Net Income (Loss) to Common Stockholders
Year ended December 31, 2022						
Insurance	$ 8,369,062	$ 550,084	$ 33,347	$ 8,952,493	$ 1,455,658	$ 1,173,425
Reinsurance & Monoline Excess	1,192,367	194,272	—	1,386,639	316,527	251,386
Corporate, other and eliminations (3)	—	34,829	590,141	624,970	(254,901)	(203,476)
Net investment gains	—	—	202,397	202,397	202,397	159,727
Consolidated	$ 9,561,429	$ 779,185	$ 825,885	$ 11,166,499	$ 1,719,681	$ 1,381,062
Year ended December 31, 2021						
Insurance	$ 7,077,708	$ 468,821	$ 32,063	$ 7,578,592	$ 1,219,798	$ 976,184
Reinsurance & Monoline Excess	1,028,323	175,324	—	1,203,647	270,563	215,439
Corporate, other and eliminations (3)	—	27,473	555,122	582,595	(298,088)	(242,055)
Net investment gains	—	—	90,632	90,632	90,632	72,922
Consolidated	$ 8,106,031	$ 671,618	$ 677,817	$ 9,455,466	$ 1,282,905	$ 1,022,490
Year ended December 31, 2020						
Insurance	$ 6,067,669	$ 375,554	$ 35,611	$ 6,478,834	$ 668,012	$ 487,125
Reinsurance & Monoline Excess	863,174	146,029	—	1,009,203	205,587	164,655
Corporate, other and eliminations (3)	—	62,238	445,650	507,888	(271,797)	(214,291)
Net investment gains	—	—	103,000	103,000	103,000	93,181
Consolidated	$ 6,930,843	$ 583,821	$ 584,261	$ 8,098,925	$ 704,802	$ 530,670

Identifiable Assets

(In thousands)	December 31, 2022	December 31, 2021
Insurance	$ 27,009,652	$ 24,414,305
Reinsurance & Monoline Excess	5,195,752	4,916,894
Corporate, other and eliminations (3)	1,655,695	2,755,215
Consolidated	$ 33,861,099	$ 32,086,414

(1) Certain amounts included in earned premiums of each segment are related to inter-segment transactions.

(2) Revenues for Insurance includes $1,029 million, $873 million, and $692 million in 2022, 2021, and 2020, respectively, from foreign countries. Revenues for Reinsurance & Monoline Excess includes $412 million, $380 million, and $292 million in 2022, 2021 and 2020, respectively, from foreign countries.

(3) Corporate, other and eliminations represent corporate revenues and expenses and other items that are not allocated to

business segments.

Net premiums earned by major line of business were as follows:

(In thousands)	2022	2021	2020
Insurance			
Other liability	$ 3,206,846	$ 2,673,098	$ 2,269,458
Short-tail lines	1,630,371	1,389,068	1,247,908
Workers' compensation	1,197,811	1,131,283	1,127,487
Commercial automobile	1,208,241	990,945	794,171
Professional liability	1,125,793	893,314	628,645
Total Insurance	8,369,062	7,077,708	6,067,669
Reinsurance & Monoline Excess			
Casualty	764,793	643,193	521,559
Monoline Excess	217,017	201,187	171,522
Property	210,557	183,943	170,093
Total Reinsurance & Monoline Excess	1,192,367	1,028,323	863,174
Total	$ 9,561,429	$ 8,106,031	$ 6,930,843

(27) Subsequent Event

On January 3, 2023, the Company's Board of Directors declared a special cash dividend on its common stock of 50 cents per share that was paid on January 24, 2023 to stockholders of record at the close of business on January 13, 2023.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

The Company's management, including its Chief Executive Officer and Chief Financial Officer, have conducted an evaluation of the effectiveness of the Company's disclosure controls and procedures pursuant to Exchange Act Rule 13a-15(b) as of the end of the period covered by this annual report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the Company has in place effective controls and procedures designed to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act and the rules thereunder, is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms.
During the quarter ended December 31, 2022, there have been no changes in our internal controls over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

Management's Report On Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of Treadway Commission. Based on our evaluation under the framework in Internal Control - Integrated Framework, our management concluded that our internal control over financial reporting was effective as of December 31, 2022.

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors
W. R. Berkley Corporation:

Opinion on Internal Control Over Financial Reporting

We have audited W. R. Berkley Corporation and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2022 and 2021, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2022, and the related notes and financial statement schedules II to VI (collectively, the consolidated financial statements), and our report dated February 24, 2023 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report On Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/S/ KPMG LLP

New York, New York
February 24, 2023

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Reference is made to the registrant's definitive proxy statement, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2022, and which is incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION

Reference is made to the registrant's definitive proxy statement, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2022, and which is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

(a) Security ownership of certain beneficial owners

Reference is made to the registrant's definitive proxy statement, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2022, and which is incorporated herein by reference.

(b) Security ownership of management

Reference is made to the registrant's definitive proxy statement, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2022, and which is incorporated herein by reference.

(c) Changes in control

Reference is made to the registrant's definitive proxy statement, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2022, and which is incorporated herein by reference.

(d) Equity compensation plan information

Reference is made to the registrant's definitive proxy statement, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2022, and which is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Reference is made to the registrant's definitive proxy statement, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2022, and which is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Our independent registered public accounting firm is KPMG LLP, New York, NY, Auditor Firm ID: 185.

Reference is made to the registrant's definitive proxy statement, which will be filed with the Securities and Exchange Commission within 120 days after December 31, 2022, and which is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) Index to Financial Statements

The schedules to the consolidated financial statements listed below should be read in conjunction with the consolidated financial statements included in this Annual Report on Form 10-K. Financial statement schedules not included in this Annual Report on Form 10-K have been omitted because they are not applicable or required information is shown in the financial statements or notes thereto.

(b) Exhibits

EXHIBITS

Number	
(3.1)	The Company's Restated Certificate of Incorporation, as amended through May 10, 2004 (incorporated by reference to Exhibits 3.1 and 3.2 of the Company's Quarterly Report on Form 10-Q (File No. 1-15202) filed with the Commission on August 6, 2003).
(3.2)	Amendment, dated May 11, 2004, to the Company's Restated Certificate of Incorporation, as amended (incorporated by reference to Exhibit 3.2 of the Company's Quarterly Report on Form 10-Q (File No. 1-15202) filed with the Commission on August 5, 2004).
(3.3)	Amendment, dated May 16, 2006, to the Company's Restated Certificate of Incorporation, as amended (incorporated by reference to Exhibit 3.2 of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on May 17, 2006).
(3.4)	Amendment, dated June 12, 2020, to the Company's Restated Certificate of Incorporation, as amended (incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on June 16, 2020).
(3.5)	Amendment, dated June 15, 2022, to the Company's Restated Certificate of Incorporation, as amended (incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on June 16, 2022).
(3.6)	Amended and Restated By-Laws (incorporated by reference to Exhibit 3 (ii) of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on August 5, 2015).
(4.1)	Description of Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934.
(4.2)	Indenture, dated as of February 14, 2003, between the Company and The Bank of New York, as Trustee (incorporated by reference to Exhibit 4.1 of the Company's Annual Report on Form 10-K (File No. 1-15202) filed with the Commission on March 31, 2003).
(4.3)	Fifth Supplemental Indenture, dated as of February 9, 2007, between the Company and The Bank of New York, as Trustee, relating to $250,000,000 principal amount of the Company's 6.250% Senior Notes due 2037, including the form of the Notes as Exhibit A (incorporated by reference to Exhibit 4.7 of the Company's Annual Report on Form 10-K (File No. 1-15202) filed with the Commission on March 1, 2007).
(4.4)	Ninth Supplemental Indenture, dated as of August 6, 2014, between the Company and The Bank of New York Mellon, as Trustee, relating to $350,000,000 principal amount of the Company's 4.750% Senior Notes due 2044, including the form of the Notes as Exhibit A (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on August 6, 2014).
(4.5)	Indenture, dated as of May 12, 2020, between the Company and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on May 12, 2020).
(4.6)	First Supplemental Indenture, dated as of May 12, 2020, between the Company and The Bank of New York Mellon, as Trustee, relating to $470,000,000 principal amount of the Company's 4.000% Senior Notes due 2050, including the form of the Notes as Exhibit A (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on May 12, 2020).
(4.7)	Second Supplemental Indenture, dated as of March 16, 2021, between the Company and The Bank of New York Mellon, as Trustee, relating to $400,000,000 principal amount of the Company's 3.550% Senior Notes due 2052, including the form of the Notes as Exhibit A (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on March 16, 2021).
(4.8)	Third Supplemental Indenture, dated as of September 15, 2021, between the Company and The Bank of New York Mellon, as Trustee, relating to $350,000,000 principal amount of the Company's 3.150% Senior Notes due 2061, including the form of the Notes as Exhibit A (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on September 15, 2021).
(4.9)	Subordinated Indenture, dated as of March 26, 2018, between the Company and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on March 26, 2018).

(4.10) First Supplemental Indenture, dated as of March 26, 2018, between the Company and The Bank of New York Mellon, as Trustee, relating to $185,000,000 principal amount of the Company's 5.700% Subordinated Debentures due 2058, including the form of the Securities as Exhibit A (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on March 26, 2018).

(4.11) Second Supplemental Indenture, dated as of December 16, 2019, between the Company and the Bank of New York Mellon, as Trustee, relating to $300,000,000 principal amount of the Company's 5.100% Subordinated Debentures due 2059, including the form of the Securities as Exhibit A (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on December 16, 2019).

(4.12) Third Supplemental Indenture, dated as of September 21, 2020, between the Company and The Bank of New York Mellon, as Trustee, relating to $250,000,000 principal amount of the Company's 4.250% Subordinated Debentures due 2060, including the form of the Securities as Exhibit A (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on September 21, 2020).

(4.13) Fourth Supplemental Indenture, dated as of February 10, 2021, between the Company and The Bank of New York Mellon, as Trustee, relating to $300,000,000 principal amount of the Company's 4.125% Subordinated Debentures due 2061, including the form of the Securities as Exhibit A (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on February 10, 2021).

(4.14) The instruments defining the rights of holders of the other long term debt securities of the Company are omitted pursuant to Section (b)(4)(iii)(A) of Item 601 of Regulation S-K. The Company agrees to furnish supplementally copies of these instruments to the Commission upon request.

(10.1) Credit Agreement, dated as of April 1, 2022, by and among W. R. Berkley Corporation, as borrower, each lender from time to time party thereto, Credit Suisse AG, New York Branch, JPMorgan Chase Bank, N.A. and Morgan Stanley Senior Funding, Inc. as Syndication Agents, and Bank of America, N.A., as Administrative Agent, Several L/C Agent and Fronting L/C Issuer (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on April 4, 2022).

(10.2) W. R. Berkley Corporation 2018 Stock Incentive Plan (incorporated by reference to Annex B of the Company's 2018 Proxy Statement (File No. 1-15202) filed with the Commission on April 19, 2018).

(10.3) Form of Restricted Stock Unit Agreement for grant of April 4, 2003 (incorporated by reference to Exhibit 10.2 of the Company's Quarterly Report on Form 10-Q (File No. 1-15202) filed with the Commission on August 6, 2003).

(10.4) Form of Restricted Stock Unit Agreement under the W. R. Berkley Corporation 2003 Stock Incentive Plan (incorporated by reference to Exhibit 10.2 of the Company's Quarterly Report on Form 10-Q (File No. 1-15202) filed with the Commission on May 3, 2005).

(10.5) Form of Restricted Stock Unit Agreement under the W. R. Berkley Corporation 2003 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q (File No. 1-15202) filed with the Commission on August 6, 2010).

(10.6) Form of Restricted Stock Unit Agreement under the W. R. Berkley Corporation 2012 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q (File No. 1-15202) filed with the Commission on November 8, 2012).

(10.7) Form of 2014 Performance-Based Restricted Stock Unit Agreement under the W. R. Berkley Corporation 2012 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q (File No. 1-15202) filed with the Commission on November 7, 2014).

(10.8) Form of 2015 Performance-Based Restricted Stock Unit Agreement under the W. R. Berkley Corporation 2012 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q (File No. 1-15202) filed with the Commission on November 9, 2015).

(10.9) Form of 2017 Performance-Based Restricted Stock Unit Agreement Under the W. R. Berkley Corporation 2012 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q (File No. 1-15202) filed with the Commission on November 8, 2017).

(10.10)	Form of 2018 Performance-Based Restricted Stock Unit Agreement Under the W. R. Berkley Corporation 2018 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q (File No. 1-15202) filed with the Commission on November 7, 2018).
(10.11)	Form of 2020 Performance-Based Restricted Stock Unit Agreement Under the W. R. Berkley Corporation 2018 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q (File No. 1-15202) filed with the Commission on November 5, 2020).
(10.12)	W. R. Berkley Corporation Deferred Compensation Plan for Officers as amended and restated effective December 1, 2021 (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on November 12, 2021).
(10.13)	W. R. Berkley Corporation Deferred Compensation Plan for Directors as amended and restated effective December 1, 2021 (incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on November 12, 2021).
(10.14)	W. R. Berkley Corporation Amended and Restated Annual Incentive Compensation Plan (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on February 25, 2019).
(10.15)	W. R. Berkley Corporation 2019 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.2 of the Company's current Report on Form 8-K (File No. 1-15202) filed with the Commission on February 25, 2019).
(10.16)	Form of 2019 Performance Unit Award Agreement under the W. R. Berkley Corporation 2019 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K (File No. 1-15202) filed with the Commission on February 25, 2019).
(10.17)	Form of 2020 Performance Unit Award Agreement under the W. R. Berkley Corporation 2019 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q (File No. 1-15202) filed with the Commission on August 3, 2020).
(10.18)	Form of 2021 Performance Unit Award Agreement under the W. R. Berkley Corporation 2019 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q (File No. 1-15202) filed with the Commission on November 4, 2021).
(10.19)	Form of 2022 Performance Unit Award Agreement under the W. R. Berkley Corporation 2019 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q (File No. 1-15202) filed with the Commission on May 3, 2022).
(10.20)	W. R. Berkley Corporation 2009 Directors Stock Plan (incorporated by reference to Annex B of the Company's 2021 Proxy Statement (File No. 1-15202) filed with the Commission on April 27, 2021).
(10.21)	Supplemental Benefits Agreement between William R. Berkley and the Company as amended and restated as of December 21, 2011 (incorporated by reference to Exhibit 10.14 of the Company's Annual Report on Form 10-K (File No. 1-15202) filed with the Commission on February 28, 2012).
(14)	Code of Ethics for Senior Financial Officers (incorporated by reference to Exhibit 14 of the Company's Annual Report on Form 10-K (File No. 1-15202) filed with the Commission on March 14, 2005).
(21)	List of the Company's subsidiaries.
(23)	Consent of Independent Registered Public Accounting Firm.
(31.1)	Certification of the Chief Executive Officer pursuant to Rule 13a-14(a)/ 15d-14(a).
(31.2)	Certification of the Chief Financial Officer pursuant to Rule 13a-14(a)/ 15d-14(a).
(32.1)	Certification of the Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

ITEM 16. FORM 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

W. R. BERKLEY CORPORATION

By /s/ W. Robert Berkley, Jr.

W. Robert Berkley, Jr.
President and Chief Executive Officer

February 24, 2023

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ William R. Berkley William R. Berkley	Executive Chairman of the Board of Directors	February 24, 2023
/s/ W. Robert Berkley, Jr. W. Robert Berkley, Jr.	President Chief Executive Officer and Director (Principal executive officer)	February 24, 2023
/s/ Christopher L. Augostini Christopher L. Augostini	Director	February 24, 2023
/s/ Ronald E. Blaylock Ronald E. Blaylock	Director	February 24, 2023
Mark E. Brockbank	Director	
/s/ Mary C. Farrell Mary C. Farrell	Director	February 24, 2023
/s/ María Luisa Ferré María Luisa Ferré	Director	February 24, 2023
/s/ Daniel L. Mosley Daniel L. Mosley	Director	February 24, 2023
/s/ Mark L. Shapiro Mark L. Shapiro	Director	February 24, 2023
/s/ Jonathan Talisman Jonathan Talisman	Director	February 24, 2023
/s/ Richard M. Baio Richard M. Baio	Executive Vice President and Chief Financial Officer (Principal financial officer and principal accounting officer)	February 24, 2023

Schedule II

W. R. Berkley Corporation
Condensed Financial Information of Registrant
Balance Sheets (Parent Company)

(In thousands)	**December 31, 2022**	**December 31, 2021**
Assets:		
Cash and cash equivalents	$ 103,522	$ 684,037
Fixed maturity securities available for sale at fair value (cost $285,900 and $805,211 at December 31, 2022 and 2021, respectively)	275,511	806,074
Loans receivable (net of allowance for expected credit losses of $559 and $647 at December 31, 2022 and 2021, respectively)	109,793	93,397
Equity securities, at fair value (cost $3,430 in both 2022 and 2021)	3,430	3,430
Investment in subsidiaries	8,888,455	8,516,916
Current federal income taxes	34,452	23,424
Deferred federal income taxes	304,191	11,796
Property, furniture and equipment at cost, less accumulated depreciation	11,356	11,916
Other assets	39,741	43,793
Total assets	$ 9,770,451	$ 10,194,783
Liabilities and stockholders' equity:		
Liabilities:		
Due to subsidiaries	$ 53,029	$ 138,376
Other liabilities	139,150	146,892
Subordinated debentures	1,008,371	1,007,652
Senior notes	1,821,569	2,248,852
Total liabilities	3,022,119	3,541,772
Stockholders' equity:		
Preferred stock	—	—
Common stock	105,803	105,803
Additional paid-in capital	997,534	981,104
Retained earnings (including accumulated undistributed net income of subsidiaries of $7,975,360 and $6,463,882 at December 31, 2022 and 2021, respectively)	10,161,005	9,015,135
Accumulated other comprehensive loss	(1,264,581)	(281,955)
Treasury stock, at cost	(3,251,429)	(3,167,076)
Total stockholders' equity	6,748,332	6,653,011
Total liabilities and stockholders' equity	$ 9,770,451	$ 10,194,783

See Report of Independent Registered Public Accounting Firm and note to condensed financial information.

W. R. Berkley Corporation
Condensed Financial Information of Registrant, Continued
Statements of Income (Parent Company)

	Year Ended December 31,		
(In thousands)	**2022**	**2021**	**2020**
Management fees and investment income including dividends from subsidiaries of $22,807, $520,251, and $617,424 for the years ended December 31, 2022, 2021 and 2020, respectively	$ 32,585	$ 548,512	$ 654,485
Net investment gains	1,007	1,474	3,580
Other income	1,916	1,138	568
Total revenues	35,508	551,124	658,633
Operating costs and expense	192,175	214,995	166,892
Interest expense	129,633	144,837	145,417
(Loss) income before federal income taxes	(286,300)	191,292	346,324
Federal income taxes:			
Federal income taxes provided by subsidiaries on a separate return basis	414,660	294,731	188,490
Federal income tax expense on a consolidated return basis	(258,776)	(226,900)	(139,679)
Net federal income tax expense	155,884	67,831	48,811
(Loss) income before undistributed equity in net income of subsidiaries	(130,416)	259,123	395,135
Equity in undistributed net income of subsidiaries	1,511,478	763,367	135,535
Net income	$ 1,381,062	$ 1,022,490	$ 530,670

See Report of Independent Registered Public Accounting Firm and note to condensed financial information.

W. R. Berkley Corporation
Condensed Financial Information of Registrant, Continued
Statements of Cash Flows (Parent Company)

(In thousands)	**Year Ended December 31,** 2022	2021	2020
Cash flow (used in) from operating activities:			
Net income	$ 1,381,062	$ 1,022,490	$ 530,670
Adjustments to reconcile net income to net cash from operating activities:			
Net investment gains	(1,007)	(1,474)	(3,580)
Depreciation and amortization	4,281	18,761	15,133
Equity in undistributed earnings of subsidiaries	(1,511,478)	(763,367)	(135,535)
Tax payments received from subsidiaries	321,682	328,851	165,495
Federal income taxes provided by subsidiaries on a separate return basis	(414,660)	(294,731)	(188,489)
Stock incentive plans	49,411	48,440	49,599
Change in:			
Federal income taxes	(40,746)	(22,017)	32,069
Other assets	3,163	(33,319)	1,220
Other liabilities	87,100	(11,758)	3,964
Accrued investment income	890	755	836
Net cash (used in) from operating activities	(120,302)	292,631	471,382
Cash from (used in) investing activities:			
Proceeds from sales of fixed maturity securities	543,549	402,046	414,802
Proceeds from maturities and prepayments of fixed maturity securities	83,134	654,134	258,413
Cost of purchases of fixed maturity securities	(109,289)	(1,071,823)	(747,713)
Change in loans receivable	(16,249)	(18,227)	(20,023)
Investments in and advances to subsidiaries, net	(171,062)	(1,411)	(100,704)
Change in balance due to security broker	(10,289)	10,487	(245)
Net additions to real estate, furniture & equipment	(432)	(1,496)	(81)
Other, net	368	95	103
Net cash from (used in) investing activities	319,730	(26,195)	(195,448)
Cash (used in) from financing activities:			
Net proceeds from issuance of senior notes	(914)	1,029,579	736,609
Repayment and redemption of debt	(426,503)	(400,000)	(650,000)
Purchase of common treasury shares	(94,140)	(122,426)	(346,357)
Cash dividends to common stockholders	(235,192)	(355,736)	(84,147)
Other, net	(23,194)	(30,776)	(24,880)
Net cash (used in) from financing activities	(779,943)	120,641	(368,775)
Net (decrease) increase in cash and cash equivalents	(580,515)	387,077	(92,841)
Cash and cash equivalents at beginning of year	684,037	296,960	389,801
Cash and cash equivalents at end of year	$ 103,522	$ 684,037	$ 296,960

See Report of Independent Registered Public Accounting Firm and note to condensed financial information.

W. R. Berkley Corporation

Condensed Financial Information of Registrant, Continued

December 31, 2022

Note to Condensed Financial Information (Parent Company)

The accompanying condensed financial information should be read in conjunction with the notes to consolidated financial statements included elsewhere herein. Reclassifications have been made in the 2021 and 2020 financial statements as originally reported to conform them to the presentation of the 2022 financial statements.

The Company files a consolidated federal income tax return with the results of its domestic insurance subsidiaries included on a statutory basis. Under present Company policy, federal income taxes payable by subsidiary companies on a separate-return basis are paid to W. R. Berkley Corporation, and the Company pays the tax due on a consolidated return basis.

Schedule III

W. R. Berkley Corporation and Subsidiaries
Supplementary Insurance Information
December 31, 2022, 2021 and 2020

(In thousands)	Deferred Policy Acquisition Cost	Reserve for Losses and Loss Expenses	Unearned Premiums	Net Premiums Earned	Net Investment Income	Loss and Loss Expenses	Amortization of Deferred Policy Acquisition Cost	Other Operating Costs and Expenses	Net Premiums Written
December 31, 2022									
Insurance	$ 651,257	$ 13,786,112	$ 4,779,214	$ 8,369,062	$ 550,084	$ 5,130,909	$ 935,469	$ 1,430,456	$ 8,784,146
Reinsurance & Monoline Excess	112,229	3,225,111	518,440	1,192,367	194,272	730,841	103,434	235,836	1,219,924
Corporate, other and eliminations	—	—	—	—	34,829	—	—	256,310	—
Total	$ 763,486	$ 17,011,223	$ 5,297,654	$ 9,561,429	$ 779,185	$ 5,861,750	$ 1,038,903	$ 1,922,602	$ 10,004,070
December 31, 2021									
Insurance	$ 566,718	$ 12,379,395	$ 4,348,171	$ 7,077,708	$ 468,821	$ 4,326,403	$ 830,199	$ 1,202,192	$ 7,743,814
Reinsurance & Monoline Excess	109,427	3,011,493	498,989	1,028,323	175,324	627,557	131,429	174,098	1,119,053
Corporate, other and eliminations	—	—	—	—	27,473	—	—	261,352	—
Total	$ 676,145	$ 15,390,888	$ 4,847,160	$ 8,106,031	$ 671,618	$ 4,953,960	$ 961,628	$ 1,637,642	$ 8,862,867
December 31, 2020									
Insurance	$ 467,871	$ 10,977,674	$ 3,660,758	$ 6,067,669	$ 375,554	$ 3,939,759	$ 734,062	$ 1,137,002	$ 6,347,101
Reinsurance & Monoline Excess	88,297	2,806,756	412,433	863,174	146,029	528,947	170,893	103,775	915,336
Corporate, other and eliminations	—	—	—	—	62,238	—	—	244,660	—
Total	$ 556,168	$ 13,784,430	$ 4,073,191	$ 6,930,843	$ 583,821	$ 4,468,706	$ 904,955	$ 1,485,437	$ 7,262,437

See Report of Independent Registered Public Accounting Firm.

Schedule IV

W. R. Berkley Corporation and Subsidiaries
Reinsurance
Years ended December 31, 2022, 2021 and 2020

(In thousands, other than percentages)	Premiums Written: Direct Amount	Ceded to Other Companies	Assumed from Other Companies	Net Amount	Percentage of Amount Assumed to Net
Year ended December 31, 2022					
Insurance	$ 10,363,730	$ 1,799,639	$ 220,055	$ 8,784,146	2.5 %
Reinsurance & Monoline Excess	331,408	105,343	993,859	1,219,924	81.5 %
Total	$ 10,695,138	$ 1,904,982	$ 1,213,914	$ 10,004,070	12.1 %
Year ended December 31, 2021					
Insurance	$ 9,220,683	$ 1,727,854	$ 250,985	$ 7,743,814	3.2 %
Reinsurance & Monoline Excess	310,367	109,413	918,099	1,119,053	82.0 %
Total	$ 9,531,050	$ 1,837,267	$ 1,169,084	$ 8,862,867	13.2 %
Year ended December 31, 2020					
Insurance	$ 7,625,981	$ 1,490,395	$ 211,515	$ 6,347,101	3.3 %
Reinsurance & Monoline Excess	248,069	94,815	762,082	915,336	83.3 %
Total	$ 7,874,050	$ 1,585,210	$ 973,597	$ 7,262,437	13.4 %

See Report of Independent Registered Public Accounting Firm.

Schedule V

W. R. Berkley Corporation and Subsidiaries
Valuation and Qualifying Accounts
Years ended December 31, 2022, 2021 and 2020

(In thousands)	Opening Allowance Balance	Cumulative Effect Adjustment - CECL	Additions-Charged to Expense	Deduction-Amounts Written Off	Ending Allowance Balance
Year ended December 31, 2022					
Premiums, fees and other receivables	$ 30,860	$ —	$ 13,734	$ (7,663)	$ 36,931
Due from reinsurers	7,713	—	352	(1)	8,064
Deferred federal and foreign income taxes	75,230	—	1,046	(29,110)	47,166
Fixed maturity securities	22,625	—	15,152	(311)	37,466
Loan loss reserves	1,718	—	73	—	1,791
Total	$ 138,146	$ —	$ 30,357	$ (37,085)	$ 131,418
Year ended December 31, 2021					
Premiums, fees and other receivables	$ 27,855	$ —	$ 10,807	$ (7,802)	$ 30,860
Due from reinsurers	7,801	—	334	(422)	7,713
Deferred federal and foreign income taxes	79,488	—	6,011	(10,269)	75,230
Fixed maturity securities	2,580	—	21,013	(968)	22,625
Loan loss reserves	5,437	—	—	(3,719)	1,718
Total	$ 123,161	$ —	$ 38,165	$ (23,180)	$ 138,146
Year ended December 31, 2020					
Premiums, fees and other receivables	$ 26,546	$ 1,270	$ 6,783	$ (6,744)	$ 27,855
Due from reinsurers	690	5,927	1,187	(3)	7,801
Deferred federal and foreign income taxes	33,250	—	46,756	(518)	79,488
Fixed maturity securities	—	35,714	16,909	(50,043)	2,580
Loan loss reserves	2,146	(357)	3,648	—	5,437
Total	$ 62,632	$ 42,554	$ 75,283	$ (57,308)	$ 123,161

See Report of Independent Registered Public Accounting Firm.

W. R. Berkley Corporation and Subsidiaries
Supplementary Information Concerning Property-Casualty Insurance Operations
Years Ended December 31, 2022, 2021 and 2020

(In thousands)	2022	2021	2020
Deferred policy acquisition costs	$ 763,486	$ 676,145	$ 556,168
Reserves for losses and loss expenses	17,011,223	15,390,888	13,784,430
Unearned premiums	5,297,654	4,847,160	4,073,191
Net premiums earned	9,561,429	8,106,031	6,930,843
Net investment income	779,185	671,618	583,821
Losses and loss expenses incurred:			
Current year	5,774,713	4,921,191	4,432,937
Prior years	54,511	863	627
Loss reserve discount accretion	32,526	31,906	35,142
Amortization of deferred policy acquisition costs	1,038,903	961,628	904,955
Paid losses and loss expenses	4,347,910	3,665,694	3,598,649
Net premiums written	10,004,070	8,862,867	7,262,437

See Report of Independent Registered Public Accounting Firm.

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mecasualty.com

Scott M. McDonough, President

Service Operations

BERKLEY CAPITAL, LLC

600 Brickell Avenue, 39th Floor
Miami, Florida 33131 **(786) 450 5510**

Frank T. Medici, President

BERKLEY DEAN & COMPANY, INC.

475 Steamboat Road
Greenwich, Connecticut 06830 **(203) 629 3000**

James G. Shiel, President

BERKLEY TECHNOLOGY SERVICES LLC

101 Bellevue Parkway
Wilmington, Delaware 19809 **(302) 439 2000**

James B. Gilbert, President

Des Moines, Iowa **(515) 564 2300**

W. R. Berkley Corporation's businesses conduct business through the following insurance entities: Acadia Insurance Company; Admiral Indemnity Company; Admiral Insurance Company; Berkley Argentina de Reaseguros S.A.; Berkley Assurance Company; Berkley Casualty Company; Berkley Insurance Company; Berkley International Aseguradora de Riesgos del Trabajo S.A.; Berkley International do Brasil Seguros S.A.; Berkley International Fianzas México, S.A. de C.V.; Berkley International Seguros Colombia S.A.; Berkley International Seguros México, S.A. de C.V.; Berkley International Seguros S.A.; Berkley International Seguros S.A. (Uruguay); Berkley Life and Health Insurance Company; Berkley National Insurance Company; Berkley Prestige Insurance Company; Berkley Regional Insurance Company; Berkley Specialty Insurance Company; Carolina Casualty Insurance Company; Clermont Insurance Company; Continental Western Insurance Company; East Isles Reinsurance, Ltd.; Firemen's Insurance Company of Washington, D.C.; Gemini Insurance Company; Great Divide Insurance Company; Intrepid Casualty Company; Intrepid Insurance Company; Intrepid Specialty Insurance Company; Key Risk Insurance Company; Midwest Employers Casualty Company; Nautilus Insurance Company; Preferred Employers Insurance Company; Oak Harbor Reinsurance Company; Queen's Island Insurance Company, Ltd.; Riverport Insurance Company; StarNet Insurance Company; Syndicate 1967 at Lloyd's; Tri-State Insurance Company of Minnesota; Union Insurance Company; Union Standard Lloyds; W. R. Berkley Europe AG.

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W. Robert Berkley, Jr.
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Christopher L. Augostini
Executive Vice President — Business and Administration
Chief Financial Officer
EMORY UNIVERSITY

Ronald E. Blaylock
Managing Partner
GENNX360 CAPITAL PARTNERS

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Retired Chief Executive Officer
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Chairman
THE HOWARD GILMAN FOUNDATION

Retired Managing Director Chief Investment Strategist
UBS WEALTH MANAGEMENT USA

María Luisa Ferré
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Daniel L. Mosley
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Former Partner
CRAVATH, SWAINE & MOORE LLP

Mark L. Shapiro
Private Investor

Jonathan Talisman
Managing Partner
CAPITOL TAX PARTNERS

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Executive Chairman

W. Robert Berkley, Jr.
President and Chief Executive Officer

Richard M. Baio
Executive Vice President —
Chief Financial Officer

James B. Gilbert
Executive Vice President —
Enterprise Technology

Lucille T. Sgaglione
Executive Vice President

James G. Shiel
Executive Vice President — Investments

Philip S. Welt
Executive Vice President —
General Counsel and Secretary

Jared E. Abbey
Executive Vice President

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Executive Vice President

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Executive Vice President

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Executive Vice President

Robert W. Standen
Executive Vice President

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Joseph L. Sullivan
Executive Vice President

Nelson Tavares
Executive Vice President

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Senior Vice President —
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Senior Vice President —
Human Resources

Edward F. Linekin
Senior Vice President —
Investments

A. Scott Mansolillo
Senior Vice President —
Chief Compliance Officer

Lynn Neville
Senior Vice President — Claims

CORPORATE INFORMATION

ANNUAL MEETING

The Annual Meeting of Stockholders of W. R. Berkley Corporation will be held at 1:30 p.m. on June 14, 2023 at its offices at 475 Steamboat Road, Greenwich, Connecticut 06830.

SHARES TRADED

Common Stock of W. R. Berkley Corporation is traded on the New York Stock Exchange. Symbol: WRB

TRANSFER AGENT AND REGISTRAR

EQ Shareowner Services
1110 Centre Pointe Curve, Suite 101
Mendota Heights, Minnesota 55120-4100
(800) 468 9716
shareowneronline.com

WEBSITE

For additional information, including press releases, visit our website at: **www.berkley.com**

Follow us on Twitter **@WRBerkleyCorp** and LinkedIn.

AUDITORS

KPMG LLP, New York, New York

OUTSIDE COUNSEL

Willkie Farr & Gallagher LLP, New York, New York

"ALWAYS DO RIGHT.
THIS WILL GRATIFY SOME PEOPLE
AND ASTONISH THE REST."

—MARK TWAIN

W. R. Berkley Corporation