

Markel Group Annual Report

2023

**MARKEL
GROUP**

The Markel Style

Markel Group has a commitment to success. We believe in hard work and a zealous pursuit of excellence while keeping a sense of humor. Our creed is honesty and fairness in all our dealings.

The Markel way is to seek to be a market leader in each of our pursuits. We seek to know our customers' needs and to provide our customers with quality products and service.

Our pledge to our shareholders is that we will build the financial value of our company. We respect our relationship with our suppliers and have a commitment to our communities.

We are encouraged to look for a better way to do things...to challenge management. We have the ability to make decisions or alter a course quickly. The Markel approach is one of spontaneity and flexibility. This requires a respect for authority but a disdain of bureaucracy.

At Markel, we hold the individual's right to self-determination in the highest light, providing an atmosphere in which people can reach their personal potential. Being results-oriented, we are willing to put aside individual concerns in the spirit of teamwork to achieve success.

Above all, we enjoy what we are doing. There is excitement at Markel, one that comes from innovating, creating, striving for a better way, sharing success with others...winning.

Highlights

Financial Highlights

<i>(dollars in millions, except per share data)</i>	2023	2022	2021
Gross premium volume	\$ 14,002	\$ 13,202	\$ 11,439
Earned premiums	\$ 8,295	\$ 7,588	\$ 6,503
Net investment income	\$ 735	\$ 447	\$ 367
Net investment gains (losses)	\$ 1,524	\$ (1,596)	\$ 1,979
U.S. GAAP combined ratio	98 %	92 %	90 %
Market Ventures operating revenues	\$ 4,985	\$ 4,758	\$ 3,644
Total operating revenues	\$ 15,804	\$ 11,675	\$ 12,846
Market Ventures operating income	\$ 438	\$ 325	\$ 273
Total operating income (loss)	\$ 2,929	\$ (93)	\$ 3,242
Net income (loss) to common shareholders	\$ 1,960	\$ (252)	\$ 2,387
Comprehensive income (loss) to shareholders	\$ 2,285	\$ (1,206)	\$ 2,076
Invested assets	\$ 30,854	\$ 27,420	\$ 28,292
Total assets	\$ 55,046	\$ 49,791	\$ 48,477
Senior long-term debt and other debt	\$ 3,780	\$ 4,104	\$ 4,361
Shareholders' equity	\$ 14,984	\$ 13,151	\$ 14,700
Debt to capital	20 %	24 %	23 %

Per Share Data

Common shares outstanding (at year end, in thousands)	13,132	13,423	13,632
Diluted net income (loss) per common share	\$ 146.98	\$ (23.72)	\$ 176.38
Closing stock price per common share	\$ 1,419.90	\$ 1,317.49	\$ 1,234.00
5-Year CAGR in closing stock price ⁽¹⁾	6 %	3 %	6 %
Book value per common share	\$ 1,095.95	\$ 935.65	\$ 1,034.92
5-Year CAGR in book value per common share ⁽¹⁾	11 %	6 %	11 %

⁽¹⁾ CAGR—compound annual growth rate.

⁽²⁾ Invested assets include total investments, cash and cash equivalents and restricted cash and cash equivalents.

Operating Highlights

- Gross premium volume across our Insurance engine reached \$14 billion
- Net investment income grew 64% and significantly exceeded our previous record high
- Market Ventures hit record highs for both revenues (\$5.0 billion) and operating income (\$438 million)
- Invested assets of nearly \$31 billion at the end of the year
- Operating cash flows of \$2.8 billion, reflecting contributions from each of our three engines
- Comprehensive income to shareholders of \$2.3 billion, driven by an increase in the fair value of our equity portfolio
- Share repurchases totaling \$445 million

Contents

Letter to Business Partners 2

Form 10-K

Business 10K - 2

Risk Factors 10K - 22

Cybersecurity 10K - 34

Legal Proceedings 10K - 36

Executive Officers 10K - 37

Common Stock Data 10K - 38

Management's Discussion & Analysis 10K - 40

Critical Accounting Estimates 10K - 58

Safe Harbor and Cautionary Statement 10K - 66

Report of Independent Registered
Public Accounting Firm 10K - 73

Consolidated Financial Statements 10K - 75

Notes to Consolidated Financial
Statements 10K - 79

Management's Report on Internal
Control over Financial Reporting 10K - 130

Directors i

2023

To Our Business Partners,

The Markel Group has a commitment to success.

These are the first words in the Markel Style, our creed, written in 1986.

We work to honor that pledge.

We define success as: "building one of the world's great companies."

You might ask, "What does it mean to be a great company?"

One: We believe great companies provide first-rate products and services. Customers then come back the next day. Quality creates referrals and a virtuous cycle of ultimate sustainability.

Two: We believe great companies provide meaningful careers. The Markel Style states, "We provide an atmosphere where people can reach their personal potential." Thousands do just that. Starting with our IPO in 1986, we had roughly 300 employees. Today, more than 20,000 people

continuously learn, create, and work for our customers. They help each other and work as a team. They also provide for their families and communities.

Three: We believe great companies attract and maintain long-term, committed and high-quality shareholders by earning excellent and sustainable returns on the capital needed to run the business.

We believe this definition of success applies across all industries. It is universal.

We believe it describes the story of the Markel Group.

The 2023 letter will be longer than usual. As Charles Dickens might say about 2023, "It was the best of times, it was the worst of times." The letter is long, but we hope it clarifies what's working at the Markel Group and our awareness of where we can improve.

By the time you finish reading, I hope you will share my optimism that we are truly on the path of building one of the world's great companies.

Financial Highlights

<i>(in millions, except per share data)</i>	2023	2022	2021	2020	2019	2018	2017	2016	2015
Total operating revenues	\$ 15,804	11,675	12,846	9,735	9,526	6,841	6,062	5,612	5,370
Gross written premiums	\$ 14,002	13,202	11,439	9,267	8,780	7,864	5,507	4,797	4,633
Combined ratio	98 %	92 %	90 %	98 %	94 %	98 %	105 %	92 %	89 %
Invested assets	\$ 30,854	27,420	28,292	24,927	22,258	19,238	20,570	19,059	18,181
Invested assets per common share	\$ 2,349.53	2,042.73	2,075.42	1,808.50	1,613.62	1,385.24	1,479.45	1,365.72	1,302.48
Net income (loss) to common shareholders	\$ 1,960	(252)	2,387	798	1,790	(128)	395	456	583
Comprehensive income (loss) to shareholders	\$ 2,285	(1,206)	2,076	1,192	2,094	(376)	1,175	667	233
Shareholders' equity	\$ 14,984	13,151	14,700	12,822	11,071	9,081	9,504	8,461	7,834
Book value per common share	\$ 1,095.95	935.65	1,034.92	887.34	802.59	653.85	683.55	606.30	561.23
5-Year CAGR in book value per common share ⁽¹⁾	11 %	6 %	11 %	10 %	8 %	7 %	11 %	11 %	11 %
Closing stock price per share	\$ 1,419.90	1,317.49	1,234.00	1,033.30	1,143.17	1,038.05	1,139.13	904.50	883.35
5-Year CAGR in closing stock price per share ⁽¹⁾	6 %	3 %	6 %	3 %	11 %	12 %	21 %	17 %	18 %

⁽¹⁾ CAGR - compound annual growth rate

2023 (part one)

In 2023, we enjoyed excellent returns in our Markel Ventures businesses, investment operations, and certain portions of our insurance operations.

The raw numbers of 2023 tell only part of the story. Numbers track the narrative of our dedicated culture of service, but never fully capture the spirit that creates them. Numbers are “the map, not the territory.”

I am happy to report to you that the *spirit* and culture of the Markel Group is alive and well. I am also happy to report that we will share many great numbers along with some that disappoint us.

During 2023 in our insurance operations, we made several significant management changes and some tough decisions. In our long history, that is nothing new. Change and tough decisions describe what it means to be an organization with more than 20,000 people and decades of history. It takes embracing change and the willingness to make tough decisions to create the future we all seek.

Change often unsettles people. Reality demands that we set aside our discomfort and embrace it. There is no way to remain relevant to the world of 2024 and beyond without doing so. As always, our values continue to guide us as we adapt.

As to the 2023 numbers, while they tell only part of the story, over time they do not lie. Our long-term results will ultimately show strong evidence of progress and success, or the lack thereof.

Table 1 shows a set of key numbers for the year 2023 as compared to 2022.

Table 2 shows the same set for the last five-year period, as well as the two previous five-year periods.

Table 1: One-year financial results

<i>(dollars in millions, except per share data)</i>	2023	2022
Total revenues	\$ 15,804	\$ 11,675
Earned premiums	\$ 8,295	\$ 7,588
Underwriting profits	\$ 133	\$ 627
ILS and Program Services revenues	\$ 272	\$ 488
ILS and Program Services operating income	\$ 97	\$ 84
Markel Ventures revenues	\$ 4,985	\$ 4,758
Markel Ventures EBITDA	\$ 628	\$ 506
Net investment income	\$ 735	\$ 447
Comprehensive income (loss) to shareholders	\$ 2,285	\$ (1,206)
Closing stock price per share, at end of period	\$ 1,419.90	\$ 1,317.49

2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	20-Year CAGR ⁽¹⁾
5,134	4,323	3,000	2,630	2,225	2,069	1,977	2,551	2,576	2,200	2,262	2,092	11 %
4,806	3,920	2,514	2,291	1,982	1,906	2,213	2,359	2,536	2,401	2,518	2,572	9 %
95 %	97 %	97 %	102 %	97 %	95 %	99 %	88 %	87 %	101 %	96 %	99 %	
18,638	17,612	9,333	8,728	8,224	7,849	6,893	7,775	7,524	6,588	6,317	5,350	9 %
1,334.89	1,259.26	969.23	907.20	846.24	799.34	702.34	780.84	752.80	672.34	641.49	543.31	8 %
321	281	253	142	267	202	(59)	406	393	148	165	123	
936	459	504	252	431	591	(403)	337	551	64	273	222	
7,595	6,674	3,889	3,388	3,172	2,774	2,181	2,641	2,296	1,705	1,657	1,382	13 %
543.96	477.16	403.85	352.10	326.36	282.55	222.20	265.26	229.78	174.04	168.22	140.38	11 %
14 %	17 %	9 %	9 %	13 %	11 %	10 %	18 %	16 %	11 %	20 %	13 %	
682.84	580.35	433.42	414.67	378.13	340.00	299.00	491.10	480.10	317.05	364.00	253.51	9 %
15 %	14 %	(2)%	(3)%	4 %	(1)%	3 %	19 %	22 %	12 %	19 %	7 %	

Table 2: Five-year financial results

<i>(dollars in millions, except per share data)</i>	2019 - 2023	2014 - 2018	2009 - 2013
Total revenues	\$ 59,586	\$ 29,019	\$ 14,247
Earned premiums	\$ 33,048	\$ 20,491	\$ 10,905
Underwriting profits	\$ 1,796	\$ 832	\$ 272
ILS and Program Services revenues	\$ 1,746	\$ 231	N/A
ILS and Program Services operating income (loss)	\$ 268	\$ (94)	N/A
Markel Ventures revenues	\$ 18,237	\$ 6,353	\$ 1,742
Markel Ventures EBITDA	\$ 2,168	\$ 709	\$ 212
Net investment income	\$ 2,367	\$ 1,903	\$ 1,341
Comprehensive income to shareholders	\$ 6,441	\$ 2,635	\$ 2,237
Closing stock price per share, at end of period	\$ 1,419.90	\$ 1,038.05	\$ 580.35

Table 3: Blackjack! 21 year financial results

We show the last 21 years of key financial highlights in the table at the bottom of these opening pages.

In any given year, volatile investment markets, natural catastrophes, business cycles and macro-economic factors often distort measurements of the progress of your company. That is why we continually and consistently report longer-term measures. We believe they provide a more accurate sensation of our progress than those of any one year.

We show this series every year. We do so because we think it demonstrates our commitment to building the Markel Group over the long term. We are unaware of many companies that consistently update and report multi-decade performance measurements. This transparency highlights one of the ways in which we are different.

The numbers demonstrate our culture in action. They validate that we continue to honor our pledge that the "Markel Group has a commitment to success" and that we are on the path to building "one of the world's great companies."

Three-engine architecture

Over the last several decades, we designed a three-engine *system* to drive the Markel Group forward.

We believe that three engines create a superior system, with more self-reinforcing resilience and sustainability than possible from a single-engine machine.

In our first annual report in 1986 as a public company, we wrote that we would "specialize and

diversify" to earn excellent financial results. We believe that the three-engine system creates an environment that allows us to do just that.

Three engines also work together to bolster our ability to maintain a long-term perspective.

Three powerful engines mean that in any given year, we can make forward progress even if one (or two) of the engines is not firing on all cylinders.

In 1930, we started with the single engine of our insurance business.

Every insurance business includes some investments (usually in fixed-income securities), but we wanted more from our investing activities. Starting with the initial public offering in 1986, we added extra emphasis to our investment operations and broadened them to include substantial ownership of public equities. We wanted better returns than could be achieved solely with the traditional fixed-income focus common at most insurers.

We designed the system for investments to become a separate and distinct engine for Markel.

Starting in 2005, with the purchase of a controlling interest in AMF Bakery Systems, we expanded the scope of our Investment engine to include majority ownership stakes in non-insurance businesses.

This acquisition created the third engine, Markel Ventures.

The beauty of this system is that it increases the resilience and durability of the Markel Group. Each engine by itself can provide enough thrust to keep us moving forward. We can absorb blows and difficult circumstances in any single engine because the other two engines can carry us forward.

We also believe that the three-engine system helps us to adapt to a constantly changing world. We recognize that new opportunities and challenges continually emerge. With the three engines of the Markel Group, we can accommodate and adapt to challenges and opportunities no matter the form or industry.

We believe that this system also reinforces the ability to remain long-term focused. We are not dependent on any individual business for the growth of the Markel Group.

We also keep debt to low levels.

Everything we do is designed to reinforce our ability to remain singularly focused on doing the right thing for the long term.

The three-engine system works as an adaptation and volatility-absorption machine.

Our culture helped to create this system. And the system works to reinforce and strengthen our culture.

The beat goes on.

2023 (part two): How are we doing?

In 2023 we earned excellent results in our Markel Ventures and Investment engines. Unfortunately, we fell short of our goals in our Insurance engine.

Over the last five years, all three engines pushed Markel forward.

Over 21 years, all three engines produced excellent multi-decade progress.

Insurance engine

What does success look like for insurance?

It starts with a combined ratio of less than 100%.

In 2023, we reported a combined ratio of 98%.

This fell short of what we planned at the beginning of the year.

One of our competitive advantages at Markel is that we write complex and difficult forms of insurance. Very few organizations can tackle the risks that we do on a regular basis. Our multi-decade track record of profitability in our insurance operations speaks to our skills and culture of tackling complexity and difficulty—and doing it well.

Complex and difficult, by definition, is hard. We don't always get it right. Our 2023 results were below our targets. We had more than our usual challenges using our competitive advantage to produce an underwriting profit, and we did not earn sufficient returns on the capital we used to write insurance.

Despite our challenges in 2023, we enjoyed several bright spots. Aggregate combined ratios sum the results from multiple product lines. The single, aggregate combined ratio number fails to show the outstanding results produced in several corners of our operations.

For example, our international operations, led by Simon Wilson, produced spectacular results. Double-digit rates of both profitability and growth are superb. Simon and his team produced just that in our global operations.

Over the last several years, Simon led his organization through a series of targeted strategic steps. Each step expanded the geographic reach of Markel, increased exposures within existing successful operations, and launched new products, all while producing appropriate financial returns.

The results of 2023—and those earned since the initial COVID-19 shock loss—have been wonderful. They reflect the efforts of first-rate leadership and a first-rate team.

Thank you to Simon and his team.

Within our Specialty operations, we also had pockets of excellent results. To name just a few: we enjoyed strong profitability in property/inland marine, surety, personal lines, binding, environmental, management liability, financial advisor coverages, and many others.

Thank you to leaders like Jon Hahn, Mike Keimig, Jeff May, Mark Schauss, and many, many others for their superior work and dedication to produce these results.

Unfortunately, we also had areas within our Specialty operations where the results were unacceptable.

Some of the shortfall was the result of unforced errors on our part. Specifically, our initial foray into underwriting and insuring collateralized intellectual property did not go well. The initial product was not well designed. The share of risks between us as the insurer and the buyers of that insurance did not match up appropriately.

In response, we altered the terms, conditions, and nature of those coverages. We also changed the management teams responsible for that product. We will strive not to repeat those errors.

We always need to be willing to accept new risks and adapt. The world continues to change at an ever-accelerating rate. Insurance needs to change as well.

We would wither away if we didn't embrace change.

We also need never to forget the basics of insurance. That means we need to fully consider the total circumstances of what we are insuring, why people

might buy that insurance, and what the ranges of possible outcomes might be.

We are committed to experimentation, innovation, and continuous learning to stay relevant in a changing world. Sometimes, that will be costly and difficult—it certainly was in the case of collateralized intellectual property insurance. We can and should have done better.

We are taking steps to learn more efficiently and effectively going forward.

We also experienced losses in our insurance results stemming from large-scale natural catastrophes like the wildfires this year in Hawaii. Each year seems to bring a new crop of large-scale insured loss. 2023 was no exception.

Whether (and weather) these events stem from climate change or not, we continue to reduce our exposures to these sorts of events. We also continue to raise rates to reflect the higher costs of covering catastrophe losses. Also, as part of the insurance industry, we continue to support efforts like updating building codes to create sturdier and more resilient properties.

The rising costs and reduced availability of insurance in places like California and Florida appear to be affecting where people live.

While it takes time to balance out the scales of risk and return, the marketplace continues to grind away at getting the balance right, where it is fair to both consumers and insurers.

Consumers need insurance coverage to protect their homes, businesses, and personal lives. Insurers need to provide those necessary coverages. They need to do so profitably as well, so they have the resources to pay claims when due.

In 2023, we also continued to navigate through the effects of inflation.

Inflation comes in many flavors. Vanilla inflation is higher prices for the same products or services.

Bumpers on cars, boxes of cereal, home improvement or renovation supplies, hours of labor, replacement chargers for cell phones, college tuition, doctor visits, and whatever else you might think of, continue to increase in price.

As insurers, we buy everyday products and services to aid our policyholders. Historically, we forecast what those costs will be. Then we incorporate those

estimates into how we price the insurance policies we write today.

This is not a new phenomenon, nor is it unique to Markel.

Historically, we've succeeded at predicting those costs with enough accuracy to assure that our ultimate claims costs prove to be more than covered by our initial estimates. That continued to be the case in 2023. At the same time, predicting costs got harder amid persistent and pervasive inflation.

We expect to adequately price and reserve future loss costs in 2024 and beyond.

That's at the very core of what we do.

"Social inflation" describes another flavor of inflation. Social inflation (the "new new" term for loss trend) is a recurring cycle in the insurance industry. As was the case in the inflationary environment in the US in the 1970s and early 80s, spikes in legal costs and jury awards, fueled by factors such as litigation financing, are pushing total loss costs up dramatically.

At that time, the asbestos crisis was the headline phrase that provided a shortcut description of spiraling loss costs. Today, it's called social inflation.

Insurance remains a critical piece of our economic system. Modern society can't function without it. Very few people or companies can buy homes, start and run businesses, make long-term commitments, and find necessary financing without insurance coverage.

Just as occurred in the wake of the "insurance crisis" of the 70s and 80s, things like "Tort Reform", "Loser pays", changes in laws regarding liability, changes in limits of insurance coverages, and other forces coalesced to get the "inflation" of that time under control.

Today strikes me as a similar rebalancing era. The ongoing actions in bellwether states like California and Florida will demonstrate how we can find a way forward to improve and rebalance insurance markets.

This is not new.

The problems of social inflation can and will be solved.

It will take time and compromise to stabilize the markets, but that will happen.

As the economist Herbert Stein stated back in the 70s: "Things that can't happen won't, and things that must happen will."

We need functioning and balanced insurance markets to keep our economy on track. It's a "must happen" and it will come to be.

In 2023, we fell short in anticipating and predicting the scale and extent of social inflation in certain pockets of our insurance operations.

In response, we have increased our discipline to operate profitably, where we face large consequences from inflation.

Where appropriate, we are lowering policy limits and tightening terms and conditions. We're charging more per unit of risk, and increasing the data intensity and pace of feedback loops to ensure we adapt to changing environments more quickly. We are placing accountability for our results directly with proven underwriters.

We are refining our methods to aggregate total exposures and rebalancing our portfolio of risks, bringing greater diversification to our product mix.

We are acting with discipline to walk away from business that doesn't meet our profitability requirements.

These actions should combine to improve our balance of risk-versus-reward.

Finally, another factor behind our higher combined ratio in 2023 stemmed from our product mix.

2023 property insurance results for the industry showed the benefits of several years of higher prices and fewer large-scale, headline-making natural catastrophes. As such, insurers with greater property exposures tended to benefit from a good year more than casualty-oriented writers.

While we write a balanced portfolio of both casualty and property risks, we skew modestly towards casualty, including casualty with long-tail risks. Given our historical product mix, our results in 2023 did not pick up as much of the profitability available from property classes.

Over time, results for casualty lines tend to be less volatile than those for property. There should not be an inherent long-term difference in the overall economics between the two classes, but they can and do perform differently in any given year.

Fortunately, we benefited from strong market conditions in the property market. Both through the property risks we continue to write, and the economics we earn through our activities at our Nephila business.

Several years ago, we shifted a meaningful portion of our larger property exposure to Nephila. We did so because we believed that Nephila's capital providers worked with different cost of capital hurdles. As such, we believed that large property exposures for the Markel Group would be better served through the ILS market rather than on a traditional insurance company balance sheet.

This idea worked. You can start to see it in the 2023 results.

Nephila produced excellent returns for its investors this year. And, as should be the case, they earned both management fees and profit share compensation in 2023. (Note, that the profit share contribution remained modest since some funds started 2023 below their high-water marks. Now, substantially all funds are above those marks. Future profitability for Nephila stands to improve meaningfully as a result.)

These results start to confirm our original thesis for the Nephila acquisition. We are delighted to be able to report to you that they earned \$22 million of pre-tax earnings this year up from a loss of \$16 million in 2022.

There are also accounting and timing dynamics that arise from having our large property exposures backed by capital from the Nephila investor base instead of our traditional operations. Namely, we will recognize our income from property exposures via management fees and profit shares from Nephila, as opposed to points of combined ratio profitability reported by the Insurance engine.

Writing large property risks through Nephila also caps the downside risks to the Markel Group from large losses when the wind blows, earthquakes shake, and things go bump in the night.

Whichever way we recognize the good news from profitable operations in property insurance at Markel Group, it works to the benefit of our shareholders.

We expect that Nephila's results will begin to attract positive attention from their investors. We expect assets under management to begin to grow again following the underlying performance of what Nephila investors earned in 2023.

Further, Matt Freeman and his team at State National continue to produce excellent results. Given the wonderful results at State National, we will be expanding State National's operations globally in 2024. We look forward to reporting more on their progress in future years.

In summary, I believe that we have the necessary leadership, accountability, tools, licenses, technology, and skills to put Markel back at the forefront of global specialty insurance organizations.

As Robert Frost said, "The best way out is through."

The work is hard.

It will take time to see the results.

But I believe that we are up to the task.

Ventures engine

Markel Ventures enjoyed a spectacular year.

Andrew Crowley and the leaders of the Markel Ventures companies continue to produce wonderful results.

Since the launch of Markel Ventures in 2005, we've cumulatively written checks for acquisitions totaling roughly \$3.7 billion. Over the same time, we've built up the cash and received dividends of roughly \$1.9 billion from these operations. The Markel Ventures engine also fully funded all their capital expenditure programs and working capital needs.

In rough justice math, that means we've got approximately \$1.7 billion on the line for a set of businesses that produced \$628 million of EBITDA on \$5 billion in revenues last year.

Mike Heaton played a fundamental role in the growth of Markel Ventures and deserves our thanks and congratulations for doing so. He's doing exciting work now that's focused on the success of the whole system, from Insurance to Ventures.

Importantly, neither Mike, Andrew, I, nor any combination of us accomplished this feat without the outstanding leadership and contributions of the cadre of Markel Ventures CEOs, the Markel Ventures home office team, and the thousands of people throughout the organization.

As a great example of such contributions, I'd like to congratulate and thank Bruce Bader upon his recent retirement from Havco. Bruce has done a spectacular job, and we'll miss him. As a testament to the value

of operating in the Markel Group system, Bruce initially committed to us for three years when we bought Havco. He stayed on for eleven. We all won because of it. Thank you, Bruce.

Thank you all for building a culture of service and excellence. Thank you for creating a system that fully demonstrates the attributes and values of a great company.

Given the ongoing high prices for potential acquisitions, we did not purchase any new platform companies in 2023. We did add to our VSC Fire and Security business, and increase our ownership stakes in Costa and Metromont, but the results of 2023 were largely "applesauce to applesauce" comparisons. (GAAP accounting has strict definitions on what "apples to apples" means. Who knew? Given the actions at VSC, Costa, and Metromont, we chose the word applesauce rather than apples. We think it conveys the point.)

I believe that the architecture and design of Markel Ventures within the three-engine system of the Markel Group helps to create these wonderful returns.

How so? Our system and financial resources help us to remain consistent and clear in our message to existing and potential partners. We are focused solely on the *long-term* performance of the Markel Ventures businesses. We never waver from this core belief.

We do not take short cuts when it comes to serving our customers and our associates. In every decision we face, we think about the simple idea of what would be best in the long run.

To support our long-term focus, we use only minimal amounts of debt. This removes the pressure point of debt service from the decisions of how best to run the business.

We believe low uses of debt also creates a competitive advantage. Operating without a sword of Damocles (debt) hanging over our heads—and intending to hold businesses forever without ever re-auctioning them off to a "highest bidder"—helps to create a rare and wonderful culture.

In this environment, the leaders of these businesses flourish.

You can see it in the ongoing numbers. They get to just run their businesses.

It's amazing what people can accomplish when you take away the constraints that are within your power to remove.

It amazes and gratifies me to see the loyalty of our people and the ongoing deal flow we see that stems from this basic and consistent approach to people and business.

Why operate in a debt-fueled and short-term pressure cooker when you don't have to?

Beats me.

We'll stick to our way.

It's working.

And if you are a business owner and this appeals to you ... give us a call.

Investment engine

Our investment operations performed as designed in 2023.

Our recurring interest and dividend income increased 64% to \$735 million in 2023 from \$447 million in 2022.

Throughout the year, we invested the cash flows generated by our businesses, and the maturities of our existing bonds, into fixed-income instruments with higher coupons. At current levels of interest rates, we should see continued growth in this recurring income line in 2024.

We also continued to regularly and systematically add to our portfolio of publicly traded equities during the year. We started the year with an equity portfolio valued at \$7.7 billion. We added purchases of \$638 million and subtracted sales of \$299 million, ending the year with a market value of \$9.6 billion.

We earned a total return in our equity portfolio of 21.6% during the year.

In fixed income, we maintain a portfolio of the highest credit quality instruments we can find. We aim to match those holdings against our future expected insurance claim payments in both duration and currency.

With the combination of insurance profitability, as measured by the combined ratio, and investment income, as measured by the investment yield, we earn a spread on our insurance float. That spread is the highest single component of our income in most

years. Even with our minimal insurance profitability in 2023, that continued to be the case.

We do not attempt to predict interest rates. We also do not try to predict credit outcomes for lower rated fixed-income securities. We just want a portfolio of high-quality fixed-income instruments to earn positive returns, and to assure payments to our policyholders.

The fixed-income unrealized gains and losses that occur during our holding periods have—and should continue to—trend towards zero. As such, we do not react to mark-to-market moves during our multiyear holding periods.

Among the sound reasons that we ride out mark-to-market moves in our bond portfolio is that under GAAP accounting we ignore the equal and opposite mark-to-market moves taking place in our insurance casualty reserves. We establish reserves on day one to reflect what we think the ultimate loss costs will be. We do not discount those gross reserves to a net present value amount, except as required on our run-off life insurance reserves.

When interest rates rise, the mark-to-market value of our bond portfolio declines (also, the interest income from the reinvestment of each maturing bond goes up). We report those mark-to-market changes in our financial statements.

At the exact same time, the net present value of our insurance reserves decreases. Discounting the amount that we expect to pay on a claim in five years back to today would decrease the current carrying value of the claims.

As such, our financial statements reflect the mark-to-market change in our bond holdings, but not the mark-to-market changes in our insurance reserve amounts. Given this one-sided accounting treatment, we choose to be undisturbed by unrealized gains or losses in our bond portfolio. If we don't have credit losses (and we don't), the unrealized amount goes back to zero over time as bonds reach maturity.

In our equity investments, we follow our four-part, time-tested and long-term discipline of: 1) investing in good businesses with good returns on capital; 2) run by management teams with equal measures of talent and integrity; 3) with reinvestment opportunities to grow and/or capital discipline; and 4) at fair prices.

Long-term readers of this report will recognize these four lenses. They've served as unchanging principles for decades.

As of December 31, 2023, we now enjoy an unrealized gain of over \$6 billion on our equity investment portfolio. At the current US tax rate of 21%, this means we have \$1.3 billion of zero cost capital from our deferred tax liability. Very few organizations follow this long-term, tax-efficient process. It is a big advantage for the Markel Group and allows us to be better long-term partners to the companies in which we invest and support.

If we traded our portfolio more frequently and realized these gains, we would need to write a check to the government for \$1.3 billion. If it's all the same to you, I'd prefer to wait a while.

With our approach to find common stocks that we can invest in with the desire to hold them for long periods of time, we can give ourselves a huge economic advantage over those who pursue shorter-term strategies. And we do.

Beyond the pure financial and measurable advantages of this approach, we think the underlying mindset helps us to maintain a long-term focus. Not just about what stocks to buy, but also in how we form and approach our business relationships, and about the rest of the decisions we face on a regular basis.

It's part of—and a reinforcing element to—our culture and how we compete and win.

The long-term focus remains consistent throughout the Markel Group.

It works.

The beat goes on.

Capital allocation

We've spent years describing the architecture of our three-engine system. Capital allocation decisions transmit the power of each of the three engines to make the Markel Group go.

Capital allocation decisions represent how we invest the earnings generated from the entire system.

If you think about wonderful individual businesses, oftentimes they cannot or will not do that.

For example, consider the situation faced by the backers of the hit Broadway show *Hamilton*. I'm confident whoever put up that money has indeed earned many multiples of their initial investment.

Great!

Congratulations!

But what are they going to do with the money? I'm happy to stipulate that the early investors saw the potential and genius of Lin Manuel Miranda and the true work of art he created. But can they reinvest the money they made at the same rates of return?

I think the answer is probably no. That initial investment earned a wonderful return, but now it's time to face the challenge of how to allocate all this new capital you earned.

The ability to reinvest the money is a fundamental opportunity for the Markel Group.

We've created a three-engine system that is designed to earn capital in each of the three engines, then rationally reinvest that capital wherever we believe it will earn the best possible return.

Our three-engine system is also quite tax efficient. We pay taxes in full when we make operating profits in any of our engines. We can then move that capital anywhere else within the Markel Group without incurring an additional layer of taxation. If we paid out our earnings in dividends, you as a taxpayer would have to pay tax on that income before you could invest the money elsewhere.

Our structure and approach allow us to reinvest *after tax earnings* rather than *after tax, after second tax earnings*.

Our decisions do not always turn out like we hope or plan. But we always make capital allocation decisions to the best of our ability, and with all the data and information available at the time.

When we make money, we have four basic choices for where we allocate the funds. We can do any, some, or all of them.

We can fund growth in any of our current set of businesses.

We can acquire new businesses.

We can purchase publicly traded equities or fixed-income securities.

We can repurchase Markel Group common stock.

Fortunately, despite our underperformance in parts of our insurance business, we generated significant amounts of capital this year.

The comprehensive income amount we cited at the beginning of this letter gives you a rough proxy of how much.

That is especially true when you get to the five-year numbers. A five-year time horizon tends to dampen yearly market volatility and provide more accurate measurements of long-term economic performance.

In 2023, we repurchased \$445 million of Markel Group common stock compared to \$291 million in 2022.

The size and scale of our repurchases continue to grow. Before 2022, we made only modest repurchases. Given our view about the intrinsic value per share of Markel Group and comparing that to the market price, we've started repurchasing more shares.

We also purchased \$340 million net of publicly traded equity securities compared to \$201 million in 2022. Despite the white-hot increase of the "magnificent seven" we witnessed in 2023, we continue to find investments that meet our longstanding four-part test.

Our capital expenditures in our existing businesses to fund growth and maintain existing facilities totaled \$259 million in 2023 compared to \$255 million in 2022. The bulk of our capital expenditures relate to our Markel Ventures businesses and their physical facilities and equipment. We expect that total to decline somewhat in 2024 compared to 2023 as we have no new major capital expenditure projects planned for.

Orange and Blue

In the last several years, we've discussed "Orange and Blue Capital," and "Orange and Blue Revenues," to try to communicate how things are going at the Markel Group.

We'll cite "Orange and Blue" again this year to provide insight into how we think about capital allocation choices, and how we make decisions on share repurchases.

We know that others will have different methods to value the Markel Group. We don't claim that our method is perfect or the only way to proceed. We do believe that when we follow this discipline consistently, year after year, it provides directionally correct information to guide us.

Here is what we do.

First, we think there is an "Orange" component of value of your company.

To figure out the "Orange" value, we add up all the investments and cash on our balance sheet and subtract out the debt we owe. We then divide that total by the number of shares outstanding to calculate a net investment per share number.

Here's our big assumption to believe this is a meaningful number:

If our insurance operations operate with a combined ratio under 100% AND if they do not shrink in size, all of the returns from that total portfolio accrue to the shareholders. If you look at 2023, the last five years, the last 15 years, and the last 21 years—as well as all the way back to the IPO—our history and track record would suggest that is a reasonable assumption.

Second, we think there is a "Blue" component of the value of your company.

To figure out the "Blue" value of your company, we add up all the non-investment operating income totals of our insurance underwriting, non-underwriting insurance operations, and Markel Ventures businesses. We subtract out our interest expense and taxes to get a sum of the net income produced by our operations. We normalize some of those components using three-year averages or thoughtful manual overrides. Then we assign a conservative and consistent multiple to that total. We then divide that total by the number of shares outstanding to determine the "Blue" component of the overall value per share.

Then, we add the "Orange" and "Blue" numbers together to calculate our sense of the intrinsic value per share of the Markel Group.

We've calculated intrinsic value per share following this method consistently ever since the IPO in 1986. It has compounded at a double-digit rate since that time. The share price has tracked that number very closely.

In the last five-year period, that number compounded at a double-digit rate despite the challenges of the COVID-19 shock, an intervening bear market in equities, a period of almost non-existent interest rates and corresponding investment income, as well as some less than perfect acquisitions and execution of our insurance operations.

Imagine what might occur if we get more of these things right over the next five years? A girl can dream.

Our number one task as managers, measured in financial terms, is to keep the per share intrinsic value of the Markel Group moving up and to the right at reasonable rates of return.

We have done exactly that over many years. Now we tackle the challenge of continuing to do so.

When the Orange and Blue calculation indicates that Markel Group shares are selling at a substantial discount, our appetite for repurchases goes up. If the market price exceeds our estimate, expect us to be willing to issue shares for growth, acquisition, or financing purposes.

We are not going through this exercise to “hype” our stock price. We are just trying to be transparent about how we think when making capital allocation decisions when it comes to Markel Group shares.

As always, we will act rationally to the best of our ability.

The beat goes on.

2024 and beyond

Poet and potter M.C. Richards once said, “Let no one be deluded that a knowledge of the path can substitute for putting one foot in front of the other.”

We continue to pursue “knowledge of the path” and all that phrase implies.

We will continue to pursue knowledge; we’ll also keep walking.

That describes what we’ve been doing since 1930. It describes our plan for 2024 and beyond.

Our long-term results stand as a testament to the value of persistence, rationality and compounding. The numbers describe the results from “putting one foot in front of the other” over decades.


Look how far we’ve come.

The next steps look promising to me.

Thank you for your ongoing support and partnership. We could not run a long-term focused organization without the partnership of long-term owners and partners. We hope to see you in person at our shareholder meeting on May 22 at the University of Richmond.

Markel Group remains a distinctive and special organization, and it is a great joy in my life to serve as your CEO.

Respectfully submitted,



Thomas S. Gayner, *Chief Executive Officer*

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K

Annual report pursuant to Section 13 or 15(d) of the
Securities Exchange Act of 1934 for the fiscal year ended December 31, 2023

Commission File Number 001-15811

MARKEL GROUP INC.

(Exact name of registrant as specified in its charter)

A Virginia Corporation

IRS Employer Identification No. 54-1959284

4521 Highwoods Parkway, Glen Allen, Virginia 23060-6148

(Address of principal executive offices) (Zip code)

Registrant's telephone number, including area code: (804) 747-0136

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

Title of each class	Trading Symbol(s)	Name of exchange on which registered
Common Stock, no par value	MKL	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 Section 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 (§ 232.405 of this chapter) 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 shares of the registrant's Common Stock held by non-affiliates as of June 30, 2023 was approximately \$18,051,000,000.

The number of shares of the registrant's Common Stock outstanding at January 31, 2024: 13,110,035.

Documents Incorporated By Reference: The portions of the registrant's Proxy Statement for the Annual Meeting of Shareholders scheduled to be held on May 22, 2024, referred to in Part III.

Markel Group Inc.
Form 10-K
Index

	<u>Page Number</u>
Part I	
Item 1. Business	10K - 2
Item 1A. Risk Factors	10K - 22
Item 1B. Unresolved Staff Comments	NONE
Item 1C. Cybersecurity	10K - 34
Item 2. Properties	10K - 36
Item 3. Legal Proceedings	10K - 36
Item 4. Mine Safety Disclosures	NONE
Information about Our Executive Officers	10K - 37
Part II	
Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	10K - 38
Item 6. [Reserved]	NONE
Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations	10K - 40
Item 7A. Quantitative and Qualitative Disclosures About Market Risk	10K - 69
Item 8. Financial Statements and Supplementary Data	
Report of Independent Registered Public Accounting Firm	10K - 73
Consolidated Balance Sheets—December 31, 2023 and 2022	10K - 75
Consolidated Statements of Income (Loss) and Comprehensive Income (Loss)—Years Ended December 31, 2023, 2022 and 2021	10K - 76
Consolidated Statements of Changes in Equity—Years Ended December 31, 2023, 2022 and 2021	10K - 77
Consolidated Statements of Cash Flows—Years Ended December 31, 2023, 2022 and 2021	10K - 78
Notes to Consolidated Financial Statements	10K - 79
Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure	NONE
Item 9A. Controls and Procedures	10K - 130
Item 9B. Other Information	10K - 132
Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections	NONE
Part III	
Item 10. Directors, Executive Officers and Corporate Governance	10K - 132
Item 11. Executive Compensation	10K - 132
Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	10K - 132
Item 13. Certain Relationships and Related Transactions, and Director Independence	10K - 132
Item 14. Principal Accounting Fees and Services	10K - 132
Part IV	
Item 15. Exhibits and Financial Statement Schedules	10K - 132
Item 16. Form 10-K Summary	NONE
Exhibit Index	10K - 133
Signatures	10K - 136

PART I

Item 1. BUSINESS

Markel Group Inc. (Markel Group) is a holding company comprised of a diverse family of businesses and investments. The leadership teams of our businesses operate with a high degree of independence, while at the same time living the values that we call the Markel Style. Our specialty insurance business, Markel, sits at the core of our company. Through decades of sound underwriting, Markel has provided the capital base from which we built a system of businesses and investments that collectively increase Markel Group's durability and adaptability. We aspire to build one of the world's great companies by creating win-win-win outcomes for our customers, associates and shareholders. We deploy three financial engines in pursuit of this goal.

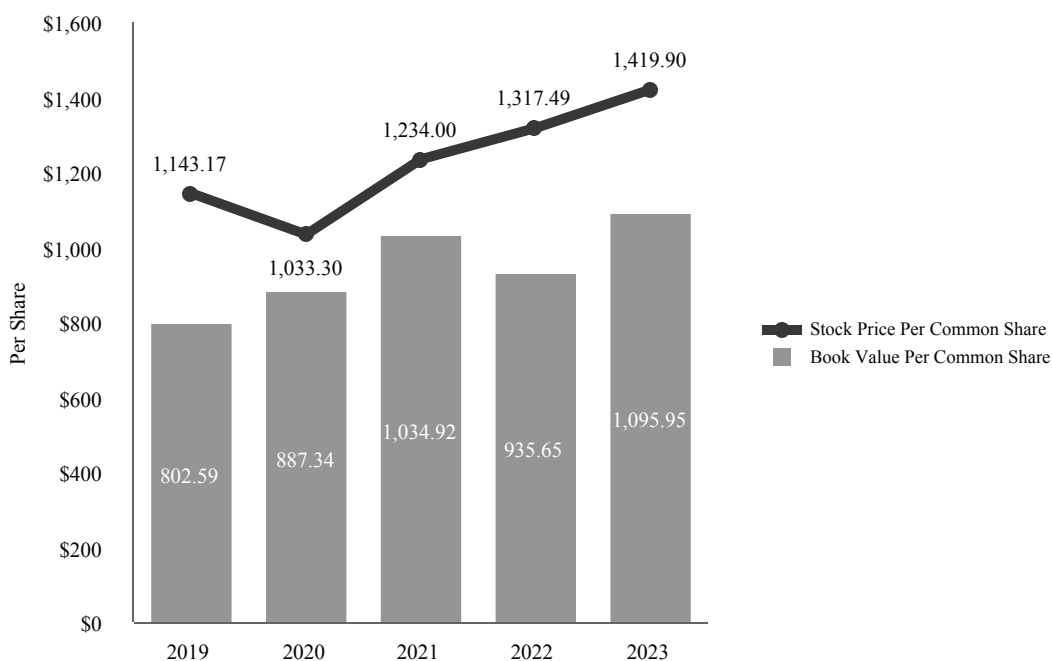
Insurance - markets and underwrites specialty insurance products using our underwriting, fronting and insurance-linked securities platforms that enable us to best match risk and capital

Investments - invests premiums received by our underwriting operations and any available earnings provided by our operating businesses in fixed maturity and equity securities

Markel Ventures - owns controlling interests in a diverse portfolio of businesses that operate in a variety of industries

Our three interdependent engines form a system that provides diverse income streams, access to a wide range of investment opportunities and the ability to efficiently move capital to the best ideas across our three engines. We allocate capital using a process that we have consistently followed for years. We first look to invest in our existing businesses for organic growth opportunities. After funding internal growth opportunities, we look to acquire controlling interests in businesses, build our portfolio of equity securities, or repurchase shares of our common stock. We believe our system is uniquely equipped for long-term growth. To mitigate the effects of short-term volatility and align with the long-term perspective that we apply to operating our businesses and making investments, we generally use five-year time periods to measure our performance. We measure financial success by our ability to grow the market price per common share of our stock, or total shareholder return, at high rates of return over a long period of time. Over the past five years, our common share price increased at a compound annual rate of 6%. We also have considered the performance of book value per common share over the long-term, although we believe that as our business has evolved, this measure has become less reflective of shareholder value because a significant portion of our operations is not recorded at fair value. Over the past five years, the compound annual growth in book value per common share was 11%.

The following graph presents stock price per common share and book value per common share for the past five years as of December 31.



The following table presents summary financial data over the last five years, including stock price per common share, book value per common share and other important financial measures and metrics.

<i>(dollars in millions, except per share data)</i>	2023	2022	2021	2020	2019	5-Year CAGR ⁽¹⁾
Results of Operations						
Earned premiums	\$ 8,295	\$ 7,588	\$ 6,503	\$ 5,612	\$ 5,050	12 %
Net investment income	\$ 735	\$ 447	\$ 367	\$ 376	\$ 442	11 %
Net investment gains (losses)	\$ 1,524	\$ (1,596)	\$ 1,979	\$ 618	\$ 1,602	
Market Ventures operating revenues	\$ 4,985	\$ 4,758	\$ 3,644	\$ 2,795	\$ 2,055	21 %
Total operating revenues	\$ 15,804	\$ 11,675	\$ 12,846	\$ 9,735	\$ 9,526	18 %
Market Ventures operating income	\$ 438	\$ 325	\$ 273	\$ 254	\$ 168	
Total operating income (loss)	\$ 2,929	\$ (93)	\$ 3,242	\$ 1,274	\$ 2,477	
Net income (loss) to common shareholders	\$ 1,960	\$ (252)	\$ 2,387	\$ 798	\$ 1,790	
Diluted net income (loss) per common share	\$ 146.98	\$ (23.72)	\$ 176.38	\$ 55.63	\$ 129.07	
Financial Position						
Invested assets ⁽²⁾	\$ 30,854	\$ 27,420	\$ 28,292	\$ 24,927	\$ 22,258	10 %
Total assets	\$ 55,046	\$ 49,791	\$ 48,477	\$ 41,738	\$ 37,474	11 %
Unpaid losses and loss adjustment expenses	\$ 23,483	\$ 20,948	\$ 18,179	\$ 16,222	\$ 14,729	10 %
Shareholders' equity	\$ 14,984	\$ 13,151	\$ 14,700	\$ 12,822	\$ 11,071	11 %
Common shares outstanding (at year end, in thousands)	13,132	13,423	13,632	13,783	13,794	
Consolidated Performance Measures						
Closing stock price	\$1,419.90	\$1,317.49	\$1,234.00	\$1,033.30	\$1,143.17	6 %
5-Year CAGR in closing stock price ⁽¹⁾	6 %	3 %	6 %	3 %	11 %	
Book value per common share	\$1,095.95	\$ 935.65	\$1,034.92	\$ 887.34	\$ 802.59	11 %
5-Year CAGR in book value per common share ⁽¹⁾	11 %	6 %	11 %	10 %	8 %	

⁽¹⁾ CAGR—compound annual growth rate.

⁽²⁾ Invested assets include total investments, cash and cash equivalents and restricted cash and cash equivalents.

Insurance

Our insurance engine is comprised of the following types of operations:

- Underwriting - our risk-bearing insurance and reinsurance operations.
- Program services and other fronting - fronting platform that provides other insurance entities and capacity providers access to the United States (U.S.) property and casualty insurance market.
- Insurance-linked securities (ILS) - provides investment management services to third-party capital providers for a variety of insurance-related investment products.

Through our underwriting, program services and other fronting and ILS operations, we have a suite of capabilities through which we can access capital to support our customers' risks, which includes our own capital through our underwriting operations, as well as third-party capital through our program services and other fronting and ILS operations. Within each of these insurance platforms, we believe that our specialty product focus enables us to develop expertise and specialized market knowledge. We seek to differentiate ourselves from competitors by our expertise, service, continuity and other value-based considerations, including the multiple platforms through which we can manage risk and deploy capital. For example, through our program services and other fronting platform, we have programs through which we write insurance policies on behalf of our ILS operations that are supported by third-party capital. Additionally, we cede certain risks historically written through our underwriting operations to our ILS operations to the extent those risks are more aligned with the risk profile of our ILS investors than our own corporate tolerance. Our ability to access multiple insurance platforms allows us to achieve income

streams from our insurance operations beyond the traditional underwriting model. We believe this multi-platform approach provides us with a unique advantage through which we have the ability to unlock additional value for our customers and business partners, which we refer to as "the power of the platform."

Underwriting

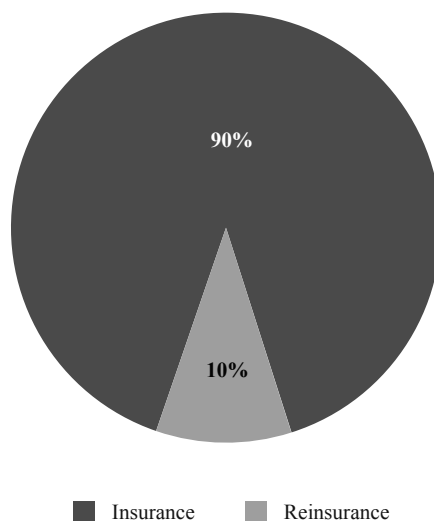
Specialty Insurance and Reinsurance

Within our underwriting operations, we underwrite specialty insurance products on a risk-bearing basis. The specialty insurance market differs significantly from the standard market. In the standard market, insurance rates and forms are highly regulated, products and coverages are largely uniform with relatively predictable exposures, and companies tend to compete for customers on the basis of price. In contrast, the specialty market provides coverage for hard-to-place risks that generally do not fit the underwriting criteria of standard carriers.

Competition in the specialty insurance market tends to focus less on price than in the standard insurance market and more on other value-based considerations, such as availability, service and expertise. While specialty market exposures may have higher perceived insurance risks than their standard market counterparts, we seek to manage these risks and achieve higher financial returns. To reach our financial and operational goals, we must have extensive knowledge and expertise in our chosen markets. Many of our larger accounts are considered on an individual basis where customized forms and tailored solutions are employed. Examples of specialty insurance markets that we have targeted include liability coverage for highly specialized professionals, transaction-related risks, and marine, energy and environmental-related activities. Our market strategy in each of these areas of specialization is tailored to the unique nature of the loss exposure, coverage and services required by insureds. In each of the markets we serve, we assign teams of experienced underwriters and claims specialists who provide a full range of insurance services.

We also participate in the reinsurance market in certain classes of reinsurance product offerings, primarily casualty lines and certain other specialty lines. In the reinsurance market, our clients are other insurance companies, or cedents. We typically write our reinsurance products in the form of treaty reinsurance contracts, which are contractual arrangements that provide for automatic reinsuring of a type or category of risk underwritten by cedents. Treaty reinsurance products are written globally on both a quota share and excess of loss basis. With treaty reinsurance contracts, we do not separately evaluate each of the individual risks assumed under the contracts and are largely dependent on the individual underwriting decisions made by the cedent. Accordingly, we review and analyze the cedent's risk management and underwriting practices in deciding whether to provide treaty reinsurance and in pricing of treaty reinsurance contracts. Additionally, we write casualty reinsurance on a facultative basis, which is distinct from treaty reinsurance in that we evaluate each risk individually to determine whether to assume the risk.

The following chart presents the composition of our underwriting operations between our Insurance segment and Reinsurance segment based on 2023 underwriting gross premium volume of \$10.3 billion. The Insurance segment includes all of our direct business, as well as facultative reinsurance placements. The Reinsurance segment includes all treaty reinsurance.



The following table summarizes our U.S. insurance and reinsurance underwriting subsidiaries.

U.S. Legal Entity	Abbreviation	Market	State of Domicile
Essentia Insurance Company	Essentia	Insurance - admitted	Missouri
Evanston Insurance Company	EIC	Insurance - non-admitted	Illinois
FirstComp Insurance Company	FCIC	Insurance - admitted	Nebraska
Markel American Insurance Company	MAIC	Insurance - admitted	Virginia
Markel Global Reinsurance Company	MGRC	Reinsurance	Delaware
Markel Insurance Company	MIC	Insurance - admitted	Illinois
National Specialty Insurance Company	NSIC	Insurance - admitted	Texas
State National Insurance Company, Inc.	SNIC	Insurance - admitted	Texas
SureTec Insurance Company	SIC	Insurance - admitted	Texas

Through these U.S. insurance and reinsurance subsidiaries, we are licensed, authorized, or accredited to write business in all 50 states and the District of Columbia.

The following table summarizes our international insurance and reinsurance underwriting subsidiaries.

International Legal Entity	Abbreviation	Country
Markel Bermuda Limited	MBL	Bermuda
Markel Insurance SE	MISE	Germany
Markel International Insurance Company Limited	MIICL	United Kingdom
Markel Syndicate 3000	Syndicate 3000	United Kingdom

Markets and Distribution

Our underwriting operations write business on a global basis and utilize multiple distribution channels to access our targeted risks.

In the U.S., we write business in the excess and surplus lines (E&S) and admitted insurance markets, as well as the reinsurance market. The primary distribution channels through which our U.S. business is placed are wholesale insurance and reinsurance brokers, retail insurance agents and alternative channels, including third-party managing general agents.

The E&S, or non-admitted, market focuses on hard-to-place risks and loss exposures that generally are not written in the standard market. E&S eligibility allows our insurance subsidiaries to underwrite unique loss exposures with more flexible policy forms and unregulated premium rates. This typically results in coverages that are more restrictive and more expensive than coverages in the standard market. The E&S market is accessed primarily through wholesale insurance and reinsurance brokers, which have limited quoting and binding authority. In 2022, the E&S market represented \$98 billion, or 11%, of the \$875 billion U.S. property and casualty industry.¹ In 2022, we were the third largest E&S writer in the U.S. as measured by direct premium writings.¹

Our U.S. business written in the admitted market focuses on unique and hard-to-place risks in the standard market, some of which must remain with an admitted insurance company for marketing and regulatory reasons. Hard-to-place risks written in the admitted market cover insureds engaged in similar, but highly specialized, activities that require a total insurance program not otherwise available from standard insurers. The admitted market is subject to more state regulation than the E&S market, particularly with regard to rate and form filing requirements, premium tax payment requirements and membership in various state associations, such as state guaranty funds and assigned risk plans. Business written in the admitted market is placed primarily by retail insurance agents. Our admitted business is also placed through managing general agents, which have broader underwriting authority than retail agents. These agents are carefully selected based on a track record of proficiency with their selected products, and the business written is controlled through regular audits and pre-approvals. In addition, certain products and programs written on an admitted basis are marketed directly to consumers.

¹ *Market Segment Report - U.S. Surplus Lines, A.M. Best (September 13, 2023)*

Our U.S. reinsurance operations are conducted through MGRC. Reinsurance business is placed primarily through wholesale reinsurance brokers. We were the 41st largest reinsurer in 2022 as measured by worldwide gross reinsurance premium writings.²

In Bermuda, which is known for its significant concentration of insurance and reinsurance businesses, we participate in the worldwide insurance and reinsurance markets. The Bermuda property and casualty market is a significant source of capital for the U.S. market and the leading location for cessions by U.S. insurers.³ Business written in the Bermuda market is typically placed by a Bermuda-based wholesale broker. We conduct our Bermuda underwriting operations through MBL, which is registered as a Class 4 insurer and Class C long-term insurer under the insurance laws of Bermuda.

We also participate in the London insurance and reinsurance market, which is known for its ability to provide innovative, tailored coverage and capacity for unique and hard-to-place risks, many of which have significantly higher limits than risks placed through the standard market. Insurance brokers place most of the business in the London market. Risks written in this market are written on either a direct basis or a subscription basis, the latter of which means that loss exposures brought into the market are typically insured by more than one insurance company or Lloyd's of London (Lloyd's) syndicate, often due to the high limits of insurance coverage required. We participate in the London insurance and reinsurance market primarily through Markel Capital Limited (Markel Capital) and MIICL. Markel Capital is the corporate capital provider for Syndicate 3000, through which our Lloyd's operations are conducted. In addition to their headquarters in London, Markel Capital and MIICL maintain branch offices across the United Kingdom (U.K.), Europe, Canada, Asia, Australia and the Middle East through which we are able to offer insurance and reinsurance.

In Europe, we also write business through Syndicate 3000 and MISE, a regulated insurance carrier located in Munich, Germany. From its offices in Germany, MISE transacts business in European Union (E.U.) member states and throughout the European Economic Area. MISE has established branches in Ireland, the Netherlands, Spain, Switzerland, France and the U.K. Syndicate 3000 supplements, or serves as an alternative to, MISE for access to the E.U. markets.

While we operate in various other markets, substantially all of our gross written premiums in 2023 were written from our platforms in the United States, the United Kingdom, Bermuda and Germany. In 2023, 80% of gross premium writings from our global underwriting operations were attributed to risks or cedents located in the United States. In each of the markets in which we operate, we seek to develop and capitalize on relationships with insurance and reinsurance brokers, insurance and reinsurance companies, large global corporations and financial intermediaries to develop and underwrite business. A significant volume of premium for the property and casualty insurance and reinsurance industry is produced through a small number of large insurance and reinsurance brokers. In 2023, the top five independent brokers accounted for 37% of gross premiums written in our underwriting operations. Additionally, a significant portion of the reinsurance contracts securitized through our ILS operations, for the benefit of third-party investors, are placed through these five independent brokers.

Ceded Reinsurance

In a reinsurance transaction, an insurance company transfers, or cedes, all or part of its exposure in return for a premium. In a retrocessional reinsurance transaction, a reinsured exposure is further ceded to another reinsurer. Within our underwriting operations, we seek to retain as much of our profitable business as possible while managing volatility within our underwriting results and capital requirements at our insurance subsidiaries. We purchase reinsurance and retrocessional reinsurance to manage our net retention on individual risks and overall exposure to losses, while providing us with the ability to offer policies with sufficient limits to meet policyholder needs. This includes purchasing sufficient coverage for our catastrophe-exposed policies to ensure that our net retained catastrophe risk is within our corporate tolerances. The structure of our reinsurance purchases may vary from year to year depending on our risk tolerance and the availability and cost of reinsurance, as determined by current market conditions. In such instances, we may in turn modify our gross premium writings to manage our overall net loss exposures. Net retention of gross premium volume in our underwriting segments was 82% in 2023.

Ceded reinsurance and retrocessional contracts do not legally discharge us from our primary liability for the full amount of the policies, and we will be required to pay the loss and bear collection risk if the reinsurer fails to meet its obligations under the reinsurance agreement. We attempt to minimize credit exposure to reinsurers through adherence to internal ceded reinsurance guidelines. We manage our exposures so that no unsecured exposure to any one reinsurer is material to our ongoing business. Treaties typically contain provisions that allow us to demand that a reinsurer post letters of credit or assets as collateral if a reinsurer becomes an unauthorized reinsurer under applicable regulations or if its rating falls below an acceptable level.

² *Market Segment Report - Global Reinsurance, A.M. Best (August 22, 2023)*

³ *Offshore Reinsurance in the U.S. Market, Reinsurance Association of America (2022)*

See note 12 of the notes to consolidated financial statements included under Item 8 and Item 7A Quantitative and Qualitative Disclosures About Market Risk for additional information about our ceded reinsurance programs and exposures.

Competition and Underwriting Philosophy

We compete with numerous domestic and international insurance companies and reinsurers, Lloyd's syndicates, risk retention groups, insurance buying groups, risk securitization programs, alternative capital sources, such as that provided through ILS, and alternative self-insurance mechanisms. We also compete with new companies that continue to be formed to enter the insurance and reinsurance markets, particularly companies with new or "disruptive" technologies or business models. Competition may take the form of lower prices, broader coverages, greater product flexibility, enhanced digital capabilities for distribution of insurance products, higher coverage limits, higher quality services or higher ratings by independent rating agencies. In all of our markets, we compete on the basis of overall financial strength, ratings assigned by independent rating agencies, development of specialty products to satisfy well-defined market needs and by maintaining relationships with agents, brokers and insureds who rely on our expertise. This expertise is our principal means of competing. We offer a diverse portfolio of products, each with its own distinct competitive environment, which requires us to be responsive to changes in market conditions for individual product lines. With each of our products, we seek to write business that produces consistent underwriting profits by maintaining adequate rates for our premium writings in relation to expected loss cost trends.

Few barriers exist to prevent competition from entering our markets within the property and casualty industry. Market conditions, risk tolerance and capital capacity influence the degree of competition at any point in time. During periods of excess underwriting capacity, as defined by availability of capital, competition can result in lower pricing and less favorable policy terms and conditions for insurers. During periods of reduced underwriting capacity, pricing and policy terms and conditions are generally more favorable for insurers. Historically, the performance of the property and casualty insurance and reinsurance industries has tended to fluctuate in cyclical periods of price competition and excess underwriting capacity, followed by periods of high premium rates and shortages of underwriting capacity. At any given time, our portfolio of insurance products could be experiencing varying combinations of these characteristics.

Within our underwriting operations, we seek to earn an underwriting profit every year. The property and casualty insurance industry commonly defines underwriting profit or loss as earned premiums net of losses and loss adjustment expenses and underwriting, acquisition and insurance expenses. We believe that the ability to achieve consistent underwriting profits demonstrates knowledge and expertise, commitment to superior customer service and the ability to manage insurance risk. We use underwriting profit or loss as a basis for evaluating our underwriting performance. The combined ratio is a measure of underwriting performance and represents the relationship of incurred losses, loss adjustment expenses and underwriting, acquisition and insurance expenses to earned premiums. A combined ratio less than 100% indicates an underwriting profit, while a combined ratio greater than 100% reflects an underwriting loss. In 2023, our combined ratio was 98%. See Item 7 Management's Discussion & Analysis of Financial Condition and Results of Operations for a discussion of our underwriting results.

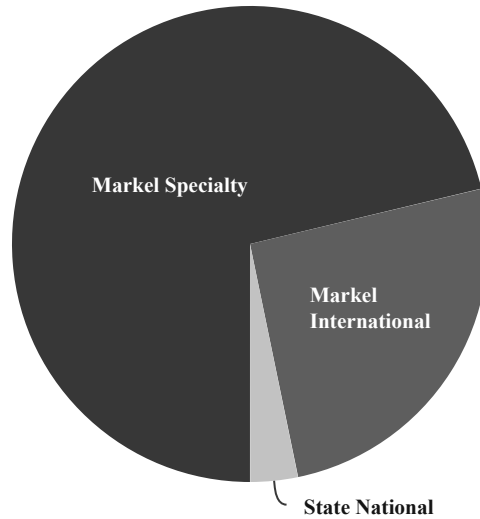
We routinely review the pricing for all of our product lines. When we believe the prevailing market price will not support our underwriting profit targets, the business is not written. As a result of our underwriting discipline, gross premium volume may vary when we alter our product offerings to maintain or improve underwriting profitability. For example, in 2023, we adjusted our writings within our U.S. and Bermuda directors and officers and errors and omissions product lines in our Insurance segment in response to unfavorable loss cost trends and downward pressure on rates.

Underwriting Segments

We monitor and assess the performance of our ongoing underwriting operations on a global basis in the following two segments: Insurance and Reinsurance. See note 2 of the notes to consolidated financial statements included under Item 8 for additional segment reporting disclosures.

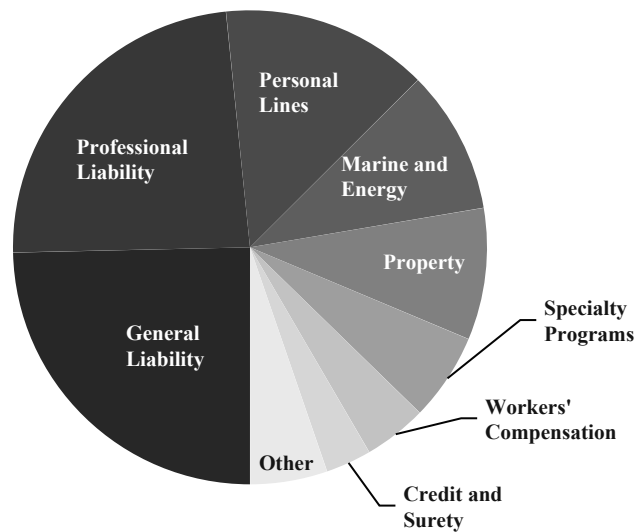
Insurance Segment

Our Insurance segment reported gross premium volume of \$9.2 billion, earned premiums of \$7.3 billion and an underwriting profit of \$162.2 million in 2023. The following chart presents the composition of our Insurance segment by division based on 2023 gross premium volume.



The Market Specialty division is comprised of our U.S. and Bermuda based insurance underwriting operations and writes business for insureds ranging from individuals and small businesses to Fortune 1000 companies in the U.S., the U.K., the E.U., Asia and Australia. The Market Specialty platform provides easy access to our diverse portfolio of products and capabilities. The Market International division writes business worldwide from our London and Munich-based platforms, which include branch offices in Canada, Asia, Australia and across the E.U. The State National division writes collateral protection insurance for automobile and other vehicle loans in the U.S.

The following chart displays the types of products written in our Insurance segment based on 2023 gross premium volume.



General liability product offerings include a variety of primary and excess liability coverages. We focus on businesses in the construction, life sciences, energy, medical, healthcare, pharmaceutical, professional services, social welfare, recreational, transportation, heavy industrial and hospitality industries. Specific products include primary general liability, excess and umbrella products, products liability products, environmental liability products and casualty facultative reinsurance written for individual casualty risks.

Our professional liability product lines provide insurance solutions for small, middle market and risk management accounts with coverage that is tailored to their exposures and needs. Professional liability coverages include errors and omissions, directors and officers, cyber, employment practices liability, professional indemnity, transaction liability, intellectual property and union liability. Errors and omissions coverage provides solutions for specialized professions including lawyers, accountants, agents and brokers, service technicians and consultants, as well as other less-specialized professionals. Directors and officers coverage is provided for publicly-traded, private and non-profit companies, including financial institutions and Fortune 1000 companies. We also offer claims-made professional liability coverage for individual healthcare providers and coverages for medical facilities.

Personal lines products provide first and third-party coverages in the U.S. for classic cars, motorcycles and a variety of personal watercraft, including vintage boats, high-performance boats and yachts and recreational vehicles, such as motorcycles, snowmobiles and ATVs. Additionally, property coverages are offered for homeowners that do not qualify for standard homeowner's coverage, as well as personal umbrella coverage.

Marine and energy products include a portfolio of coverages for cargo, energy, hull, liability, war and terrorism risks worldwide. The cargo product line is an international transit-based book providing coverage for many types of cargo. Energy coverage includes all aspects of oil, gas and renewable energy activities. Our renewable energy activities include coverages for onshore and offshore wind farms, as well as alternative energy generation and storage technology projects. Hull coverages consist of coverage for physical damage to ocean-going tonnage, yachts and mortgagees' interests. Liability coverage provides coverage for a broad range of energy liabilities, as well as traditional marine exposures including charterers, terminal operators and ship repairers. Marine war coverage includes protections for the hulls of ships, and other related interests, against war and associated perils. Terrorism coverage includes coverage for property damage and business interruption related to political and civil violence and war on land.

Property coverages consist principally of fire, allied lines (including windstorm, hail and water damage) and other specialized property coverages, including catastrophe-exposed property risks such as earthquake and wind on both a primary and excess basis. Catastrophe-exposed property risks can present higher severity than more standard property risks due to the impacts from earthquakes and severe weather events such as hurricanes, convective storms and wildfires. Our property coverages are exposed to windstorm losses that, based on the seasonal nature of those events, are more likely to occur in the third and fourth quarters of the year. Our property risks range from small, single-location accounts to large, multi-state, multi-location, multi-national accounts on a worldwide basis. Other types of property products include inland marine products, railroad-related products and specie coverage for fine art on exhibition and in private collections.

Specialty programs business is offered in the U.S. on a standalone or package basis and generally targets specialized commercial markets and various customer groups, such as amateur sports and fitness clubs. Certain specialty programs written in this segment use managing general agents to offer single source admitted and non-admitted programs for a specific industry, class or line of business.

Workers' compensation products are offered in the U.S. and provide wage replacement and medical benefits to employees injured in the course of employment and target main-street, service and artisan contractor businesses, retail stores and restaurants.

Credit and surety products consist primarily of trade credit and prepayment coverage and a range of bonds and guarantees that support contractual obligations, as well as other coverages for specific credit risks, markets and contingencies. Key credit risks covered include those of counterparty insolvency and defaults by government-owned entities. The key coverages under surety products include contractual performance and payment risks, commercial license and permit obligations and obligations related to judicial proceedings such as court and fiduciary bonds.

Other product lines within the Insurance segment primarily include collateral protection insurance, which insures personal automobiles and other vehicles held as collateral for loans made by credit unions, banks and specialty finance companies.

Reinsurance Segment

Our Reinsurance segment product offerings are underwritten primarily by our Global Reinsurance division, which operates from platforms in the U.S., Bermuda and the U.K. We write quota share and excess of loss reinsurance on a local, national and global basis. Our Reinsurance segment reported gross premium volume of \$1.0 billion, earned premiums of \$1.0 billion and an underwriting loss of \$19.3 million in 2023. The following chart displays the types of products written in our Reinsurance segment based on 2023 gross premium volume.



General liability reinsurance primarily consists of umbrella and excess casualty products, as well as environmental liability products covering pollution legal liability and contractors' pollution exposures.

Our specialty treaty reinsurance products are written across a wide range of specialty product lines, primarily consisting of the following:

- Credit and surety products, including structured and whole turnover credit, political risk and contract and commercial surety reinsurance programs covering worldwide exposures;
- Workers' compensation and accident and health products covering both standard and catastrophe-exposed business in the U.S. and worldwide;
- Marine and energy products covering both offshore and onshore marine, energy and renewable energy risks on a worldwide basis, including hull, cargo and liability;
- Public entity reinsurance products offering casualty coverage for municipalities, schools, special districts, public housing authorities and public entity affiliated non-profits;
- Mortgage default insurance offering coverage for private mortgage insurers predominantly located in the U.S. and Australia;
- Aviation and space coverage, including major risk, general aviation, satellite launch and orbit;
- Agriculture reinsurance covering multi-peril crop insurance, hail and related exposures for risks located in the U.S. and Canada; and
- Discrete political violence and national terror pools in select jurisdictions globally.

Professional liability reinsurance primarily consists of the following:

- Transaction liability, which provides representation, warranty and indemnity coverage for mergers and acquisitions, including coverage for tax and contingent liability;
- Directors and officers liability for publicly-traded, private and non-profit companies;
- Cyber and technology errors and omissions covering both first and third-party exposures;
- Errors and omissions for lawyers, accountants, agents and brokers, services technicians and consultants; and
- Healthcare liability for physicians, hospitals, long-term care and other medical facilities.

Program Services and Other Fronting

Our program services and other fronting business generates fee income in the form of ceding fees in exchange for fronting insurance and reinsurance business for other insurance carriers (capacity providers). In general, fronting refers to business in which we write insurance on behalf of a general agent or capacity provider and then cede all, or substantially all, of the risk under these policies to the capacity provider in exchange for ceding fees. The results of our program services and other fronting operations are not included in a reportable segment.

Our program services business, which is provided through our State National division, offers issuing carrier capacity to both specialty managing general agents and other producers who sell, control and administer books of insurance business that are supported by third parties that assume reinsurance risk, including the Nephila Reinsurers. These reinsurers include domestic and foreign insurers and institutional risk investors that want to access specific lines of U.S. property and casualty insurance business but may not have the required licenses, filings or financial strength ratings to do so.

Beginning in 2024, our State National division is expanding internationally through a partnership with our Market International division to create an international program services division to serve managing general agents in the U.K. market. The new division is another example of how we can leverage our array of capabilities to effectively and efficiently connect capital with risk.

Through our program services business, we write a wide variety of insurance and reinsurance products, principally including general liability, commercial liability, commercial multi-peril, property and workers' compensation. Program services business written through our State National division is separately managed from our underwriting divisions, which may write similar products, in order to protect our program services customers.

The following table summarizes the subsidiaries through which our program services business is written.

Legal Entity	Abbreviation	State of Domicile
City National Insurance Company	CNIC	Texas
National Specialty Insurance Company	NSIC	Texas
Pinnacle National Insurance Company	PNIC	Texas
State National Insurance Company, Inc.	SNIC	Texas
Superior Specialty Insurance Company	SSIC	Delaware
United Specialty Insurance Company	USIC	Delaware

Through these subsidiaries, our program services business is licensed or authorized to write business in all 50 states and the District of Columbia. Many of our programs are arranged with the assistance of brokers that are seeking to provide customized insurance solutions for specialty insurance business that requires a carrier rated "A" by A.M. Best Company (A.M. Best). Our specialized business model relies on third-party producers or capacity providers to provide policy administration, claims handling, cash handling, underwriting, or other traditional insurance company services. We compete primarily on the basis of price, customer service, financial strength ratings, licenses, reputation, business model and experience.

Total revenues attributed to our program services business for the year ended December 31, 2023 were \$151.8 million. Our program services business generated \$2.9 billion of gross written premium volume for the year ended December 31, 2023.

In our program services business, we enter into reinsurance agreements whereby we cede to the capacity providers 100% of the premium written and substantially all of our gross liability under all policies issued by and on behalf of us by the producer. As a result of our contract design, substantially all of the underwriting risk and operational risk inherent in the arrangement is borne by the capacity providers.

Our contracts with capacity providers do not legally discharge us from our primary liability for the full amount of the policies, and we will be required to pay the loss and bear collection risk if a capacity provider fails to meet its obligations under the reinsurance agreement. As a result, we remain exposed to the credit risk of capacity providers, including the risk that one of our capacity providers becomes insolvent or is otherwise unable or unwilling to pay policyholder claims. We mitigate this credit risk generally by either selecting well capitalized, highly rated authorized capacity providers or requiring that the capacity provider post substantial collateral to secure the reinsured risks, which, in some instances, exceeds the related reinsurance recoverable.

In our other fronting business, we leverage the strength of our underwriting platform, including our highly rated insurance subsidiaries, to write business on behalf of our Nephila ILS operations, in exchange for ceding fees, to support its business plans and assist in meeting its desired return objectives. Our other fronting business is managed separately from our program services business. The results of our other fronting business are not included in a reportable segment. Total revenues attributed to our other fronting business for the year ended December 31, 2023 were \$20.7 million. Our other fronting business generated \$840.9 million of gross written premium volume for the year ended December 31, 2023.

Business written on behalf of our Nephila ILS operations within both our program services and other fronting operations primarily consists of catastrophe-exposed property insurance and reinsurance business, as well as specialty and climate reinsurance business. The business written is ceded to the Nephila Reinsurers, whose investors ultimately assume the risk. To mitigate credit risk for this business, we require collateral up to a specified level of annual aggregate agreement year losses, which is held in a trust for which we are the beneficiary. See note 18 of the notes to consolidated financial statements included under Item 8 for further details regarding our programs with Nephila Reinsurers.

Although we reinsure substantially all of the risks inherent in our program services and other fronting businesses, we have certain programs that contain limits on our reinsurers' obligations to us that expose us to underwriting risk, including loss ratio caps, aggregate reinsurance limits or exclusion of the credit risk of producers. Under certain programs, including programs and contracts with Nephila Reinsurers, we also bear underwriting risk for annual aggregate agreement year losses in excess of a limit that we believe is unlikely to be exceeded.

Insurance-Linked Securities

Our insurance-linked securities operations are primarily comprised of our Nephila operations and are not included in a reportable segment. Nephila Holdings Ltd. (together with its subsidiaries, Nephila) provides investment and insurance management services through which we offer alternative capital to the insurance and reinsurance markets while providing investors with investment strategies that typically are uncorrelated with traditional asset classes. We receive management fees for investment and insurance management services provided through these operations, and for certain funds, incentive fees based on their annual performance. Our management fees are based on the net asset value of the accounts managed for most of our funds and gross premium volume for the remaining funds. Total revenues from our insurance-linked securities operations for the year ended December 31, 2023 were \$99.5 million. As of December 31, 2023, Nephila's net assets under management were \$6.8 billion.

Our fund management operations provide insurance and investment management services for a broad range of investment products for insurance and reinsurance companies, government entities, banks, hedge funds, pension funds and institutional investors, including insurance-linked securities such as catastrophe bonds, insurance swaps, traditional reinsurance contracts, industry loss warranties and other financial instruments. Nephila serves as the investment manager to several Bermuda based private funds (the Nephila Funds). To provide access for the Nephila Funds to a variety of insurance-linked securities in the property catastrophe, climate and specialty markets, Nephila acts as an insurance manager to certain Bermuda Class 3, collateralized and special purpose reinsurance companies, Lloyd's Syndicate 2357 and Lloyd's Syndicate 2358 (collectively, the Nephila Reinsurers). The results of the Nephila Reinsurers are attributed to the Nephila Funds primarily through derivative transactions between these entities. Neither the Nephila Funds nor the Nephila Reinsurers are subsidiaries of Markel Group, and as such, these entities are not included in our consolidated financial statements.

The Nephila Reinsurers subscribe to various property, climate and specialty reinsurance contracts based on their investors' risk profiles, which include business ceded by our underwriting and program services and other fronting platforms. We write this business on behalf of our Nephila ILS operations to the extent it fits Nephila investors' risk profile and cede substantially all of the risk to Nephila Reinsurers. See note 18 of the notes to consolidated financial statements included under Item 8 for further details regarding transactions with entities managed through our Nephila operations.

Ratings

Financial stability and strength are important considerations of policyholders, cedents and insurance agents and brokers. Because an insurance premium paid today purchases coverage for losses that might not be paid for many years, the financial viability of the insurer is of critical concern. Various independent rating agencies provide information and assign ratings to assist buyers in their search for financially sound insurers. Rating agencies periodically re-evaluate assigned ratings based upon changes in the insurer's operating results, financial condition or other significant factors influencing the insurer's business. Downgrades in assigned ratings and other negative actions could have an adverse impact on an insurer's ability to write new business.

Rating agencies assign financial strength ratings (FSRs) to property and casualty insurance companies, or group of companies, based on quantitative criteria such as profitability, leverage and liquidity, as well as qualitative assessments such as market placement, business profile, adequacy and soundness of ceded reinsurance, quality and estimated market value of assets, adequacy of loss reserves and surplus and competence, experience and integrity of management.

Sixteen of our seventeen insurance subsidiaries are rated by A.M. Best, while our Lloyd's syndicate is part of a group rating for the Lloyd's overall market. All sixteen of our insurance subsidiaries rated by A.M. Best have been assigned an FSR of "A" (excellent). The Lloyd's group has been assigned an FSR of "A" (excellent) by A.M. Best.

Nine of our seventeen insurance subsidiaries are rated by Standard & Poor's (S&P), while our Lloyd's syndicate is part of a group rating for the Lloyd's overall market. All nine of our insurance subsidiaries rated by S&P have been assigned an FSR of "A" (strong). The Lloyd's group has been assigned an FSR of "A+" (strong) by S&P.

Five of our seventeen insurance subsidiaries are rated by Moody's Corporation (Moody's). All five insurance subsidiaries rated by Moody's have been assigned an FSR of "A2" (good).

Investments

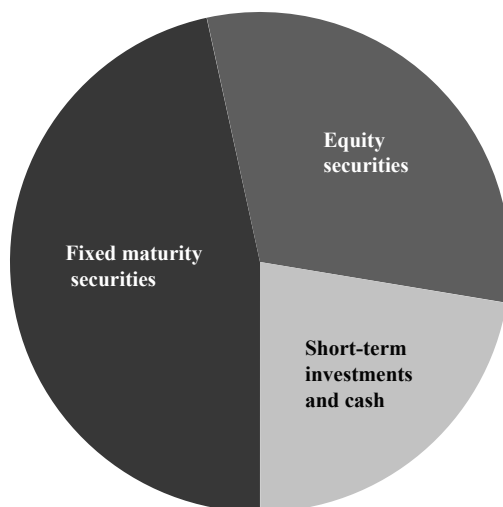
Our investment operations manage the capital held within our underwriting operations, as well as capital allocated by Markel Group. Invested assets managed through our investment operations includes our portfolio of publicly traded fixed maturity and equity securities, as well as cash and short-term investments.

Our underwriting operations provide our investment operations with steady inflows of premiums. These funds are invested predominantly in high-quality government and municipal bonds and mortgage-backed securities that generally match the duration and currency of our loss reserves. We typically hold these investments until maturity. As a result, unrealized holding gains and losses on these securities are generally expected to reverse as the securities mature. Premiums collected through our underwriting operations may also be held as short-term investments or cash and cash equivalents to provide short-term liquidity for projected claims payments, reinsurance costs and operating expenses.

Our investments in equity securities are predominantly held within our regulated insurance subsidiaries to support capital requirements. Capital held by our insurance subsidiaries beyond that which we anticipate will be needed to cover claims payments and operating expenses is available to be invested in equity securities, along with additional capital allocated for investment purposes by Markel Group. We allocate a higher percentage of capital to equity securities than most other insurance companies. Over the long run, equity securities have produced higher returns relative to fixed maturity securities and short-term investments.

When purchasing equity securities, we seek to invest in profitable companies with high returns on capital and low debt, with honest and talented management and significant reinvestment opportunities and capital discipline, all while paying reasonable prices for those securities. We intend to hold these equity investments over the long-term. We believe our long-term time horizon and internal sourcing of capital for investment provides us with a distinct competitive advantage compared to other companies. Substantially all of our investment portfolio is managed by company employees, which helps minimize costs in our investment operations. The breadth of our operating businesses, and the experience we garner from supporting them, also informs and enhances the efficacy of our investment activities.

Invested assets, comprised of fixed maturity securities, equity securities, short-term investments, cash and cash equivalents and restricted cash and cash equivalents, were \$30.9 billion at December 31, 2023. The following chart displays the composition of our invested assets as of December 31, 2023.



We measure our investment performance by analyzing net investment income earned on our investment portfolio, which reflects the recurring interest and dividend earnings on our investment portfolio. In 2023, our net investment income was \$734.5 million. We also analyze net investment gains, which include unrealized gains and losses on our equity portfolio. Based on the potential for volatility in the financial markets, we understand that the level of gains or losses may vary from one period to the next, and therefore believe that our investment performance is best analyzed over longer periods of time. Our annual return on equity securities for the five-year period ended December 31, 2023 was 14.6%.

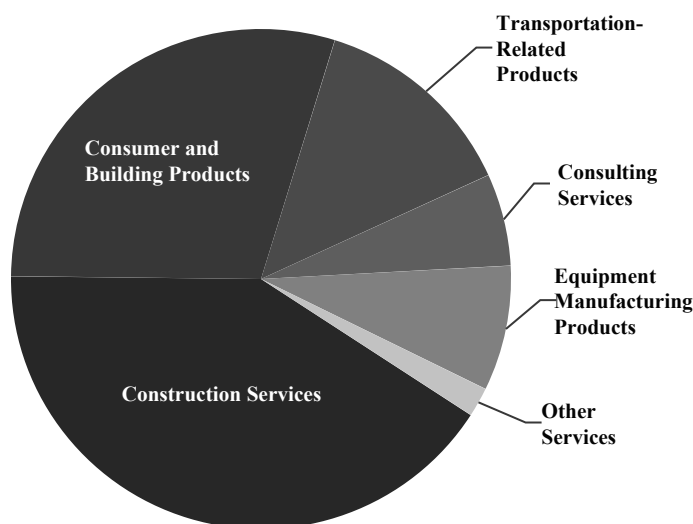
Markel Ventures

Through our wholly owned subsidiary Markel Ventures, Inc. (Markel Ventures), we own controlling interests in high-quality businesses that operate in a variety of different industries with shared values and the shared goal of positively contributing to the long-term financial performance of Markel Group. Management teams for each business operate autonomously and are responsible for developing strategic initiatives, managing day-to-day operations and making investment and capital allocation decisions for their respective companies. Our Markel Ventures management team is responsible for decisions regarding allocation of capital for acquisitions and new investments. Our strategy in making these acquisitions is similar to our strategy for purchasing equity securities. We seek to invest in profitable companies, with honest and talented management, that exhibit reinvestment opportunities and capital discipline, at reasonable prices. We intend to own the businesses acquired for a long period of time.

Our chief operating decision maker allocates resources to and assesses the performance of these various businesses in the aggregate as the Markel Ventures segment. See note 2 of the notes to consolidated financial statements included under Item 8 for additional segment reporting disclosures. The Markel Ventures segment includes a diverse portfolio of specialized businesses from different industries that offer various types of products and services to businesses and consumers across many markets. All of our businesses in this segment are headquartered in the U.S., with subsidiaries of certain businesses located outside of the U.S. In 2021, our Markel Ventures operations expanded through acquisitions of majority interests in Metromont LLC and Buckner HeavyLift Cranes. See note 3 of the notes to consolidated financial statements included under Item 8 for additional details related to these acquisitions. This follows the acquisition of Lansing Building Products, LLC in 2020 and VSC Fire & Security, Inc. in 2019. We continue to look for acquisition opportunities that align with our investment criteria and strategic objectives around diversification and specialization.

In 2023, our Markel Ventures operations reported revenues of \$5.0 billion, operating income of \$437.5 million and earnings before interest, income taxes, depreciation and amortization (EBITDA) of \$628.5 million. We use Markel Ventures EBITDA, which is a non-GAAP financial measure, as an operating performance measure in conjunction with operating income. See "Markel Ventures" under Item 7 Management's Discussion & Analysis of Financial Condition and Results of Operations for more information on our Markel Ventures results, including EBITDA.

The following chart displays the types of businesses within our Markel Ventures segment based on 2023 operating revenues. Our Markel Ventures management team does not manage the Markel Ventures portfolio of businesses at this level of aggregation due to the distinct characteristics of each business and the autonomy with which local management operates each business.



The following table provides summary information about our portfolio of Markel Ventures companies by type of business.

Company	Category	Year Founded	Joined Markel Group Family
Markel Food Group - <i>Global manufacturer and designer of industrial food equipment</i>	Equipment manufacturing	1915	2005
ParkLand Ventures - <i>Operator of manufactured housing communities in the U.S.</i>	Other	2008	2008
Panel Specialists - <i>Manufacturer of dorm room furniture and wall panel systems</i>	Consumer and building products	1990	2009
Ellicott Dredges - <i>Manufacturer and designer of cutter suction dredges</i>	Equipment manufacturing	1885	2009
RetailData - <i>Provider of retail intelligence solutions</i>	Consulting services	1988	2010
PartnerMD - <i>Concierge healthcare membership provider offering personalized primary care, advanced physicals, and wellness services</i>	Other	2003	2011
Weldship - <i>Manufacturer of industrial and specialty gas transportation and storage equipment</i>	Transportation-related products	1946	2011
Havco - <i>Manufacturer of laminated wood flooring for dry-van trailers, truck bodies and containers</i>	Transportation-related products	1978	2012
Eagle - <i>Designer and builder of single family attached and detached homes</i>	Consumer and building products	1984	2013
Cottrell - <i>Manufacturer of over-the-road auto hauler equipment</i>	Transportation-related products	1975	2014
CapTech - <i>Management and information technology consulting firm</i>	Consulting services	1997	2015
Costa Farms - <i>Largest producer of ornamental plants in the U.S.</i> ⁴	Consumer and building products	1961	2017
Rosemont Investment Group - <i>Specialist investor in asset and wealth management companies</i>	Other	2018	2018
Brahmin - <i>Creator of fashion leather handbags</i>	Consumer and building products	1982	2018
VSC Fire & Security - <i>Distributor of comprehensive fire protection, life safety, and low voltage solutions</i>	Construction services	1958	2019
Lansing Building Products - <i>Supplier of exterior building products and materials to professional contractors</i>	Construction services	1955	2020
Buckner Heavylift Cranes - <i>Provider of heavylift crane rental solutions</i>	Construction services	1947	2021
Metromont - <i>Manufacturer of highly engineered precast concrete solutions</i>	Consumer and building products	1925	2021

Markel Ventures businesses encounter a variety of competitors that vary by industry, end market and geographic area. Each Markel Ventures business has several main competitors and numerous smaller ones in most of its respective end markets and geographic areas.

Many of the businesses in this segment experience revenue fluctuations over time due to the cyclical nature of supply and demand in their particular industry. For example, the construction industry is cyclical based on certain larger economic trends and factors, including the inflationary and interest rate environment and, for some businesses, the level of government investment. Additionally, many of our businesses experience fluctuation in demand throughout the year based on the seasonality of the products they sell or services they provide. For example, the demand for ornamental plants is particularly high during the spring and summer seasons as compared to the rest of the year.

⁴ Measured by 2023 square footage of production. *Greenhouse Grower's 2023 Top 100 Growers*, Greenhouse Grower (May 11, 2023)

Businesses in this segment are reliant on inputs, such as raw materials and labor, to manufacture products and deliver services, and the operating results of these businesses could be impacted by the ability or inability to source these inputs and obtain price increases from customers in response to increases in the price of these inputs, including the cost of shipping. For example, shipping costs at some of our businesses increased significantly in 2022 before reverting to more typical levels in 2023, which has resulted in higher margins in 2023 compared to 2022 at the impacted businesses.

Management teams for each of our businesses proactively manage the risks and challenges posed by cyclicity, seasonality and inflation, among other things, in a variety of ways as appropriate and as needed for their business.

Regulatory Environment

We are subject to extensive U.S. state and federal, as well as international, regulation and supervision in the jurisdictions in which we do business. Regulations vary from jurisdiction to jurisdiction. Additionally, as a company with publicly traded securities, we are also subject to certain legal and regulatory requirements applicable generally to public companies, including the rules and regulations of the U.S. Securities and Exchange Commission (SEC) and the New York Stock Exchange relating to reporting and disclosure, accounting and financial reporting, corporate governance and other matters.

The following is a summary of significant regulations that apply to our businesses, but it is not intended to be a comprehensive review of every regulation to which we are subject. For information regarding certain risks associated with regulations applicable to our businesses, see Item 1A Risk Factors.

Group Insurance Regulation and Supervision

Group Supervision - Global Supervisory College; Global Common Framework. Regulators within and outside the U.S. are increasingly coordinating the regulation of multinational insurers by conducting a supervisory college. A supervisory college is a forum of the regulators having jurisdictional authority over an insurance holding company's worldwide insurance subsidiaries. The supervisory college meets with executive management to evaluate the insurance group on both a group-wide and legal-entity basis, particularly with respect to its financial data, business strategies, enterprise risk management and corporate governance. The Illinois Department of Insurance is our lead insurance regulator for purposes of conducting our supervisory college.

In 2020, the International Association of Insurance Supervisors adopted its Common Framework for the Supervision of Internationally Active Insurance Groups (ComFrame). ComFrame establishes a comprehensive framework for supervisors to address group-wide activities and risks of internationally active insurance groups (IAIGs) and lays the groundwork for better supervisory cooperation and coordination. ComFrame requires the designation of a group-wide supervisor (regulator) for each IAIG and imposes a group capital requirement that will be applied to an IAIG in addition to the current legal entity capital requirements imposed by state and international insurance regulators. In response to ComFrame, the National Association of Insurance Commissioners (NAIC) revised the model Insurance Holding Company System Regulatory Act to allow state insurance regulators in the U.S. to be designated as group-wide supervisors for U.S. based IAIGs. In 2023, it was determined that we meet the criteria to be identified as an IAIG. The Illinois Department of Insurance has been designated as our group-wide supervisor.

Holding Company Statutes. We also are subject to state statutes governing insurance holding company systems, which typically require that we periodically file information with the appropriate state insurance commissioner, including information concerning our capital structure, ownership, financial condition, dividend payments and other material transactions with affiliates, and general business operations. These statutes also require approval of changes in control of an insurer or an insurance holding company. Generally, "control" for these purposes is defined as ownership or voting power of 10% or more of a company's voting shares. We also must submit an annual group-level enterprise risk report, which provides information regarding material risks within the insurance holding company system that could pose enterprise risk to its U.S. insurance subsidiaries.

Own Risk and Solvency Assessment and Enterprise Risk Management. We must submit an Own Risk and Solvency Assessment Summary Report (ORSA) annually to our lead insurance regulator. The ORSA 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. In addition, we must file an annual enterprise risk report with our lead insurance regulator. The report must identify the material risks within the insurance holding company system that could pose enterprise risk to our U.S. insurance subsidiaries.

U.S. Insurance Regulation

State Regulation

Overview. Our U.S. insurance company subsidiaries are subject to varying degrees of regulation and supervision by the states and other jurisdictions in which they do business. In the U.S., authority for the regulation, supervision and administration of the business of insurance in each state is generally delegated to a state insurance commissioner who oversees a regulatory body responsible for the supervision of the business of insurance. State regulatory authorities have broad regulatory, supervisory and administrative powers relating to: solvency standards; corporate conduct; market conduct activities; regulating unfair trade and claims practices; licensing of insurers; licensing and appointment of agents; approval of forms and policies used; the nature of, and limitations on, insurers' investments; the form and content of annual statements and other reports on the financial condition of insurers; and establishment of loss reserves. States also regulate various aspects of the contractual relationships between insurers and independent agents. In addition, the NAIC, comprised of the insurance commissioners of each U.S. jurisdiction, develops or amends model statutes and regulations that, in turn, most states adopt.

Risk Based Capital Requirements. The NAIC uses a risk based capital (RBC) formula to measure the capital of an insurer, taking into account the company's investments and products. For property and casualty insurance companies, RBC requirements establish capital thresholds for four categories of risk: asset risk, insurance risk, interest rate risk and business risk.

Financial Exams. State insurance regulators also prescribe the form and content of statutory financial statements, perform periodic financial examinations of insurers regarding activities in their respective states, set minimum reserve and loss ratio requirements, establish standards for permissible types and amounts of investments and require minimum capital and surplus levels. These statutory capital and surplus requirements include RBC rules promulgated by the NAIC.

Statutory Accounting Principles. Each of our U.S. insurance companies is required to file detailed quarterly and annual reports, including financial statements, in accordance with prescribed statutory accounting rules. The quarterly and annual financial reports utilize statutory accounting principles (SAP) that are different from U.S. GAAP. In developing SAP, insurance regulators were primarily concerned with monitoring the solvency of insurance companies to assure an insurer's ability to pay all its current and future obligations to policyholders.

Rates and Form Filings. The policy forms and various premium rates of our U.S. admitted insurance subsidiaries are subject to regulation in every state in which they conduct business. In many states, rates and policy forms must be filed with the applicable insurance regulator prior to their use, and in some states, rates and forms must be affirmatively approved by the applicable insurance regulator prior to use.

Dividends. The laws of the domicile states of our U.S. insurance subsidiaries govern the amount of dividends that may be paid to our holding company, Markel Group. Generally, statutes in the domicile states of our insurance subsidiaries require prior approval for payment of extraordinary, as opposed to ordinary, dividends. See note 22 of the notes to consolidated financial statements included under Item 8.

Market Conduct. State insurance laws and regulations include numerous provisions governing trade practices and the marketplace activities of insurers, including provisions governing marketing and sales practices, data security, compliance of underwriting services to policyholders, confirmation of licensing and appointment of producers, claims management, anti-fraud controls and complaint handling. State regulatory authorities generally enforce these provisions through periodic market conduct examinations.

Investment Regulation. Investments by our U.S. insurance companies must comply with applicable laws and regulations that 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.

Cybersecurity; Data Privacy. Several states have enacted laws establishing cybersecurity requirements for financial services companies, including insurance companies, that require implementation of security measures for the monitoring, detection, prevention, mitigation and management of cybersecurity incidents. Several states also have enacted laws addressing data privacy concerns and the protection of consumer data.

Federal Regulation

The U.S. federal government and its regulatory agencies generally do not directly regulate the business of insurance. However, two federal government bodies, the Federal Insurance Office (FIO) and the Financial Stability Oversight Council (FSOC), each created under The Dodd Frank Wall Street Reform and Consumer Protection Act, may impact the regulation of insurance. Although the FIO is prohibited from directly regulating the business of insurance, it has authority to represent the U.S. in international insurance matters and has limited powers to preempt certain types of state insurance laws. The FIO also can recommend to the FSOC that it designate an insurer as an entity posing risks to the U.S. financial stability in the event of the insurer's material financial distress or failure. We have not been so designated. The U.S. federal laws that most affect our day-to-day insurance operations are: the Gramm-Leach-Bliley Act; the Fair Credit Reporting Act; the Health Insurance Portability and Accountability Act of 1996; the Terrorism Risk Insurance Act of 2002; anti-money laundering laws and regulations; the Nonadmitted and Reinsurance Reform Act of 2010; the Foreign Corrupt Practices Act, and the rules and regulations of the Office of Foreign Assets Control.

International Insurance Regulation

Overview. Our international insurance operations are subject to regulation and supervision in various jurisdictions. These regulations, which vary depending on the jurisdiction, include, among others, solvency and market conduct regulations; anti-corruption, anti-money laundering, and anti-terrorism financing guidelines, laws and regulations; various privacy, insurance, tax, tariff, trade and sanctions laws and regulations; and corporate, competition, employment, intellectual property and investment laws and regulations. Our international insurance operations are domiciled in the U.K., Europe and Bermuda and are subject to regulation in those jurisdictions. In addition, we conduct business in Canada, Asia, Australia and the Middle East, where our businesses also are supervised by local regulatory authorities.

U.K. and European Regulation. We are subject to regulation by the Prudential Regulatory Authority and Financial Conduct Authority in respect of our U.K. insurance businesses. We are also subject to regulation by the Federal Financial Supervisory Authority, better known by its abbreviation BaFin, in respect of our German insurance carrier.

Our U.K. and German insurance businesses are subject to both the E.U.'s General Data Protection Regulation (GDPR) and the Solvency II Directive (Solvency II).

GDPR requires businesses operating in the E.U., and businesses transacting with E.U. citizens, to comply with conditions for processing personal data. Following the U.K.'s exit from the E.U., GDPR was transposed into U.K. law. The E.U. has granted adequacy status to the U.K.'s data protection laws, valid until June 2025 with the possibility of renewal, meaning that they are deemed essentially equivalent to E.U. data protection laws.

Solvency II requires our U.K. and German businesses to maintain certain capital standards and publish risk-related information in the form of a Solvency and Financial Condition Report. Following the U.K.'s exit from the E.U., Solvency II also was transposed into U.K. law as retained law. The U.K. government, under the Financial Services and Markets Act 2023, has opted to repeal certain portions of retained E.U. law. This repeal will occur in stages and, where necessary, after replacement regulations designed for the U.K. are in place. This repeal of retained E.U. law includes reforms to Solvency II. The Prudential Regulation Authority has consulted on the reforms, to be known as Solvency UK, which are expected to be implemented in 2024.

Bermuda Regulation. The insurance industry in Bermuda is regulated by the Bermuda Monetary Authority (BMA). Under the Bermuda Insurance Act 1978, and related regulations and standards of the BMA, each Bermuda insurance company is subject to, among other things: licensing, capital, surplus and liquidity requirements; solvency standards; restrictions on dividends and distributions; and periodic examinations of the company and its financial condition. In addition, each insurance company must obtain prior approval of ownership and transfer of shares and maintain a principal office and appoint and maintain a principal representative in Bermuda. The BMA also requires that each insurance company contract for local services, such as corporate secretary and registered representative services, at market rates.

ILS Regulation

Our Nephila insurance-linked securities operations are subject to regulation and supervision by various regulatory authorities, both in the U.S. and internationally. Certain of our ILS subsidiaries are organized and regulated as follows:

- registered with the SEC as an investment adviser under the Investment Advisers Act of 1940,
- registered with the U.S. Commodity Futures Trading Commission as a commodity pool operator or a commodity trading advisor under the Commodity Exchange Act, and/or
- registered with the BMA as an insurance manager under the Bermuda Insurance Act 1978.

Certain other ILS subsidiaries serve as the investment manager to one or more private funds that are registered with the BMA under the Investment Funds Act 2006, as amended, or the Segregated Accounts Companies Act 2000, as amended. In addition, these operations include business relationships with certain U.S., U.K. and Bermuda insurance companies that are subject to U.S. and international insurance regulation as previously described in this "Regulatory Environment" section.

As a result, subsidiaries involved in our ILS operations are subject to regulations that may impose substantive and material restrictions and requirements on their operations, including, among other things: a broader fiduciary duty to act in the best interests of their clients; disclosure of information about our businesses and conflicts of interests to clients; maintenance of written policies and procedures; maintenance of extensive books and records; restrictions on the types of fees we may charge, including performance fees; restrictions on solicitation arrangements; requirements regarding engaging in transactions with clients; maintenance of an effective compliance program; and other restrictions and requirements applicable to custody of client assets, client privacy, advertising, pay-to-play prohibitions and cybersecurity; as well as possible sanctions, disciplinary actions or other penalties for non-compliance.

Markel Ventures Regulation

Our Markel Ventures businesses are subject to a wide variety of U.S. federal, state, and local laws and regulations, as well as international laws and regulations applicable to their international operations. Specifically, the most significant of these laws and regulations cover the following areas: safety, health, employment, the environment, transportation, U.S. and international trade, anti-corruption, data privacy and security and government contracts.

Human Capital

Our culture is our greatest asset and is defined by the Markel Style. Written in 1986, in preparation for our initial public offering, the Markel Style memorialized how we seek to operate our businesses and treat one another. It continues to provide our guiding principles across our diverse group of businesses. Key within the Markel Style is the encouragement to look for a better way to do things, to challenge management. We also seek spontaneity and flexibility and have a respect for authority, but disdain for bureaucracy. Our holding company and each of our businesses is managed in a way to accomplish these principles. Each of our businesses operates with a high degree of autonomy so long as they operate within the principles of the Markel Style. This allows our managers to make decisions that are best for their employees and customers, as well as our shareholders. We believe this high degree of empowerment leads to the satisfaction that comes from being trusted in the responsibilities one has been given.

Further outlined in the Markel Style is our creed of honesty and fairness in all our dealings; holding the individual's right to self-determination in the highest light; putting aside individual concerns in the spirit of teamwork; and providing an atmosphere in which people can reach their full potential. We greatly value our employees, encourage their career development and reward their pursuit of excellence, while also celebrating a diverse workforce.

At December 31, 2023, we had approximately 21,600 employees, of whom approximately 5,400 were employed within our insurance operations and approximately 16,200 were employed within our Markel Ventures operations.

Insurance

Our specialty insurance business, Markel, markets and underwrites specialty insurance products. Markel has a well-developed process to ensure effective performance management, including an embedded annual review process that enables goal setting, development planning and performance assessment. Markel has also established global leadership development programs for different levels of leadership at Markel, partnering with various schools to create leading-edge curricula in this area.

With the Markel Style as the foundation, Markel has identified five pillars of focus that relate to today's challenges and opportunities—diversity and inclusion, community, innovation, well-being, and recognition. This program is both company and employee led—collectively, we want to bring the values of the Markel Style to life with our actions, not just our words. The intent is to create an environment where employees are able to authentically bring their true selves to work, a place where all ideas are heard and diverse perspectives are valued, a culture that prioritizes innovation, the ability to make a difference for our local communities and the wider world, and a foundation for holding ourselves accountable for our own well-being and of those around us.

Employee health and overall well-being is a key priority, and we provide a range of employee and eligible partner plans and programs, including health and voluntary benefits. These offerings include a variety of financial protection programs to help our employees meet their unique investment and savings needs including life insurance, retirement savings with company contributions in most situations and an employee stock purchase plan. Comprehensive employee assistance programs are available in all of our major markets along with other well-being and fitness resources.

We rely on our employees' ideas and input to help make Markel a great place to work. For example, senior leadership conducts regular employee communication meetings, inclusive of question and answer sessions, across our insurance operations and provides opportunities for employees to share their ideas on how we can improve employee engagement. In addition, every two years we conduct a major, global employee engagement survey, which in early 2022 garnered 88% participation, and which enables us to identify, focus on and track progress against key engagement drivers and external norms for high performing companies. This survey has generated additional ideas for employee engagement, and we have made meaningful changes and improvements in our human capital practices based on this feedback. Plans are underway to conduct an employee engagement survey in early 2024. Additionally, Markel conducts regular pulse and employee net promoter score surveys on a departmental level across the organization throughout the year.

We are committed to embracing all aspects of diversity, including diversity of perspective, which we believe is crucial to sustainable success. Markel accordingly supports and encourages focused efforts to continue to build the diversity of our employee population and the inclusiveness of our culture. Our diversity and inclusion efforts seek to cultivate an inclusive environment in which every employee feels valued, respected and accepted. We believe this environment helps us increase creativity and innovation, foster business connections, serve our customers and maintain our market leadership.

Markel's global Diversity and Inclusion (D&I) Steering Committee comprises more than 15 senior managers who are charged with advising on D&I strategy and providing leadership support and advocacy for our D&I efforts. Our Human Resources leadership team works to further shape the D&I strategy for our global workforce, and to ensure the integration of our D&I efforts with our global talent acquisition and development processes. We have various early career programs open to a diverse range of applicants and a regional scholarship program that is focused on underrepresented groups.

Markel supports a range of employee-led D&I networks and resource groups, including our Markel Women's Network, BEAM (Black Engagement at Markel), PRISM (LGBTQ+), Jitneys (Young Professionals), Markel Asian Professionals Network, Markel Veterans Network, UNIDOS (Latin and Hispanic Network), and across our international operations, an Inclusion Network with connections to a number of the London market partner networks. All of these networks and organizations have put in place goals and programming that are focused on education and development, community engagement, talent acquisition and networking/support. Additionally, we continue our global sponsorship of Dive-In, the insurance industry's annual diversity and inclusion festival.

Markel Ventures

Our Markel Ventures operations are comprised of a diverse portfolio of businesses from different industries through which we own controlling interests. The Markel Ventures operations are viewed by management as separate and distinct from our insurance operations with local management teams that direct the strategy and day-to-day operations of their respective companies, including human capital matters. When making these acquisitions, we seek, among other things, businesses whose leadership teams demonstrate equal measures of both integrity and talent. As a result, each Markel Ventures business fosters a culture within their operations, and with their employees, that aligns with the principles of the Markel Style.

Item 1A. RISK FACTORS

A wide range of factors could materially affect our future prospects and performance. The matters addressed in Item 7 Management's Discussion and Analysis of Financial Condition and Results of Operations, including under "Safe Harbor and Cautionary Statement" and "Critical Accounting Estimates", and Item 7A Quantitative and Qualitative Disclosures About Market Risk, as well as other information included or incorporated in this report, describe many of the significant risks that could affect our businesses, results of operations and financial condition. We are also subject to the risks discussed below.

One or more of the risks discussed in this Item 1A. Risk Factors, and others we cannot anticipate, could have material adverse effects on our results of operations and financial condition; and the extent of these effects will depend, at least in part, on the scope, severity, frequency or duration of the specific event or circumstance. In addition, we may take steps to prevent, mitigate or manage potential risks or liabilities, and related developments, and some of those steps may have a material adverse effect on our results of operations and financial condition. Even if an unfavorable outcome does not materialize, these factors, and actions we may take in response, may have a material adverse impact on our reputation or result in substantial expense and disruption.

Headings and sub-headings for the Risk Factors below are for reference purposes only and are not intended to limit or affect in any way the meaning or scope of each Risk Factor.

Risks Primarily Related to Our Insurance Operations

Loss Exposures

We may experience losses or disruptions from catastrophes. As a company with significant property and casualty insurance underwriting operations, we may experience losses from man-made or natural catastrophes. Catastrophes include, but are not limited to, windstorms, hurricanes, earthquakes, tornadoes, derechos, hail, severe winter weather, floods and wildfires and may include pandemics and events related to terrorism, broad reaching cyberattacks, riots and political and civil unrest. While we employ catastrophe modeling tools in our underwriting process, we cannot predict how severe a potential catastrophe will be before it occurs. The extent of losses from catastrophes is a function of the total amount of losses incurred, the number of insureds affected, the frequency and severity of the events, the effectiveness of our catastrophe risk management program and the adequacy of our reinsurance coverage. Catastrophes can occur over numerous geographic areas; however, some catastrophes may produce significant damage in large, heavily populated areas. We offer insurance and reinsurance coverage against terrorist acts in connection with some of our programs, and in other instances we are legally required to offer terrorism insurance; in both circumstances, we actively manage our exposure, but if there is a covered terrorist attack, we could sustain material losses. In addition, catastrophes may have a material adverse effect on the investment management and incentive fees earned by our insurance-linked securities (ILS) operations and returns on our investments in ILS funds. Catastrophes also may result in significant disruptions in our insurance and other operations, as well as loss of income and assets. The impacts of climate change may increase the frequency and/or severity of weather-related catastrophes, which may result in elevated catastrophe-related losses or disruptions, which may be material.

The failure of any of the methods we employ to manage our loss exposures could have a material adverse effect on us.

We seek to manage our loss exposures in a variety of ways, including adhering to maximum limitations on policies written in defined geographical zones, implementing maximum gross limits by coverage for each insured, establishing per risk and per occurrence limitations for each event, employing coverage restrictions and following prudent underwriting guidelines for each program written. We also seek to manage our loss exposures through geographic and industry diversification. Underwriting is a matter of judgment, involving assumptions about matters that are inherently unpredictable and beyond our control, and for which historical experience and probability analysis may not provide sufficient guidance. One or more future events could result in claims that substantially exceed our expectations, which could have a material adverse effect on our results of operations and financial condition. In addition, we seek to manage our loss exposures by policy terms, coverage exclusions and choice of legal forum. Disputes relating to coverage and choice of legal forum also arise. As a result, various provisions of our policies, such as choice of forum, or coverage limitations or exclusions, may not be enforceable in the manner we intend and some or all of our methods to manage loss exposures may prove ineffective.

The effects of emerging claim and coverage issues on our business are uncertain. As industry practices and legal, judicial, social and other environmental conditions change, unexpected and unintended issues related to claims and coverage may emerge. These issues could have a material adverse effect on our results of operations or financial condition by either broadening coverage beyond our underwriting intent or increasing the frequency and/or severity of claims. For example, rising costs, litigation funding, social inflation, including new or expanded theories of liability, higher adverse verdicts, and

legislative changes, such as extended statutes of limitations, may result in higher and more frequent claims over a longer reporting period than originally expected. In some instances, these changes may not become apparent until after we have issued insurance or reinsurance contracts that are affected by the changes. As a result, the full extent of liability under our insurance or reinsurance contracts may not be known for many years after a contract is issued.

We use analytical models to assist our decision making in key areas such as pricing, reserving and capital modeling and actual results may differ materially from the model outputs and related analyses. We use various modeling techniques and data analytics (e.g., scenarios, predictive and stochastic modeling, and forecasting) to analyze and estimate exposures, loss trends and other risks associated with our insurance and ILS businesses. This includes both proprietary and third-party modeled outputs and related analyses to assist us in, among other things, decision-making related to underwriting, pricing, capital allocation, reserving, investing, reinsurance and catastrophe risk. We incorporate numerous assumptions and forecasts about the future level and variability of policyholder behavior, loss frequency and severity, interest rates, equity markets, inflation, capital requirements, and currency exchange rates, among others. The modeled outputs and related analyses from both proprietary models and third-party models are subject to various assumptions, uncertainties, model design errors, complexities and the inherent limitations of any statistical analysis, including those arising from the use of historical internal and industry data and assumptions.

In addition, the modeled outputs and related analyses may from time to time contain inaccuracies, perhaps in material respects, including as a result of inaccurate inputs or applications thereof (whether due to data error, human error or otherwise). Consequently, actual results may differ materially from our modeled results. Our profitability and financial condition substantially depend on the extent to which our actual experience is consistent with assumptions we use in our models and ultimate model outputs. If, based upon these models or other factors, we misprice our products or fail to appropriately estimate the risks we are exposed to, our business, results of operations and financial condition may be materially adversely affected.

Loss Reserves

Our results may be affected because actual insured or reinsured losses differ from our loss reserves. Significant periods of time often elapse between the occurrence of an insured or reinsured loss, the reporting of the loss to us and our payment of that loss. To recognize liabilities for unpaid losses, we establish reserves as balance sheet liabilities representing estimates of amounts needed to pay reported and unreported losses and the related loss adjustment expenses. The process of estimating loss reserves is a difficult and complex exercise involving analytical models with many variables and subjective judgments. This process may also become more difficult if we experience a period of rising inflation, as has been the case since early 2021.

As part of the reserving process, we review historical data and consider the impact of various factors, such as:

- trends in claim frequency and severity;
- changes in operations;
- changes to mix of business, terms and conditions, limits and layers;
- emerging economic and social trends;
- trends in insurance rates;
- inflation or deflation; and
- changes in the regulatory and litigation environments.

This process assumes that past experience, adjusted for the effects of current developments and anticipated trends, is an appropriate basis for predicting future events. There is no precise method, however, for evaluating the impact of any specific factor on the adequacy of reserves, and actual results will differ from original estimates. As part of the reserving process, we regularly review our loss reserves and make adjustments as necessary. Future increases in loss reserves for our underwriting operations will, and for our programs services operations may, result in additional charges to earnings, which may be material.

In addition, as discussed above, we use analytical models to assist our decision making in loss reserving, and actual results may differ materially from the model outputs and related analyses.

There is generally greater uncertainty in estimating reserves for long-tail coverages, such as general liability, professional liability and workers' compensation, as they require a longer period of time for claims to be reported and settled. The impact of changes in economic and social inflation and medical costs are also more pronounced for long-tail coverages due to the longer settlement period. In addition, reinsurance reserves are subject to greater uncertainty than insurance reserves primarily because a reinsurer relies on (i) the original underwriting decisions and claims decisions made by ceding companies and (ii)

information and data from ceding companies. As a result, we are subject to the risk that our ceding companies may not have adequately evaluated the risks reinsured by us and the premiums ceded may not adequately compensate us for the risks we assume. In addition, reinsurance reserves may be less reliable than insurance reserves because there is generally a longer lapse of time from the occurrence of the event to the reporting of the loss or benefit to the reinsurer and ultimate resolution or settlement of the loss. Reserves for contracts for which we are not the primary insurer, and participate only in excess layers of loss, are also subject to greater uncertainty than insurance reserves for contracts for which we are the primary insurer for many of the same reasons as reinsurance reserves.

Changes in the assumptions and estimates used in establishing reserves for our life and annuity reinsurance book could result in material increases in our estimated loss reserves for such business. Our run-off life and annuity reinsurance book exposes us to mortality risk, which is the risk that the level of death claims may differ from that which we assumed in establishing the reserves for our life and annuity reinsurance contracts. Some of our life and annuity reinsurance contracts expose us to longevity risk, which is the risk that an insured person will live longer than expected when the reserves were established, or morbidity risk, which is the risk that an insured person will become critically ill or disabled. Our reserving process for the life and annuity reinsurance book is designed with the objective of establishing appropriate reserves for the risks we assumed. Among other things, this process relies heavily on analysis of mortality, longevity and morbidity trends, lapse rates, interest rates and expenses. As of December 31, 2023, our reserves for life and annuity benefits totaled \$649.1 million.

We expect mortality, morbidity, longevity, and lapse experience to fluctuate somewhat from period to period, but believe they should remain reasonably predictable over a period of many years. Mortality, longevity, morbidity or lapse experience that is less favorable than the mortality, longevity, morbidity or lapse rates that we used in establishing the reserves for a reinsurance agreement will negatively affect our net income because the reserves we originally set for the risks we assumed may not be sufficient to cover the future claims and expense payments. Furthermore, even if the total benefits paid over the life of the contract do not exceed the expected amount, unexpected increases in the incidence of deaths or illness can result in changes to our assumptions in a given reporting period, adversely affecting our net income in any particular reporting period. If there are adverse changes to any of the above factors, a charge to earnings may be recorded, which may have a material adverse effect on our results of operations and financial condition.

Ceded Reinsurance

We may be unable to purchase reinsurance protection on terms acceptable to us, or we may be unable to collect on loss recoveries from reinsurers. Our underwriting operations purchase reinsurance and retrocessional reinsurance to manage our net retention on individual risks and mitigate the volatility of losses on our results of operations and financial condition, while providing us with the ability to offer policies with sufficient limits to meet policyholder needs. In addition, we reinsure substantially all of the risks inherent in our program services and other fronting businesses, however, we have certain programs that contain limits on our reinsurers' obligations to us that expose us to underwriting risk, including loss ratio caps, aggregate reinsurance limits or exclusion of the credit risk of producers. See note 12 of the notes to consolidated financial statements included under Item 8 for information about ceded reinsurance for our program services and other fronting businesses.

The ceding of insurance does not legally discharge us from our primary liability for the full amount of the policies. Reliance on reinsurance recoveries may create credit risk as a result of the reinsurer's inability or unwillingness to pay reinsurance claims when due. We generally select well capitalized and highly rated reinsurers and in certain instances we require reinsurers to post substantial collateral to secure the reinsured risks. Deterioration in the credit quality of existing reinsurers or disputes over the terms of reinsurance could result in charges to earnings, which may have a material adverse effect on our results of operations and financial condition. In addition, collateral may not be sufficient to cover the reinsurer's obligation to us, and we may not be able to cause the reinsurer to deliver additional collateral.

As of December 31, 2023, we were the beneficiary of letters of credit, trust accounts and funds withheld in the aggregate amount of \$5.1 billion, collateralizing \$9.2 billion in reinsurance recoverables. The remaining unsecured reinsurance recoverables are ceded to highly-rated, well capitalized reinsurers. Our reinsurance recoverables are based on estimates, and our actual liabilities may exceed the amount we are able to recover from our reinsurers or any collateral securing the reinsurance recoverables. The failure of a reinsurer to meet its obligations to us, whether due to insolvency, dispute or other unwillingness or inability to pay, or due to our inability to access sufficient collateral to cover our liabilities, could have a material adverse effect on our results of operations and financial condition.

The availability and cost of reinsurance are determined by market conditions beyond our control. There is no guarantee that our desired amounts of reinsurance or retrocessional reinsurance will be available in the marketplace in the future. In addition, available capacity may not be on terms we deem appropriate or acceptable or with companies with whom we want to do business. This could impact our ability to write certain products and have a material adverse effect on our results of operations and financial condition.

Market Competition and Broker Reliance

Competition in the insurance and reinsurance markets could reduce profits from our insurance operations. Insurance and reinsurance markets are highly competitive. We compete on an international and regional basis with major United States (U.S.), Bermuda, United Kingdom (U.K.), European, and other international insurers and reinsurers and with underwriting syndicates, some of which have greater financial, marketing, and management resources than we do, have greater access to "big data," and may be able to offer a wider range of, or more sophisticated, commercial and personal lines products. Recent industry consolidation, including business combinations among insurance and other financial services companies, has resulted in larger competitors with even greater financial resources. In addition, capital market participants have created alternative products that are intended to compete with reinsurance products.

Similar to other industries, the insurance industry is undergoing rapid and significant technological and other changes. There is increasing focus by traditional insurance industry participants, technology companies, "InsurTech" start-up companies and others on using technology and innovation to simplify and improve the customer experience, increase efficiencies, redesign products, alter business models and effect other potentially disruptive changes in the insurance industry. If we do not anticipate, keep pace with and adapt to technological and other changes impacting the insurance industry, it will harm our ability to compete, decrease the value of our products to customers, and materially and adversely affect our business. Furthermore, innovation, technological change and changing customer preferences in the markets in which we operate also pose other risks to our businesses. For example, they could result in increasing our service, administrative, policy acquisition or general expenses as we seek to distinguish our products and services from those of our competitors or otherwise keep up with such innovation and changes.

Increased competition could result in fewer submissions, lower premium rates, and less favorable policy terms and conditions, which could reduce our underwriting profits, or within our program services and other fronting operations, our operating profits, and have a material adverse effect on our results of operations and financial condition.

The historical cyclicity in the property and casualty insurance industry could have a material adverse effect on our ability to improve or maintain underwriting profits or to grow or maintain premium volume. The insurance and reinsurance markets have historically been cyclical, characterized by extended periods of intense price competition due to excessive underwriting capacity, and more recently alternative sources of capital, as well as periods when shortages of capacity permitted more favorable rate levels. Among our competitive strengths have been our specialty product focus and our niche market strategy. These strengths also make us vulnerable in periods of intense competition to actions by other insurance companies who seek to write additional premiums without appropriate regard for underwriting profitability. At times it could be very difficult for us to grow or maintain premium volume levels without sacrificing underwriting profits. If we are not successful in maintaining rates or achieving rate increases, it may be difficult for us to improve or maintain underwriting profits or to grow or maintain premium volume levels.

Our efforts to develop new products, expand in targeted markets or improve business processes and workflows may not be successful and may increase or create new risks. From time to time, to protect and grow market share or improve our efficiency, we invest in strategic initiatives to:

- develop products that insure risks we have not previously insured, include new coverages or change coverage terms;
- change commission terms;
- change our underwriting processes;
- improve business processes and workflow to increase efficiencies and productivity and to enhance the experience of our customers and producers;
- expand distribution channels; and
- enter geographic markets where we previously have had relatively little or no market share.

We may not be successful in these efforts, and even if we are successful, they may increase or create the following risks, among others:

- demand for new products or expansion into new markets may not meet our expectations;
- new products and expansion into new markets may increase or change our risk exposures, and the data and models we use to manage those exposures may not be as effective as those we use in existing markets or with existing products;
- models underlying automated underwriting and pricing decisions may not be effective;
- efforts to develop new products or markets or to change commission terms may create or increase distribution channel conflicts;
- in connection with the conversion of existing policyholders to a new product, some policyholders' pricing may increase while the pricing for other policyholders may decrease, the net impact of which could negatively impact retention and profit margins;
- changes to our business processes or workflow, including the use of new technologies, may give rise to execution risk; and
- increased usage of artificial intelligence by us and third parties and the evolving regulatory landscape may increase underwriting and regulatory risk, while also presenting opportunity risk if we do not leverage artificial intelligence appropriately.

These efforts may require us to make substantial expenditures, which may negatively impact results in the near term, and if not successful, could materially and adversely affect our results of operations.

We depend on a few brokers for a large portion of our revenues and the loss of business provided by any one of them could have a material adverse effect on us. We market our insurance and reinsurance worldwide through insurance and reinsurance brokers. For the year ended December 31, 2023, our top five independent brokers represented 37% of the gross premiums written by our underwriting operations. Loss of all or a substantial portion of the business provided by one or more of these brokers could have a material adverse effect on our business.

Financial Strength and Credit Ratings

Our insurance companies and senior debt are rated by various rating agencies, and a downgrade or potential downgrade in one or more of these ratings could have a material adverse effect on us. Financial strength ratings are an important factor in establishing the competitive position of insurance and reinsurance companies. Our senior debt ratings also affect the availability and cost of capital. Certain of our insurance and reinsurance company subsidiaries and our senior debt securities are rated by various rating agencies. Our financial strength and debt ratings are subject to periodic review, and are subject to revision or withdrawal at any time. The financial strength ratings of our insurance subsidiaries are significantly influenced by their statutory surplus amounts and leverage and capital adequacy ratios and other financial metrics. Rating agencies may implement changes to their ratings methodologies or internal models that have the effect of increasing or decreasing the amount of capital our insurance subsidiaries must hold or restrict how the company may deploy its capital in order to maintain its current ratings. For example, for certain of our insurance subsidiaries, rating agencies may take into account in their calculations the collateral provided to us by reinsurers. A change in this practice could adversely impact our ratings. We cannot be sure that we will be able to retain our current, or any future, ratings. If our ratings are reduced from their current levels by one or more rating agencies, our competitive position in our target markets within the insurance industry could suffer and it would be more difficult for us to market our products. A ratings downgrade could result in a substantial loss of business as policyholders and ceding company clients move to other companies with higher claims-paying and financial strength ratings. In addition, a downgrade could trigger contract provisions that allow cedents to terminate their reinsurance contracts on terms disadvantageous to us or require us to collateralize our obligations through trusts or letters of credit. A ratings downgrade could also have a material adverse effect on our liquidity, including the availability of our letter of credit facilities, and limit our access to capital markets, increase our cost of borrowing or issuing debt and require us to post collateral.

The amount of capital that our insurance subsidiaries have and must hold to maintain their financial strength and credit ratings and meet other requirements can vary significantly from time to time and is sensitive to a number of factors, some of which are outside of our control. Capital requirements for our insurance subsidiaries are prescribed by the applicable insurance regulators, while rating agencies establish requirements that inform ratings for our insurance subsidiaries and senior debt securities. Projecting surplus and the related capital requirements is complex and requires making assumptions regarding how our business will perform within the broader macroeconomic environment. Insurance regulators and rating

agencies evaluate company capital through financial models that calculate minimum capitalization requirements based on risk-based capital formulas for property and casualty insurance groups and their subsidiaries. In any particular year, capital levels and risk-based capital requirements may increase or decrease depending on a variety of factors including the mix of business written by our insurance subsidiaries and correlation or diversification in the business profile, the amount of additional capital our insurance subsidiaries must hold to support business growth, the value of securities in our investment portfolio, changes in interest rates and foreign currency exchange rates, as well as changes to the regulatory and rating agency models used to determine our required capital.

Insurance Regulation

Our insurance subsidiaries are subject to supervision and regulation that may have a material adverse effect on our operations and financial condition. Our insurance subsidiaries are subject to supervision and regulation by the regulatory authorities in the various jurisdictions in which they conduct business, including foreign and U.S. state insurance regulators. Regulatory authorities have broad regulatory, supervisory and administrative powers relating to, among other things, data protection and data privacy, cybersecurity, solvency standards, licensing, coverage requirements, product terms and conditions, policy rates and forms, business and claims practices, disclosures to consumers, and the form and content of financial reports. In some instances, we follow practices based on our interpretations of regulations or practices that we believe may be generally followed by the industry. These practices may turn out to be different from the interpretations of regulatory authorities. Insurance regulatory authorities have broad authority to initiate investigations or other proceedings, and, in connection with a failure to comply with applicable laws and regulations, could impose adverse consequences, including fines, penalties, injunctions, denial or revocation of an operating license or approval, increased scrutiny or oversight, limitations on engaging in a particular business, or redress to clients. These actions also could result in negative publicity, reputational damage or harm to client, employee or other relationships. Additionally, regulatory and legislative authorities continue to implement enhanced or new regulatory requirements to assure the stability of insurance companies or enhance policyholder protections or, in certain instances, intended to prevent or mitigate future financial crises. Regulatory authorities also may seek to exercise their supervisory or enforcement authority in new or more extensive ways, such as increased capital requirements. These actions, if they occur, could affect the competitive market, as well as the way we conduct our business or manage our capital, and could result in lower revenues and higher costs. As a result, such actions could have a material adverse effect on our results of operations and financial condition.

Regulators may challenge our use of fronting arrangements in states in which our capacity providers are not licensed. Our program services and other fronting business enters into fronting arrangements with general agents and domestic and foreign insurers that want to access specific U.S. property and casualty insurance business in states in which the capacity providers are not licensed or are not authorized to write particular lines of insurance. Some state insurance regulators may object to these fronting arrangements. In certain states, an insurance commissioner has the authority to prohibit an authorized insurer from acting as an issuing carrier for an unauthorized insurer. In addition, insurance departments in states in which there is no such statutory or regulatory prohibition, could deem the assuming insurer to be transacting insurance business without a license and the issuing carrier to be aiding and abetting the unauthorized sale of insurance.

If regulators in any of the states where we conduct our fronting business were to prohibit or limit those arrangements, we would be prevented or limited from conducting that business for which a capacity provider is not authorized in those states, unless and until the capacity provider is able to obtain the necessary licenses. This could have a material adverse effect on our results of operations and financial condition.

Insurance-Linked Securities

Our ILS operations and our management of third-party capital may expose us to risks. Some of our operating subsidiaries may owe certain legal duties and obligations to third-party investors. A failure to fulfill any of those duties or obligations could result in significant liabilities, penalties or other losses, and harm our businesses and results of operations. In addition, third-party investors may decide not to renew their investments in the funds we manage, which could materially impact the financial condition of those funds, and could, in turn, have a material adverse effect on our results of operations and financial condition. Moreover, we may not be able to maintain or raise additional third-party capital for the funds we manage or for potential new funds and therefore we may forego existing or potential fee income and other income generating opportunities. For example, investment performance at Nephila, as well as the broader ILS market, has been adversely impacted by consecutive years of elevated catastrophe losses, as well as by the COVID-19 pandemic in 2020. These events, as well as volatility in the capital markets, also have impacted investor decisions around allocation of capital to ILS, which in turn have impacted, and may continue to impact, our capital raises and redemptions within the funds we manage, as well as new funds, resulting in a decline in assets under management. See "Critical Accounting Estimates - Goodwill and Intangible

Assets" under Item 7. Management's Discussion & Analysis of Financial Condition and Results of Operations for discussion and considerations of these impacts on the valuation of goodwill and intangible assets attributed to our Nephila ILS operations.

Risks Primarily Related to Our Investments and Access to Capital

Changes in Economic Conditions

Our investment results may be impacted by changes in interest rates, U.S. and international monetary and fiscal policies as well as broader economic conditions. We receive premiums from customers for insuring their risks. We invest these funds until they are needed to pay policyholder claims. Fluctuations in the value of our investment portfolio can occur as a result of changes in interest rates and U.S. and international fiscal, monetary and trade policies as well as broader economic conditions (including, for example, equity market conditions and significant or prolonged inflation or deflation). Although we attempt to take measures to manage the risks of investing in these changing environments, we may not be able to mitigate our sensitivity to them effectively. Despite our mitigation efforts, which include duration and currency targets for asset portfolios, compliance monitoring of these targets and means to reasonably and effectively match asset duration and currency to the duration and currency of the loss reserves, changes in interest rates and U.S. and international fiscal, monetary and trade policies as well as broader economic conditions could have a material adverse effect on our investment results and, consequently, our results of operations and financial condition.

We invest a significant portion of our shareholders' equity in equity securities, which may result in significant variability in our investment results and net income and may have a material adverse effect on shareholders' equity. Additionally, our equity investment portfolio is concentrated, and declines in the value of these significant investments could have a material adverse effect on our financial results and on our ability to carry out our business plans. Equity securities were 64% and 58% of our shareholders' equity at December 31, 2023 and 2022, respectively. Equity securities have historically produced higher returns than fixed maturity securities over long periods of time; however, investing in equity securities may result in significant variability in investment returns from one period to the next. In volatile financial markets, we could experience significant declines in the fair value of our equity investment portfolio, which would result in a material decrease in net income and shareholders' equity. Our equity portfolio is concentrated in particular issuers and industries and, as a result, a decline in the fair value of these concentrated investments also could result in a material decrease in net income and shareholders' equity. A material decrease in shareholders' equity may have a material adverse effect on our ability to carry out our business plans.

Access to Capital

We may require additional capital in the future, which may not be available or may only be available on unfavorable terms. To the extent that cash flows generated by our operations are insufficient to fund future operating requirements, or that our capital position is adversely impacted by a decline in the fair value of our investment portfolio, losses from catastrophe events or otherwise, we may need to raise additional funds through financings or curtail our growth. We also may be required to liquidate fixed maturity securities or equity securities, which may result in realized investment losses. Any further sources of capital, including capacity needed for letters of credit, if available at all, may be on terms that are unfavorable to us. Our access to additional sources of capital will depend on a variety of factors, such as market conditions, the general availability of credit, the availability of credit to the industries in which we operate, our results of operations, financial condition, credit ratings and credit capacity, as well as pending litigation or regulatory investigations. Our ability to borrow under our revolving credit facility and letter of credit facilities is contingent on our compliance with the covenants and other requirements under those facilities. Similarly, our access to capital may be impaired if regulatory authorities or rating agencies take negative actions against us. Our inability to obtain adequate capital when needed could have a negative impact on our ability to invest in, or take advantage of opportunities to expand, our businesses, such as possible acquisitions or the creation of new ventures, and inhibit our ability to refinance our existing indebtedness on terms acceptable to us. Any of these effects could have a material adverse effect on our results of operations and financial condition.

A failure to comply with covenants and other requirements under our credit facilities, senior debt and other indebtedness could have a material adverse effect on us. The agreements and indentures relating to our credit facilities, senior debt and other indebtedness, including letter of credit facilities used by certain of our subsidiaries, contain covenants and other requirements. If we fail to comply with those covenants or requirements, the lenders, noteholders or counterparties under those agreements and indentures could declare a default and demand immediate repayment of all amounts owed to them. In addition, where applicable, our lenders may cancel their commitments to lend or issue letters of credit or require us to pledge additional or a different type of collateral. A default under one debt agreement may also put us at risk of a cross-default

under other debt agreements or other arrangements. Any of these effects could have a material adverse effect on our results of operations and financial condition.

Our liquidity and our ability to meet our debt and other obligations, and pay dividends on our preferred stock, depend on the receipt of funds from our subsidiaries. We are a holding company, and as a result, our cash flow and our ability to meet our debt and other obligations, and pay dividends on our preferred stock, depend upon the earnings of our subsidiaries and on the distribution of earnings, loans or other payments by our subsidiaries to us. The payment of dividends by our insurance subsidiaries, which account for a significant portion of our operating cash flows, may require prior regulatory notice or approval or may be restricted by capital requirements imposed by regulatory authorities. Similarly, our insurance subsidiaries may require capital contributions from us to satisfy their capital requirements. In addition, our reinsurance contracts typically allow the cedent, upon a reduction in an insurance company's capital in excess of specified amounts, to terminate its contract on terms disadvantageous to us or to exercise other remedies that may adversely affect us. Those contract provisions may have the effect of limiting distributions by our insurance subsidiaries to us.

Risks Related to All of Our Operations

Legal and Regulatory Risks

The legal and regulatory requirements applicable to our businesses are extensive. Failure to comply could have a material adverse effect on us. Each of our businesses is highly dependent on the ability to engage on a daily basis in a large number of financial and operational activities, including, among others, insurance underwriting, claim processing, investment activities, the management of third-party capital and providing products and services to businesses and consumers, many of which are highly complex. These activities are subject to internal guidelines and policies, as well as legal and regulatory requirements, including, among others, those related to privacy and data security, economic and trade sanctions, anti-corruption, anti-bribery and global finance and investments, customer protection and insurance matters. Our continued expansion into new businesses, distribution channels and markets brings about additional requirements. While we believe that we have adopted adequate and effective risk management and compliance programs, compliance risks remain, particularly as we become subject to additional rules and regulations. Failure to comply with, or to obtain, appropriate authorizations or exemptions under any applicable laws and regulations could result in restrictions on our ability to do business or undertake activities that are regulated in one or more of the jurisdictions in which we conduct business. Any such failure could also subject us to fines, penalties, equitable relief and changes to our business practices. In addition, a failure to comply could result in defaults under our senior unsecured debt agreements or credit facilities or damage our businesses or our reputation.

Compliance with applicable laws and regulations is personnel- and systems-intensive. Shareholder activism, the current political environment, and the current high level of government intervention and regulatory reform may lead to substantial and complex new regulations and compliance obligations. Any changes in, or the enactment of new, laws and regulations may increase the complexity of the regulatory environment in which we operate, which could materially increase our direct and indirect costs for compliance and other expenses of doing business, and have a material adverse effect on our results of operations and financial condition. For example, failure to implement data management and security controls in the use of artificial intelligence by us or third party providers may subject us to data privacy, intellectual property and general regulatory risk, particularly in light of emerging regulation on the use of artificial intelligence.

Losses from legal and regulatory actions may have a material adverse effect on us. From time to time we may be involved in various legal actions, including at times multi-party or class action litigation, some of which involve claims for substantial or indeterminate amounts. A significant unfavorable outcome in one or more of these actions could have a material adverse effect on our results of operations and financial condition. We are also involved from time to time in various regulatory actions, investigations and inquiries, including market conduct exams by insurance regulatory authorities. If a regulatory authority takes action against us or we enter into a consent order or agreement to settle a matter, a regulatory authority has the option to require us to pay substantial fines or implement remedial measures that could prove costly or disruptive to our businesses and operations. Even if an unfavorable outcome does not materialize, these matters could have an adverse impact on our reputation and result in substantial expense and disruption. See note 21 of the notes to consolidated financial statements included under Item 8 and Item 3 Legal Proceedings.

We are subject to laws and regulations relating to economic and trade sanctions and bribery and corruption, the violation of which could have a material adverse effect on us. We are required to comply with the economic and trade sanctions and embargo programs administered by the U.S. Department of the Treasury's Office of Foreign Assets Control and similar multi-national bodies and governmental agencies worldwide, as well as applicable anti-corruption and anti-bribery laws and regulations of the U.S. and other jurisdictions where we operate. In some cases, we must comply with many new

economic, financial and trade sanctions that are imposed over a short period of time, as occurred with the Russia-Ukraine conflict. A violation of a sanction, embargo program, or anti-corruption law could subject us, and individual employees, to a regulatory enforcement action as well as significant civil and criminal penalties. In addition, a violation could result in defaults under our outstanding indebtedness or credit facilities or damage our businesses or our reputation. Those penalties or defaults, or damage to our businesses or reputation, could have a material adverse effect on our results of operations and financial condition. In some cases, the requirements and limitations applicable to the global operations of U.S. companies and their affiliates are more restrictive than, and may even conflict with, those applicable to non-U.S. companies and their affiliates, which also could have a material adverse effect on our results of operations and financial condition.

Employee error and misconduct may be difficult to detect and prevent and may result in significant losses. We run the risk of misconduct by employees across our businesses. Instances of misconduct, fraud, illegal acts, errors, failure to document transactions properly or to obtain proper internal authorization, or failure to comply with regulatory requirements or our internal policies may result in losses or reputational damage. It is not always possible to detect, deter or prevent employee errors or misconduct or fraud, and the controls and trainings that we have in place to mitigate these activities may not be sufficient or effective in all cases.

Global Operations

We manage our global operations through a network of business entities, which could result in inconsistent management, governance and oversight practices. We manage our global operations through a network of business entities located in the U.S., Bermuda, the U.K., Europe, Canada, the Middle East, Asia and Australia. These business entities are managed by executives, and supported by shared and centralized services; however, for certain of our businesses, subsidiary-level management is responsible for day-to-day operations, profitability, personnel decisions, the growth of the business, and legal and regulatory compliance, including adherence to applicable local laws. Operating through subsidiary-level management can make it difficult for us to implement strategic decisions and coordinated procedures throughout our global operations. In addition, some of our business entities operate with management, sales, and support personnel that may be insufficient to support growth in their respective locations and industries, without significant central oversight and coordination. We continue to enhance our management, governance and oversight procedures to effectively support, and improve transparency throughout, our global operations and network of business entities; however, our operating strategy nonetheless could result in inconsistent management, governance, and oversight practices, which may have a material adverse effect on our results of operations and financial condition.

We have substantial international operations and investments, which expose us to increased political, civil, operational and economic risks. A substantial portion of our revenues and income is derived from our operations and investments outside the U.S., including from the U.K., Bermuda, Europe, Canada, the Middle East, Asia and Australia. Our international operations and investments expose us to increased political, civil, operational and economic risks. Deterioration or volatility in foreign and international financial markets or general economic and political and civil conditions could adversely affect our operating results, financial condition and liquidity. Concerns about the economic conditions, capital markets, political, civil and economic stability and solvency of certain countries may contribute to global market volatility. Political and civil changes in the jurisdictions where we operate and elsewhere, some of which may be disruptive, can also interfere with our customers and our activities in a particular location. Our international operations also may be subject to a number of additional risks, particularly in emerging economies, including restrictions such as price controls, capital controls, currency exchange limits, ownership limits and other restrictive or anti-competitive governmental actions or requirements, which could have a material adverse effect on our businesses.

General economic, market or industry conditions could lead to investment losses, adverse effects on our businesses and limit our access to the capital markets. General economic and market conditions and industry specific conditions, including extended economic recessions or expansions; prolonged periods of slow economic growth; inflation or deflation; fluctuations and volatility in foreign currency exchange rates, commodity and energy prices and interest rates; volatility in the credit and capital markets; changes in U.S. government debt ratings; the imposition of tariffs and other changes in international trade regulation and other factors, could lead to: substantial realized and unrealized investment losses in future periods; declines in demand for, or increased frequency and severity of claims made under, our insurance products; disruptions in global supply chains and increased costs of inputs for our products and services; reduced demand for our services and the products we sell and distribute; changes in the carrying value of our other assets and liabilities; and limited or no access to the capital markets. Any of these impacts could have a material adverse effect on our results of operations, financial condition, debt and financial strength ratings or our insurance subsidiaries' capital. Market Ventures businesses have been, and may continue to be, adversely affected by increased costs of labor and materials and declines in demand for certain products and services due to

economic and industry specific conditions. Our efforts to mitigate these impacts may not be successful and, even when they are successful, there may be a time lag before the impacts of these efforts are reflected in our results.

Our businesses, results of operations and financial condition could be adversely affected by ongoing regional or military conflicts and related disruptions in the global economy. The global economy has been, and may in the future be, negatively impacted by regional or military conflicts, for example, the on-going conflicts between Russia and Ukraine and between Israel and Hamas. We may have operations in areas affected by a conflict, and some of our businesses may be adversely affected by a conflict and its effects. Within our underwriting operations, we may have insurance contracts with exposure to losses attributed to a conflict. Our other operations also may have direct exposure to customers and vendors in an affected area. Certain of our businesses may experience shortages in materials and increased costs for transportation, energy, and raw materials due in part to the negative impact of a conflict on the global economy.

Furthermore, governments in the U.S., U.K., and European Union, among others, may impose export controls on certain products and financial and economic sanctions on certain industry sectors and parties in affected areas. These export controls and sanctions, or our failure to comply with them, could result in restrictions on our ability to do business in one or more of the jurisdictions in which we conduct business or have the other adverse effects discussed above under this Item 1A. Risk Factors under "We are subject to laws and regulations relating to economic and trade sanctions and bribery and corruption, the violation of which could have a material adverse effect on us."

We are unable to predict the impact an ongoing conflict may have on our businesses or the global economy. The impact of geopolitical tensions related to these conflicts, including increased trade barriers or restrictions on global trade, is unknown and could result in, among other things, heightened cybersecurity threats, supply disruptions, protracted or increased inflation, increased energy costs, lower consumer demand, fluctuations in interest and foreign exchange rates and increased volatility in financial markets, any of which could adversely affect our businesses, results of operations and financial condition. In addition, an ongoing conflict may have the effect of triggering or intensifying many of the risks described under this Item 1A Risk Factors under Risks Primarily Related to Our Insurance Operations, Risks Primarily Related to Our Investments and Access to Capital, and Risks Related to All of Our Operations.

Acquisitions, Integration and Reliance on Management and Personnel

The integration of acquired businesses may not be as successful as we anticipate. We have completed, and expect to complete, acquisitions in an effort to achieve profitable growth in our underwriting and other insurance operations and to create additional value on a diversified basis in our Market Ventures operations. Acquisitions present operational, regulatory, strategic and financial risks, as well as risks associated with liabilities arising from the previous operations of the acquired businesses. We also must make decisions about the degree to which we integrate acquisitions into our existing businesses, operations and systems, and over what timeframe. Those decisions may adversely affect how successfully the acquired businesses perform, both in the short-term and in the long-term. All of these risks are magnified in the case of a large acquisition. Integration of the operations, systems and personnel of acquired businesses may prove more difficult than anticipated, which may result in failure to achieve financial objectives associated with the acquisition or diversion of management attention and other resources. In addition, integration of formerly privately-held companies into the management and internal control and financial reporting systems of a publicly-held company presents additional risks. See note 3 of the notes to consolidated financial statements included under Item 8 for information about our recent acquisitions.

Impairment in the value of our goodwill or other intangible assets could have a material adverse effect on our operating results and financial condition. As of December 31, 2023, goodwill and intangible assets totaled \$4.2 billion and represented 28% of shareholders' equity. We record goodwill and intangible assets at fair value upon the acquisition of a business. Goodwill represents the excess of amounts paid to acquire businesses over the fair value of the net assets acquired. Goodwill and indefinite-lived intangible assets are evaluated for impairment annually, or more frequently if events or circumstances indicate that their carrying value may not be recoverable. Declines in operating results, divestitures, sustained market declines and other factors that impact the fair value of a reporting unit could result in an impairment of goodwill or intangible assets and, in turn, a charge to net income. Such a charge could have a material adverse effect on our results of operations or financial condition. Developments that adversely affect the future cash flows or earnings of an acquired business may cause the goodwill or intangible assets recorded for it to be impaired. See "Critical Accounting Estimates - Goodwill and Intangible Assets" included under Item 7 Management's Discussion and Analysis of Financial Condition and Results of Operations and note 8 of the notes to consolidated financial statements included under Item 8 for information about our goodwill and intangible assets.

The loss of, or failure to successfully implement succession planning for, one or more key executives or an inability to attract and retain qualified personnel in our various businesses could have a material adverse effect on us. Our success depends on our ability to retain the services of our existing key executives, implement successful succession planning and attract and retain additional qualified personnel in the future. The temporary or permanent loss of the services of any of our key executives or the inability to hire and retain other highly qualified personnel in the future could have a material adverse effect on our ability to conduct or grow our business.

Additionally, in our decentralized business model, we rely on qualified personnel to manage and operate our various businesses. In our decentralized business model, we need qualified and competent management to direct day-to-day business activities of our operating subsidiaries and to manage changes in future business operations due to changing business or regulatory environments. Our operating subsidiaries also need qualified and competent personnel to execute business plans and serve their customers, suppliers and other stakeholders. Our inability to recruit, train and retain qualified and competent managers and personnel could negatively affect the operating results, financial condition and liquidity of our subsidiaries and Market Group as a whole.

Information Technology Systems and Third-Party Systems and Service Providers

Information technology systems that we use could fail or suffer a security breach or cyberattack, which could have a material adverse effect on us or result in the loss of regulated or sensitive information. Our businesses are dependent upon the operational effectiveness and security of our enterprise systems and those maintained by third parties. Among other things, we rely on these systems to interact with producers, insureds, customers, clients, and other third parties, to perform actuarial and other modeling functions, to underwrite business, to prepare policies and process premiums, to process claims and make claims payments, to prepare internal and external financial statements and information, as well as to engage in a wide variety of other business activities. A significant failure of our enterprise systems, or those of third parties upon which we may rely, whether because of a natural disaster, network outage or a cyberattack on those systems, including ransomware, could compromise our personal, confidential and proprietary information as well as that of our customers and business partners, impede or interrupt our business operations and could result in other negative consequences, including remediation costs, loss of revenue, additional regulatory scrutiny and fines, litigation and monetary and reputational damages. In addition, if we are unable to innovate, develop and acquire new technology, it may leave us more susceptible to these attacks. Like other companies, we have been subject to cyberattacks, malicious viruses and malware, and denial of service attacks and expect that this will continue in the future with greater sophistication and frequency. Despite any controls or protective actions we take against such attacks, those measures may be insufficient to prevent, or mitigate the effects of, a natural disaster, network outage or a cyberattack on our systems. This could result in liability to us, cause our data to be corrupted or stolen and cause us to commit resources to correct those failures.

In addition, we are subject to numerous data privacy and cybersecurity laws and regulations enacted in the jurisdictions in which we do business. A misuse or mishandling of personal, confidential or proprietary information being sent to or received from a customer, business partner, employee or third party could damage our businesses or our reputation or result in significant monetary damages, regulatory enforcement actions, fines and criminal prosecution in one or more jurisdictions. For example, under the European General Data Protection Regulation there are significant punishments for non-compliance which could result in a penalty of up to 4% of a firm's global annual revenue. In addition, a violation of data privacy laws and regulations could result in defaults under our outstanding indebtedness or credit facilities. Those monetary damages, penalties, regulatory or legal actions or defaults, or the damage to our businesses or reputation, could have a material adverse effect on our results of operations and financial condition. Third parties who we utilize to perform certain functions are also subject to these risks, and their failure to adhere to these laws and regulations also could damage our businesses or reputation or result in regulatory intervention, which could have a material adverse effect on our results of operations and financial condition.

Further, we routinely transmit, receive and store personal, confidential and proprietary information by email and other digital means. Although we attempt to protect this personal, confidential and proprietary information, we may be unable to do so in all cases, especially with business partners and other third parties who may not have or use appropriate controls to protect personal, confidential and proprietary information.

While we maintain cyber risk insurance providing first-party and third-party coverages, that insurance may not cover all costs associated with the consequences of an enterprise failure, cyberattack, or breach of systems. A material cyber security breach could have a material adverse effect on our results of operations and financial condition.

Third-party providers may perform poorly, breach their obligations to us or expose us to enhanced risks. Certain of our business functions are performed by third-party providers, and these providers may not perform as expected or may fail to adhere to the obligations owed to us. For example, certain of our business units rely on relationships with a number of third-party administrators under contracts pursuant to which these third-party administrators manage and pay claims on our behalf and advise us with respect to case reserves. In these relationships, we rely on controls incorporated in the provisions of the administration agreement, as well as on the administrator's internal controls, to manage the claims process within our prescribed parameters. In addition, certain of our business units use managing general agents, general agents and other producers to write and administer business on our behalf within prescribed underwriting authorities. Although we monitor these administrators, agents, producers and other service providers on an ongoing basis, our monitoring efforts may not be adequate, or our service providers could exceed their authorities or otherwise breach obligations owed to us, which could result in operational disruption, reputational damage and regulatory intervention and otherwise have a material adverse effect on our results of operation and financial condition.

In addition, we utilize third parties to perform certain technology and business process functions, such as data center hosting, cloud based operating environments, human resources and other outsourced services. If these third-party providers do not perform as expected, we may experience operational difficulties, increased costs and a loss of business, or we may not realize expected productivity improvements or cost efficiencies. Our use of third parties to perform certain technology and business process functions may expose us to risks related to privacy and data security, including through their use of artificial intelligence without our knowledge or below our standards, which could result in monetary and reputational damages. We may be further exposed to risks associated with artificial intelligence and machine learning technology if third-party service providers or any counterparts, where known or unknown to us, use such technology in their business activities. In addition, our ability to receive services from third-party providers might be impacted by a wide variety of factors, including political and civil instability, supply chain disruptions, volatility or disruptions in the financial markets, wide-spread health issues, unanticipated or additional regulatory requirements or policies. As a result, our ability to conduct our businesses may be adversely affected.

Pandemics

Pandemics have had, and could have, material adverse effects on us. The effects of a pandemic, and related governmental responses, may be wide-ranging, costly, disruptive and rapidly changing, resulting in material adverse effects on our underwriting, investment, Markel Ventures and other operations, and on our results of operations and financial condition, as was the case with COVID-19. Factors that give rise, or may give rise, to those effects include, or may include, the following, as well as others that we cannot predict:

- Insured or reinsured losses from pandemic-related claims that are different, or more extensive, than we expect;
- Government actions or judicial decisions related to insurance or reinsurance coverages or rates, including, for example, requiring retroactive coverage of claims or expanding the scope of coverage;
- Disputes, lawsuits and other legal actions challenging the promptness of coverage determinations, or the coverage determinations themselves, under applicable insurance or reinsurance policies, resulting in increased claims, litigation and related expenses;
- Disruptions, delays and increased costs and risks related to having limited or no access to our facilities, workplace re-entry, employee safety concerns and reductions or interruptions of critical or essential services;
- Continually changing business conditions and compliance obligations; and
- Short or long-term impacts on the cost, availability or timeliness of required raw materials, supplies or services provided by third parties, including services provided by state, federal or foreign governments or government agencies.

In addition, a pandemic may, as has been the case with COVID-19, have the effect of triggering or intensifying many of the risks described elsewhere under this Item 1A. Risk Factors under Risks Primarily Related to Our Insurance Operations, Risks Primarily Related to Our Investments and Access to Capital, and Risks Related to All of Our Operations.

Climate Change

The impacts of climate change, and legal or regulatory measures to address climate change, may adversely affect our results of operations or financial condition. Our businesses, results of operations, and financial condition could be impacted by risks associated with climate change, including:

- changes from legislation, regulation and court decisions that:
 - create economic and regulatory uncertainty,
 - increase our compliance costs,
 - impose liability on or increase exposure for our policyholders not contemplated during our underwriting,
 - change our ability to provide insurance coverage to certain policyholders, or
 - impose new or additional requirements that increase the costs associated with, or disrupt, sourcing, manufacturing, and distribution of, our products and services,
- changes in the frequency, severity, and location of weather-related catastrophes, such as hurricanes, tornados, windstorms, floods, wildfires, and other extreme weather events, which may:
 - result in insured losses that exceed our expectations or 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,
 - make it more difficult or expensive for us to obtain reinsurance at desired levels, or
 - increase physical risks to and impacts on our operations,
- changing demand for insurance coverage we provide, such as demand from industries that produce or use carbon-based energy including those transitioning from those energy sources, decreased availability of reinsurance available for coverages we provide for carbon intensive industries, or increased claims and losses related to those industries, and
- losses on our invested assets, including from:
 - changes in supply and demand,
 - advances in low-carbon technology and renewable energy development,
 - effects of extreme weather events on the physical and operational exposure of industries and issuers, and
 - the transition that companies make towards addressing climate risk in their own businesses.

Item 1C. CYBERSECURITY

Markel Group is a holding company comprised of a diverse group of companies and investments. Our specialty insurance business, Markel, sits at the core of our company. Markel Group utilizes information technology systems and services, including cybersecurity, provided and/or administered by Markel. Through Markel Group's wholly owned subsidiary, Markel Ventures, Inc. (Markel Ventures), Markel Group owns controlling interests in businesses that operate in a variety of industries. The Markel Ventures businesses are independently managed with respect to their information security and data protection programs.

Insurance

In order to maintain a strong cybersecurity program, Markel uses a variety of controls and technology tools designed to identify, detect, prevent, respond to, and recover from security threats. Markel undergoes regular security audits including a System and Organization Controls (SOC) audit for Cybersecurity conducted annually by independent auditors in which cybersecurity threats are identified and assessed. Markel regularly tests aspects of its internal security and conducts security risk interviews and assessments on third parties with whom it does business, depending on the nature of the relationship. Markel has invested in technology that assists its risk management teams in measuring and addressing weaknesses in its third-party and supply chain community. Markel performs continuous monitoring of all its third parties to ensure they are maintaining acceptable levels of security controls and remediating any known weaknesses.

Markel participates in the Financial Services Information Sharing and Analysis Center to share information about the latest cyber threats and preparedness measures. Markel also shares threat intelligence information with other partners. Markel has a cybersecurity incident response plan, as well as a crisis management plan, that cover cyber events, including a process for determining the materiality of cyber events that includes evaluation by a cross functional crisis management group including security, information technology, finance, legal and business and escalation to Markel Group senior management as warranted by the severity of the situation. An internal team engages in tabletop exercises several times each year to enhance preparedness for such situations.

Information security and data protection risks are the responsibility of all employees. Markel has a mandatory training program covering a variety of security and data protection disciplines. In addition, all Markel employees are required to acknowledge annually policies on acceptable use of Markel's technology resources and enterprise information security. Contractors are required to provide certain representations and certifications relating to information security.

The Markel information security and data protection program is led by a Chief Information Security Officer (CISO) who supervises a team of security and data protection professionals across the globe. Markel's global information security and data protection program leverages the Cybersecurity Framework from the National Institutes of Standards and Technology as well as industry best practices. Markel also is able to map to both ISO (International Organization for Standardization) and BSI (British Standards Institution) among other cybersecurity standards. Markel's CISO has been with Markel 13 years and has 22 years' experience in information technology, with 17 years in information technology security, and is a certified Information Systems Security Professional (CISSP).

Markel Ventures

Each of our Markel Ventures businesses maintains its own, separate IT infrastructure, that often includes third-party providers, to support the needs of its business. As a result, cybersecurity risk for the Markel Ventures businesses is not concentrated in one system or service provider. Further, given the disparate nature of the businesses, systems, and providers, there is no single, uniform approach to managing cybersecurity risk at the Markel Ventures businesses – each is tailored to its unique needs. As is the case with all risks, management for each Markel Ventures business is responsible for evaluating and managing cybersecurity risks for its business. Therefore, each business determines the appropriate IT systems and providers needed to do so. Management for each business shares information on material risks from cybersecurity incidents with Markel Ventures management.

Markel Ventures has established processes for the Markel Ventures businesses to share information about how they assess, identify, and manage cybersecurity risk and shares information on material risks from cybersecurity incidents with Markel Group management, as appropriate. Each Markel Ventures business has a board that meets quarterly. Material matters regarding cybersecurity risk management and cybersecurity incidents are discussed at these meetings. In addition, Markel Ventures management regularly meets with the businesses to discuss their risk identification, assessment, and management approach. These discussions include how the business assesses, identifies, and manages key risks, including cybersecurity risks.

Markel Ventures requires real-time reporting of material cybersecurity incidents to understand how the matters are being managed, assess whether public disclosure is required and inform Markel Group senior management of relevant matters. Depending on the cybersecurity incident, third parties may be engaged by the Markel Ventures businesses to assist them in understanding and managing the event.

Given the varying size and complexity of the Markel Ventures businesses, a diverse array of individuals assume responsibility for managing cybersecurity risks within them. In some instances, primary responsibility may be with a member of the executive management team. In other instances, primary responsibility may land with information technology professionals. In all instances, however, ultimate responsibility rests with each business' Chief Executive Officer.

Markel Group Board Oversight

The Markel Group Board of Directors oversees Markel Group's risk management framework on an enterprise-wide basis, which includes cybersecurity risks. Periodic reports are provided to the Markel Group Board of Directors by members of management which, among other things, seek to systematically identify the principal risks facing our businesses and the manner in which such risks are addressed. For cybersecurity, this includes a review of the cybersecurity program and its governance, active and planned initiatives, protection and prevention matters, detection and response measures, and the threat landscape.

Cybersecurity Risks

No previous cybersecurity incident has had, or is reasonably likely to have, a material adverse effect on Markel Group, its business strategy, results of operations, or financial condition. For risks related to cybersecurity threats, see Item 1A Risk Factors, including under "Information technology systems that we use could fail or suffer a security breach or cyberattack, which could have a material adverse effect on us or result in the loss of regulated or sensitive information."

Item 2. PROPERTIES

We lease office space in Glen Allen, Virginia for our Markel Group corporate headquarters, which also serves as the headquarters for our insurance and Markel Ventures operations. Our insurance operations lease office space throughout the U.S. and in various locations in other countries. In total, we have 64 insurance offices in 17 countries. Additionally, our Markel Ventures businesses maintain office space, factories and warehouses, both through leased and owned properties, throughout the U.S. and in certain international locations. The property needs of our Markel Ventures businesses vary based on the nature of the operations of each business. We believe our properties are suitable and adequate for our current operations.

Item 3. LEGAL PROCEEDINGS

Thomas Yeransian v. Markel Corporation

In October 2010, we completed the acquisition of Aspen Holdings, Inc. (Aspen). As part of the consideration for that acquisition, Aspen shareholders received contingent value rights (CVRs). Prior to the December 31, 2017 CVR maturity date, the CVR holder representative, Thomas Yeransian, disputed our prior estimation of the value of the CVRs. On September 15, 2016, Mr. Yeransian filed a suit, Thomas Yeransian v. Markel Corporation (U.S. District Court for the District of Delaware), alleging, among other things, that we are in default under the CVR agreement. The suit seeks: \$47.3 million in damages, which represents the unadjusted value of the CVRs; plus interest (\$29.1 million through December 31, 2023) and default interest (up to an additional \$24.4 million through December 31, 2023, depending on the date any default occurred); and an unspecified amount of punitive damages, costs, and attorneys' fees.

At the initial hearing held February 21, 2017, the court stayed the proceedings and ordered the parties to discuss resolving the dispute pursuant to the independent CVR valuation procedure under the CVR agreement. The parties met on April 5, 2017, but were unsuccessful in reaching agreement on a process for resolving the dispute. We subsequently filed a motion to stay the litigation and compel arbitration, and, on July 31, 2017, the court issued an order granting that motion.

On November 13, 2018, Mr. Yeransian filed a second suit, Thomas Yeransian v. Markel Corporation (U.S. District Court for the District of Delaware), which also alleges that the Company is in default under the CVR agreement. The second suit seeks the same monetary damages and relief as the original suit. We filed a motion to stay this suit until the arbitration for the original suit had concluded and the CVR holders received the final amount due under the CVR Agreement. The court granted that motion on August 6, 2019.

On June 5, 2020, Mr. Yeransian filed a third suit, Thomas Yeransian v. Markel Corporation (U.S. District Court for the District of Delaware). Similar to the first and second suits, the third suit alleges that the Company is in default under the CVR agreement and, in addition, has interfered with the arbitration for the CVR valuation. The third suit seeks the same monetary damages and relief as the original suit and the second suit, as well as other declaratory and non-monetary judgments and orders. We filed a motion to stay this suit, which the court granted on March 16, 2021.

Under the arbitration terms of the CVR Agreement, independent experts were appointed to determine the final value of the CVRs. On September 20, 2021, the experts delivered their report indicating a final CVR valuation of \$22.4 million, excluding interest. We had previously paid \$8.0 million to the CVR holders, representing 90% of the undisputed value of the CVRs, plus interest of \$1.9 million. On September 20, 2021, we paid \$20.1 million, which represents \$14.1 million for the unpaid portion of the final CVR amount (excluding fees payable to a third party), plus \$6.0 million in additional interest.

The stay was lifted on each pending suit, and the three suits were consolidated. On June 8, 2023, the court ruled in favor of the Company and against Mr. Yeransian on all counts. Mr. Yeransian has appealed the court's decision.

We believe Mr. Yeransian's suits to be without merit. We further believe that any material loss resulting from the suits to be remote.

Information About Our Executive Officers

Thomas S. Gayner

Chief Executive Officer since January 2023. Co-Chief Executive Officer from January 2016 to December 2022. President and Chief Investment Officer from May 2010 to December 2015. Chief Investment Officer from January 2001 to December 2015. Director from 1998 to 2004. Director since August 2016. Age 62.

Michael R. Heaton

Executive Vice President and Chief Operating Officer since February 2024 and Executive Vice President since May 2022. President, Markel Ventures from January 2016 to May 2022. President and Chief Executive Officer, Markel Ventures, Inc., a subsidiary, from May 2020 to May 2022; President and Chief Operating Officer, Markel Ventures, Inc., from January 2016 to May 2020. Chief Operating Officer, Markel Ventures, Inc., from September 2013 to December 2015. Age 47.

Andrew G. Crowley

President, Markel Ventures since May 2022. President, Markel Ventures, Inc., a subsidiary, since May 2022. Executive Vice President, Markel Ventures, Inc., from May 2020 to May 2022. Managing Director, Markel Ventures, Inc., from January 2017 to May 2020. Age 41.

Jeremy A. Noble

President, Insurance since January 2023. Senior Vice President and Chief Financial Officer from September 2018 to December 2022. Senior Vice President, Finance from June 2018 to September 2018. Finance Director, Markel International from July 2015 to June 2018. Managing Director, Internal Audit from September 2011 to July 2015. Age 48.

Richard R. Grinnan

Senior Vice President, Chief Legal Officer and Secretary of Markel Group since February 2020 and of Markel since October 2022. General Counsel and Secretary from June 2014 to February 2020. Assistant General Counsel from August 2012 to June 2014. Age 55.

Brian J. Costanzo

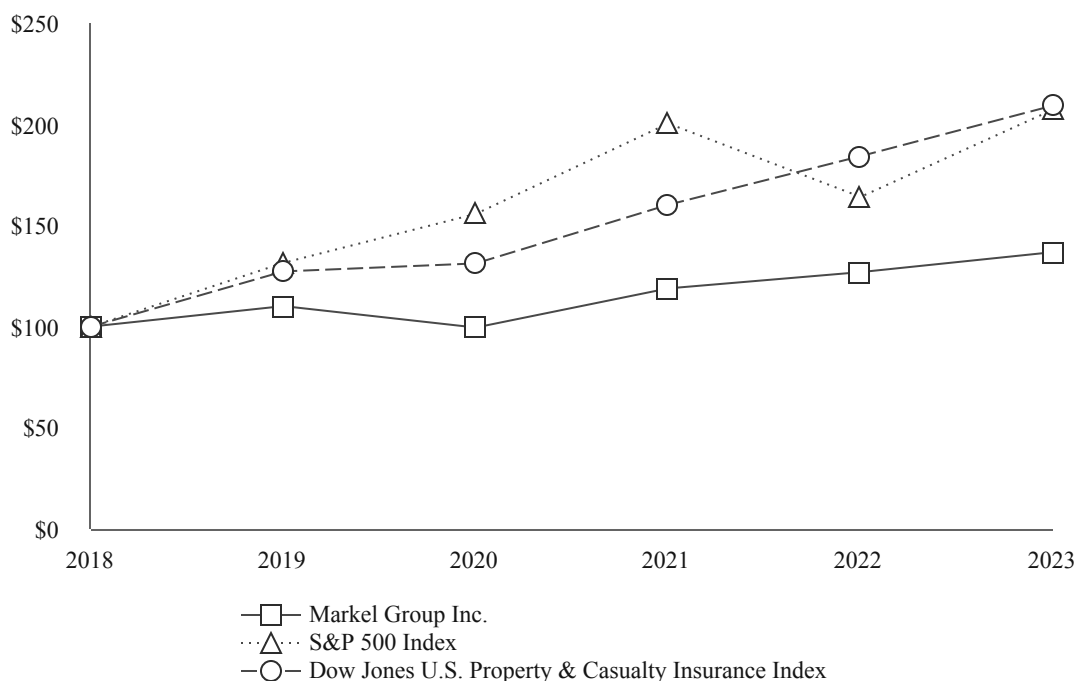
Chief Financial Officer of Markel Group and of Markel since December 2023. Senior Vice President, Finance, Chief Accounting Officer and Controller from October 2022 to December 2023. Principal financial officer (on an interim basis) from January 2023 to March 2023. Chief Accounting Officer and Controller from June 2021 to October 2022. Controller from December 2019 to June 2021. Segment Controller - U.S. Insurance from March 2014 to December 2019. Age 45.

PART II

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

Performance Graph

The following graph compares the cumulative total return (based on share price) on our common stock with the cumulative total return of companies included in the Standard & Poor's (S&P) 500 Index and the Dow Jones U.S. Property & Casualty Insurance Companies Index. We are a holding company comprised of a diverse group of businesses and investments, and we believe there are few companies with a mix of business operations comparable to ours. Our principal business markets and underwrites specialty insurance products, and therefore, we have used the Dow Jones U.S. Property & Casualty Insurance Companies Index as our peer group. However, we also own controlling interests in a diverse portfolio of businesses that operate in a variety of other industries. This information is not necessarily indicative of future results.



	Years Ended December 31,					
	2018 ⁽¹⁾	2019	2020	2021	2022	2023
Market Group Inc.	\$ 100	\$ 110	\$ 100	\$ 119	\$ 127	\$ 137
S&P 500 Index	100	131	156	200	164	207
Dow Jones U.S. Property & Casualty Insurance Index	100	127	131	160	184	209

⁽¹⁾ \$100 invested on December 31, 2018 in our common stock or the listed index. Includes reinvestment of dividends.

Common Stock and Dividend Information

Our common stock trades on the New York Stock Exchange under the symbol MKL. The number of shareholders of record as of January 31, 2024 was approximately 260. The total number of shareholders, including those holding shares in street name or in brokerage accounts, is estimated to be in excess of 220,000. Our current strategy is to retain earnings and, consequently, we have not paid and do not expect to pay a cash dividend on our common stock.

Common Share Repurchases

The following table summarizes our common share repurchases for the quarter ended December 31, 2023.

	Issuer Purchases of Equity Securities			
	(a)	(b)	(c)	(d)
	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs ⁽¹⁾	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (in thousands)
October 1, 2023 through October 31, 2023	16,635	\$ 1,470.02	16,635	\$ 221,111
November 1, 2023 through November 30, 2023	75,841	\$ 1,400.09	75,841	\$ 748,196
December 1, 2023 through December 31, 2023	25,200	\$ 1,396.70	25,200	\$ 712,999
Total	117,676	\$ 1,409.25	117,676	\$ 712,999

⁽¹⁾ The Board of Directors approved the repurchase of up to \$750 million of our common shares pursuant to a share repurchase program publicly announced in November 2023. The new program terminated and replaced a similar \$750 million share repurchase program authorized in February 2022. Under our share repurchase program, we may repurchase outstanding common shares of our stock from time to time in privately negotiated or open market transactions, including under plans complying with Rule 10b5-1 and Rule 10b-18 under the Securities Exchange Act of 1934. The share repurchase program has no expiration date but may be terminated by the Board at any time.

Securities Authorized for Issuance Under Equity Compensation Plans

See Part III for information on securities authorized for issuance under our equity compensation plans.

Available Information

This document represents Markel Group's Annual Report on Form 10-K, which is filed with the U.S. Securities and Exchange Commission. We make available free of charge on or through our website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and all amendments to those reports as soon as reasonably practicable after such material is electronically filed with or furnished to the U.S. Securities and Exchange Commission. Our website address is www.mklgroup.com.

Transfer Agent

Equiniti Trust Company, LLC, 48 Wall Street, Floor 23, New York, NY 10005
(800) 937-5449 helpast@equiniti.com

Annual Shareholders Meeting

Our annual shareholders meeting will take place on May 22, 2024 at the University of Richmond Robins Center in Richmond, Virginia at 2:00 p.m. (Eastern Time). The shareholders meeting will be part of a two-day event we are calling the 2024 Reunion, which is open to shareholders, employees, and friends of Markel Group. More information on the agenda and registration for the 2024 Reunion is available at www.mklreunion.com.

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

The following discussion and analysis includes discussion of changes in our results of operations and financial condition from 2022 to 2023 and should be read in conjunction with the consolidated financial statements and related notes included under Item 8, Item 1 Business, Item 1A Risk Factors and "Safe Harbor and Cautionary Statement" under Item 7. The accompanying consolidated financial statements and related notes have been prepared in accordance with United States (U.S.) generally accepted accounting principles (GAAP) and include the accounts of our holding company, Markel Group Inc. (Markel Group), and its consolidated subsidiaries, as well as any variable interest entities that meet the requirements for consolidation (the Company). A discussion of changes in our results of operations and financial condition from 2021 to 2022 may be found in Part II Item 7 Management's Discussion and Analysis of Financial Condition and Results of Operations in our 2022 Annual Report on Form 10-K, which was filed with the U.S. Securities and Exchange Commission on February 17, 2023.

Item 7 is divided into the following sections:

- Results of Operations
- Liquidity and Capital Resources
- Critical Accounting Estimates
- Safe Harbor and Cautionary Statement

For a discussion of our significant accounting policies, as well as recently issued accounting pronouncements that we have not yet adopted and their expected effects on our consolidated financial position, results of operations and cash flows, see note 1 of the notes to consolidated financial statements included under Item 8.

Results of Operations

The following table presents the components of operating revenues.

	Years Ended December 31,	
	2023	2022
<i>(dollars in thousands)</i>		
Insurance segment	\$ 7,282,705	\$ 6,528,263
Reinsurance segment	1,014,294	1,063,347
Program services and other fronting, insurance-linked securities and other insurance	280,131	493,746
Insurance operations	8,577,130	8,085,356
Net investment income	729,219	445,846
Net investment gains (losses)	1,524,054	(1,595,733)
Other	(11,854)	(17,661)
Investing segment	2,241,419	(1,167,548)
Markel Ventures segment	4,985,081	4,757,527
Total operating revenues	<u>\$ 15,803,630</u>	<u>\$ 11,675,335</u>

The following table presents the components of comprehensive income (loss) to shareholders.

	Years Ended December 31,	
	2023	2022
<i>(dollars in thousands)</i>		
Insurance segment profit	\$ 162,176	\$ 549,871
Reinsurance segment profit (loss)	(19,265)	83,859
Program services and other fronting, insurance-linked securities and other insurance	205,234	294,979
Amortization of intangible assets ⁽¹⁾	(98,244)	(99,735)
Impairment of goodwill ⁽²⁾	—	(80,000)
Insurance operations	249,901	748,974
Investing segment profit (loss)	2,241,419	(1,167,548)
Markel Ventures segment profit ⁽³⁾	437,508	325,238
Operating income (loss)	2,928,828	(93,336)
Interest expense	(185,077)	(196,062)
Net foreign exchange gains (losses)	(90,045)	137,832
Income tax (expense) benefit	(552,616)	48,209
Net income attributable to noncontrolling interests	(105,030)	(112,920)
Net income (loss) to shareholders	1,996,060	(216,277)
Preferred stock dividends	(36,000)	(36,000)
Net income (loss) to common shareholders	1,960,060	(252,277)
Other comprehensive income (loss) to shareholders	289,284	(989,502)
Comprehensive income (loss) to shareholders	\$ 2,285,344	\$ (1,205,779)

(1) Amortization of intangible assets includes all amortization attributable to our insurance operations. Amortization of intangible assets attributable to our underwriting segments was \$37.1 million and \$38.5 million for the years ended December 31, 2023 and 2022, respectively; however, we do not allocate amortization of intangible assets between the Insurance and Reinsurance segments. Amortization of intangible assets attributable to our program services and other fronting, insurance-linked securities and other insurance operations was \$61.2 million for the years ended December 31, 2023 and 2022.

(2) Impairment of goodwill for the year ended December 31, 2022 was attributable to our Nephila ILS operations.

(3) Segment profit for the Markel Ventures segment includes amortization of intangible assets attributable to Markel Ventures.

The change in comprehensive income (loss) to shareholders in 2023 compared to 2022 was primarily due to pre-tax net investment gains of \$1.5 billion in 2023 compared to pre-tax net investment losses of \$1.6 billion in 2022, as well as pre-tax net unrealized gains on our fixed maturity securities of \$389.5 million in 2023 compared to pre-tax net unrealized losses of \$1.5 billion in 2022.

The components of net income (loss) to shareholders and comprehensive income (loss) to shareholders are discussed in further detail under "Insurance Results," "Investing Results," "Markel Ventures Results," "Interest Expense, Net Foreign Exchange Gains (Losses) and Income Taxes" and "Comprehensive Income (Loss) to Shareholders and Book Value per Common Share."

Insurance Results

Our Insurance engine includes our underwriting, program services and other fronting and insurance-linked securities (ILS) operations. We have a suite of capabilities through which we can access capital to support our customers' risks, which includes our own capital through our underwriting operations and third-party capital through our program services and other fronting and ILS operations. Our underwriting operations, which are primarily comprised of our Insurance and Reinsurance segments, produce revenues primarily by underwriting insurance contracts and earning premiums in the specialty insurance market. Our program services and other fronting and insurance-linked securities operations produce revenues primarily through fees earned for fronting services and investment management services, respectively. Our insurance operations also include the underwriting results of run-off lines of business that were discontinued prior to, or in conjunction with, insurance acquisitions,

and the results of our run-off life and annuity reinsurance business. The following table presents the components of our Insurance engine gross premium volume and operating revenues.

<i>(dollars in thousands)</i>	Years Ended December 31,		
	2023	2022	% Change
Gross premium volume:			
Underwriting	\$ 10,277,632	\$ 9,847,538	4 %
Program services and other fronting ⁽¹⁾	3,724,605	3,354,144	11 %
Insurance operations	\$ 14,002,237	\$ 13,201,682	6 %
Operating revenues:			
Insurance segment	\$ 7,282,705	\$ 6,528,263	12 %
Reinsurance segment	1,014,294	1,063,347	(5)%
Program services and other fronting, insurance-linked securities and other insurance	280,131	493,746	(43)%
Insurance operations	\$ 8,577,130	\$ 8,085,356	6 %

⁽¹⁾ Substantially all gross premiums from our program services and other fronting operations were ceded to third parties for the years ended December 31, 2023 and 2022.

Underwriting Results

Underwriting profits are a key component of our strategy to build shareholder value. The property and casualty insurance industry commonly defines underwriting profit or loss as earned premiums net of losses and loss adjustment expenses and underwriting, acquisition and insurance expenses. We use underwriting profit or loss and the combined ratio as a basis for evaluating our underwriting performance. The U.S. GAAP combined ratio is a measure of underwriting performance and represents the relationship of incurred losses, loss adjustment expenses and underwriting, acquisition and insurance expenses to earned premiums. The combined ratio is the sum of the loss ratio and the expense ratio. The loss ratio represents the relationship of incurred losses and loss adjustment expenses to earned premiums. The expense ratio represents the relationship of underwriting, acquisition and insurance expenses to earned premiums. A combined ratio less than 100% indicates an underwriting profit, while a combined ratio greater than 100% reflects an underwriting loss.

In addition to the U.S. GAAP combined ratio, loss ratio and expense ratio, we also evaluate our underwriting performance using measures that exclude the impacts of certain items on these ratios. We believe these adjusted measures, which are non-GAAP measures, provide financial statement users with a better understanding of the significant factors that comprise our underwriting results and how management evaluates underwriting performance.

When analyzing our combined ratio, we exclude current accident year losses and loss adjustment expenses attributed to natural catastrophes and certain other significant, infrequent loss events, for example, the on-going military conflict between Russia and Ukraine that began following Russia's invasion of Ukraine in February 2022. Due to the unique characteristics of these events, there is inherent variability as to the timing or loss amount, which cannot be predicted in advance. We believe measures that exclude the effects of such events are meaningful to understand the underlying trends and variability in our underwriting results that may be obscured by these items.

When analyzing our loss ratio, we evaluate losses and loss adjustment expenses attributable to the current accident year separate from losses and loss adjustment expenses attributable to prior accident years. Prior accident year reserve development, which can either be favorable or unfavorable, represents changes in our estimates of losses and loss adjustment expenses related to loss events that occurred in prior years. We believe a discussion of current accident year loss ratios, which exclude prior accident year reserve development, is helpful since it provides more insight into estimates of current underwriting performance and excludes changes in estimates related to prior year loss reserves. We also analyze our current accident year loss ratio excluding losses and loss adjustment expenses attributable to catastrophes and, in 2022, the Russia-Ukraine conflict. The current accident year loss ratio excluding the impact of catastrophes and other significant, infrequent loss events is also commonly referred to as an attritional loss ratio within the property and casualty insurance industry.

The following table presents summary data for our consolidated underwriting operations, which are comprised predominantly of our Insurance and Reinsurance segments. Our consolidated underwriting results also include results from discontinued lines of business and the retained portion of our program services and other fronting operations.

<i>(dollars in thousands)</i>	Years Ended December 31,		
	2023	2022	% Change
Gross premium volume	\$10,276,419	\$ 9,843,555	4 %
Net written premiums	\$ 8,397,575	\$ 8,203,390	2 %
Earned premiums	\$ 8,295,479	\$ 7,587,792	9 %
Underwriting profit	\$ 132,736	\$ 626,620	(79)%
Underwriting Ratios ⁽¹⁾			Point Change
Loss ratio			
Current accident year loss ratio	64.6 %	60.8 %	3.8
Prior accident years loss ratio	(0.5)%	(2.2)%	1.7
Loss ratio	64.2 %	58.6 %	5.6
Expense ratio	34.2 %	33.2 %	1.0
Combined ratio	98.4 %	91.7 %	6.7
Current accident year loss ratio catastrophe impact ⁽²⁾	0.5 %	0.6 %	(0.1)
Current accident year loss ratio Russia-Ukraine conflict impact ⁽²⁾	— %	0.5 %	(0.5)
Current accident year loss ratio, excluding catastrophes and Russia-Ukraine conflict impact	64.1 %	59.7 %	4.4
Combined ratio, excluding current year catastrophes and Russia-Ukraine conflict impact	97.9 %	90.7 %	7.2

(1) Amounts may not reconcile due to rounding.

(2) The point impact of catastrophes and the Russia-Ukraine conflict is calculated as the associated net losses and loss adjustment expenses divided by total earned premiums.

Premiums

The increase in gross premium volume in our underwriting operations in 2023 was driven by growth within our Insurance segment, partially offset by lower gross premium volume within our Reinsurance segment. Net retention of gross premium volume for our underwriting operations was 82% in 2023 compared to 83% in 2022. The decrease was driven by lower retention in 2023 compared to 2022 across both of our underwriting segments. Within our underwriting operations, we purchase reinsurance and retrocessional reinsurance to manage our net retention on individual risks and overall exposure to losses and to enable us to write policies with sufficient limits to meet policyholder needs. The increase in earned premiums in 2023 was primarily attributable to higher gross premium volume in recent periods.

Throughout 2023, we achieved an overall modest rate increase across the landscape of our diversified product portfolio. However, rate trends by product class were more divergent in 2023 in contrast to the past few years, where we experienced rate increases across most of our product lines. These more nuanced rate trends, coupled with increases in loss cost trends due to heightened economic and social inflation, have forced us to examine each of our product classes more closely and target premium growth only in product lines where we are most confident in the levels of rate adequacy.

During 2023, we achieved significant rate increases on our property coverages and select marine and energy product lines, due to recent industry loss experience and the increasing cost of obtaining reinsurance protection, which led us to pursue opportunistic growth within these product lines. Additionally, within our general liability product lines, we continued to achieve modest rate increases across most product classes and saw the level of rate increases improve over the course of the year. We maintained modest growth in these product lines, while carefully selecting risks, managing limits and adjusting attachment points in response to heightened loss cost trends within general liability lines.

Within our insurance and reinsurance professional liability product lines, overall, we saw modest rate decreases driven by notable rate decreases within our public directors and officers product, consistent with broader trends across the industry, and,

to a lesser extent, within our errors and omissions coverages. Within these products, we are contracting our new premium writings when we believe rates are inadequate and are also allowing business to lapse. In other professional liability product lines, particularly within our international portfolio, we are generally seeing consistency in rates and are continuing to pursue growth opportunities where we find the business to be adequately priced. We also saw rate decreases globally within our cyber product line as that market matures, following several years of significant rate increases and strong industry underwriting performance. Despite these current trends, we view cyber as a long-term growth opportunity. Finally, we continued to realize low single digit rate decreases within our workers' compensation product line and are reacting accordingly on a state-by-state basis to maintain profitability.

Combined Ratio

In 2023, underwriting results included \$40.1 million of net losses and loss adjustment expenses attributed to the Hawaiian wildfires and Hurricane Idalia (2023 Catastrophes). The net losses and loss adjustment expenses from the 2023 Catastrophes were net of ceded losses of \$9.3 million. In 2022, underwriting results included \$46.2 million and \$35.7 million of net losses and loss adjustment expenses attributed to Hurricane Ian and the Russia-Ukraine conflict, respectively. The net losses and loss adjustment expenses from Hurricane Ian and the Russia-Ukraine conflict were net of ceded losses of \$115.3 million and \$44.3 million, respectively. Excluding these losses, the increase in our consolidated combined ratio in 2023 compared to 2022 was primarily driven by a higher attritional loss ratio across both of our underwriting segments.

Insurance Segment

<i>(dollars in thousands)</i>	Years Ended December 31,		
	2023	2022	% Change
Gross premium volume	\$ 9,217,150	\$ 8,606,700	7 %
Net written premiums	\$ 7,432,062	\$ 7,040,176	6 %
Earned premiums	\$ 7,282,705	\$ 6,528,263	12 %
Underwriting profit	\$ 162,176	\$ 549,871	(71)%

Underwriting Ratios ⁽¹⁾

			Point Change
Loss ratio			
Current accident year loss ratio	64.4 %	60.3 %	4.1
Prior accident years loss ratio	(1.4)%	(2.2)%	0.8
Loss ratio	63.0 %	58.1 %	4.9
Expense ratio	34.8 %	33.5 %	1.3
Combined ratio	97.8 %	91.6 %	6.2
Current accident year loss ratio catastrophe impact ⁽²⁾	0.5 %	0.7 %	(0.2)
Current accident year loss ratio Russia-Ukraine conflict impact ⁽²⁾	— %	0.4 %	(0.4)
Current accident year loss ratio, excluding catastrophes and Russia-Ukraine conflict impact	63.9 %	59.2 %	4.7
Combined ratio, excluding current year catastrophes and Russia-Ukraine conflict impact	97.2 %	90.5 %	6.7

(1) Amounts may not reconcile due to rounding.

(2) The point impact of catastrophes and the Russia-Ukraine conflict is calculated as the associated net losses and loss adjustment expenses divided by total earned premiums.

Premiums

The increase in gross premium volume in our Insurance segment in 2023 was driven by more favorable rates and new business growth across many of our product lines, most notably within our personal lines and property product lines. The increase was partially offset by lower premium volume within select lines of our professional liability and general liability product lines, where we are adjusting our writings in response to changes in market conditions and downward pressure on rates. We continue to focus on rate adequacy, particularly within certain classes of our casualty and professional liability product lines, and will not write business that we believe will not meet our underwriting profit targets.

Net retention of gross premium volume was 81% in 2023 compared to 82% in 2022. The decrease was driven by higher cession rates on our personal lines product lines in 2023 compared to 2022. The increase in earned premiums in 2023 was primarily due to higher gross premium volume across most product lines in recent periods.

Combined Ratio

The Insurance segment's current accident year losses and loss adjustment expenses in 2023 included \$39.6 million of net losses and loss adjustment expenses attributed to the 2023 Catastrophes. Current accident year losses in 2022 included \$46.2 million and \$23.0 million of net losses and loss adjustment expenses attributed to Hurricane Ian and the Russia-Ukraine conflict, respectively. Excluding these losses, the increase in the current accident year loss ratio in 2023 compared to 2022 was primarily attributable to higher attritional loss ratios within our general liability and professional liability product lines in 2023 compared to 2022. Based on the adverse prior accident year loss development trends on these long-tail lines of business and the uncertainty around future loss cost trends, as discussed in further detail below, we increased our attritional loss ratios on certain product classes within our general liability and professional liability product lines in 2023. Consistent with our loss reserving philosophy and to increase the likelihood that the reserves established for our in-force portfolio will ultimately prove to be adequate, we are taking a more cautious approach in our reserving, resulting in higher attritional loss ratios on this business.

Additionally, we recognized losses on our intellectual property collateral protection insurance written within our professional liability product line in 2023 due to higher than anticipated levels of claims and loss experience. Losses on this product line also included \$65.0 million of credit losses recognized in connection with fraudulent letters of credit that were provided by an affiliate of Vesttoo Ltd. as collateral for reinsurance purchased on two policies, which we believe represents our full exposure to credit losses on the related reinsurance recoverables. We are actively pursuing remedies to make recoveries on the reinsurance recoverables impacted by the fraudulent letters of credit and do not have any other ceded reinsurance contracts with Vesttoo Ltd. or its affiliates.

The Insurance segment's 2023 combined ratio included \$104.7 million of favorable development on prior accident years loss reserves, which was primarily attributable to favorable development on our property, marine and energy, international professional liability, personal lines and workers' compensation product lines, partially offset by adverse development on our U.S. and Bermuda general liability and professional liability product lines. In 2022, the combined ratio included \$142.9 million of favorable development on prior accident years loss reserves, which was primarily attributable to favorable development on our workers' compensation, programs, property and credit and surety product lines. Favorable development in 2022 was partially offset by adverse development on our professional liability and general liability product lines, primarily on our U.S. and Bermuda business. See note 11 of the notes to consolidated financial statements included under Item 8 for more information on the Insurance segment's prior year loss reserve development.

Net favorable development in 2022 was net of \$128.5 million, or two points, of adverse development on our U.S. and Bermuda professional liability and general liability product lines, which was primarily attributable to unfavorable claim settlements and increased claim frequency and severity on the 2016 to 2019 accident years. The adverse development was across a number of products, including directors and officers, errors and omissions and employment practices liability within professional liability and contractors and excess and umbrella within general liability. Development on prior years loss reserves within our U.S. and Bermuda professional liability and general liability product lines in 2022 was impacted by broader market conditions. The impact of economic and social inflation, including the rising cost to adjust and settle claims and the impact of more pervasive litigation financing trends, has contributed to the loss cost trends, leading to higher than anticipated losses in older accident years for these product lines. The impacts of social inflation were most significant on our large, risk-managed excess professional liability accounts, corresponding with a notable rise in the number of class action lawsuits on these years and the recent unfavorable legal environment. The development of this claims trend was influenced by state and federal court closures following the onset of the COVID-19 pandemic in 2020, which delayed court proceedings for claims on the impacted product lines.

In 2023, we continued to see an increased frequency of large claims and unfavorable loss cost trends on our U.S. and Bermuda general liability and professional liability product lines. In response to consecutive quarters of adverse loss development, in the fourth quarter of 2023, we conducted an extensive reserve study on selected general liability and professional liability product lines, which resulted in further increases to our prior accident year loss reserves. Adverse development in 2023 on our U.S. and Bermuda general liability and professional liability product lines totaled \$330.7 million, or five points. This adverse development was most substantial on our primary casualty contractors' liability and excess and umbrella general liability product lines.

A significant portion of our casualty portfolio is associated with construction business, which has grown meaningfully in recent years. Our study determined that the ultimate claim reporting tail on certain of our casualty construction lines is likely to be longer than we initially anticipated. Within our excess and umbrella general liability and risk-managed errors and omissions professional liability books, we determined that there was a greater than expected propensity for limits below our attachment point to erode, pushing more claims into our layers. Further, reporting of these claims has lagged historical loss development patterns due to the effect of court closures and claims backlogs arising from the COVID-19 pandemic, in addition to aggressive tactics by the plaintiffs' bar and delayed claims reporting trends. Although we have achieved significant rate increases since 2019 on many of these lines in response to heightened loss trends, the findings of our study led us to increase our loss development factors, and therefore our estimate of the ultimate loss ratios, on our primary casualty contractors' liability, excess and umbrella general liability and risk-managed errors and omissions professional liability product lines. This resulted in significant strengthening of reserves on the impacted lines, including on the 2020 to 2022 accident years where we determined that the incurred loss trends are following a similar loss development trend at the same stage as older accident years.

Consistent with our reserving philosophy to hold reserves that are more likely to be redundant than deficient, we increased reserves in areas where there were indications that our reserves may have been deficient, however, in instances where claims trends have been more favorable than we previously anticipated, we will wait to reduce loss reserves until those trends are observed over additional periods of time. For those lines in which we strengthened reserves, although we believe the gross and net reserves are adequate based on information available at this time, we continue to closely monitor reported claims, claim settlements, ceded reinsurance contract attachments and judicial decisions, among other things, and may adjust our estimates as new information becomes available.

The increase in the Insurance segment's expense ratio in 2023 was primarily due to higher personnel costs, professional fees and other general and administrative expenses, which were partially offset by the impact of higher earned premiums.

Reinsurance Segment

<i>(dollars in thousands)</i>	Years Ended December 31,		
	2023	2022	% Change
Gross premium volume	\$ 1,046,539	\$ 1,229,851	(15)%
Net written premiums	\$ 967,799	\$ 1,167,312	(17)%
Earned premiums	\$ 1,014,294	\$ 1,063,347	(5)%
Underwriting profit (loss)	\$ (19,265)	\$ 83,859	NM ⁽¹⁾
Underwriting Ratios ⁽²⁾			Point Change
Loss ratio			
Current accident year loss ratio	66.0 %	63.6 %	2.4
Prior accident years loss ratio	5.6 %	(2.4)%	8.0
Loss ratio	71.7 %	61.2 %	10.5
Expense ratio	30.2 %	30.9 %	(0.7)
Combined ratio	101.9 %	92.1 %	9.8
Current accident year loss ratio Russia-Ukraine conflict impact ⁽³⁾	— %	1.2 %	(1.2)
Current accident year loss ratio, excluding Russia-Ukraine conflict impact	66.0 %	62.4 %	3.6
Combined ratio, excluding current year Russia-Ukraine conflict impact	101.9 %	90.9 %	11.0

⁽¹⁾ NM - Ratio is not meaningful.

⁽²⁾ Amounts may not reconcile due to rounding.

⁽³⁾ The point impact of the Russia-Ukraine conflict is calculated as the associated net losses and loss adjustment expenses divided by total earned premiums.

Premiums

The decrease in gross premium volume in our Reinsurance segment in 2023 was driven by significantly lower gross premiums within our professional liability product lines, primarily attributable to unfavorable premium adjustments in 2023 compared to favorable premium adjustments in 2022, largely driven by transaction liability business, due to lower volume of deal activity, and the deterioration in the pricing environment on directors and officers liability. Lower premium volume within professional liability also reflects decreases on renewals, due to decreased exposures and participation. The decrease in professional liability premium volume was partially offset by higher gross premiums within our marine and energy product lines due to increases on renewals, arising from increased exposures and more favorable rates, as well as new business. Significant variability in gross premium volume can be expected in our Reinsurance segment due to individually significant contracts and multi-year contracts.

Net retention of gross premium volume was 92% in 2023 compared to 95% in 2022. The decrease in net retention was driven by changes in mix of gross premium volume, as our professional liability business is fully retained and our marine and energy business carries a higher cession rate than the rest of the segment.

The decrease in earned premiums in 2023 was primarily due to less favorable premium adjustments in 2023 compared to 2022, primarily attributable to our professional liability and credit and surety product lines, and the non-renewal of a large treaty within our workers' compensation product line.

Combined Ratio

The increase in the Reinsurance segment's current accident year loss ratio in 2023 compared to 2022 was primarily due to less favorable premium adjustments on prior accident years in 2023 compared to 2022, primarily on our professional liability and credit and surety product lines.

The Reinsurance segment's 2023 combined ratio included \$57.1 million of adverse development on prior accident years loss reserves, which was driven by \$95.5 million, or nine points, of adverse development on our general liability product lines and \$53.7 million, or five points, of adverse development on our public entity product line, as well as additional exposures recognized on prior accident years related to net favorable premium adjustments on our general liability product lines. These increases in prior accident year reserves in 2023 were partially offset by favorable development across several product lines, including our property and workers' compensation product lines, as well as reduced exposures recognized on prior accident years related to net unfavorable premium adjustments on our professional liability product lines.

Adverse development on our general liability product lines was primarily attributable to large reported loss claims and adverse loss development trends across multiple accident years. Substantially all of the adverse development on our public entity product line was attributable to a segment of this business that we discontinued writing in 2020, which experienced an increased frequency of large claims over the past several quarters, most significantly on the 2014 to 2019 accident years. Adverse development on both our general liability and public entity product lines included notable strengthening as a result of actions taken in the fourth quarter in response to changes in loss trends observed in the reserve study previously discussed under "Insurance Segment" and the expectation that those loss trends will ultimately emerge within comparable reinsurance product lines.

In 2022, the combined ratio included \$26.1 million of favorable development on prior accident years loss reserves, which was primarily attributable to favorable development within our property product lines related to natural catastrophes and our credit and surety product lines. Favorable development on prior years loss reserves in 2022 was partially offset by additional exposures recognized on prior accident years related to net favorable premium adjustments on our general liability, credit and surety and professional liability product lines.

See note 11 of the notes to consolidated financial statements included under Item 8 for more information on the Reinsurance segment's prior year loss reserve development.

Program Services and Other Fronting, Insurance-linked Securities and Other Insurance

The following table presents the components of operating revenues and operating expenses attributable to our program services and other fronting, insurance-linked securities and other insurance operations, including our run-off block of life and annuity reinsurance contracts, none of which are included in a reportable segment.

	Years Ended December 31,					
	2023			2022		
	Operating revenues	Operating expenses	Net	Operating revenues	Operating expenses	Net
<i>(dollars in thousands)</i>						
Services and other:						
Program services and other fronting	\$ 155,654	\$ 31,591	\$ 124,063	\$ 149,993	\$ 27,613	\$ 122,380
Program services - disposition gain	16,923	—	16,923	—	—	—
Insurance-linked securities	97,550	75,950	21,600	109,020	125,316	(16,296)
Insurance-linked securities - disposition gains	—	—	—	225,828	—	225,828
Life and annuity ⁽¹⁾	40	12,070	(12,030)	1,040	11,073	(10,033)
Markel CATCo buy-out	—	—	—	—	101,904	(101,904)
Markel CATCo Re ⁽²⁾	—	(71,491)	71,491	—	(89,862)	89,862
Other	11,484	18,122	(6,638)	11,683	19,431	(7,748)
	281,651	66,242	215,409	497,564	195,475	302,089
Underwriting ⁽³⁾	(1,520)	8,655	(10,175)	(3,818)	3,292	(7,110)
	280,131	74,897	205,234	493,746	198,767	294,979
Amortization of intangible assets		61,168	(61,168)		61,202	(61,202)
Impairment of goodwill		—	—		80,000	(80,000)
	\$ 280,131	\$ 136,065	\$ 144,066	\$ 493,746	\$ 339,969	\$ 153,777

(1) Investment income earned on the investments that support life and annuity policy benefit reserves are included in our Investing segment.

(2) Results attributable to Markel CATCo Re were entirely attributable to noncontrolling interest holders in Markel CATCo Re.

(3) Underwriting results attributable to our other insurance operations include results from discontinued lines of business and the retained portion of our program services and other fronting operations.

Program Services and Other Fronting

The increase in operating revenues in 2023 was due to modest increases at both our program services business and other fronting operations as a result of higher gross premium volume in 2023 compared to 2022. The following table summarizes gross premium volume in our program services and other fronting operations.

	Years Ended December 31,		
	2023	2022	% Change
<i>(dollars in thousands)</i>			
Program services	\$ 2,883,737	\$ 2,800,273	3 %
Other fronting	\$ 840,868	\$ 553,871	52 %

The increase in gross premium volume within our program services operations in 2023 was attributable to expansion of existing programs and growth from new programs. The increase in gross premium volume in our other fronting operating in 2023 was driven by expansion of our property catastrophe programs with Nephila Reinsurers and achieving more favorable rates on this business, as well as growth from a new specialty program with Nephila Reinsurers.

In June 2023, we sold Independent Specialty Insurance Company, a subsidiary within our program services operations, which resulted in a gain of \$16.9 million.

Insurance-Linked Securities

The decrease in operating revenues and operating expenses in our Nephila insurance-linked securities operations in 2023 was primarily due to the disposition of our Velocity managing general agent operations in February 2022, which resulted in a gain of \$107.3 million, and our Volante managing general agent operations in October 2022, which resulted in a gain of \$118.5 million. Following these sales, our Nephila ILS operations are solely comprised of our fund management operations. In 2023, the increase in operating revenues within our fund management operations was primarily due to \$31.1 million of management fees recognized upon the release of capital from side pocket reserves. Nephila's net assets under management were \$6.8 billion as of December 31, 2023.

Additionally, in 2022, we recognized a goodwill impairment charge of \$80.0 million attributable to our Nephila fund management operations. See note 8 of the notes to consolidated financial statements included under Item 8 for more information about this goodwill impairment.

Markel CATCo

In March 2022, we completed a buy-out transaction with Markel CATCo Re Ltd. (Markel CATCo Re) and Markel CATCo Reinsurance Fund Ltd. (the Markel CATCo Funds) that provided for an accelerated return of all remaining capital to investors in the Markel CATCo Funds and resulted in the consolidation of Markel CATCo Re upon completion of the transaction. In order to complete the transaction, we made \$101.9 million in payments, net of insurance proceeds, to or for the benefit of investors that were recognized as an expense during the first quarter of 2022. See note 17 of the notes to consolidated financial statements for further details regarding our Markel CATCo operations, the buy-out transaction and the consolidation of Markel CATCo Re.

Investing Results

We measure our investment performance by analyzing net investment income earned on our investment portfolio, which reflects the recurring interest and dividend earnings on our investment portfolio. We also analyze net investment gains, which include unrealized gains and losses on our equity portfolio. Based on the potential for volatility in the financial markets, we understand that the level of gains or losses may vary from one period to the next, and therefore believe that our investment performance is best analyzed over longer periods of time.

The following table summarizes our consolidated investment performance, which consists predominantly of the results of our Investing segment. Net investment gains or losses in any given period are typically attributable to changes in the fair value of our equity portfolio due to market value movements. The change in net unrealized gains (losses) on available-for-sale investments in any given period is typically attributable to changes in the fair value of our fixed maturity portfolio due to changes in interest rates during the period.

<i>(dollars in thousands)</i>	Years Ended December 31,				
	2023	2022	2021	2020	2019
Net investment income	\$ 734,532	\$ 446,755	\$ 367,417	\$ 375,826	\$ 442,182
Yield on fixed maturity securities ⁽¹⁾	2.8 %	2.3 %	2.6 %	3.1 %	3.5 %
Yield on short-term investments ⁽¹⁾	4.5 %	1.5 %	0.1 %	0.5 %	1.9 %
Yield on cash and cash equivalents and restricted cash and cash equivalents ⁽¹⁾	2.8 %	0.6 %	0.0 %	0.2 %	0.9 %
Net realized investment gains (losses)	\$ (42,177)	\$ (40,983)	\$ 37,908	\$ 14,780	\$ (1,482)
Change in fair value of equity securities	1,566,231	(1,554,750)	1,940,626	603,199	1,603,204
Net investment gains (losses)	\$ 1,524,054	\$ (1,595,733)	\$ 1,978,534	\$ 617,979	\$ 1,601,722
Return on equity securities ⁽²⁾	21.6 %	(16.1)%	29.4 %	15.1 %	29.8 %
Five-year annual return	14.6 %	9.3 %	18.4 %	15.2 %	11.4 %
Ten-year annual return	11.9 %	12.9 %	16.9 %	14.3 %	14.7 %
Twenty-year annual return	10.2 %	10.6 %	11.0 %	10.5 %	11.0 %
Other ⁽³⁾	\$ (11,854)	\$ (17,661)	\$ 7,184	\$ (3,996)	\$ 9,706
Change in net unrealized gains (losses) on available-for-sale investments	\$ 390,558	\$ (1,463,876)	\$ (513,084)	\$ 510,247	\$ 433,280

⁽¹⁾ Yield reflects the applicable interest income as a percentage of the applicable monthly average invested assets at amortized cost.

⁽²⁾ Return on equity securities is calculated by dividing dividends and the change in fair value of equity securities by the monthly average equity securities at fair value and considers the timing of net purchases and sales.

⁽³⁾ Other income or losses within our investing operations primarily relate to equity method investments in our investing segment, which are managed separately from the rest of our investment portfolio.

The increase in net investment income in 2023 was primarily attributable to higher interest income on cash equivalents, fixed maturity securities and short-term investments due to higher yields during 2023 compared to 2022. Throughout 2023, we increased our allocation of cash to money market funds in response to increases in short-term interest rates. Additionally, interest income on our fixed maturity securities increased in part due to higher average holdings of fixed maturity securities in 2023 compared to 2022. See note 4(d) of the notes to consolidated financial statements included under Item 8 for details regarding the components of net investment income.

Markel Ventures Results

We measure Markel Ventures' results by its operating income, as well as earnings before interest, income taxes, depreciation and amortization (EBITDA). We consolidate the results of our Markel Ventures subsidiaries on a one-month lag, with the exception of significant transactions or events that occur during the intervening period. The following table summarizes the results from our Markel Ventures segment.

<i>(dollars in thousands)</i>	Years Ended December 31,		
	2023	2022	% Change
Operating revenues	\$ 4,985,081	\$ 4,757,527	5 %
Operating income	\$ 437,508	\$ 325,238	35 %
EBITDA	\$ 628,483	\$ 506,336	24 %

The increase in operating revenues in 2023 was driven by higher revenues at our construction services businesses and transportation-related businesses, due to a combination of increased demand, higher prices, and growth, as well as increased production at one of our equipment manufacturing businesses compared to 2022. The increase also reflected a full-year contribution from Metromont, compared to an 11-month contribution in 2022 following its acquisition. These increases in operating revenues were partially offset by the impact of decreased demand at our consumer and building products businesses, consulting services businesses and one of our construction services businesses.

The increases in operating income and EBITDA in 2023 were driven by our products businesses, particularly our consumer and building products businesses, which had higher margins in 2023 compared to 2022. In 2022, the operating margins at many of our products businesses were impacted by increased costs of materials, freight and labor, which reflected the impact of broader economic conditions. As conditions stabilized throughout 2023, particularly in regard to materials and freight costs, our operating margins for those businesses improved. The increases in operating income and EBITDA at many of our businesses were partially offset by the impact of lower revenues and operating margins at one of our construction services businesses due to decreased demand.

Markel Ventures EBITDA is a non-GAAP financial measure. We use Markel Ventures EBITDA as an operating performance measure in conjunction with U.S. GAAP measures, including operating income, to monitor and evaluate the performance of our Markel Ventures segment. Because EBITDA excludes interest, income taxes, depreciation and amortization, it provides an indicator of economic performance that is useful to both management and investors in evaluating our Markel Ventures businesses as it is not affected by levels of debt, interest rates, effective tax rates or levels of depreciation or amortization resulting from purchase accounting. The following table reconciles Markel Ventures operating income to Markel Ventures EBITDA.

<i>(dollars in thousands)</i>	Years Ended December 31,	
	2023	2022
Markel Ventures operating income	\$ 437,508	\$ 325,238
Depreciation expense	108,605	102,055
Amortization of intangible assets	82,370	79,043
Markel Ventures EBITDA	<u>\$ 628,483</u>	<u>\$ 506,336</u>

The following tables present condensed financial information reflecting the financial position, results of operations and cash flows of Markel Ventures, Inc., and also summarizing the amounts recognized in the consolidated financial statements included under Item 8 for the Markel Ventures segment, unless otherwise noted.

CONDENSED BALANCE SHEETS

<i>(dollars in thousands)</i>	December 31,	
	2023	2022
ASSETS		
Cash and cash equivalents	\$ 398,983	\$ 315,452
Receivables	655,875	636,161
Goodwill	1,137,654	1,153,909
Intangible assets	736,717	796,297
Other assets:		
Inventory	617,250	639,562
Property, plant and equipment, net	1,145,359	1,028,156
Right-of-use lease assets	534,342	484,527
Other	293,362	261,613
Total other assets	<u>2,590,313</u>	<u>2,413,858</u>
Total Assets	<u>\$ 5,519,542</u>	<u>\$ 5,315,677</u>
LIABILITIES AND EQUITY		
Debt ⁽¹⁾	\$ 1,077,034	\$ 1,222,152
Other liabilities:		
Accounts payable and accrued liabilities	372,768	355,037
Lease liabilities	547,099	489,877
Other	622,986	556,427
Total other liabilities	<u>1,542,853</u>	<u>1,401,341</u>
Total Liabilities	<u>2,619,887</u>	<u>2,623,493</u>
Redeemable noncontrolling interests	469,685	523,154
Shareholders' equity ⁽²⁾	2,433,184	2,172,935
Noncontrolling interests	(3,214)	(3,905)
Total Equity	<u>2,429,970</u>	<u>2,169,030</u>
Total Liabilities and Equity	<u>\$ 5,519,542</u>	<u>\$ 5,315,677</u>

⁽¹⁾ Debt as of December 31, 2023 and 2022 included \$738.0 million and \$808.1 million, respectively, of debt due to other subsidiaries of Markel Group, which was eliminated in consolidation and is guaranteed by Markel Group.

⁽²⁾ Shareholders' equity as of both December 31, 2023 and 2022 included \$1.4 billion of common stock, which represents Markel Group's investment in Markel Ventures, Inc. and which was eliminated in consolidation.

CONDENSED STATEMENTS OF INCOME

<i>(dollars in thousands)</i>	Years ended December 31,	
	2023	2022
OPERATING REVENUES		
Products revenues	\$ 2,545,053	\$ 2,427,096
Services and other revenues	2,434,715	2,329,522
Net investment income	5,313	909
Total Operating Revenues	4,985,081	4,757,527
OPERATING EXPENSES		
Products expenses	2,220,676	2,241,736
Services and other expenses	2,244,527	2,111,510
Amortization of intangible assets	82,370	79,043
Total Operating Expenses	4,547,573	4,432,289
Operating Income	437,508	325,238
Interest expense ⁽¹⁾	(47,227)	(46,780)
Net foreign exchange gains (losses)	(6,295)	3,140
Income Before Income Taxes	383,986	281,598
Income tax expense	(85,295)	(61,588)
Net Income	298,691	220,010
Net income attributable to noncontrolling interests	(33,585)	(27,409)
Net Income to Shareholders	\$ 265,106	\$ 192,601

⁽¹⁾ Interest expense for the years ended December 31, 2023 and 2022 included intercompany interest expense of \$26.5 million and \$27.4 million, respectively, which was eliminated in consolidation.

CONDENSED STATEMENTS OF CASH FLOWS

<i>(dollars in thousands)</i>	Years ended December 31,	
	2023	2022
Cash, cash equivalents, restricted cash and restricted cash equivalents, beginning of year	\$ 315,452	\$ 321,473
Net cash provided by operating activities	568,063	260,286
Net cash used by investing activities	(238,242)	(302,770)
Net cash provided (used) by financing activities ⁽¹⁾	(246,102)	37,897
Effect of foreign currency rate changes on cash, cash equivalents, restricted cash and restricted cash equivalents	(188)	(1,434)
Increase (decrease) in cash, cash equivalents, restricted cash and restricted cash equivalents	83,531	(6,021)
Cash, cash equivalents, restricted cash and restricted cash equivalents, end of year	\$ 398,983	\$ 315,452

⁽¹⁾ Net cash provided (used) by financing activities for the years ended December 31, 2023 and 2022 included net repayments of intercompany debt of \$70.0 million and \$44.9 million, respectively, which were eliminated in consolidation.

Interest Expense, Net Foreign Exchange Gains (Losses) and Income Taxes

Interest Expense

Interest expense was \$185.1 million in 2023 compared to \$196.1 million in 2022. The decrease in interest expense was attributable to the impact of the retirement of our 3.625% unsecured senior notes in March 2023 and our 4.9% unsecured senior notes in July 2022. See note 14 of the notes to consolidated financial statements included under Item 8 for further details regarding the retirement of our senior long-term debt.

Net Foreign Exchange Gains (Losses)

Net foreign exchange gains (losses) included in net income (loss) were losses of \$90.0 million in 2023 compared to gains of \$137.8 million in 2022. Net foreign exchange gains (losses) are primarily due to the remeasurement of our foreign currency denominated insurance reserves to the U.S. Dollar. The U.S. Dollar moderately weakened against the Euro and British Pound, the predominant foreign currencies within our insurance operations, during 2023, while it strengthened against the Euro and British Pound in 2022. Pre-tax net foreign exchange gains and losses attributed to changes in exchange rates on available-for-sale securities supporting our insurance reserves, which are included in the changes in net unrealized gains (losses) on available-for-sale investments in other comprehensive income (loss), were gains of \$74.0 million in 2023 compared to losses of \$79.5 million in 2022.

Income Taxes

The effective tax rate was 21% in 2023 compared to 32% in 2022. The effective tax rate for 2022 differs from the effective tax rate for 2023, and the statutory rate of 21%, due to the impact of various immaterial items resulting in a net tax benefit that was magnified due to the small pre-tax loss in 2022. See note 15 of the notes to consolidated financial statements included under Item 8 for further discussion of our income taxes.

The Inflation Reduction Act of 2022 (the IRA), which implemented a 15% corporate minimum tax based on adjusted financial statement income, became effective in 2023. The IRA did not have a material impact on our results of operations, financial conditions or cash flows in 2023, and is not expected to have a material impact on our results of operations, financial condition or cash flows in future periods. However, we will continue to evaluate the impacts of the IRA as additional guidance is issued by the U.S. Treasury.

The Organization for Economic Co-operation and Development (OECD) recently introduced rules, commonly referred to as Pillar Two, to establish a 15% global corporate minimum tax on large, multi-national enterprises. Certain countries in which we have operations, including the United Kingdom, have enacted legislation consistent with Pillar Two, which generally became effective on January 1, 2024. Additionally, in response to Pillar Two, in December 2023, Bermuda enacted the Corporate Income Tax Act of 2023 (the Bermuda CIT Act) effective January 1, 2025, which imposes a 15% corporate income tax on certain Bermuda businesses of large, multi-national enterprises. We do not expect Pillar Two or the Bermuda CIT Act to have a material impact on our results of operations, financial condition or cash flows, however, we will continue to evaluate these tax law changes as additional guidance is issued by the OECD and relevant tax authorities.

Comprehensive Income (Loss) to Shareholders and Book Value per Common Share

The following table summarizes the components of comprehensive income (loss) to shareholders.

<i>(dollars in thousands)</i>	Years Ended December 31,	
	2023	2022
Net income (loss) to shareholders	\$ 1,996,060	\$ (216,277)
Other comprehensive income (loss):		
Change in net unrealized gains (losses) on available-for-sale investments, net of taxes	306,903	(1,154,830)
Change in discount rate for life and annuity benefits, net of taxes	(22,343)	149,874
Other, net of taxes	4,778	15,471
Other comprehensive income attributable to noncontrolling interests	(54)	(17)
Other comprehensive income (loss) to shareholders	289,284	(989,502)
Comprehensive income (loss) to shareholders	\$ 2,285,344	\$ (1,205,779)

Book value per common share increased 17% from \$935.65 at December 31, 2022 to \$1,095.95 as of December 31, 2023.

Liquidity and Capital Resources

We seek to maintain prudent levels of liquidity and financial leverage for the benefit and protection of our policyholders, creditors and shareholders. Our consolidated debt to capital ratio was 20% at December 31, 2023 and 24% at December 31, 2022, both of which are within the range of our target capital structure. The decrease reflects the retirement of our 3.625% unsecured senior notes due March 30, 2023 and an increase in shareholder's equity, primarily attributable to an increase in the fair value of equity securities.

Holding Company

Our holding company had \$3.5 billion and \$3.7 billion of investments, cash and cash equivalents and restricted cash and cash equivalents (invested assets) at December 31, 2023 and December 31, 2022, respectively. The decrease was primarily due to repurchases of our common stock and the retirement of our 3.625% unsecured senior notes due March 30, 2023, partially offset by dividends received from insurance subsidiaries and an increase in the fair value of equity securities held by our holding company. See note 23 of the notes to consolidated financial statements included under Item 8 for condensed financial information for our holding company.

The following table presents the composition of our holding company's invested assets.

	December 31,	
	2023	2022
Fixed maturity securities	4 %	4 %
Equity securities	49 %	40 %
Short-term investments, cash and cash equivalents and restricted cash and cash equivalents	47 %	56 %
Total	<u>100 %</u>	<u>100 %</u>

After satisfying our interest and principal obligations on our senior long-term debt and paying dividends on our preferred stock when declared by our Board of Directors, as well as any other holding company obligations, capital at Markel Group is available to, among other things, allocate to our existing businesses, complete acquisitions, build our portfolio of equity securities or repurchase shares of our common stock.

In November 2023, our Board of Directors approved a new share repurchase program that replaced the previous share repurchase program. The program provides for the repurchase of up to \$750 million of common stock. The program has no expiration date but may be terminated by the Board of Directors at any time. As of December 31, 2023, \$713.0 million remained available for repurchases under the program.

We may from time to time seek to prepay, retire or repurchase our outstanding senior notes or preferred shares, through open market purchases, privately negotiated transactions or otherwise. Those prepayments, retirements or repurchases, if any, will depend on prevailing market conditions, our liquidity requirements, contractual restrictions and other factors.

The holding company has historically primarily relied on dividends from its insurance subsidiaries to meet its obligations. Under the insurance laws of the various states in which our domestic insurance subsidiaries are incorporated, an insurer is restricted in the amount of dividends it may pay without prior approval of regulatory authorities. There are also regulatory restrictions on the amount of dividends that certain of our foreign insurance subsidiaries may pay based on applicable laws in their respective jurisdictions. At December 31, 2023, our domestic insurance subsidiaries and Markel Bermuda Limited could pay ordinary dividends of \$1.2 billion during the following twelve months under these laws.

In June 2023, we entered into an amended and restated credit agreement for our corporate revolving credit facility, which provides up to \$300 million of capacity for future acquisitions, investments and stock repurchases, and for other working capital and general corporate purposes. At our discretion, up to \$200 million of the total capacity may be used for letters of credit. We may increase the capacity of the facility by up to \$200 million subject to obtaining commitments for the increase and certain other terms and conditions. Markel Group guaranteed the obligations under the facility of the insurance subsidiaries that are also parties to the credit agreement. This facility expires in June 2028. As of December 31, 2023 and 2022, there were no borrowings outstanding under this revolving credit facility. We were in compliance with all covenants contained in our corporate revolving credit facility at December 31, 2023. To the extent that we are not in compliance with our

covenants, access to the revolving credit facility could be restricted. While we believe this to be unlikely, the inability to access the revolving credit facility could adversely affect our liquidity. See note 14 of the notes to consolidated financial statements included under Item 8 for further discussion of our revolving credit facility.

We have access to various capital sources, including dividends from our subsidiaries, holding company invested assets, undrawn capacity under our revolving credit facility and access to the debt and equity capital markets. We believe we have, or have access to, adequate liquidity to meet our capital and operating needs, including that which may be required to support the operating needs of our subsidiaries. However, the availability of these sources of capital and the availability and terms of future financings will depend on a variety of factors. See the "Access to Capital" risk factors under Item 1A Risk Factors for more discussion regarding our access to capital sources.

Operating Subsidiaries

Insurance

Within our insurance subsidiaries, our primary source of cash inflows is the collection of premiums, and our primary cash outflow is the subsequent payment of claims, reinsurance costs and operating expenses. Premiums collected by our underwriting operations are invested primarily in short-term investments and fixed maturity securities. Short-term investments held by our insurance subsidiaries provide liquidity for payment of projected claims, reinsurance costs and operating expenses. Fixed maturity securities are held by our insurance subsidiaries to support our loss reserves and the eventual payment of claims, and therefore have maturities that generally match the duration of the underlying net loss reserves.

We seek to maintain capital in each of our insurance subsidiaries that exceeds required capital levels, as prescribed by applicable regulators. Capital held at our insurance subsidiaries beyond that which we anticipate will be needed to cover payment of claims and operating expenses is typically invested in equity securities, which over the long run, have produced higher returns relative to fixed maturity securities and short-term investments. At least annually, when capital at an insurance subsidiary exceeds our target levels, it is typically paid to Markel Group in the form of dividends. In certain instances, an insurance subsidiary may require additional capital to meet our target capital levels. In these instances, Markel Group has historically contributed capital to the insurance subsidiary to restore capital to our target levels.

In 2023 and 2022, our insurance subsidiaries paid dividends totaling \$310.0 million and \$130.0 million, respectively, to Markel Group. Additionally, in 2022, as a result of unfavorable market value movements in the public equity markets, the portion of capital held in equity securities at our insurance subsidiaries declined significantly. Therefore, in order to maintain our target levels of excess capital within the impacted insurance subsidiaries, our holding company made capital contributions totaling \$973.5 million in 2022. There were no capital contributions from our holding company to our insurance subsidiaries in 2023.

Markel Ventures

Our Markel Ventures operating subsidiaries include a diverse portfolio of businesses in a variety of industries. The nature of the cash inflows and outflows generated by each of the individual operating businesses varies based on their individual industries and business strategies. In general, these businesses operate using limited long-term debt and rely primarily on revolving lines of credit for their operational financing needs. Markel Ventures, Inc. may also provide loans or make contributions to these operating subsidiaries to fund strategic growth investments and projects. Capital used by Markel Ventures, Inc. to complete acquisitions consists of profits generated by Markel Ventures, as well as capital contributions from Markel Group and loans from our insurance subsidiaries.

Operating cash flows from our Markel Ventures operations was \$568.1 million in 2023 and \$260.3 million in 2022. After satisfying the obligations on their debt, along with any capital expenditures, operating cash flows from our Markel Ventures subsidiaries are available to be allocated across the Company by Markel Group. Historically, cash flows generated by our Markel Ventures operating subsidiaries have been retained by Markel Ventures, Inc., at Markel Group's direction, to fund growth opportunities within Markel Ventures or repay loans with our insurance subsidiaries, rather than making distributions to Markel Group. In 2023 and 2022, Markel Ventures, Inc. repaid \$70.0 million and \$44.9 million, respectively, of principle on debt with our insurance subsidiaries. As of December 31, 2023 and 2022, Markel Ventures, Inc.'s outstanding intercompany debt with our insurance subsidiaries was \$738.0 million and \$808.1 million, respectively, all of which is guaranteed by Markel Group.

As of December 31, 2023 and 2022, redeemable noncontrolling interests attributable to Markel Ventures, Inc. totaled \$469.7 million and \$523.2 million, respectively, which represents the obligation for Markel Ventures, Inc. to purchase the remaining equity interests in Markel Ventures businesses that are not wholly owned. Of the total balance at December 31, 2023, \$82.6 million is available for redemption in 2024, with the remainder becoming redeemable between 2025 and 2030.

Various of our Markel Ventures subsidiaries maintain revolving credit facilities or lines of credit, which provide up to \$680 million of aggregate capacity for working capital and other general operational purposes. A portion of the capacity on certain of these credit facilities may be used as security for letters of credit and other obligations. At December 31, 2023 and 2022, \$169.5 million and \$238.1 million, respectively, of borrowings were outstanding under these credit facilities. At December 31, 2023, all of our Markel Ventures subsidiaries were in compliance with all covenants contained in their respective credit facilities. To the extent our Markel Ventures subsidiaries are not in compliance with their respective covenants, access to their credit facilities could be restricted, which could adversely affect their operations.

Cash Flows and Invested Assets

Net cash provided by operating activities was \$2.8 billion in 2023 compared to \$2.7 billion in 2022. The increase was primarily due to an increase in operating cash flows from Markel Ventures and investments, partially offset by a decrease in operating cash flows from our insurance operations.

Net cash used by investing activities was \$2.7 billion in 2023 compared to \$1.7 billion in 2022. In 2023, net cash used by investing activities included net purchases of fixed maturity securities and equity securities of \$2.2 billion and \$339.7 million, respectively, and net sales of short-term investments of \$202.9 million. In 2022, net cash used by investing activities included net purchases of fixed maturity securities, short-term investments and equity securities of \$959.7 million, \$846.0 million and \$201.0 million, respectively. In 2022, net cash used by investing activities was net of \$630.0 million of net cash and restricted cash acquired as part of our consolidation of Markel CATCo Re, of which \$169.4 million was subsequently distributed to Markel CATCo investors for shares that were redeemed in conjunction with the buy-out transaction. Cash flow from investing activities is affected by various factors such as anticipated payment of claims, financing activity, acquisition opportunities and individual buy and sell decisions made in the normal course of our investment portfolio management.

In 2023, we continued to increase our allocation of cash and short-term investments to fixed maturity securities in response to higher interest rates and to support our growing underwriting business. Additionally, we increased our purchases of equity securities in 2023.

Invested assets were \$30.9 billion at December 31, 2023 compared to \$27.4 billion at December 31, 2022, reflecting an increase of 13% in 2023. The increase was primarily attributable to operating cash flows, as well as an increase in the fair value of our equity portfolio. The following table presents the composition of our invested assets.

	December 31,	
	2023	2022
Fixed maturity securities	47 %	43 %
Equity securities	31 %	28 %
Short-term investments, cash and cash equivalents and restricted cash and cash equivalents	22 %	29 %
Total	100 %	100 %

The change in the composition of the investment portfolio from December 31, 2022 to December 31, 2023 reflects our increased allocation of cash and short-term investments to fixed maturity and equity securities, as well as an increase in the fair value of our equity portfolio.

Net cash used by financing activities was \$999.7 million in 2023, which included \$250.0 million to retire our 3.625% unsecured senior notes due March 30, 2023. Net cash used by financing activities was \$595.3 million in 2022, which included \$350.0 million to retire our 4.90% unsecured senior notes due July 1, 2022. Financing activities in 2023 and 2022 also reflected borrowings and repayments at certain our Markel Ventures businesses, primarily on revolving lines of credit. Cash of \$445.5 million and \$290.8 million was used to repurchase shares of our common stock during 2023 and 2022, respectively.

Cash Obligations

As of December 31, 2023, our primary contractual cash obligations were unpaid losses and loss adjustment expenses, senior long-term debt and other debt and related interest payments, life and annuity benefits, lease liabilities and purchase obligations. These cash obligations, as presented in the following table, represent our estimate of total future cash payments and may differ from the corresponding liabilities on our consolidated balance sheet due to present value discounts and other adjustments required for presentation in accordance with U.S. GAAP. The following table summarizes our estimated contractual cash obligations at December 31, 2023 and the estimated amount expected to be paid in 2024.

<i>(dollars in thousands)</i>	Total cash obligations as of December 31, 2023	Cash obligations due in less than 1 year
Unpaid losses and loss adjustment expenses ⁽¹⁾	\$ 23,616,295	\$ 4,860,429
Senior long-term debt and other debt ⁽²⁾	\$ 3,823,709	\$ 76,150
Interest payments on senior long-term debt and other debt ⁽³⁾	\$ 3,264,553	\$ 171,515
Life and annuity benefits ⁽⁴⁾	\$ 900,958	\$ 58,355
Lease liabilities ⁽⁵⁾	\$ 809,900	\$ 125,845
Purchase obligations ⁽⁶⁾	\$ 388,069	\$ 201,809

(1) The actual cash payments for settled claims will vary, possibly significantly, from these estimates. As of December 31, 2023, the average duration of our reserves for unpaid losses and loss adjustment expenses was 3.8 years. See note 11 of the notes to consolidated financial statements included under Item 8 for further details on our loss reserve estimates.

(2) See note 14 of the notes to consolidated financial statements included under Item 8 for further details on the scheduled maturity of principal payments on our senior long-term debt and other debt.

(3) Interest expense is accrued in the period incurred and therefore, only a portion of the future interest payments presented in this table represents a liability on our consolidated balance sheet as of December 31, 2023.

(4) There is inherent uncertainty in the process of estimating the timing of payments for life and annuity benefits and actual cash payments for settled contracts could vary significantly from these estimates. We expect \$631.3 million of our cash obligation for life and annuity benefits to be paid beyond five years. See note 13 of the notes to consolidated financial statements included under Item 8 for further details on our estimates for life and annuity benefit reserves.

(5) See note 9 of the notes to consolidated financial statements included under Item 8 for further details on our lease obligations and the expected timing of future payments.

(6) Purchase obligations are primarily related to open purchase order commitments with subcontractors and suppliers under contracts in our insurance and Market Ventures operations.

Restricted Assets and Capital

At December 31, 2023, we had \$5.0 billion of invested assets held in trust or on deposit for the benefit of policyholders or ceding companies or to support underwriting activities. Additionally, we have pledged investments and cash and cash equivalents totaling \$450.5 million at December 31, 2023 as security for letters of credit that have been issued by various banks on our behalf. These invested assets and the related liabilities are included in our consolidated balance sheet. See note 4(f) of the notes to consolidated financial statements included under Item 8 for further discussion of restrictions over our invested assets.

Our insurance operations require capital to support premium writings, and we remain committed to maintaining adequate capital and surplus at each of our insurance subsidiaries. The National Association of Insurance Commissioners (NAIC) developed a model law and risk-based capital formula designed to help regulators identify domestic property and casualty insurers that may be inadequately capitalized. Under the NAIC's requirements, a domestic insurer must maintain total capital and surplus above a calculated threshold or face varying levels of regulatory action. Capital adequacy of our foreign insurance subsidiaries is regulated by applicable laws of the United Kingdom, Bermuda and Germany. At December 31, 2023, the capital and surplus of each of our insurance subsidiaries significantly exceeded the amount of statutory capital and surplus necessary to satisfy regulatory requirements.

Critical Accounting Estimates

Critical accounting estimates are those estimates that both are important to the portrayal of our financial condition and results of operations and require us to exercise significant judgment. The preparation of financial statements in accordance with U.S. GAAP requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of material contingent assets and liabilities. These estimates, by necessity, are based on assumptions about numerous factors. Actual results may differ materially from the estimates and assumptions used in preparing the consolidated financial statements. Our accounts with accounting policies that involve critical accounting estimates are unpaid losses and loss adjustment expenses and goodwill and intangible assets.

Unpaid Losses and Loss Adjustment Expenses

Our consolidated balance sheets included estimated unpaid losses and loss adjustment expenses of \$23.5 billion and reinsurance recoverables on unpaid losses of \$8.8 billion at December 31, 2023 compared to \$20.9 billion and \$8.0 billion, respectively, at December 31, 2022. Included in these balances were unpaid losses and loss adjustment expenses and reinsurance recoverables on unpaid losses attributable to our program services business and other fronting arrangements totaling \$5.2 billion as of both December 31, 2023 and 2022. Additionally, consolidated unpaid losses and loss adjustment expenses as of December 31, 2023 and December 31, 2022 included \$185.0 million and \$347.9 million, respectively, of fully collateralized reserves attributable to Markel CATCo Re, which we consolidate following the Markel CATCo buy-out. See note 17 of the notes to consolidated financial statements for further details regarding the consolidation of Markel CATCo Re. Our consolidated balance sheets do not include reserves for losses and loss adjustment expenses attributed to unconsolidated subsidiaries or affiliates that we manage through our Nephila insurance-linked securities operations.

We accrue liabilities for unpaid losses and loss adjustment expenses based upon estimates of the ultimate amounts payable. We maintain reserves for specific claims incurred and reported (case reserves) and reserves for claims incurred but not reported (IBNR reserves).

Reported claims are in various stages of the settlement process, and the corresponding reserves for reported claims are based upon all information available to us. Case reserves consider our estimate of the ultimate cost to settle the claims, including investigation and defense of lawsuits resulting from the claims, and may be subject to adjustment for differences between costs originally estimated and costs subsequently re-estimated or incurred. Claims are settled based upon their merits, and some claims may take years to settle, especially if legal action is involved. As of any balance sheet date, all claims have not yet been reported, and some claims may not be reported for many years. As a result, the liability for unpaid losses and loss adjustment expenses includes significant estimates for incurred but not reported claims.

There is normally a time lag between when a loss event occurs and when it is reported to us. The actuarial methods that we use to estimate losses have been designed to address the lag in loss reporting as well as the delay in obtaining information that would allow us to more accurately estimate future payments. There is also often a time lag between cedents establishing case reserves or re-estimating their reserves and notifying us of those new or revised case reserves. As a result, the reporting lag is more pronounced in our reinsurance contracts than in our insurance contracts. On reinsurance transactions, the reporting lag will generally be 60 to 90 days after the end of a reporting period but can be longer in some cases. There may also be a more pronounced reporting lag, as well as reliance on third-party claims handling practices and reserve estimates, on insurance contracts for which we are not the primary insurer and participate only in excess layers of loss. Based on the experience of our actuaries and management, we select loss development factors and trending techniques to mitigate the difficulties caused by reporting lags. At least annually, we evaluate our loss development factors and trending assumptions using our own loss data, as well as cedent-specific and industry data, and update them as needed.

U.S. GAAP requires that IBNR reserves be based on the estimated ultimate cost of settling claims, including the effects of inflation and other social and economic factors, using past experience adjusted for current trends and any other factors that would modify past experience. IBNR reserves are calculated by subtracting paid losses and loss adjustment expenses and case reserves from estimated ultimate losses and loss adjustment expenses. IBNR reserves were 72% of total unpaid losses and loss adjustment expenses at December 31, 2023 compared to 70% at December 31, 2022.

The following table summarizes case reserves and IBNR reserves for our underwriting, program services and other fronting operations, which excludes \$185.0 million and \$347.9 million of fully collateralized reserves attributable to Markel CATCo Re as of December 31, 2023 and December 31, 2022, respectively. The amounts in the following table exclude the unamortized portion of any fair value adjustments for unpaid losses and loss adjustment expenses assumed in conjunction with an acquisition and any adjustments to discount reserves.

<i>(dollars in thousands)</i>	Insurance segment	Reinsurance segment	Other underwriting	Program services and other fronting	Total
December 31, 2023					
Case reserves	\$ 3,666,965	\$ 1,175,883	\$ 59,003	\$ 1,668,765	\$ 6,570,616
IBNR reserves	10,551,643	2,620,699	106,068	3,516,788	16,795,198
Total	<u>\$ 14,218,608</u>	<u>\$ 3,796,582</u>	<u>\$ 165,071</u>	<u>\$ 5,185,553</u>	<u>\$ 23,365,814</u> ⁽¹⁾
December 31, 2022					
Case reserves	\$ 3,361,400	\$ 1,234,852	\$ 70,072	\$ 1,617,473	\$ 6,283,797
IBNR reserves	8,238,051	2,406,235	127,531	3,586,817	14,358,634
Total	<u>\$ 11,599,451</u>	<u>\$ 3,641,087</u>	<u>\$ 197,603</u>	<u>\$ 5,204,290</u>	<u>\$ 20,642,431</u> ⁽¹⁾

(1) Substantially all of the premium written in our program services and other fronting business is ceded, resulting in reinsurance recoverables on unpaid losses of \$5.2 billion as of both December 31, 2023 and 2022.

Each quarter, our actuaries prepare estimates of the ultimate liability for unpaid losses and loss adjustment expenses based on established actuarial methods. Management reviews these estimates, supplements the actuarial analyses with information provided by claims, underwriting and other operational personnel and determines its best estimate of loss reserves, which is recorded in our consolidated financial statements. Our procedures for determining the adequacy of loss reserves at the end of the year are substantially similar to the procedures applied at the end of each interim period.

Any adjustments to reserves resulting from our interim or year-end reviews, including changes in estimates, are recorded as a component of losses and loss adjustment expenses in the period of the change. Reserve changes that increase previous estimates of ultimate claims cost are referred to as unfavorable or adverse development, or reserve strengthening. Reserve changes that decrease previous estimates of ultimate claims cost are referred to as favorable development.

Program Services and Other Fronting

For our program services business and other fronting arrangements, case reserves are generally established based on reports received from the general agents or reinsurers with whom we do business. Our actuaries review the case loss reserve data received for sufficiency, consistency with historical data and for consistency with other programs we write that have similar characteristics. Ultimate losses and loss adjustment expenses are calculated using either our program experience or, where the program data is not credible, industry experience for similar products or lines of business. Substantially all of the premium written in our program services business and other fronting arrangements is ceded, and net reserves for unpaid losses and loss adjustment expenses as of December 31, 2023 and December 31, 2022 were \$10.1 million and \$10.0 million, respectively.

Underwriting

For our insurance operations, we are generally notified of insured losses by our insureds, their brokers or the primary insurer in instances in which we participate in excess layers of insured losses on a contract. Based on this information, we establish case reserves by estimating the expected ultimate losses from the claim, including any administrative or legal costs associated with settling the claim. Our claims personnel use their knowledge of the policy provisions and details specific to the claim, along with information provided by internal and external experts, including underwriters, actuaries and legal counsel, to estimate the expected ultimate losses.

For our reinsurance operations, case reserves are generally established based on reports received from ceding companies or their brokers. For excess of loss contracts, we are typically notified of insurance losses on specific contracts and record a case reserve for the estimated expected ultimate losses from the claim. For quota share contracts, we typically receive aggregated claims information and record a case reserve based on that information. As with insurance business, we evaluate this information and estimate the expected ultimate losses.

Our liabilities for unpaid losses and loss adjustment expenses can generally be categorized into two distinct groups, short-tail business and long-tail business. Short-tail business refers to lines of business, such as property, accident and health, automobile, watercraft and marine hull exposures, for which losses are usually known and paid shortly after the loss actually occurs. Long-tail business refers to lines of business for which specific losses take much longer to emerge and may not be known and reported for some time. Given the time frame over which long-tail exposures are ultimately settled, there is greater uncertainty and volatility in these lines than in short-tail lines of business. Our long-tail coverages consist of most casualty lines, including professional liability, products liability, general and excess liability and excess and umbrella exposures, as well as workers' compensation insurance, many of which have been a significant source of growth in premium volume in recent years. Some factors that contribute to the uncertainty and volatility of long-tail business, and thus require a significant degree of judgment in the reserving process, include the effects of unanticipated levels of economic inflation, the impact of social inflation, the inherent uncertainty as to the length of reporting and payment development patterns, the possibility of judicial interpretations or legislative changes, including changes in workers' compensation benefit laws, that might impact future loss experience relative to prior loss experience and the potential lack of comparability of the underlying data used in performing loss reserve analyses.

Our ultimate liability may be greater or less than current reserves. Changes in our estimated ultimate liability for loss reserves generally occur as a result of the emergence of unanticipated loss activity, the completion of specific actuarial or claims studies or changes in internal or external factors. We closely monitor new information on reported claims and use statistical analyses prepared by our actuaries to evaluate the adequacy of our recorded reserves. We are required to exercise considerable judgment when assessing the relative credibility of loss development trends. Our philosophy is to establish loss reserves that are more likely redundant than deficient. This means that we seek to establish loss reserves that will ultimately prove to be adequate. As a result, if new information or trends indicate an increase in frequency or severity of claims in excess of what we initially anticipated, we generally respond quickly and increase loss reserves. If, however, frequency or severity trends are more favorable than initially anticipated, we often wait to reduce our loss reserves until we can evaluate experience in additional periods to confirm the credibility of the trend. In addition, for long-tail lines of business, trends develop over longer periods of time, and as a result, we give credibility to these trends more slowly than for short-tail or less volatile lines of business.

Actuarial Methods and Analysis

In establishing our liabilities for unpaid losses and loss adjustment expenses, our actuaries estimate an ultimate loss ratio, by accident year or underwriting year, for each of our product lines with input from our underwriting and claims personnel. For product lines in which loss reserves are established on a underwriting year basis, we have developed a methodology to convert from underwriting year to accident year for financial reporting purposes. In estimating an ultimate loss ratio for a particular line of business, our actuaries may use one or more actuarial reserving methods and select from these a single point estimate. To varying degrees, these methods include detailed statistical analysis of past claim reporting, settlement activity, claim frequency and severity, policyholder loss experience, industry loss experience and changes in market and economic conditions, policy forms and exposures. The actuarial methods we use include:

Initial Expected Loss Ratio Method – This method multiplies earned premiums by an expected loss ratio. The expected loss ratio is selected utilizing industry data, our historical data, frequency-severity and rate level forecasts and professional judgment.

Paid Loss Development – This method uses historical loss payment patterns to estimate future loss payment patterns. Our actuaries use the historical loss patterns to develop factors that are applied to current paid loss amounts to calculate expected ultimate losses.

Incurred Loss Development – This method uses historical loss reporting patterns to estimate future loss reporting patterns. Our actuaries use the historical loss patterns to develop factors that are applied to current reported losses to calculate expected ultimate losses.

Bornhuetter-Ferguson Paid Loss Development – This method divides the projection of ultimate losses into the portion that has already been paid and the portion that has yet to be paid. The portion that has yet to be paid is estimated as the product of three amounts: the premium earned for the exposure period, the expected loss ratio and the estimated percentage of ultimate losses that are still unpaid. The expected loss ratio is selected by considering historical loss ratios, adjusted for any known changes in pricing, loss trends, adequacy of case reserves, changes in administrative practices and other relevant factors.

Bornhuetter-Ferguson Incurred Loss Development – This method is identical to the Bornhuetter-Ferguson paid loss development method, except that it uses the estimated percentage of ultimate losses that are still unreported, instead of the estimated percentage of ultimate losses that are still unpaid.

Frequency/Severity – Under this method, expected ultimate losses are equal to the product of the expected ultimate number of claims and the expected ultimate average cost per claim. Our actuaries use historical reporting patterns and severity patterns to develop factors that are applied to the current reported amounts to calculate expected ultimate losses.

Other Methods – There are certain instances when traditional actuarial methods may not be appropriate for estimating unpaid losses and loss adjustment expenses. In these instances, we may employ other actuarial methods.

Each actuarial method has its own set of assumptions and its own strengths and limitations, with no one method being better than the others in all situations. Our actuaries select the reserving methods that they believe will produce the most reliable estimates for the class of business being evaluated. Greater judgment may be required when we introduce new product lines or when there have been changes in claims handling practices, as the statistical data available may be insufficient. In these instances, we may rely upon assumptions applied to similar lines of business, rely more heavily on industry experience, take into account changes in underwriting guidelines and risk selection or review the impact of changes in claims reserving practices with claims personnel. Greater judgment also may be required for product lines that experience a low frequency of high severity claims, particularly when we are reliant on third party case reserve estimates and claims handling practices. In these instances, we may perform detailed claims reviews, analyzing the characteristics of each individual claim, with input from both actuarial and claims personnel to assess the adequacy of the case and IBNR reserves on the underlying product line. Our claims personnel use their knowledge of the specific claims along with internal and external experts, to estimate the expected ultimate losses. While we use our best judgment in establishing our estimate for loss reserves, applying different assumptions and variables could lead to significantly different loss reserve estimates.

A key assumption in most actuarial analyses is that past development patterns will repeat themselves in the future, absent a significant change in internal or external factors that influence the ultimate cost of our unpaid losses and loss adjustment expenses. Our estimates reflect implicit and explicit assumptions regarding the potential effects of external factors, including economic and social inflation, judicial decisions, changes in law, general economic conditions and recent trends in these factors. Our actuarial analyses are based on statistical analysis but also consist of reviewing internal factors that are difficult to analyze statistically, including changes in underwriting and claims handling practices, as well as rate changes. In the London market, and where we act as a reinsurer or participate only in excess layers of insured losses, the timing and amount of information reported about underlying claims are in the control of third parties. This can also affect estimates and require re-estimation as new information becomes available.

We cannot estimate losses from widespread catastrophic events, such as hurricanes and earthquakes, as well as pandemics and wars, using the traditional actuarial methods previously described. In the initial months after a catastrophic event occurs, our actuaries estimate losses and loss adjustment expenses based on claims received to date, industry loss estimates and output from industry, broker and proprietary models, as well as analysis of our ceded reinsurance contracts. We may also perform detailed policy and reinsurance contract level reviews. The availability of data from these procedures varies depending on the timing of the event relative to the point at which we develop our estimate. We also consider loss experience on historical events that may have similar characteristics to the underlying event and current market conditions, including the level of economic inflation. In the period shortly after an event occurs, more weight is put on modeling and industry estimates, whereas with the passage of time, greater reliance is placed on incurred claims data and historical claim patterns. Due to the inherent uncertainty in estimating such losses, these estimates are subject to variability, which increases with the severity and complexity of the underlying event. As additional claims are reported and paid, and industry loss estimates are revised, we incorporate this new information into our analysis and adjust our estimate of ultimate losses and loss adjustment expenses as appropriate.

Management's Best Estimate

Loss reserves are established at management's best estimate, which is developed using the actuarially calculated point estimate as the starting point. The actuarial point estimate represents our actuaries' estimate of the most likely amount that will ultimately be paid to settle the losses that have occurred at a particular point in time; however, there is inherent uncertainty in the point estimate as it is the expected value in a range of possible reserve estimates. Similarly, the point estimate for ceded losses is calculated based on the ultimate gross loss amount expected to be paid, as well as the frequency and severity of the underlying claims, which ultimately determines coverage under the applicable ceded reinsurance contracts. Therefore, ceded loss estimates are subject to many of the same judgments and assumptions as the gross loss estimates. In some cases, actuarial

analyses, which are generally based on statistical analysis, cannot fully incorporate all of the subjective factors that affect development of losses. In other cases, management's perspective of these more subjective factors may differ from the actuarial perspective. Subjective factors influencing the development of management's best estimate include: the credibility and timeliness of claims and loss information received from cedents and other third parties; and the impacts of economic and social inflation, judicial decisions, changes in law, changes in underwriting or claims handling practices, general economic conditions, the risk of moral hazard and other current and developing trends within the insurance and reinsurance markets, including the effects of competition. For example, our loss experience in recent years has reflected higher than anticipated levels of economic inflation, as well as the impacts of social inflation, including the rising cost to adjust and settle claims and the impact of more pervasive litigation financing trends.

In developing its best estimate of loss reserves, management's philosophy is to establish loss reserves that are more likely to be redundant rather than deficient, and therefore, will ultimately prove to be adequate. Management's approach to establishing loss reserves typically results in loss reserves that exceed the calculated actuarial point estimate. Management also considers the range, or variability, of reasonably possible loss outcomes determined by our actuaries when establishing its best estimate for loss reserves. The actuarial ranges represent our actuaries' estimate of a likely lowest amount and likely highest amount that could ultimately be paid to settle the losses that have occurred at a particular point in time. The range determinations are based on estimates and actuarial judgements and are intended to encompass reasonably likely changes in one or more of the factors that were used to determine the point estimates. Using statistical models, our actuaries establish a range of reasonable reserve estimates for each of our underwriting segments. Additionally, following an acquisition of insurance operations, acquired reserves initially are recorded at fair value, and therefore our recorded loss reserves may be closer to the actuarial point estimate until we build total loss reserves that are consistent with our historic level of confidence. Management's best estimate of net reserves for unpaid losses and loss adjustment expenses exceeded the actuarially calculated point estimate by \$683.4 million, or 5.0%, at December 31, 2023, compared to \$688.4 million, or 5.8%, at December 31, 2022.

The difference between management's best estimate and the actuarially calculated point estimate in both 2023 and 2022 is primarily associated with our long-tail business due to the subjective factors previously described that affect the development of losses. The decrease in 2023 resulted from significant strengthening of reserves following increases in our actuaries' best estimate of ultimate losses on certain general liability and professional liability product lines, which management believes already considers the subjective factors that may impact the development of underlying losses on the impacted product lines. Certain subjective factors, particularly the credibility and timeliness of claims information, are more pronounced within our reinsurance operations, as previously discussed, and therefore, the percentage difference between management's best estimate and the actuarially calculated point estimate is more significant in our Reinsurance segment than our Insurance segment.

Changes in Estimates

Loss frequency and loss severity are two key measures of loss activity that often result in adjustments to actuarial assumptions relative to ultimate loss reserve estimates. Loss frequency measures the number of claims per unit of insured exposure. When the number of newly reported claims is higher than anticipated, loss reserves are generally increased. Conversely, loss reserves are generally decreased when fewer claims are reported than expected. Loss severity measures the average size of a claim. When the average severity of reported claims is higher than originally estimated, loss reserves are typically increased. When the average claim size is lower than anticipated, loss reserves are typically decreased.

Our underwriting results in 2023 included \$38.6 million of net favorable development on prior years loss reserves compared to \$167.4 million in 2022. Favorable development on prior years loss reserves in 2023 and 2022 reflected significant favorable loss experience across several product lines, largely offset by adverse development on certain long-tail general liability and professional liability product lines following the emergence of multiple factors that impacted the claims and loss trends on those lines.

Favorable development in 2023 was most notable on our property, international professional liability, marine and energy and workers' compensation product lines. Favorable development in 2022 was most significant on our property and workers' compensation product lines. Favorable development on our property product lines in 2023 and 2022 was driven by lower loss severity than previously anticipated, as well as net favorable development on our reserves for natural catastrophes that occurred in prior years. On our workers' compensation product line, the actuarial methods we used indicated a continued decline in the loss severity trend on prior accident years in 2023 and 2022, consistent with our experience in recent years. Within our international operations, our professional liability and marine and energy product lines experienced lower loss severity than initially expected. As actual losses on these product lines continued to be lower than anticipated in 2023 and 2022, it became more likely that the underwriting results would prove to be better than originally estimated. Management gave greater credibility to the favorable trends experienced on earlier accident years and upon incorporating these favorable trends

into its best estimate, reduced prior years loss reserves on more recent accident years accordingly. While we believe it is likely that there will be additional favorable development on prior years loss reserves in 2024, we caution readers not to place undue reliance on this favorable trend.

The favorable development in 2023 and 2022 was largely offset by adverse development on certain long-tail general liability and professional liability product lines. Beginning in the latter half of 2022, select lines within our U.S. and Bermuda general liability and professional liability portfolio were impacted by consecutive quarters of unfavorable loss cost trends and increased claim frequency and severity, resulting in adverse development on these lines in both 2023 and 2022.

Net favorable development in 2022 was net of \$128.5 million of adverse development on our U.S. and Bermuda professional liability and general liability product lines within our Insurance segment, which was primarily attributable to unfavorable claim settlements and increased claim frequency and severity on the 2016 to 2019 accident years. The adverse development was across a number of products, including directors and officers, errors and omissions and employment practices liability within professional liability and contractors and excess and umbrella within general liability. Development on prior years loss reserves within our U.S. and Bermuda professional liability and general liability product lines in 2022 was impacted by broader market conditions. The impact of economic and social inflation, including the rising cost to adjust and settle claims and the impact of more pervasive litigation financing trends, has contributed to the loss cost trends, leading to higher than anticipated losses in older accident years for these products lines. The impacts of social inflation were most significant on our large, risk-managed excess professional liability accounts, corresponding with a notable rise in the number of class action lawsuits on these years and the recent unfavorable legal environment. The development of this claims trend was influenced by state and federal court closures following the onset of the COVID-19 pandemic in 2020, which delayed court proceedings for claims on the impacted product lines.

In 2023, we continued to see an increased frequency of large claims and unfavorable loss cost trends on certain of our U.S. and Bermuda general liability and professional liability product lines. In response to consecutive quarters of adverse loss development, in the fourth quarter of 2023, we conducted an extensive reserve study on selected general liability and professional liability product lines, which resulted in further increases to our prior accident year loss reserves. Adverse development in 2023 on our U.S. and Bermuda general liability and professional liability product lines within our Insurance segment totaled \$330.7 million. This adverse development was most substantial on our primary casualty contractors' liability and excess and umbrella general liability product lines.

A significant portion of our casualty portfolio is associated with construction business, which has grown meaningfully in recent years. Our study determined that the ultimate claim reporting tail on certain of our casualty construction lines is likely to be longer than we initially anticipated. Within our excess and umbrella general liability and risk-managed errors and omissions professional liability books, we determined that there was a greater than expected propensity for limits below our attachment point to erode, pushing more claims into our layers. Further, reporting of these claims has lagged historical loss development patterns due to the effect of court closures and claims backlogs arising from the COVID-19 pandemic, in addition to aggressive tactics by the plaintiffs' bar and delayed claims reporting trends. Although we have achieved significant rate increases since 2019 on many of these lines in response to heightened loss trends, the findings of our study led us to increase our loss development factors, and therefore our estimate of the ultimate loss ratios, on our primary casualty contractors' liability, excess and umbrella general liability and risk-managed errors and omissions professional liability product lines. This resulted in significant strengthening of reserves on the impacted lines, including on the 2020 to 2022 accident years, where we determined that the incurred loss trends are following a similar loss development trend at the same stage as older accident years.

Additionally, we experienced \$149.2 million of adverse development on our general liability and public entity product lines within our Reinsurance segment. Adverse development on our general liability product lines was primarily attributable to large reported claims and adverse loss development trends across multiple accident years. Substantially all of the adverse development on our public entity product line was attributable to a segment of this business that we discontinued writing in 2020, which experienced an increased frequency of large claims over the past several quarters, most significantly on the 2014 to 2019 accident years. Adverse development on both our general liability and public entity product lines included notable strengthening as a result of actions taken in the fourth quarter in response to changes in loss trends observed in the reserve study and the expectation that those loss trends will ultimately emerge within comparable reinsurance product lines.

The loss trends observed over the past two years have created more uncertainty around the ultimate losses that will be incurred to settle claims on these longer-tail product lines. Consistent with our reserving philosophy, we are responding quickly to increase loss reserves following any indication of increased claims frequency or severity in excess of our previous expectations, whereas in instances where claims trends are more favorable than we previously anticipated, we are often

waiting to reduce loss reserves and will evaluate our experience over additional periods of time. For those lines in which we strengthened reserves, although we believe the gross and net reserves are adequate based on information available at this time, we continue to closely monitor reported claims, claim settlements, ceded reinsurance contract attachments and judicial decisions, among other things, and may adjust our estimates as new information becomes available.

Changes in prior years loss reserves, including the trends and factors that impacted loss reserve development in 2023 and 2022, as well as further details regarding the historical development of reserves for losses and loss adjustment expenses and changes in assumptions used to calculate reserves for unpaid losses and loss adjustment expenses are discussed in further detail in note 11 of the notes to consolidated financial statements included under Item 8.

Actuarial Ranges

The following table summarizes our reserves for net unpaid losses and loss adjustment expenses and the actuarially established high and low ends of a range of reasonable reserve estimates at December 31, 2023. This table excludes the fully collateralized reserves attributable to Markel CATCo Re. As described in note 11 of the notes to consolidated financial statements included under Item 8, unpaid losses and loss adjustment expenses attributable to acquisitions are recorded at fair value as of the acquisition date, which generally consists of the present value of the expected net loss and loss adjustment expense payments plus a risk premium. The net loss reserves presented in this table represent our estimated future payments for losses and loss adjustment expenses, whereas the reserves for unpaid losses and loss adjustment expenses included on the consolidated balance sheet include the unamortized portion of fair value adjustments recorded in conjunction with an acquisition.

<i>(dollars in millions)</i>	Net Loss Reserves Held	Low End of Actuarial Range ⁽¹⁾	High End of Actuarial Range ⁽¹⁾
Insurance	\$ 11,048.5	\$ 8,940.1	\$ 11,929.5
Reinsurance	\$ 3,339.5	\$ 2,732.9	\$ 3,795.0
Other underwriting	\$ 89.8	\$ 62.1	\$ 109.6

⁽¹⁾ Due to the actuarial methods used to determine the separate ranges for each component of our business, it is not appropriate to aggregate the high or low ends of the separate ranges to determine the high and low ends of the actuarial range on a consolidated basis.

Undue reliance should not be placed on these ranges of estimates as they are only one of many points of reference used by management to determine its best estimate of ultimate losses. Further, actuarial ranges may not be a true reflection of the potential variability between loss reserves estimated at the balance sheet date and the ultimate cost of settling claims. Similar to the development of our estimate of ultimate losses, actuarial ranges are developed based on known events as of the valuation date, while ultimate paid losses are subject to events and circumstances that are unknown as of the valuation date.

During the years ended December 31, 2023 and 2022, we experienced favorable development on prior years loss reserves of 0.3% and 1.5%, respectively, of beginning of year net loss reserves. The magnitude of our historical trend of favorable loss reserve development, which ranged from 4.6% to 6.4% of beginning of year net loss reserves over the preceding five years, was disrupted in 2022 and 2023 as a result of the emergence of multiple factors that impacted the claims and loss trends on certain of our general liability and professional liability product lines, which resulted in net adverse loss development within the select product lines previously discussed. The impacts of economic and social inflation, among other factors previously discussed, have also created more uncertainty around the ultimate losses that will be incurred to settle claims on our longer-tail product lines. As a result, in instances where claims trends are more favorable than we previously anticipated we are approaching reductions to prior year loss reserves years cautiously. It is difficult for management to predict the duration and magnitude of a trend and, on a relative basis, it is even more difficult to predict the emergence of factors or trends that are unknown today but may have a material impact on loss reserve development. In assessing the likelihood of whether the trends previously discussed will continue and whether other trends may develop, we believe that a reasonably likely movement in prior years loss reserves during 2024 would range from adverse development of 1%, or \$150 million, to favorable development of 5%, or \$700 million, of December 31, 2023 net loss reserves.

Goodwill and Intangible Assets

Our consolidated balance sheet as of December 31, 2023 included goodwill and intangible assets of \$4.2 billion as follows:

<i>(dollars in millions)</i>	December 31, 2023			
	Underwriting	Markel Ventures	Other ⁽¹⁾	Total
Goodwill	\$ 895.6	\$ 1,137.7	\$ 591.5	\$ 2,624.8
Intangible assets	325.3	736.7	526.6	1,588.6
Total	\$ 1,220.9	\$ 1,874.4	\$ 1,118.1	\$ 4,213.4

⁽¹⁾ Amounts included in Other reflect our operations that are not included in a reportable segment, including our program services and our insurance-linked securities operations.

Goodwill and intangible assets are recorded as a result of business acquisitions. Goodwill represents the excess of the amount paid to acquire a business over the net fair value of assets acquired and liabilities assumed at the date of acquisition. Indefinite-lived and other intangible assets are recorded at fair value as of the acquisition date. The determination of the fair value of certain assets acquired, including goodwill and intangible assets, and liabilities assumed involves significant judgment and the use of valuation models and other estimates, which require assumptions that are inherently subjective. We did not make any significant acquisitions during the years ended December 31, 2023 or 2022.

Intangible assets with definite lives are reviewed for impairment when events or circumstances indicate that their carrying value may not be recoverable. Goodwill and indefinite-lived intangible assets are tested for impairment annually, or when events or circumstances indicate that their carrying value may not be recoverable. A significant amount of judgment is required in performing impairment tests, including the optional assessment of qualitative factors for the annual impairment test, which is used to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. This assessment serves as a basis for determining whether it is necessary to perform a quantitative impairment test. We completed our annual tests for impairment as of October 1, 2023 based upon results of operations through September 30, 2023. We elected to perform a quantitative assessment for one of our reporting units and a qualitative assessment for all of our other reporting units.

We performed a quantitative impairment assessment for one of our Markel Ventures reporting units, in which we estimated the fair value of the reporting unit using an income approach based on a discounted cash flow model. The cash flow projections included management's best estimate of future growth and margins. The discount rate was primarily based on a capital asset pricing model. Based on the results of our quantitative assessment, the estimated fair value of the reporting unit exceeded the carry value.

When performing our qualitative assessments, we considered macroeconomic factors such as industry conditions and market conditions. We also considered reporting unit-specific events, actual financial performance versus expectations and management's future business expectations, as well as the amount by which the fair value of the reporting unit exceeded its carrying value at the date of the last quantitative assessment. As part of our qualitative assessment of recently acquired reporting units with material goodwill, we considered the fact that the businesses had been acquired in orderly transactions between market participants, and our purchase price represented fair value at acquisition. We considered similar factors to determine if there were any indicators requiring an assessment of the recoverability of our definite lived intangible assets and concluded there were not. For recent acquisitions for which we elected to perform a qualitative assessment, there were no events since acquisition that had a significant adverse impact on the fair value of these reporting units through the assessment date. Based on the results of our qualitative assessments, we believe it is more likely than not that the fair value of each of the assessed reporting units exceeded its respective carrying amount.

Based on the results of our assessments, there were no impairments of goodwill in 2023, and none of our reporting units are at risk of a material impairment of goodwill. Additionally, there were no significant events or changes in circumstances impacting our reporting units between the assessment date and December 31, 2023. However, deterioration of market conditions related to the general economy or the specific industries in which we operate, a sustained trend of weaker than anticipated financial performance within a reporting unit beyond that which we considered or included in our assessments, or an increase in the market-based weighted average cost of capital, among other factors, could impact the impairment analysis and may result in future goodwill or intangible asset impairment charges.

See the risk factor titled "Impairment in the value of our goodwill or other intangible assets could have a material adverse effect on our operating results and financial condition" within Item 1A Risk Factors for further discussion of risks associated with our goodwill and intangible assets.

We performed a quantitative impairment assessment for our Nephila reporting unit in 2022. Based on the results of the assessment, we reduced the carrying value of the goodwill of our Nephila reporting unit by \$80.0 million to \$221.8 million. We also evaluated our intangible assets within our Nephila reporting unit for impairment and determined they were not impaired. See note 8 of the notes to consolidated financial statements for further details.

Safe Harbor and Cautionary Statement

This report contains statements concerning or incorporating our expectations, assumptions, plans, objectives, future financial or operating performance and other statements that are not historical facts. These statements are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements may use words such as "anticipate," "believe," "estimate," "expect," "intend," "predict," "project" and similar expressions as they relate to us or our management.

There are risks and uncertainties that may cause actual results to differ materially from predicted results in forward-looking statements. Factors that may cause actual results to differ are often presented with the forward-looking statements themselves. Additional factors that could cause actual results to differ from those predicted are set forth under Item 1 Business, Item 1A Risk Factors, Item 7 Management's Discussion and Analysis of Financial Condition and Results of Operations and Item 7A Quantitative and Qualitative Disclosures About Market Risk in this report or are included in the items listed below:

- the effect of cyclical trends or changes in market conditions on our underwriting, investing, Markel Ventures and other operations, including demand and pricing in the insurance, reinsurance and other markets in which we operate;
- actions by competitors, including the use of technology and innovation to simplify the customer experience, increase efficiencies, redesign products, alter models and effect other potentially disruptive changes in the insurance industry, and the effect of competition on market trends and pricing;
- our efforts to develop new products, expand in targeted markets or improve business processes and workflows may not be successful and may increase or create new risks (e.g., insufficient demand, change to risk exposures, distribution channel conflicts, execution risk, regulatory risk, increased expenditures);
- the frequency and severity of man-made, health-related and natural catastrophes may exceed expectations, are unpredictable and, in the case of some natural catastrophes, may be exacerbated by changing conditions in the climate, oceans and atmosphere, resulting in increased frequency and/or severity of extreme weather-related events;
- we offer insurance and reinsurance coverage against terrorist acts in connection with some of our programs, and in other instances we are legally required to offer terrorism insurance; in both circumstances, we actively manage our exposure, but if there is a covered terrorist attack, we could sustain material losses;
- emerging claim and coverage issues, changing industry practices and evolving legal, judicial, social and other claims and coverage trends or conditions, can increase the scope of coverage, the frequency and severity of claims and the period over which claims may be reported; these factors, as well as uncertainties in the loss estimation process, can adversely impact the adequacy of our loss reserves and our allowance for reinsurance recoverables;
- reinsurance reserves are subject to greater uncertainty than insurance reserves, primarily because of reliance upon the original underwriting decisions made by ceding companies and the longer lapse of time from the occurrence of loss events to their reporting to the reinsurer for ultimate resolution;
- inaccuracies (whether due to data error, human error or otherwise) in the various modeling techniques and data analytics (e.g., scenarios, predictive and stochastic modeling, and forecasting) we use to analyze and estimate exposures, loss trends and other risks associated with our insurance and insurance-linked securities businesses could cause us to misprice our products or fail to appropriately estimate the risks to which we are exposed;
- changes in the assumptions and estimates used in establishing reserves for our life and annuity reinsurance book (which is in runoff), for example, changes in assumptions and estimates of mortality, longevity, morbidity and interest rates, could result in material changes in our estimated loss reserves for that business;
- adverse developments in insurance coverage litigation or other legal or administrative proceedings could result in material increases in our estimates of loss reserves;

- initial estimates for catastrophe losses and other significant, infrequent events are often based on limited information, are dependent on broad assumptions about the nature and extent of losses, coverage, liability and reinsurance, and those losses may ultimately differ materially from our expectations;
- changes in the availability, costs, quality and providers of reinsurance coverage, which may impact our ability to write or continue to write certain lines of business or to mitigate the volatility of losses on our results of operations and financial condition;
- the ability or willingness of reinsurers to pay balances due may be adversely affected by industry and economic conditions, deterioration in reinsurer credit quality and coverage disputes, and collateral we hold, if any, may not be sufficient to cover a reinsurer's obligation to us;
- after the commutation of ceded reinsurance contracts, any subsequent adverse development in the re-assumed loss reserves will result in a charge to earnings;
- regulatory actions can impede our ability to charge adequate rates and efficiently allocate capital;
- general economic and market conditions and industry specific conditions, including extended economic recessions or expansions; prolonged periods of slow economic growth; inflation or deflation; fluctuations in foreign currency exchange rates, commodity and energy prices and interest rates; volatility in the credit and capital markets; and other factors;
- economic conditions, actual or potential defaults in corporate bonds, municipal bonds, mortgage-backed securities or sovereign debt obligations, volatility in interest and foreign currency exchange rates, changes in U.S. government debt ratings and changes in market value of concentrated investments can have a significant impact on the fair value of our fixed maturity securities and equity securities, as well as the carrying value of our other assets and liabilities, and this impact may be heightened by market volatility and our ability to mitigate our sensitivity to these changing conditions;
- economic conditions may adversely affect our access to capital and credit markets;
- the effects of government intervention, including material changes in the monetary policies of central banks, to address financial downturns, inflation and other economic and currency concerns;
- the impacts that political and civil unrest and regional conflicts may have on our businesses and the markets they serve or that any disruptions in regional or worldwide economic conditions generally arising from these situations may have on our businesses, industries or investments;
- the impacts of liability, transaction and physical risks associated with climate change;
- the significant volatility, uncertainty and disruption caused by health epidemics and pandemics, as well as governmental, legislative, judicial or regulatory actions or developments in response thereto;
- changes in U.S. tax laws, regulations or interpretations, or in the tax laws, regulations or interpretations of other jurisdictions in which we operate, and adjustments we may make in our operations or tax strategies in response to those changes;
- a failure or security breach of, or cyberattack on, enterprise information technology systems that we, or third parties who perform certain functions for us, use or a failure to comply with data protection or privacy regulations;
- third-party providers may perform poorly, breach their obligations to us or expose us to enhanced risks;
- our acquisitions may increase our operational and internal control risks for a period of time;
- we may not realize the contemplated benefits, including cost savings and synergies, of our acquisitions;
- any determination requiring the write-off of a significant portion of our goodwill and intangible assets;
- the failure or inadequacy of any methods we employ to manage our loss exposures;
- the loss of services of any senior executive or other key personnel, or an inability to attract and retain qualified personnel, for our businesses could adversely impact one or more of our operations;
- the manner in which we manage our global operations through a network of business entities could result in inconsistent management, governance and oversight practices and make it difficult for us to implement strategic decisions and coordinate procedures;
- our substantial international operations and investments expose us to increased political, civil, operational and economic risks, including foreign currency exchange rate and credit risk;
- our ability to obtain additional capital for our operations on terms favorable to us;

- the compliance, or failure to comply, with covenants and other requirements under our credit facilities, senior debt and other indebtedness and our preferred shares;
- our ability to maintain or raise third-party capital for existing or new investment vehicles and risks related to our management of third-party capital;
- the effectiveness of our procedures for compliance with existing and future guidelines, policies and legal and regulatory standards, rules, laws and regulations;
- the impact of economic and trade sanctions and embargo programs on our businesses, including instances in which the requirements and limitations applicable to the global operations of U.S. companies and their affiliates are more restrictive than, or conflict with, those applicable to non-U.S. companies and their affiliates;
- regulatory changes, or challenges by regulators, regarding the use of certain issuing carrier or fronting arrangements;
- our dependence on a limited number of brokers for a large portion of our revenues and third-party capital;
- adverse changes in our assigned financial strength, debt or preferred share ratings or outlook could adversely impact us, including our ability to attract and retain business, the amount of capital our insurance subsidiaries must hold and the availability and cost of capital;
- changes in the amount of statutory capital our insurance subsidiaries are required to hold, which can vary significantly and is based on many factors, some of which are outside our control;
- losses from litigation and regulatory investigations and actions; and
- a number of additional factors may adversely affect our Markel Ventures operations, and the markets they serve, and negatively impact their revenues and profitability, including, among others: adverse weather conditions, plant disease and other contaminants; changes in government support for education, healthcare and infrastructure projects; changes in capital spending levels; changes in the housing, commercial and industrial construction markets; liability for environmental matters; supply chain and shipping issues, including increases in freight costs; volatility in the market prices for their products; and volatility in commodity, wholesale and raw materials prices and interest and foreign currency exchange rates.

Results from our underwriting, investing, Markel Ventures and other operations have been and will continue to be potentially materially affected by these factors.

By making forward-looking statements, we do not intend to become obligated to publicly update or revise any such statements whether as a result of new information, future events or other changes. Readers are cautioned not to place undue reliance on any forward-looking statements, which are based on our current knowledge and speak only as at their dates.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risk is the risk of economic losses due to adverse changes in the estimated fair value of a financial instrument as the result of changes in equity prices, interest rates, foreign currency exchange rates and commodity prices. Our consolidated balance sheets include assets and liabilities with estimated fair values that are subject to market risk. Our primary market risks are equity price risk associated with investments in equity securities, interest rate risk associated with investments in fixed maturity securities and foreign currency exchange rate risk associated with our international operations.

Our fixed maturity securities and equity securities are recorded at fair value. See note 5 of the notes to consolidated financial statements included under Item 8 for details regarding the fair value measurement of our fixed maturity and equity securities.

Equity Price Risk

We make investments in equity securities, which have historically produced higher long-term returns relative to fixed maturity securities, with capital that is allocated for such purposes. We seek to invest in profitable companies, with honest and talented management, that exhibit reinvestment opportunities and capital discipline, at reasonable prices. We intend to hold these investments over the long term and focus on long-term return on equity securities, understanding that gains or losses on investments may fluctuate from one period to the next. Changes in the fair value of equity securities are recognized in net income.

At December 31, 2023, our equity portfolio was concentrated in terms of the number of issuers and industries. Such concentrations can lead to higher levels of volatility. At December 31, 2023, our ten largest equity holdings represented \$3.9 billion, or 41%, of the equity portfolio. Investments in the property and casualty insurance industry represented \$1.7 billion, or 18%, of our equity portfolio at December 31, 2023 and included a \$1.2 billion investment in the common stock of Berkshire Hathaway Inc., a company whose subsidiaries engage in a number of diverse business activities in addition to insurance. We have investment guidelines that set limits on the equity holdings of our insurance subsidiaries.

The following table summarizes our equity price risk and shows the effect of a hypothetical 35% increase or decrease in market prices as of December 31, 2023 and 2022. The selected hypothetical changes do not indicate what could be the potential best or worst case scenarios.

<i>(dollars in millions)</i>	Estimated Fair Value	Hypothetical Price Change	Estimated Fair Value after Hypothetical Change in Prices	Estimated Hypothetical Percentage Increase (Decrease) in Shareholders' Equity
As of December 31, 2023				
Equity securities	\$ 9,578	35% increase	\$ 12,930	17.7 %
		35% decrease	6,226	(17.7)
As of December 31, 2022				
Equity securities	\$ 7,672	35% increase	\$ 10,357	16.2 %
		35% decrease	4,987	(16.2)

Interest Rate Risk

Our fixed maturity investments and senior long-term debt and other debt are subject to interest rate risk. Increases and decreases in interest rates typically result in decreases and increases, respectively, in the fair value of these financial instruments. Our fixed maturity investments are recorded at estimated fair value in our financial statements, and therefore, changes in interest rates impact our financial position and results of operations. Senior long-term debt and other debt is recorded at amortized cost in our financial statements, and therefore, changes in fair value do not impact our financial position or results of operations.

Our underwriting operations provide our investment operations with steady inflows of premiums. These funds are invested predominantly in high-quality government and municipal bonds and mortgage-backed securities that generally match the duration and currency of our loss reserves. As of December 31, 2023, our fixed maturity portfolio had an average duration of 4.1 years and 97% of the portfolio was rated "AA" or better. See note 4(c) of the notes to consolidated financial statements included under Item 8 for details regarding contractual maturity dates of our fixed maturity portfolio. The changes in the estimated fair value of the fixed maturity portfolio are presented as a component of shareholders' equity in accumulated other comprehensive income, net of taxes. We typically hold these fixed maturity investments until maturity, and as a result, unrealized holding gains and losses on these securities are generally expected to reverse as the securities mature.

We work to manage the impact of interest rate fluctuations on our fixed maturity portfolio. The effective duration of the fixed maturity portfolio is managed with consideration given to the estimated duration of our loss reserves. We have investment guidelines that limit the maximum duration and maturity of the fixed maturity portfolio.

We use a commercially available model to estimate the effect of interest rate risk on the fair values of our fixed maturity portfolio and debt. The model estimates the impact of interest rate changes on a wide range of factors including duration, prepayment, put options and call options. Fair values are estimated based on the present value of cash flows, using a representative set of possible future interest rate scenarios. The model requires that numerous assumptions be made about the future. To the extent that any of the assumptions are invalid, incorrect estimates could result. The usefulness of a single point-in-time model is limited, as it is unable to accurately incorporate the full complexity of market interactions.

The following table summarizes our interest rate risk and shows the effect of hypothetical changes in interest rates as of December 31, 2023 and 2022. The selected hypothetical changes do not indicate what could be the potential best or worst case scenarios.

<i>(dollars in millions)</i>	Estimated Fair Value	Hypothetical Change in Interest Rates (bp=basis points)	Estimated Fair Value after Hypothetical Change in Interest Rates	Hypothetical Percentage Increase (Decrease) in	
				Fair Value of Fixed Maturity Securities	Shareholders' Equity
Assets					
As of December 31, 2023					
Fixed maturity securities	\$ 14,373	200 bp decrease	\$ 15,614	8.6 %	6.5 %
		100 bp decrease	14,978	4.2	3.2
		100 bp increase	13,815	(3.9)	(2.9)
		200 bp increase	13,280	(7.6)	(5.8)
As of December 31, 2022					
Fixed maturity securities	\$ 11,857	200 bp decrease	\$ 12,843	8.3 %	6.0 %
		100 bp decrease	12,334	4.0	2.9
		100 bp increase	11,406	(3.8)	(2.7)
		200 bp increase	10,972	(7.5)	(5.3)
Liabilities ⁽¹⁾					
As of December 31, 2023					
Senior long-term debt and other debt	\$ 3,353	200 bp decrease	\$ 4,222		
		100 bp decrease	3,747		
		100 bp increase	3,026		
		200 bp increase	2,753		
As of December 31, 2022					
Senior long-term debt and other debt	\$ 3,541	200 bp decrease	\$ 4,384		
		100 bp decrease	3,922		
		100 bp increase	3,225		
		200 bp increase	2,962		

⁽¹⁾ Changes in estimated fair value have no impact on shareholders' equity.

Foreign Currency Exchange Rate Risk

We have foreign currency exchange rate risk associated with certain of our international operations' assets and liabilities. We manage this risk primarily by matching assets and liabilities that are subject to foreign exchange rate risk as closely as possible. To assist with this matching, we periodically purchase foreign currency forward contracts and purchase or sell foreign currencies in the open market. Realized and unrealized gains and losses on our forward contracts are recorded in earnings. Our forward contracts generally have maturities of three months.

At both December 31, 2023 and 2022, 90% of our invested assets were denominated in United States (U.S.) Dollars. At both December 31, 2023 and 2022, 89% of our combined reserves for unpaid losses and loss adjustment expenses and life and annuity benefits were denominated in U.S. Dollars. At those dates, the largest foreign currency denominated balances within both our invested assets and reserves for unpaid losses and loss adjustment expenses and life and annuity benefits were the Euro and British Pound Sterling.

At December 31, 2023 and 2022, our foreign currency denominated assets and liabilities that are subject to foreign currency exchange rate risk were substantially matched or hedged.

Credit Risk

Credit risk, which is not considered a market risk, is the risk that an entity becomes unable or unwilling to fulfill their obligation to us. Our primary credit risks are the credit risk within our fixed maturity portfolio and the credit risk related to our reinsurance recoverables within our underwriting, program services and other fronting operations.

Fixed Maturity Investments

Credit risk exists within our fixed maturity portfolio from the potential for loss resulting from adverse changes in an issuer's ability to repay its debt obligations. We monitor our investment portfolio to ensure that credit risk does not exceed prudent levels. We have consistently invested in high credit quality, investment grade securities. As of December 31, 2023, 97% of our fixed maturity portfolio was rated "AA" or better. Our policy is to invest in investment grade securities and to minimize investments in fixed maturity securities that are unrated or rated below investment grade. Our fixed maturity portfolio includes securities issued with financial guaranty insurance. We purchase fixed maturity securities based on our assessment of the credit quality of the underlying assets without regard to insurance.

Our fixed maturity portfolio includes securities issued by foreign governments and non-sovereign foreign institutions. General concern exists about foreign countries that experience financial difficulties during periods of adverse economic conditions. We monitor developments in foreign countries, currencies and issuers that could pose risks to our fixed maturity portfolio, including ratings downgrades, political and financial changes and the widening of credit spreads. Our fixed maturity portfolio is highly diversified and comprised of high quality securities.

We obtain information from news services, data providers, rating agencies and various financial market participants to assess potential negative impacts on a country or company's financial risk profile. We analyze concentrations within our fixed maturity portfolio by country, currency and issuer, which allows us to assess our level of diversification with respect to these exposures, reduce troubled exposures should they occur and mitigate any future financial distress that these exposures could cause.

Our fixed maturity portfolio also includes securities issued by municipalities. General concern exists about municipalities that experience financial difficulties during periods of adverse economic conditions. We manage the exposure to credit risk in our municipal bond portfolio by investing in high quality securities and by diversifying our holdings, which are typically either general obligation or revenue bonds related to essential products and services.

Reinsurance Recoverables

We have credit risk within our reinsurance recoverables to the extent any of our reinsurers are unwilling or unable to meet their obligations to us under our ceded reinsurance agreements. We monitor changes in the financial condition of each of our reinsurers, and we assess our concentration of credit risk on a regular basis. While we believe our net reinsurance recoverable balances are collectible, deterioration in reinsurers' ability to pay, or collection disputes, could adversely affect our operating cash flows, financial position and results of operations.

Underwriting

Within our underwriting operations, our reinsurance recoverables balance for the ten largest reinsurers was \$2.6 billion at December 31, 2023, representing 65% of the \$4.0 billion total reinsurance recoverables, before considering allowances for credit losses. We were the beneficiary of letters of credit, trust accounts and funds withheld in the aggregate amount of \$919.2 million at December 31, 2023, collateralizing reinsurance recoverable balances due from these ten reinsurers. Nine of our ten largest reinsurers within our underwriting operations were rated "A" or better by A.M. Best Company (A.M. Best). For the remaining reinsurer, which is a related party, our reinsurance recoverable was fully collateralized as of December 31, 2023.

In 2023, we recognized \$65.0 million of credit losses in connection with fraudulent letters of credit that were provided by an affiliate of Vesttoo Ltd. as collateral for reinsurance purchased on two policies, which we believe represents our full exposure to credit losses on the related reinsurance recoverables. We are actively pursuing remedies to make recoveries on the reinsurance recoverables impacted by the fraudulent letters of credit and do not have any other ceded reinsurance contracts with Vesttoo Ltd. or its affiliates.

Within our underwriting operations, we attempt to minimize credit exposure to reinsurers through adherence to internal reinsurance guidelines. To participate in our reinsurance program, prospective companies generally must: (i) maintain an A.M. Best or Standard & Poor's rating of "A" (excellent) or better; (ii) maintain minimum capital and surplus of \$750 million; and (iii) provide collateral for recoverables in excess of an individually established amount. We also consider qualitative factors when evaluating reinsurers for eligibility to participate in our reinsurance program. In addition, certain foreign reinsurers for our U.S. insurance operations must provide collateral equal to 100% of recoverables, with the exception of reinsurers who have been granted certified or authorized status by an insurance company's state of domicile. Our credit exposure to Lloyd's of London syndicates is managed through individual and aggregate exposure thresholds.

Program Services

Within our program services business, our reinsurance recoverables balance for the ten largest reinsurers was \$2.8 billion at December 31, 2023, representing 56% of the \$4.9 billion total reinsurance recoverables, before considering allowances for credit losses. We were the beneficiary of letters of credit, trust accounts and funds withheld in the aggregate amount of \$2.0 billion at December 31, 2023, collateralizing reinsurance recoverable balances due from these ten reinsurers, and \$3.3 billion for our total reinsurance recoverables balance. Five of our ten largest reinsurers were rated "A" or better by A.M. Best. For four of the remaining five reinsurers, as of December 31, 2023, collateral held exceeded the related reinsurance recoverable.

Within our program services business, we mitigate credit risk by either selecting well capitalized, highly rated authorized reinsurers or requiring that the reinsurer post substantial collateral to secure the reinsured risks, which, in some instances, exceeds the related reinsurance recoverable. For reinsurers with a credit rating of lower than "A" we employ a stringent collateral monitoring program, under which the majority of the reinsurance recoverable balances is fully collateralized. These collateral requirements are regularly monitored by a credit committee within our program services operations.

Other Fronting

For our other fronting arrangements, which are written on behalf of our ILS operations, our total reinsurance recoverables balance was \$448.3 million at December 31, 2023. As of December 31, 2023, our ILS operations held investor collateral in excess of the related reinsurance recoverables. For this business, we require collateral up to a specified level of annual aggregate agreement year losses, which is held in a trust for which we are the beneficiary. The required collateral is monitored regularly against the annual aggregate agreement year losses to ensure adequacy of the collateral in the event of a loss.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors
Markel Group Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Markel Group Inc. and subsidiaries (the Company) as of December 31, 2023 and 2022, the related consolidated statements of income (loss) and comprehensive income (loss), changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2023, and the related notes (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, 2023 and 2022, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2023, 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, 2023, 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 23, 2024 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.

Estimation of the liability for unpaid losses and loss adjustment expenses for the Company's underwriting operations

As described in Note 11, the Company has recorded a liability for unpaid losses and loss adjustment expenses (loss reserves) of \$23.5 billion as of December 31, 2023. Of this amount, \$18.1 billion represents loss reserves for the Company's underwriting operations. The Company's actuaries use established actuarial methods and past development patterns to estimate ultimate losses to be paid. For its underwriting operations, loss reserves are established at the Company's best estimates, which incorporate the actuarial point estimates and are adjusted for certain subjective factors.

We identified the assessment of loss reserve estimation for the Company's underwriting operations as a critical audit matter because it involved significant measurement uncertainty, which required complex auditor judgment. The assessment of actuarial methods and key assumptions used to estimate ultimate losses required specialized actuarial skills and subjective auditor judgment. Key assumptions included weighting of actuarial methods, expected loss ratios, and patterns and variability of loss development.

The following are the primary procedures we performed to address this critical audit matter. With the assistance of actuarial professionals, as appropriate, we evaluated the design and tested the operating effectiveness of internal controls over the Company's loss reserving process for its underwriting operations. This included controls over key assumptions and the determination of loss reserves. Additionally, we also involved actuarial professionals with specialized skills and knowledge, who assisted in:

- assessing the Company's actuarial methodologies by comparing to generally accepted actuarial methodologies and evaluating the weighting of the methods based on common industry practice
- developing independent actuarial estimates for certain product lines using the Company's underlying historical claims and policy data
- for certain product lines, assessing the Company's assumptions about future claims reporting and payments for consistency with historical loss development and payment patterns
- developing an independent range of consolidated loss reserves based on actuarial methods and assumptions, comparing those results to the Company's recorded reserves and evaluating the movement of the Company's recorded reserve within our range

/s/ KPMG LLP

We have served as the Company's auditor since 1980.

Richmond, Virginia

February 23, 2024

MARKEL GROUP INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	December 31,	
	2023	2022
	<i>(dollars in thousands)</i>	
ASSETS		
Investments, at estimated fair value:		
Fixed maturity securities, available-for-sale (amortized cost of \$14,932,286 in 2023 and \$12,805,887 in 2022)	\$ 14,372,732	\$ 11,856,835
Equity securities (cost of \$3,497,071 in 2023 and \$3,100,040 in 2022)	9,577,871	7,671,912
Short-term investments, available-for-sale (estimated fair value approximates cost)	2,571,382	2,669,262
Total Investments	26,521,985	22,198,009
Cash and cash equivalents	3,747,060	4,137,432
Restricted cash and cash equivalents	584,974	1,084,081
Receivables	3,455,306	2,961,056
Reinsurance recoverables	9,235,501	8,446,745
Deferred policy acquisition costs	931,344	925,483
Prepaid reinsurance premiums	2,365,243	2,066,114
Goodwill	2,624,749	2,638,838
Intangible assets	1,588,684	1,747,464
Other assets	3,990,864	3,586,037
Total Assets	\$ 55,045,710	\$ 49,791,259
LIABILITIES AND EQUITY		
Unpaid losses and loss adjustment expenses	\$ 23,483,321	\$ 20,947,898
Life and annuity benefits	649,054	650,721
Unearned premiums	6,642,426	6,220,748
Payables to insurance and reinsurance companies	1,037,722	669,742
Senior long-term debt and other debt (estimated fair value of \$3,353,000 in 2023 and \$3,541,000 in 2022)	3,779,796	4,103,629
Other liabilities	3,927,498	3,461,482
Total Liabilities	39,519,817	36,054,220
Redeemable noncontrolling interests	469,685	523,154
Commitments and contingencies		
Shareholders' equity:		
Preferred stock	591,891	591,891
Common stock	3,517,146	3,493,893
Retained earnings	11,353,101	9,832,804
Accumulated other comprehensive loss	(478,210)	(767,494)
Total Shareholders' Equity	14,983,928	13,151,094
Noncontrolling interests	72,280	62,791
Total Equity	15,056,208	13,213,885
Total Liabilities and Equity	\$ 55,045,710	\$ 49,791,259

See accompanying notes to consolidated financial statements.

MARKEL GROUP INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME (LOSS) AND COMPREHENSIVE INCOME (LOSS)

Years Ended December 31,

	2023	2022	2021
	<i>(dollars in thousands, except per share data)</i>		
OPERATING REVENUES			
Earned premiums	\$ 8,295,479	\$ 7,587,792	\$ 6,503,029
Net investment income	734,532	446,755	367,417
Net investment gains (losses)	1,524,054	(1,595,733)	1,978,534
Products revenues	2,545,053	2,427,096	1,712,120
Services and other revenues	2,704,512	2,809,425	2,285,325
Total Operating Revenues	15,803,630	11,675,335	12,846,425
OPERATING EXPENSES			
Losses and loss adjustment expenses	5,322,009	4,445,589	3,581,205
Underwriting, acquisition and insurance expenses	2,840,734	2,515,583	2,293,739
Products expenses	2,220,676	2,241,736	1,544,506
Services and other expenses	2,310,769	2,306,985	2,024,931
Amortization of intangible assets	180,614	178,778	160,539
Impairment of goodwill	—	80,000	—
Total Operating Expenses	12,874,802	11,768,671	9,604,920
Operating Income (Loss)	2,928,828	(93,336)	3,241,505
Interest expense	(185,077)	(196,062)	(183,579)
Net foreign exchange gains (losses)	(90,045)	137,832	71,902
Income (Loss) Before Income Taxes	2,653,706	(151,566)	3,129,828
Income tax (expense) benefit	(552,616)	48,209	(683,961)
Net Income (Loss)	2,101,090	(103,357)	2,445,867
Net income attributable to noncontrolling interests	(105,030)	(112,920)	(22,732)
Net Income (Loss) to Shareholders	1,996,060	(216,277)	2,423,135
Preferred stock dividends	(36,000)	(36,000)	(36,000)
Net Income (Loss) to Common Shareholders	\$ 1,960,060	\$ (252,277)	\$ 2,387,135
OTHER COMPREHENSIVE INCOME (LOSS)			
Change in net unrealized gains (losses) on available-for-sale investments, net of taxes:			
Net holding gains (losses) arising during the period	\$ 278,363	\$ (1,199,736)	\$ (398,076)
Reclassification adjustments for net gains (losses) included in net income (loss)	28,540	44,906	(6,623)
Change in net unrealized gains (losses) on available-for-sale investments, net of taxes	306,903	(1,154,830)	(404,699)
Change in discount rate for life and annuity benefits, net of taxes	(22,343)	149,874	49,411
Change in foreign currency translation adjustments, net of taxes	4,704	(9,259)	(213)
Change in net actuarial pension loss, net of taxes	74	24,730	8,390
Total Other Comprehensive Income (Loss)	289,338	(989,485)	(347,111)
Comprehensive Income (Loss)	2,390,428	(1,092,842)	2,098,756
Comprehensive income attributable to noncontrolling interests	(105,084)	(112,937)	(22,730)
Comprehensive Income (Loss) to Shareholders	\$ 2,285,344	\$ (1,205,779)	\$ 2,076,026
NET INCOME (LOSS) PER COMMON SHARE			
Basic	\$ 147.32	\$ (23.72)	\$ 176.79
Diluted	\$ 146.98	\$ (23.72)	\$ 176.38

See accompanying notes to consolidated financial statements.

MARKEL GROUP INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

<i>(dollars in thousands)</i>	Preferred Stock	Common Stock	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity	Noncontrolling Interests	Total Equity	Redeemable Noncontrolling Interests
December 31, 2020	\$591,891	\$3,428,340	\$8,217,484	\$ 584,376	\$ 12,822,091	\$ 14,892	\$12,836,983	\$ 245,642
Cumulative effect of adoption of ASU No. 2018-12			—	(15,259)	(15,259)	—	(15,259)	—
January 1, 2021	591,891	3,428,340	8,217,484	569,117	12,806,832	14,892	12,821,724	245,642
Net income			2,423,135	—	2,423,135	7,257	2,430,392	15,475
Other comprehensive loss			—	(347,109)	(347,109)	—	(347,109)	(2)
Comprehensive Income					2,076,026	7,257	2,083,283	15,473
Repurchase of common stock	—	—	(206,518)	—	(206,518)	—	(206,518)	—
Preferred stock dividends	—	—	(36,000)	—	(36,000)	—	(36,000)	—
Restricted stock awards expensed	—	30,916	—	—	30,916	—	30,916	—
Acquisition of Buckner	—	—	—	—	—	—	—	26,438
Acquisition of Metromont	—	—	—	—	—	—	—	269,908
Adjustment of redeemable noncontrolling interests	—	—	46,874	—	46,874	—	46,874	(46,874)
Purchase of noncontrolling interest	—	(18,779)	—	—	(18,779)	—	(18,779)	(38,214)
Other	—	602	(81)	—	521	711	1,232	(10,995)
December 31, 2021	591,891	3,441,079	10,444,894	222,008	14,699,872	22,860	14,722,732	461,378
Net income (loss)			(216,277)	—	(216,277)	86,739	(129,538)	26,181
Other comprehensive income (loss)			—	(989,502)	(989,502)	—	(989,502)	17
Comprehensive Income (Loss)					(1,205,779)	86,739	(1,119,040)	26,198
Repurchase of common stock	—	—	(290,796)	—	(290,796)	—	(290,796)	—
Preferred stock dividends	—	—	(36,000)	—	(36,000)	—	(36,000)	—
Restricted stock awards expensed	—	41,684	—	—	41,684	—	41,684	—
Adjustment of redeemable noncontrolling interests	—	—	(69,896)	—	(69,896)	—	(69,896)	69,896
Adjustment to Metromont purchase price allocation	—	—	—	—	—	—	—	(22,485)
Disposition of Velocity	—	—	—	—	—	(22,059)	(22,059)	—
Disposition of Volante	—	—	—	—	—	(3,490)	(3,490)	—
Redemption of Markel CATCo Re noncontrolling interests	—	—	—	—	—	(22,261)	(22,261)	—
Other	—	11,130	879	—	12,009	1,002	13,011	(11,833)
December 31, 2022	591,891	3,493,893	9,832,804	(767,494)	13,151,094	62,791	13,213,885	523,154
Net income			1,996,060	—	1,996,060	72,136	2,068,196	32,894
Other comprehensive income			—	289,284	289,284	—	289,284	54
Comprehensive Income					2,285,344	72,136	2,357,480	32,948
Repurchase of common stock	—	—	(445,479)	—	(445,479)	—	(445,479)	—
Preferred stock dividends	—	—	(36,000)	—	(36,000)	—	(36,000)	—
Restricted stock awards expensed	—	35,787	—	—	35,787	—	35,787	—
Adjustment of redeemable noncontrolling interests	—	—	6,212	—	6,212	—	6,212	(6,212)
Purchase of noncontrolling interest	—	(12,144)	—	—	(12,144)	—	(12,144)	(51,227)
Redemption of Markel CATCo Re noncontrolling interests	—	—	—	—	—	(62,646)	(62,646)	—
Other	—	(390)	(496)	—	(886)	(1)	(887)	(28,978)
December 31, 2023	\$591,891	\$3,517,146	\$11,353,101	\$ (478,210)	\$ 14,983,928	\$ 72,280	\$15,056,208	\$ 469,685

See accompanying notes to consolidated financial statements.

MARKEL GROUP INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years Ended December 31,		
	2023	2022	2021
	<i>(dollars in thousands)</i>		
OPERATING ACTIVITIES			
Net income (loss)	\$ 2,101,090	\$ (103,357)	\$ 2,445,867
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Deferred income tax expense (benefit)	233,798	(282,325)	453,408
Depreciation and amortization	259,924	366,954	336,393
Net investment losses (gains)	(1,524,054)	1,595,733	(1,978,534)
Net foreign exchange losses (gains)	90,045	(137,832)	(71,902)
Gain on sale of businesses, net	(18,965)	(225,832)	(22,085)
Impairment of goodwill	—	80,000	—
Increase in receivables	(486,305)	(653,261)	(372,491)
Increase in reinsurance recoverables	(767,509)	(1,168,483)	(1,312,258)
Increase in deferred policy acquisition costs	(1,602)	(140,630)	(139,609)
Increase in prepaid reinsurance premiums	(298,049)	(271,292)	(347,982)
Increase in unpaid losses and loss adjustment expenses	2,443,178	2,383,268	2,042,486
Decrease in life and annuity benefits	(48,327)	(44,693)	(52,226)
Increase in unearned premiums	400,017	886,393	970,246
Increase in payables to insurance and reinsurance companies	365,378	210,810	131,559
Other	38,188	213,989	191,195
Net Cash Provided By Operating Activities	2,786,807	2,709,442	2,274,067
INVESTING ACTIVITIES			
Proceeds from sales, maturities, calls and prepayments of fixed maturity securities	2,126,586	1,152,335	708,111
Cost of fixed maturity securities purchased	(4,302,864)	(2,112,066)	(3,165,323)
Proceeds from sales of equity securities	298,582	242,010	200,570
Cost of equity securities purchased	(638,306)	(442,991)	(255,436)
Net change in short-term investments	202,930	(846,019)	228,955
Cost of equity method and other investments purchased	(192,715)	(20,051)	(48,922)
Additions to property and equipment	(258,619)	(254,712)	(145,249)
Acquisitions, net of cash acquired	(3,584)	(79,000)	(517,439)
Consolidation of Markel CATCo Re, net	—	629,955	—
Distributions to Markel CATCo Re noncontrolling interests for buy-out transaction	—	(169,380)	—
Proceeds from sale of businesses, net	41,302	201,370	40,720
Other	23,081	28,345	16,211
Net Cash Used By Investing Activities	(2,703,607)	(1,670,204)	(2,937,802)
FINANCING ACTIVITIES			
Additions to senior long-term debt and other debt	624,972	1,034,052	1,198,505
Repayment of senior long-term debt and other debt	(949,636)	(1,255,005)	(486,730)
Repurchases of common stock	(445,479)	(290,796)	(206,518)
Dividends paid on preferred stock	(36,000)	(36,000)	(36,000)
Purchase of noncontrolling interests	(63,371)	(30)	(57,134)
Redemption of Markel CATCo Re noncontrolling interests	(88,997)	—	—
Other	(41,205)	(47,532)	(42,356)
Net Cash Provided (Used) By Financing Activities	(999,716)	(595,311)	369,767
Effect of foreign currency rate changes on cash, cash equivalents, restricted cash and restricted cash equivalents	27,037	(103,361)	(41,734)
Increase (decrease) in cash, cash equivalents, restricted cash and restricted cash equivalents	(889,479)	340,566	(335,702)
Cash, cash equivalents, restricted cash and restricted cash equivalents at beginning of year	5,221,513	4,880,947	5,216,649
CASH, CASH EQUIVALENTS, RESTRICTED CASH AND RESTRICTED CASH EQUIVALENTS AT END OF YEAR	\$ 4,332,034	\$ 5,221,513	\$ 4,880,947

See accompanying notes to consolidated financial statements.

MARKEL GROUP INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Summary of Significant Accounting Policies

Markel Group Inc., formerly Markel Corporation, is a holding company comprised of a diverse group of companies and investments with specialty insurance at its core. Effective May 26, 2023, Markel Corporation changed its name to Markel Group Inc. (Markel Group). Through its wholly owned subsidiary, Markel Ventures, Inc. (Markel Ventures), Markel Group owns controlling interests in businesses that operate in a variety of industries. See note 2 for details regarding reportable segments.

a) Basis of Presentation. The accompanying consolidated financial statements have been prepared in accordance with United States (U.S.) generally accepted accounting principles (GAAP) and include the accounts of Markel Group and its consolidated subsidiaries, as well as any variable interest entities (VIEs) that meet the requirements for consolidation (the Company). All significant intercompany balances and transactions have been eliminated in consolidation. The Company consolidates the results of its Markel Ventures subsidiaries on a one-month lag, with the exception of significant transactions or events that occur during the intervening period. Certain prior period amounts have been reclassified to conform to the current period presentation.

b) Use of Estimates. The preparation of financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities. Management periodically reviews its estimates and assumptions. Quarterly reviews include evaluating the adequacy of reserves for unpaid losses and loss adjustment expenses and contingencies. Estimates and assumptions for goodwill and intangible assets are reviewed in conjunction with an acquisition, and goodwill and indefinite-lived intangible assets are reassessed at least annually for impairment. Actual results may differ materially from the estimates and assumptions used in preparing the consolidated financial statements.

c) Investments. Available-for-sale investments and equity securities are recorded at estimated fair value. Available-for-sale investments include fixed maturity securities and short-term investments. Fixed maturity securities include government and municipal bonds and mortgage-backed securities with original maturities of more than one year. Short-term investments are primarily comprised of treasury bills with original maturities of one year or less.

Realized investment gains or losses on available-for-sale investments are included in net income. Realized gains or losses from sales of available-for-sale investments are derived using the first-in, first-out method on the trade date. Unrealized gains and losses on available-for-sale investments, net of income taxes, are included in other comprehensive income. The Company completes a detailed analysis each quarter to assess declines in the fair value of its available-for-sale investments. Any credit-related impairment losses on the Company's available-for-sale investments are recorded as an allowance, subject to reversal, and recognized in net income. Realized and unrealized gains and losses on equity securities are included in net income as net investment gains or losses.

Premiums and discounts are amortized or accreted over the lives of the related fixed maturity securities as an adjustment to the yield using the effective interest method. Dividend and interest income are recognized when earned. Accrued interest receivable is excluded from both the estimated fair value and the amortized cost basis of available-for-sale securities and included within other assets on the Company's consolidated balance sheets. Any uncollectible accrued interest receivable is written off in the period it is deemed uncollectible.

See note 4 and note 5 for further details regarding the Company's investment portfolio.

d) Cash and Cash Equivalents. The Company considers all investments with original maturities of 90 days or less to be cash equivalents, with the exception of treasury bills, which are classified as short-term investments. The carrying value of the Company's cash and cash equivalents approximates fair value.

e) Restricted Cash and Cash Equivalents. Cash and cash equivalents that are restricted as to withdrawal or use are recorded as restricted cash and cash equivalents. The carrying value of the Company's restricted cash and cash equivalents approximates fair value.

f) Receivables. Receivables include amounts receivable from agents, brokers and insureds, which represent premiums that are both currently due and amounts not yet due on insurance and reinsurance policies. Premiums for insurance policies are generally due at inception. Premiums for reinsurance policies generally become due over the period of coverage based on the policy terms. Changes in the estimate of reinsurance premiums written will result in an adjustment to premiums receivable in the period they are determined. Receivables also include amounts receivable from contracts with customers, which represent the Company's unconditional right to consideration for satisfying the performance obligations outlined in the contract.

The Company monitors credit risk associated with receivables, taking into consideration the fact that in certain instances in the Company's insurance operations credit risk may be reduced by the Company's right to offset loss obligations or unearned premiums against premiums receivable. An allowance is established for credit losses expected to be incurred over the life of the receivable, which is recorded net of this allowance. The allowance is charged to net income in the period the receivable is recorded and revised in subsequent periods to reflect changes in the Company's estimate of expected credit losses. See note 7 for further details regarding receivables.

g) Reinsurance Recoverables. Amounts recoverable from reinsurers are estimated in a manner consistent with the claim liability associated with the reinsured business. The Company evaluates the financial condition of its reinsurers and monitors concentration of credit risk to minimize its exposure to significant losses from individual reinsurers. To further reduce credit exposure on reinsurance recoverables, the Company has received collateral, including letters of credit and trust accounts, from certain reinsurers. Cash collateral related to these reinsurance agreements is available, without restriction, when the Company pays losses covered by the reinsurance agreements. An allowance is established for credit losses expected to be incurred over the life of the reinsurance recoverable, which is recorded net of this allowance. The allowance is charged to net income in the period the recoverable is recorded and revised in subsequent periods to reflect changes in the Company's estimate of expected credit losses. As of December 31, 2023 and 2022, the allowance for credit losses associated with the Company's reinsurance recoverables was not material to the consolidated financial statements.

h) Deferred Policy Acquisition Costs. Costs directly related to the acquisition of insurance premiums are deferred and amortized over the related policy period, generally one year. The Company only defers acquisition costs incurred that are directly related to the successful acquisition of new or renewal insurance contracts, including commissions to agents and brokers, salaries and benefits and premium taxes. Commissions received related to reinsurance premiums ceded are netted against broker commissions in determining acquisition costs eligible for deferral. To the extent that future policy revenues on existing policies are not adequate to cover related costs and expenses, deferred policy acquisition costs are charged to earnings. The Company does not consider anticipated investment income in determining whether a premium deficiency exists. See note 2(a) and (g) for further details regarding policy acquisition costs.

i) Goodwill and Intangible Assets. Goodwill and intangible assets are recorded as a result of business acquisitions. Goodwill represents the excess of the amount paid to acquire a business over the net fair value of assets acquired and liabilities assumed at the date of acquisition. Indefinite-lived and other intangible assets are recorded at fair value as of the acquisition date. The determination of the fair value of certain assets acquired and liabilities assumed involves significant judgment and the use of valuation models and other estimates, which require assumptions that are inherently subjective. Goodwill and indefinite-lived intangible assets are tested for impairment at least annually. The Company completes an annual test during the fourth quarter of each year based upon the results of operations through September 30. Intangible assets with definite lives are amortized using the straight-line method over their estimated useful lives, generally five to 20 years, and are reviewed for impairment when events or circumstances indicate that their carrying value may not be recoverable. See note 8 for further details regarding goodwill and intangible assets.

j) Equity Method Investments. The Company holds certain investments that are required to be accounted for under the equity method, whereby they initially are recorded at cost within other assets on the consolidated balance sheets and subsequently increased or decreased by the Company's proportionate share of the net income or loss of the investee and other transactions impacting the investee's equity. The Company records its proportionate share of net income or loss of the investee in services and other revenues. The Company records its proportionate share of other comprehensive income or loss of the investee as a component of other comprehensive income. Dividends or other equity distributions in excess of the Company's cumulative equity in earnings of the investee are recorded as a reduction of the investment. The Company reviews equity method investments for impairment when events or circumstances indicate that a decline in the fair value of the investment below its carrying value is other-than-temporary. See note 6 for further details regarding the Company's equity method investments.

k) Property and Equipment. Property and equipment is maintained primarily by certain of the Company's Market Ventures businesses and is stated at cost less accumulated depreciation. Depreciation of property and equipment is calculated using the

straight-line method over the estimated useful lives of the respective assets. Property and equipment, net of accumulated depreciation, was \$1.3 billion and \$1.2 billion as of December 31, 2023 and 2022, respectively, and is included in other assets on the Company's consolidated balance sheets.

l) Leases. The present value of future lease payments for the Company's leases with terms greater than 12 months is included on the consolidated balance sheets as lease liabilities and right-of-use lease assets within other liabilities and other assets, respectively.

The Company's lease portfolio primarily consists of operating leases for real estate and equipment. Total expected lease payments are based on the lease payments specified in the contract and the stated term, including any options to extend or terminate that the Company is reasonably certain to exercise. The Company accounts for lease components and any associated non-lease components within a contract as a single lease component, and therefore allocates all of the expected lease payments to the lease component.

The lease liability, which represents the Company's contractual obligation to make lease payments, is calculated based on the present value of expected lease payments over the remaining lease term, discounted using the Company's collateralized incremental borrowing rate at the lease commencement date. The lease liability is then adjusted for any prepaid rent, lease incentives received or capitalized initial direct costs to determine the lease asset, which represents the Company's right to use the underlying asset for the lease term.

Total lease costs are primarily comprised of rental expense for operating leases, which is recognized on a straight line basis over the lease term. Rental expense attributable to the Company's underwriting operations is included in underwriting, acquisition and insurance expenses and rental expense attributable to the Company's other operations is included in products expenses and services and other expenses in the consolidated statements of income and comprehensive income. See note 9 for further details regarding leases.

m) Inventories. Inventories are maintained at certain of the Company's Market Ventures businesses and consist primarily of raw materials, work-in-process and finished goods. Inventories are generally valued based on the nature of the inventory, including the first-in-first-out, standard cost and specific identification methods, and stated at the lower of cost or net realizable value. Inventories were \$617.2 million and \$639.6 million as of December 31, 2023 and 2022, respectively, and are included in other assets on the Company's consolidated balance sheets.

n) Redeemable Noncontrolling Interests. The Company owns controlling interests in various companies through its Market Ventures operations. In some cases, the Company has the option to acquire the remaining equity interests, and the remaining equity interests have the option to sell their interests to the Company, in the future. The redemption value of the remaining equity interests is generally based on the respective company's earnings in specified periods preceding the redemption date. The redeemable noncontrolling interests are redeemable in 2024 or become redeemable between 2025 and 2030.

The Company recognizes changes in the redemption value that exceed the carrying value of redeemable noncontrolling interests to retained earnings as if the balance sheet date was also the redemption date. Changes in the redemption value also result in an adjustment to net income to common shareholders in the calculation of basic and diluted net income per common share. See note 19 for further details regarding the calculation of basic and diluted net income per common share.

o) Income Taxes. The Company records deferred income taxes to reflect the net tax effect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and their tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in years in which those temporary differences are expected to be recovered or settled. Deferred tax assets are reduced by a valuation allowance when management believes it is more likely than not that some, or all, of the deferred tax assets will not be realized. The Company recognizes the tax benefit from an uncertain tax position taken or expected to be taken in income tax returns only if it is more likely than not that the tax position will be sustained upon examination by tax authorities, based on the technical merits of the position. Tax positions that meet the more likely than not threshold are then measured using a probability weighted approach, whereby the largest amount of tax benefit that is greater than 50% likely of being realized upon ultimate settlement is recognized. The Company recognizes interest and penalties related to uncertain tax positions in income tax expense. See note 15 for further details regarding income taxes.

p) Unpaid Losses and Loss Adjustment Expenses. Unpaid losses and loss adjustment expenses on the Company's property and casualty insurance business are based on evaluations of reported claims and estimates for losses and loss adjustment expenses incurred but not reported. Estimates for losses and loss adjustment expenses incurred but not reported are based on

reserve development studies, among other things. Recorded reserves are estimates, and the ultimate liability may be greater or less than the estimates. See note 11 for further details regarding unpaid losses and loss adjustment expenses.

q) Life and Annuity Benefits. The Company has a run-off block of life and annuity reinsurance contracts that subject the Company to mortality, longevity and morbidity risks. Effective January 1, 2023, the Company adopted Financial Accounting Standards Board (FASB) Accounting Standards Update (ASU) No. 2018-12, *Financial Services—Insurance (Topic 944): Targeted Improvements to the Accounting for Long-Duration Contracts* and restated all prior periods presented to reflect the new accounting standard. The primary component of the Company's liabilities for life and annuity benefits is the present value of the liability for future policyholder benefits. The cash flow assumptions used to determine the policyholder benefit reserves are reviewed, and updated as necessary, at least annually. Interest accretion for the reserves is calculated using the discount rate locked-in at contract inception. Policy benefit reserves are remeasured each period using current discount rates, based on yields for upper-medium grade fixed maturity securities, with the impact of changes in the discount rate included in other comprehensive income, net of taxes. All other results attributable to the run-off of life and annuity reinsurance contracts are included in services and other revenues and services and other expenses in the consolidated statements of income and comprehensive income. Investment income earned on the investments that support the policy benefit reserves are included in net investment income. Because of the uncertainty in the assumptions used to estimate reserves for life and annuity benefit obligations and the long-term nature of these reinsurance contracts, the ultimate liability may be greater or less than the estimated liability. See note 13 for further details regarding life and annuity benefits.

r) Revenue Recognition.

Property and Casualty Premiums

Insurance premiums written are generally recorded at the inception of a policy and earned on a pro rata basis over the policy period, typically one year. The cost of reinsurance ceded is initially recorded as prepaid reinsurance premiums and is amortized over the reinsurance contract period in proportion to the amount of insurance protection provided. Premiums ceded are netted against premiums written. For multi-year contracts where insurance premiums are payable in annual installments, written premiums are recorded at the inception of the contract based on management's best estimate of total premiums to be received. For contracts where the cedent has the ability to unilaterally commute or cancel coverage within the term of the policy, written premiums are generally recorded on an annual basis or up to the contract cancellation point. The remaining premiums are estimated and included as written at each successive anniversary date within the multi-year term.

Assumed reinsurance premiums are recorded at the inception of each contract based upon contract terms and information received from cedents and brokers and are earned on a pro rata basis over the coverage period, or for multi-year contracts, in proportion with the underlying risk exposure to the extent there is variability in the exposure through the coverage period. Changes in reinsurance premium estimates are expected and may result in significant adjustments in any period. These estimates change over time as additional information regarding changes in underlying exposures is obtained. Any subsequent differences arising on such estimates are recorded as premiums written in the period they are determined and are earned on a pro rata basis over the coverage period, or immediately if the coverage period has ended. The Company uses the periodic method to account for assumed reinsurance from foreign reinsurers as a result of the sufficiency of the information provided by the reinsurer, which is consistent with its accounting for assumed reinsurance from U.S. reinsurers.

Certain contracts that the Company writes provide for reinstatement of coverage. Reinstatement premiums are the premiums for the restoration of the insurance or reinsurance limit of a contract to its full amount after a loss occurrence by the insured or reinsured. The Company accrues for reinstatement premiums resulting from losses recorded. Such accruals are based upon contractual terms and management judgment is involved with respect to the amount of losses recorded. Changes in estimates of losses recorded on contracts with reinstatement premium features will result in changes in reinstatement premiums based on contractual terms. Reinstatement premiums are recognized as premiums written at the time losses are recorded and are generally earned on a pro rata basis over the remaining coverage period.

Other Revenues

Other revenues primarily relate to the Company's Market Ventures, program services and other fronting and insurance-linked securities (ILS) operations and consist of revenues from the sale of products and services. Revenues are recognized when, or as, control of the promised goods or services is transferred to the Company's customers, in an amount that reflects the consideration the Company expects to be entitled to in exchange for those goods or services. Contracts with customers generally have an original term of one year or less. For contracts with customers that have an original term greater than one year, the Company recognizes revenue at the amount for which it has a right to invoice for the products delivered or services

performed. Certain customers may receive volume rebates or credits for products and services, which are accounted for as variable consideration. The Company estimates these amounts based on the expected amount to be provided to the customer and reduces revenues recognized by a corresponding amount. The Company does not expect significant changes to its estimates of variable consideration over the term of the contracts.

Payment terms for products and services vary by the type of product or service offered and the location of the customer, and payment is typically received at or shortly after the point of sale. For certain products, the Company requires partial payment in the form of a deposit before the products are delivered to the customer, which is included in other liabilities on the Company's consolidated balance sheets.

Through its Markel Ventures operations, the Company has several different businesses that manufacture or produce a variety of products, including ornamental plants, precast concrete, equipment used in baking systems, over-the-road transportation equipment, portable dredges, residential homes and flooring for the trucking industry. Most of the Company's product revenues are recognized when the products are shipped to the customer or the products arrive at the agreed upon destination with the end customer. Certain of the Company's products revenues are recognized based on percentage of completion. Some of the Company's contracts include multiple performance obligations. For such arrangements, revenues are allocated to each performance obligation based on the relative standalone selling price, which is derived from amounts stated in the contract.

Through its Markel Ventures operations, the Company also has several different businesses that provide various types of services, including distribution of exterior building products, fire protection and life safety services and consulting services. Service revenues are generally recognized either at a point-in-time when services are provided or over the term of the contracts based on hours incurred or as services are provided.

The Company's Markel Ventures operations also include certain businesses that earn revenues through the leasing of equipment. The revenues from these leases are generally recognized on a straight-line basis over the term of the lease.

The Company's other revenues also include fronting fees, or ceding fees, received in exchange for providing access to the U.S. property and casualty insurance market, which are based on the gross premiums written on behalf of general agent and capacity provider clients. Ceding fees are earned in a manner consistent with the recognition of the gross premiums earned on the underlying insurance policies, generally on a pro rata basis over the terms of the underlying policies reinsured.

The Company's other revenues also include investment management fee income. Investment management fee income is recognized over the period in which investment management services are provided and is calculated and recognized monthly, based on the net asset value of the accounts managed for most of the funds and underlying gross premium volume for the remaining funds. For certain accounts, the Company is also entitled to participate, on a fixed-percentage basis, in any net income generated in excess of an agreed-upon threshold as established by the underlying investment management agreements. In general, net income is calculated at the end of each calendar year and incentive fees are payable annually. Incentive fee income is recognized at the conclusion of the contractual performance period, when the uncertainty related to performance has been resolved.

See note 10 for further details regarding products, services and other revenues.

s) Program Services. In connection with its program services business, the Company enters into contractual agreements with both producing general agents and reinsurers, whereby the general agents and reinsurers are typically obligated to each other for payment of insurance amounts, including premiums, commissions and losses. To the extent these funds are not the obligation of the Company and are settled directly between the general agent and the reinsurer, no receivables or payables are recorded for these amounts. All obligations of the Company's insurance subsidiaries owed to or on behalf of their policyholders are recorded by the Company and, to the extent appropriate, offsetting reinsurance recoverables are recorded.

t) Foreign Currency Transactions. The U.S. Dollar is the Company's reporting currency and the primary functional currency of its foreign underwriting operations. The functional currencies of the Company's other foreign operations are the currencies of the primary economic environments in which the majority of their business is transacted.

Foreign currency transaction gains and losses are the result of exchange rate changes on transactions denominated in currencies other than the functional currency at each foreign entity. Monetary assets and liabilities are remeasured to the functional currency at current exchange rates, with resulting gains and losses included in net foreign exchange gains within net income. Non-monetary assets and liabilities are remeasured to the functional currency at historic exchange rates. Available-for-sale securities are recorded at fair value with resulting gains and losses, including the portion attributable to movements in

exchange rates, included in the change in net unrealized gains on available-for-sale investments, net of taxes within other comprehensive income. While the Company attempts to naturally hedge its exposure to foreign currency fluctuations by matching assets and liabilities in the same currencies, there is a financial statement mismatch between the gains or losses recorded in net income related to insurance reserves denominated in non-functional currencies and the gains or losses recorded in other comprehensive income related to the available-for-sale securities held in non-functional currencies supporting the reserves.

Assets and liabilities of foreign operations denominated in a functional currency other than the U.S. Dollar are translated into the U.S. Dollar at current exchange rates, with resulting gains or losses included, net of taxes, in the change in foreign currency translation adjustments within other comprehensive income.

u) Comprehensive Income. Comprehensive income represents all changes in equity that result from recognized transactions and other economic events during the period. Other comprehensive income refers to revenues, expenses, gains and losses that under U.S. GAAP are included in comprehensive income but excluded from net income, such as unrealized gains or losses on available-for-sale investments, changes in discount rate for life and annuity benefits, foreign currency translation adjustments and changes in net actuarial pension loss. See note 20 for further details regarding other comprehensive income.

v) Net Income Per Common Share. Basic net income per common share is computed by dividing adjusted net income to shareholders by the weighted average number of common shares outstanding during the year. Diluted net income per common share is computed by dividing adjusted net income to shareholders by the weighted average number of common shares and dilutive potential common shares outstanding during the year. See note 19 for further details regarding the calculation of basic and diluted net income per common share.

w) Variable Interest Entities. The Company determines whether it has relationships with entities defined as VIEs in accordance with FASB Accounting Standards Codification (ASC) 810, *Consolidation*. Under this guidance, a VIE is consolidated by the variable interest holder that is determined to be the primary beneficiary.

An entity in which the Company holds a variable interest is a VIE if any of the following conditions exist: (a) the total equity investment at risk is not sufficient to permit the entity to finance its activities without additional subordinated financial support, (b) as a group, the holders of equity investment at risk lack either the direct or indirect ability through voting rights or similar rights to make decisions about an entity's activities that most significantly impact the entity's economic performance or the obligation to absorb the expected losses or right to receive the expected residual returns, or (c) the voting rights of some investors are disproportionate to their obligation to absorb the expected losses of the entity, their rights to receive the expected residual returns of the entity, or both and substantially all of the entity's activities either involve or are conducted on behalf of an investor with disproportionately few voting rights.

The primary beneficiary is defined as the variable interest holder that is determined to have the controlling financial interest as a result of having both (a) the power to direct the activities of a VIE that most significantly impact the economic performance of the VIE and (b) the obligation to absorb losses or right to receive benefits from the VIE that could potentially be significant to the VIE.

The Company determines whether an entity is a VIE at the inception of its variable interest in the entity and upon the occurrence of certain reconsideration events. The Company continually reassesses whether it is the primary beneficiary of VIEs in which it holds a variable interest. See note 17 for further details regarding the Company's involvement with VIEs.

x) Recent Accounting Pronouncements.

Accounting Standards Adopted in 2023

Effective January 1, 2023, the Company adopted ASU No. 2018-12 and several ASUs issued as amendments to ASU No. 2018-12. This standard requires insurance companies with long duration contracts to: (1) review and, if there is a change, update the assumptions used to measure expected cash flows at least annually; (2) update the discount rate assumption at each reporting date; and (3) enhance certain qualitative and quantitative disclosures. ASU No. 2018-12 was applied using a modified retrospective approach that required restatement of prior periods presented, including a cumulative adjustment recorded to accumulated other comprehensive income as of January 1, 2021 (the transition date) as a result of updating the discount rate assumption. At the transition date, the adoption of ASU 2018-12 had no impact on retained earnings but resulted in a decrease to accumulated other comprehensive income, net of taxes, of \$15.3 million, which was comprised of the following corresponding adjustments to life and annuity benefits and deferred tax liabilities.

<i>(dollars in thousands)</i>	January 1, 2021
Reverse reserve deficiency adjustment related to unrealized gains on underlying investment portfolio of available-for-sale securities	\$ 119,548
Apply updated discount rate to the liability for future policyholder benefits	(138,865)
Increase in life and annuity benefits	(19,317)
Decrease in deferred tax liability	4,058
Decrease in accumulated other comprehensive income, net of taxes	\$ (15,259)

The impact of changes in the discount rate on the liability for future policyholder benefits following the transition date are included in other comprehensive income (loss) in the respective periods and, combined with the transition adjustment, resulted in the following cumulative changes to the Company's previously presented consolidated balance sheets.

<i>(dollars in thousands)</i>	December 31,	
	2022	2021
Decrease (increase) in life and annuity benefits	\$ 113,396	\$ (19,759)
Decrease (increase) in deferred tax liability	(23,813)	4,149
Increase (decrease) in accumulated other comprehensive income (loss), net of taxes	\$ 89,583	\$ (15,610)

Changes in the discount rate on the liability for future policyholder benefits also resulted in an increase of \$105.2 million and a decrease of \$0.4 million to the other comprehensive loss previously presented in 2022 and 2021, respectively, which was comprised of the following adjustments.

<i>(dollars in thousands)</i>	Years Ended December 31,	
	2022	2021
Reverse benefit included in change in net unrealized gains (losses) on available-for-sale-investments, net of taxes, related to reversal of previously recognized reserve deficiency adjustment	\$ (44,682)	\$ (49,761)
Change in discount rate for life and annuity benefits, net of taxes	149,874	49,411
Increase (decrease) in other comprehensive loss, net of taxes	\$ 105,192	\$ (350)

The adoption of other provisions of this ASU did not have a material impact on the Company's financial position, results of operations or cash flows for any of the periods presented.

Effective January 1, 2023, the Company adopted ASU No. 2021-08, *Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*. ASU No. 2021-08 requires contract assets and liabilities accounted for under FASB ASC 606, *Revenue from Contracts with Customers*, to be recorded at the acquisition date as if the acquirer entered into those contracts itself on the contract inception dates, rather than at fair value. At adoption, ASU No. 2021-08 did not impact the Company's financial position, results of operations or cash flows, but prospectively, this ASU will impact amounts recorded by the Company for assets acquired and liabilities assumed in conjunction with certain acquisitions.

Accounting Standards Not Yet Adopted

In November 2023, the FASB issued ASU No. 2023-07, *Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures*. The standard requires public companies to, among other things: (1) disclose, on an annual and interim basis, significant segment expenses that are regularly provided to the chief operating decision maker and included within each reported measure of segment profit or loss; (2) disclose, on an annual and interim basis, an amount for other segment expenses that are not separately disclosed as significant segment expenses and a description of its composition; (3) provide all annual disclosures about a reportable segment's profit or loss and assets currently required by Topic 280 in interim periods; and (4) disclose the title and position of the chief operating decision maker and an explanation of how the chief operating decision maker uses the reported measures of segment profit or loss in assessing segment performance and deciding how to allocate resources. ASU No. 2023-07 becomes effective for the Company in the fourth quarter of 2024 and will be applied using a retrospective approach that requires recasting of all prior periods presented. The standard will not impact the Company's financial position, results of operations or cash flows.

In December 2023, the FASB issued ASU No. 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures*. The standard requires public companies, on an annual basis, to provide enhanced rate reconciliation disclosures, including disclosure of specific categories and additional information for reconciling items that meet a quantitative threshold. The standard also requires public companies to, among other things, disaggregate income taxes paid by federal, state and foreign taxes. ASU No. 2023-09 becomes effective for the Company in the first quarter of 2025. The standard will not impact the Company's financial position, results of operations or cash flows.

2. Segment Reporting Disclosures

The Company has four reportable segments: Insurance, Reinsurance, Investing and Market Ventures.

The chief operating decision maker reviews the Company's ongoing underwriting operations on a global basis in the following two segments: Insurance and Reinsurance. In determining how to allocate resources and assess the performance of the Company's underwriting results, management considers many factors, including the nature of the insurance product sold, the type of account written and the type of customer served. The Insurance segment includes all direct business and facultative reinsurance placements written on a risk-bearing basis within the Company's underwriting operations. The Reinsurance segment includes all treaty reinsurance written on a risk-bearing basis within the Company's underwriting operations. All investing activities related to the Company's insurance operations are included in the Investing segment.

The Company's other insurance operations primarily consist of the results of the Company's program services and other fronting business and insurance-linked securities operations. Other insurance operations also include results for lines of business discontinued prior to, or in conjunction with, acquisitions, including development on asbestos and environmental loss reserves and results attributable to the run-off of life and annuity reinsurance business, which are monitored separately from the Company's ongoing underwriting operations. For purposes of segment reporting, none of these other insurance operations are considered to be reportable segments.

The Company's chief operating decision maker reviews and assesses Market Ventures' performance in the aggregate, as a single operating segment. The Market Ventures segment primarily consists of controlling interests in a diverse portfolio of businesses that operate in various industries.

Segment profit for each of the Company's underwriting segments is measured by underwriting profit. The property and casualty insurance industry commonly defines underwriting profit as earned premiums net of losses and loss adjustment expenses and underwriting, acquisition and insurance expenses. Underwriting profit does not replace operating income or net income computed in accordance with U.S. GAAP as a measure of profitability. Underwriting profit or loss provides a basis for management to evaluate the Company's underwriting performance. Segment profit for the Company's underwriting segments may also include other revenues and expenses that are attributable to the Company's underwriting operations that are not captured in underwriting profit. Segment profit for the Investing segment is measured by income from the Company's investment portfolio, which is comprised of net investment income and net investment gains. Segment profit for the Investing segment also includes income from equity method investments, which is included within services and other revenues. Segment profit for the Market Ventures segment is measured by operating income.

For management reporting purposes, the Company allocates assets to its underwriting operations and to its Investing and Market Ventures segments and certain of its other operations, including its program services and other fronting and insurance-linked securities operations. Underwriting assets include assets attributed to the Company's Insurance and Reinsurance segments, discontinued underwriting lines of business, as well as assets that are not specifically allocated to the Company's other operations. Generally, the Company manages its underwriting assets in the aggregate and therefore does not allocate assets to individual underwriting segments.

a) The following tables summarize the Company's segment disclosures.

	Year Ended December 31, 2023					
<i>(dollars in thousands)</i>	Insurance	Reinsurance	Investing	Markel Ventures	Other ⁽¹⁾	Consolidated
Earned premiums	\$ 7,282,705	\$ 1,014,294	\$ —	\$ —	\$ (1,520)	\$ 8,295,479
Net investment income	—	—	729,219	5,313	—	734,532
Net investment gains	—	—	1,524,054	—	—	1,524,054
Products revenues	—	—	—	2,545,053	—	2,545,053
Services and other revenues	—	—	(11,854)	2,434,715	281,651	2,704,512
Total operating revenues	<u>7,282,705</u>	<u>1,014,294</u>	<u>2,241,419</u>	<u>4,985,081</u>	<u>280,131</u>	<u>15,803,630</u>
Losses and loss adjustment expenses:						
Current accident year	(4,690,745)	(669,814)	—	—	—	(5,360,559)
Prior accident years	104,743	(57,081)	—	—	(9,112)	38,550
Underwriting, acquisition and insurance expenses:						
Amortization of policy acquisition costs	(1,508,169)	(255,501)	—	—	—	(1,763,670)
Other underwriting expenses	(1,026,358)	(51,163)	—	—	457	(1,077,064)
Products expenses	—	—	—	(2,220,676)	—	(2,220,676)
Services and other expenses	—	—	—	(2,244,527)	(66,242)	(2,310,769)
Amortization of intangible assets ⁽²⁾	—	—	—	(82,370)	(98,244)	(180,614)
Segment profit (loss)	<u>\$ 162,176</u>	<u>\$ (19,265)</u>	<u>\$ 2,241,419</u>	<u>\$ 437,508</u>	<u>\$ 106,990</u>	<u>\$ 2,928,828</u>
Interest expense						(185,077)
Net foreign exchange losses						(90,045)
Income before income taxes						<u>\$ 2,653,706</u>

⁽¹⁾ Other represents the total profit (loss) attributable to the Company's operations that are not included in a reportable segment, as well as amortization of intangible assets attributable to the underwriting segments, which is not allocated between the Insurance and Reinsurance segments.

⁽²⁾ Segment profit for the Markel Ventures segment includes amortization of intangible assets attributable to Markel Ventures. Amortization of intangible assets attributable to the Company's underwriting segments, included in Other, was \$37.1 million for the year ended December 31, 2023.

Year Ended December 31, 2022

<i>(dollars in thousands)</i>	Insurance	Reinsurance	Investing	Markel Ventures	Other ⁽¹⁾	Consolidated
Earned premiums	\$ 6,528,263	\$ 1,063,347	\$ —	\$ —	\$ (3,818)	\$ 7,587,792
Net investment income	—	—	445,846	909	—	446,755
Net investment losses	—	—	(1,595,733)	—	—	(1,595,733)
Products revenues	—	—	—	2,427,096	—	2,427,096
Services and other revenues	—	—	(17,661)	2,329,522	497,564	2,809,425
Total operating revenues	<u>6,528,263</u>	<u>1,063,347</u>	<u>(1,167,548)</u>	<u>4,757,527</u>	<u>493,746</u>	<u>11,675,335</u>
Losses and loss adjustment expenses:						
Current accident year	(3,936,425)	(676,610)	—	—	—	(4,613,035)
Prior accident years	142,924	26,052	—	—	(1,530)	167,446
Underwriting, acquisition and insurance expenses:						
Amortization of policy acquisition costs	(1,375,539)	(279,567)	—	—	—	(1,655,106)
Other underwriting expenses	(809,352)	(49,363)	—	—	(1,762)	(860,477)
Products expenses	—	—	—	(2,241,736)	—	(2,241,736)
Services and other expenses	—	—	—	(2,111,510)	(195,475)	(2,306,985)
Amortization of intangible assets ⁽²⁾	—	—	—	(79,043)	(99,735)	(178,778)
Impairment of goodwill	—	—	—	—	(80,000)	(80,000)
Segment profit (loss)	<u>\$ 549,871</u>	<u>\$ 83,859</u>	<u>\$ (1,167,548)</u>	<u>\$ 325,238</u>	<u>\$ 115,244</u>	<u>\$ (93,336)</u>
Interest expense						(196,062)
Net foreign exchange gains						137,832
Loss before income taxes						<u>\$ (151,566)</u>

⁽¹⁾ Other represents the total profit (loss) attributable to the Company's operations that are not included in a reportable segment, as well as amortization of intangible assets attributable to the underwriting segments, which is not allocated between the Insurance and Reinsurance segments.

⁽²⁾ Segment profit for the Markel Ventures segment includes amortization of intangible assets attributable to Markel Ventures. Amortization of intangible assets attributable to the Company's underwriting segments, included in Other, was \$38.5 million for the year ended December 31, 2022.

Year Ended December 31, 2021

<i>(dollars in thousands)</i>	Insurance	Reinsurance	Investing	Markel Ventures	Other ⁽¹⁾	Consolidated
Earned premiums	\$ 5,465,284	\$ 1,042,048	\$ —	\$ —	\$ (4,303)	\$ 6,503,029
Net investment income	—	—	367,406	11	—	367,417
Net investment gains	—	—	1,978,534	—	—	1,978,534
Products revenues	—	—	—	1,712,120	—	1,712,120
Services and other revenues	—	—	7,184	1,931,696	346,445	2,285,325
Total operating revenues	<u>5,465,284</u>	<u>1,042,048</u>	<u>2,353,124</u>	<u>3,643,827</u>	<u>342,142</u>	<u>12,846,425</u>
Losses and loss adjustment expenses:						
Current accident year	(3,311,185)	(749,815)	—	—	—	(4,061,000)
Prior accident years	506,292	(19,928)	—	—	(6,569)	479,795
Underwriting, acquisition and insurance expenses:						
Amortization of policy acquisition costs	(1,153,049)	(266,217)	—	—	—	(1,419,266)
Other underwriting expenses	(810,929)	(61,326)	—	—	(2,218)	(874,473)
Products expenses	—	—	—	(1,544,506)	—	(1,544,506)
Services and other expenses	—	109	—	(1,769,201)	(255,839)	(2,024,931)
Amortization of intangible assets ⁽²⁾	—	—	—	(57,568)	(102,971)	(160,539)
Segment profit (loss)	<u>\$ 696,413</u>	<u>\$ (55,129)</u>	<u>\$ 2,353,124</u>	<u>\$ 272,552</u>	<u>\$ (25,455)</u>	<u>\$ 3,241,505</u>
Interest expense						(183,579)
Net foreign exchange gains						71,902
Income before income taxes						<u>\$ 3,129,828</u>

(1) Other represents the total profit (loss) attributable to the Company's operations that are not included in a reportable segment, as well as amortization of intangible assets attributable to the underwriting segments, which is not allocated between the Insurance and Reinsurance segments.

(2) Segment profit for the Markel Ventures segment includes amortization of intangible assets attributable to Markel Ventures. Amortization of intangible assets attributable to the Company's underwriting segments, included in Other, was \$41.2 million for the year ended December 31, 2021.

b) The following amounts attributable to the Markel Ventures segment are also reviewed, or included in measures reviewed, by the Company's chief operating decision maker.

<i>(dollars in thousands)</i>	Years Ended December 31,		
	2023	2022	2021
Depreciation expense	\$ 108,605	\$ 102,055	\$ 72,580
Interest expense ⁽¹⁾	\$ 47,227	\$ 46,780	\$ 35,031
Income tax expense	\$ 85,295	\$ 61,588	\$ 43,626
Capital expenditures	\$ 221,036	\$ 225,230	\$ 124,451

(1) Interest expense for the years ended December 31, 2023, 2022 and 2021 included intercompany interest expense of \$26.5 million, \$27.4 million and \$25.8 million, respectively, which was eliminated in consolidation.

c) The following table summarizes earned premiums by major product grouping within each underwriting segment.

	Years Ended December 31,		
	2023	2022	2021
<i>(dollars in thousands)</i>			
Insurance segment:			
General liability	\$ 2,128,317	\$ 1,927,721	\$ 1,564,221
Professional liability	1,798,882	1,739,983	1,523,536
Property	532,337	428,563	362,637
Marine and energy	688,591	585,885	495,897
Personal lines	538,816	489,648	451,095
Programs	509,866	384,952	222,410
Workers' compensation	393,011	385,054	354,337
Credit and surety	219,542	193,701	161,155
Other products	473,343	392,756	329,996
Total Insurance	<u>7,282,705</u>	<u>6,528,263</u>	<u>5,465,284</u>
Reinsurance segment:			
Professional liability	388,610	398,839	320,646
General liability	368,376	382,482	314,699
Specialty	245,126	275,033	276,943
Property	12,182	6,993	129,760
Total Reinsurance	<u>1,014,294</u>	<u>1,063,347</u>	<u>1,042,048</u>
Other	<u>(1,520)</u>	<u>(3,818)</u>	<u>(4,303)</u>
Total earned premiums	<u>\$ 8,295,479</u>	<u>\$ 7,587,792</u>	<u>\$ 6,503,029</u>

The Company does not manage products at this level of aggregation as it offers a diverse portfolio of products and manages these products in logical groupings within each underwriting segment.

During the years ended December 31, 2023, 2022 and 2021, 80% of gross premiums written in the Company's underwriting segments were attributed to risks or cedents located in the United States. Substantially all of the gross premiums written in the Company's program services and other fronting businesses during 2023, 2022 and 2021 were attributed to risks located in the United States.

Most of the gross written premiums in the Company's underwriting operations are placed through insurance and reinsurance brokers. The following table summarizes the percentage of gross written premiums placed by the top five independent brokers within the Company's underwriting operations, Insurance segment and Reinsurance segment. The top five independent brokers may vary among the segments and from year to year.

	Years Ended December 31,		
	2023	2022	2021
Insurance segment	33 %	34 %	32 %
Reinsurance segment	95 %	99 %	90 %
Total underwriting	37 %	40 %	38 %

d) The following table summarizes total products revenues and services and other revenues by major product and service grouping within the Company's Market Ventures segment.

<i>(dollars in thousands)</i>	Years Ended December 31,		
	2023	2022	2021
Products:			
Consumer and building	\$ 1,474,499	\$ 1,510,130	\$ 911,422
Transportation-related	667,040	612,467	474,839
Equipment manufacturing	403,514	304,499	325,859
Total products revenues	<u>2,545,053</u>	<u>2,427,096</u>	<u>1,712,120</u>
Services and other:			
Construction	2,042,326	1,910,403	1,554,592
Consulting	297,115	326,549	277,902
Other	95,274	92,570	99,202
Total services and other revenues	<u>2,434,715</u>	<u>2,329,522</u>	<u>1,931,696</u>
Total products revenues and services and other revenues	<u>\$ 4,979,768</u>	<u>\$ 4,756,618</u>	<u>\$ 3,643,816</u>

The Company does not manage the Market Ventures portfolio of businesses at this level of aggregation due to the distinct characteristics of each business and the autonomy with which each business operates. Management reviews and assesses the performance of the Market Ventures businesses in the aggregate at the Market Ventures segment level, while individual management teams are responsible for developing strategic initiatives, managing day-to-day operations and making investment and capital allocation decisions for their respective companies.

During the years ended December 31, 2023, 2022 and 2021, 95%, 96%, and 95%, respectively, of Market Ventures segment revenues were attributable to U.S. operations.

e) The following table reconciles segment assets to the Company's consolidated balance sheets.

<i>(dollars in thousands)</i>	December 31,	
	2023	2022
Segment assets:		
Investing	\$ 30,542,282	\$ 26,982,280
Underwriting	9,897,689	8,853,559
Market Ventures	5,519,542	5,315,677
Total segment assets	<u>45,959,513</u>	<u>41,151,516</u>
Other operations	9,086,197	8,639,743
Total assets	<u>\$ 55,045,710</u>	<u>\$ 49,791,259</u>

f) The following table summarizes gross and net written premiums by segment.

	Years Ended December 31,		
	2023	2022	2021
<i>(dollars in thousands)</i>			
Gross written premium:			
Insurance segment	\$ 9,217,150	\$ 8,606,700	\$ 7,239,676
Reinsurance segment	1,046,539	1,229,851	1,246,143
Other underwriting	13,943	10,987	110
Total underwriting	10,277,632	9,847,538	8,485,929
Program services and other fronting	3,724,605	3,354,144	2,952,753
Total	\$ 14,002,237	\$ 13,201,682	\$ 11,438,682
Net written premium:			
Insurance segment	\$ 7,432,062	\$ 7,040,176	\$ 5,998,890
Reinsurance segment	967,799	1,167,312	1,126,167
Other underwriting	(1,073)	(115)	109
Total underwriting	8,398,788	8,207,373	7,125,166
Program services and other fronting	(1,213)	(3,983)	(5,435)
Total	\$ 8,397,575	\$ 8,203,390	\$ 7,119,731

g) The following table summarizes deferred policy acquisition costs, unearned premiums and unpaid losses and loss adjustment expenses by segment.

	Deferred Policy Acquisition Costs	Unearned Premiums	Unpaid Losses and Loss Adjustment Expenses
<i>(dollars in thousands)</i>			
December 31, 2023			
Insurance segment	\$ 708,128	\$ 4,307,704	\$ 14,221,258
Reinsurance segment	223,216	901,138	3,726,472
Other underwriting	—	7,488	165,071
Total underwriting	931,344	5,216,330	18,112,801
Program services and other fronting	—	1,426,096	5,185,553
Markel CATCo Re (see note 17)	—	—	184,967
Total	\$ 931,344	\$ 6,642,426	\$ 23,483,321
December 31, 2022			
Insurance segment	\$ 677,921	\$ 4,015,252	\$ 11,616,386
Reinsurance segment	247,562	921,541	3,581,699
Other underwriting	—	9,473	197,602
Total underwriting	925,483	4,946,266	15,395,687
Program services and other fronting	—	1,274,482	5,204,290
Markel CATCo Re (see note 17)	—	—	347,921
Total	\$ 925,483	\$ 6,220,748	\$ 20,947,898

3. Acquisitions and Dispositions

Volante

In October 2022, the Company sold its controlling interest in its Volante managing general agent companies (Volante) for total consideration of \$181.9 million, of which \$155.6 million was cash. This transaction resulted in a gain of \$118.5 million that was included in services and other revenue. Volante underwrites and administers specialty insurance and reinsurance policies and provides delegated underwriting services to third-party providers of insurance capital.

Velocity

In February 2022, the Company sold the majority of its controlling interest in its Velocity managing general agent companies (Velocity) for total cash consideration of \$181.3 million, which resulted in a gain of \$107.3 million that was included in services and other revenues. The Company retained a minority interest in Velocity.

In June 2023, the Company sold Independent Specialty Insurance Company (ISIC), a subsidiary within its program services operations, to Velocity. ISIC is a licensed insurance carrier, the value of which is attributed to its insurance licenses. This transaction resulted in a gain of \$16.9 million and was included in services and other revenues. Velocity utilizes ISIC to provide risk origination services for the Company's Nephila insurance-linked securities fund management operations, as well as for third parties.

Metromont LLC

In December 2021, the Company acquired 51% of Metromont LLC (Metromont), a precast concrete manufacturer and concrete building solutions provider for commercial projects. Under the terms of the acquisition agreement, the Company has the option to acquire the remaining equity interests and the remaining equity holders have the option to sell their interests to the Company. The redemption value of the remaining equity interests is generally based on Metromont's earnings in specified periods preceding the redemption date. Total consideration for the transaction was \$274.5 million, all of which was cash.

The purchase price was allocated to the acquired assets and liabilities of Metromont based on estimated fair value at the acquisition date. The Company recognized goodwill of \$101.6 million, intangible assets of \$230.0 million and redeemable noncontrolling interests of \$247.4 million. Goodwill is primarily attributable to expected future earnings and cash flow potential of Metromont, of which the Company's share is deductible for income tax purposes. Intangible assets include \$175.0 million of customer relationships and \$55.0 million of trade names, which are being amortized over 17 years and 15 years, respectively. Results attributable to Metromont are included in the Company's Markel Ventures segment.

Buckner HeavyLift Cranes

In August 2021, the Company acquired 90% of the holding company for the Buckner HeavyLift Cranes companies (Buckner), a provider of crane rental services for large commercial contractors. Under the terms of the acquisition agreement, the Company has the option to acquire the remaining equity interests and the remaining equity holders have the option to sell their interests to the Company in the future. The redemption value of the remaining equity interests is generally based on Buckner's earnings in specified periods preceding the redemption dates. Total consideration for the transaction was \$237.9 million, all of which was cash.

The purchase price was allocated to the acquired assets and liabilities of Buckner based on estimated fair value at the acquisition date. The Company recognized goodwill of \$109.9 million, intangible assets of \$60.0 million and fixed assets of \$290.4 million, primarily related to cranes. Goodwill is primarily attributable to expected future earnings and cash flow potential of Buckner, and it is not deductible for income tax purposes. Intangible assets include \$50.0 million of customer relationships and \$10.0 million of trade names, which are being amortized over 7 years and 15 years, respectively. Additionally, the Company assumed long-term debt of \$165.1 million and recognized redeemable noncontrolling interests of \$26.4 million. Results attributable to Buckner are included in the Company's Markel Ventures segment.

4. Investments

a) The following tables summarize the Company's available-for-sale investments. Commercial and residential mortgage-backed securities include securities issued by U.S. government-sponsored enterprises and U.S. government agencies. The net unrealized holding gains (losses) in the tables below are presented before taxes.

December 31, 2023				
<i>(dollars in thousands)</i>	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value
Fixed maturity securities:				
U.S. Treasury securities	\$ 3,811,293	\$ 35,824	\$ (62,404)	\$ 3,784,713
U.S. government-sponsored enterprises	1,225,426	7,292	(89,904)	1,142,814
Obligations of states, municipalities and political subdivisions	4,196,096	14,787	(181,578)	4,029,305
Foreign governments	1,858,845	21,450	(96,874)	1,783,421
Commercial mortgage-backed securities	2,371,406	8,605	(136,353)	2,243,658
Residential mortgage-backed securities	491,949	334	(21,861)	470,422
Corporate bonds	977,271	13,043	(71,915)	918,399
Total fixed maturity securities	<u>14,932,286</u>	<u>101,335</u>	<u>(660,889)</u>	<u>14,372,732</u>
Short-term investments	<u>2,564,620</u>	<u>7,155</u>	<u>(393)</u>	<u>2,571,382</u>
Investments, available-for-sale	<u>\$ 17,496,906</u>	<u>\$ 108,490</u>	<u>\$ (661,282)</u>	<u>\$ 16,944,114</u>
December 31, 2022				
<i>(dollars in thousands)</i>	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value
Fixed maturity securities:				
U.S. Treasury securities	\$ 3,050,089	\$ 2,363	\$ (138,493)	\$ 2,913,959
U.S. government-sponsored enterprises	871,463	154	(106,079)	765,538
Obligations of states, municipalities and political subdivisions	3,973,911	6,503	(247,231)	3,733,183
Foreign governments	1,473,658	2,843	(169,723)	1,306,778
Commercial mortgage-backed securities	2,109,721	395	(169,668)	1,940,448
Residential mortgage-backed securities	553,591	6	(26,804)	526,793
Corporate bonds	773,454	836	(104,154)	670,136
Total fixed maturity securities	<u>12,805,887</u>	<u>13,100</u>	<u>(962,152)</u>	<u>11,856,835</u>
Short-term investments	<u>2,663,560</u>	<u>5,760</u>	<u>(58)</u>	<u>2,669,262</u>
Investments, available-for-sale	<u>\$ 15,469,447</u>	<u>\$ 18,860</u>	<u>\$ (962,210)</u>	<u>\$ 14,526,097</u>

b) The following tables summarize gross unrealized investment losses on available-for-sale investments by the length of time that securities have continuously been in an unrealized loss position.

	December 31, 2023					
	Less than 12 months		12 months or longer		Total	
	Estimated Fair Value	Gross Unrealized Holding Losses	Estimated Fair Value	Gross Unrealized Holding Losses	Estimated Fair Value	Gross Unrealized Holding Losses
<i>(dollars in thousands)</i>						
Fixed maturity securities:						
U.S. Treasury securities	\$ 317,027	\$ (2,147)	\$ 1,507,784	\$ (60,257)	\$ 1,824,811	\$ (62,404)
U.S. government-sponsored enterprises	145,143	(2,134)	723,537	(87,770)	868,680	(89,904)
Obligations of states, municipalities and political subdivisions	679,124	(3,881)	2,332,281	(177,697)	3,011,405	(181,578)
Foreign governments	49,056	(128)	1,113,616	(96,746)	1,162,672	(96,874)
Commercial mortgage-backed securities	169,557	(1,792)	1,790,637	(134,561)	1,960,194	(136,353)
Residential mortgage-backed securities	20,420	(80)	431,705	(21,781)	452,125	(21,861)
Corporate bonds	34,340	(266)	615,501	(71,649)	649,841	(71,915)
Total fixed maturity securities	1,414,667	(10,428)	8,515,061	(650,461)	9,929,728	(660,889)
Short-term investments	52,601	(393)	—	—	52,601	(393)
Total	\$ 1,467,268	\$ (10,821)	\$ 8,515,061	\$ (650,461)	\$ 9,982,329	\$ (661,282)

At December 31, 2023, the Company held 1,386 available-for-sale securities in an unrealized loss position with a total estimated fair value of \$10.0 billion and gross unrealized losses of \$661.3 million. Of these 1,386 securities, 1,131 securities had been in a continuous unrealized loss position for one year or longer and had a total estimated fair value of \$8.5 billion and gross unrealized losses of \$650.5 million.

	December 31, 2022					
	Less than 12 months		12 months or longer		Total	
	Estimated Fair Value	Gross Unrealized Holding Losses	Estimated Fair Value	Gross Unrealized Holding Losses	Estimated Fair Value	Gross Unrealized Holding Losses
<i>(dollars in thousands)</i>						
Fixed maturity securities:						
U.S. Treasury securities	\$ 735,605	\$ (30,583)	\$ 1,907,922	\$ (107,910)	\$ 2,643,527	\$ (138,493)
U.S. government-sponsored enterprises	413,495	(40,488)	331,391	(65,591)	744,886	(106,079)
Obligations of states, municipalities and political subdivisions	2,474,289	(164,537)	348,943	(82,694)	2,823,232	(247,231)
Foreign governments	900,322	(115,324)	300,423	(54,399)	1,200,745	(169,723)
Commercial mortgage-backed securities	1,611,603	(117,482)	305,217	(52,186)	1,916,820	(169,668)
Residential mortgage-backed securities	516,423	(25,232)	9,342	(1,572)	525,765	(26,804)
Corporate bonds	498,406	(74,595)	153,035	(29,559)	651,441	(104,154)
Total fixed maturity securities	7,150,143	(568,241)	3,356,273	(393,911)	10,506,416	(962,152)
Short-term investments	774,480	(58)	—	—	774,480	(58)
Total	\$ 7,924,623	\$ (568,299)	\$ 3,356,273	\$ (393,911)	\$ 11,280,896	\$ (962,210)

At December 31, 2022, the Company held 1,400 available-for-sale securities in an unrealized loss position with a total estimated fair value of \$11.3 billion and gross unrealized losses of \$962.2 million. Of these 1,400 securities, 246 securities had been in a continuous unrealized loss position for one year or longer and had a total estimated fair value of \$3.4 billion and gross unrealized losses of \$393.9 million.

The Company completes a detailed analysis each quarter to assess whether the decline in the fair value of any investment below its cost basis is the result of a credit loss. All available-for-sale securities with unrealized losses are reviewed. The Company considers many factors in completing its quarterly review of securities with unrealized losses for credit-related impairment to determine whether a credit loss exists, including the extent to which fair value is below cost, the implied yield to maturity, rating downgrades of the security and whether or not the issuer has failed to make scheduled principal or interest payments. The Company also takes into consideration information about the financial condition of the issuer and industry factors that could negatively impact the issuer.

If the decline in fair value of an available-for-sale security below its amortized cost is considered to be the result of a credit loss, the Company compares the estimated present value of the cash flows expected to be collected to the amortized cost of the security. The extent to which the estimated present value of the cash flows expected to be collected is less than the amortized cost of the security represents the credit loss, which is recorded as an allowance and recognized in net income. The allowance is limited to the difference between the fair value and the amortized cost of the security. Any remaining decline in fair value represents the non-credit portion of the impairment, which is recognized in other comprehensive income. The Company did not have an allowance for credit losses for any available-for-sale securities as of December 31, 2023 or 2022.

Quarterly, the Company also considers whether it intends to sell an available-for-sale security or if it is more likely than not that it will be required to sell a security before recovery of its amortized cost. In these instances, a decline in fair value is recognized in net income based on the fair value of the security at the time of assessment, resulting in a new cost basis for the security.

c) The amortized cost and estimated fair value of fixed maturity securities at December 31, 2023 are shown below by contractual maturity.

<i>(dollars in thousands)</i>	Amortized Cost	Estimated Fair Value
Due in one year or less	\$ 1,192,021	\$ 1,179,344
Due after one year through five years	5,033,324	4,917,770
Due after five years through ten years	4,320,467	4,159,846
Due after ten years	1,523,119	1,401,692
	12,068,931	11,658,652
Commercial mortgage-backed securities	2,371,406	2,243,658
Residential mortgage-backed securities	491,949	470,422
Total fixed maturity securities	\$ 14,932,286	\$ 14,372,732

Expected maturities may differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without penalties, and the holders may have the right to put the securities back to the issuer. Based on expected maturities, the estimated average duration of fixed maturity securities at December 31, 2023 was 4.1 years.

d) The following table presents the components of net investment income.

<i>(dollars in thousands)</i>	Years Ended December 31,		
	2023	2022	2021
Interest:			
Fixed maturity securities	\$ 383,022	\$ 294,417	\$ 283,366
Short-term investments	106,747	33,493	2,475
Cash and cash equivalents	145,074	28,890	479
Dividends on equity securities	116,911	107,213	98,099
	751,754	464,013	384,419
Investment expenses	(17,222)	(17,258)	(17,002)
Net investment income	\$ 734,532	\$ 446,755	\$ 367,417

e) The following table presents the components of net investment gains (losses) included in net income (loss) and the pre-tax change in net unrealized gains (losses) included in other comprehensive income (loss). Gross realized investment gains and losses on fixed maturity securities, short-term investments and other investments were not material to the consolidated financial statements and are presented on a net basis in the following table.

<i>(dollars in thousands)</i>	Years Ended December 31,		
	2023	2022	2021
Fixed maturity securities, short-term investments and other investments:			
Net realized investment gains (losses)	\$ (42,177)	\$ (40,983)	\$ 37,908
Equity securities:			
Change in fair value of securities sold during the period	34,684	(14,884)	25,902
Change in fair value of securities held at the end of the period	1,531,547	(1,539,866)	1,914,724
Total change in fair value	1,566,231	(1,554,750)	1,940,626
Net investment gains (losses)	\$ 1,524,054	\$ (1,595,733)	\$ 1,978,534
Change in net unrealized gains (losses) on available-for-sale investments included in other comprehensive income (loss):			
Fixed maturity securities	\$ 389,498	\$ (1,474,890)	\$ (504,133)
Short-term investments	1,060	11,014	(8,951)
Net increase (decrease)	\$ 390,558	\$ (1,463,876)	\$ (513,084)

f) Total restricted assets are included on the Company's consolidated balance sheets as follows.

<i>(dollars in thousands)</i>	December 31,	
	2023	2022
Fixed maturity securities	\$ 3,102,899	\$ 2,773,386
Equity securities	1,004,347	843,719
Short-term investments	807,138	543,737
Restricted cash and cash equivalents	584,974	1,084,081
Total	\$ 5,499,358	\$ 5,244,923

The following table presents the components of restricted assets.

<i>(dollars in thousands)</i>	December 31,	
	2023	2022
Assets held in trust or on deposit to support underwriting activities	\$ 5,048,857	\$ 4,807,135
Assets pledged as security for letters of credit	450,501	437,788
Total	\$ 5,499,358	\$ 5,244,923

g) At December 31, 2023 and 2022, investments in securities issued by the U.S. Treasury, U.S. government agencies and U.S. government-sponsored enterprises were the only investments in any one issuer that exceeded 10% of shareholders' equity.

5. Fair Value Measurements

FASB ASC 820, *Fair Value Measurements and Disclosures*, establishes a three-level hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). If the inputs used to measure the assets or liabilities fall within different levels of the hierarchy, the classification is based on the lowest level input that is significant to the fair value measurement of the asset or liability.

Classification of assets and liabilities within the hierarchy considers the markets in which the assets and liabilities are traded and the reliability and transparency of the assumptions used to determine fair value. The hierarchy requires the use of observable market data when available. The levels of the hierarchy are defined as follows:

- Level 1 – Inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities traded in active markets.
- Level 2 – Inputs to the valuation methodology include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the asset or liability and market-corroborated inputs.
- Level 3 – Inputs to the valuation methodology are unobservable for the asset or liability and are significant to the fair value measurement.

In accordance with ASC 820, the Company determines fair value based on 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. In determining fair value, the Company uses various methods, including the market, income and cost approaches. The Company uses valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs. The following section describes the valuation methodologies used by the Company to measure assets and liabilities at fair value, including an indication of the level within the fair value hierarchy in which each asset or liability is generally classified.

Available-for-sale investments and equity securities. Available-for-sale investments and equity securities are recorded at fair value on a recurring basis. Available-for-sale investments include fixed maturity securities and short-term investments. Fair value is determined by the Company after considering various sources of information, including information provided by a third-party pricing service. The pricing service provides prices for substantially all of the Company's fixed maturity securities and equity securities. In determining fair value, the Company generally does not adjust the prices obtained from the pricing service. The Company obtains an understanding of the pricing service's valuation methodologies and related inputs, which include, but are not limited to, reported trades, benchmark yields, issuer spreads, bids, offers, duration, credit ratings, estimated cash flows and prepayment speeds. The Company validates prices provided by the pricing service by reviewing prices from other pricing sources and analyzing pricing data in certain instances.

The Company has evaluated the various types of securities in its investment portfolio to determine an appropriate fair value hierarchy level based upon trading activity and the observability of market inputs. Level 1 investments include those traded on an active exchange, such as the New York Stock Exchange. Level 2 investments include U.S. Treasury securities, U.S. government-sponsored enterprises, municipal bonds, foreign government bonds, commercial mortgage-backed securities, residential mortgage-backed securities and corporate debt securities. Level 3 investments include the Company's investments in insurance-linked securities funds that are in run-off, which are not traded on an active exchange and are valued using unobservable inputs.

Fair value for available-for-sale investments and equity securities is measured based upon quoted prices in active markets, if available. Due to variations in trading volumes and the lack of quoted market prices, fixed maturity securities are classified as Level 2 investments. The fair value of fixed maturity securities is normally derived through recent reported trades for identical or similar securities, making adjustments through the reporting date based upon available market observable data previously described. If there are no recent reported trades, the fair value of fixed maturity securities may be derived through the use of matrix pricing or model processes, where future cash flow expectations are developed based upon collateral performance and discounted at an estimated market rate. Significant inputs used to determine the fair value of obligations of states, municipalities and political subdivisions, corporate bonds and obligations of foreign governments include reported trades, benchmark yields, issuer spreads, bids, offers, credit information and estimated cash flows. Significant inputs used to determine the fair value of commercial mortgage-backed securities and residential mortgage-backed securities include the type of underlying assets, benchmark yields, prepayment speeds, collateral information, tranche type and volatility, estimated cash flows, credit information, default rates, recovery rates, issuer spreads and the year of issue.

Senior long-term debt and other debt. Senior long-term debt and other debt is carried at amortized cost with the estimated fair value disclosed on the consolidated balance sheets. Senior long-term debt and other debt is classified as Level 2 within the fair value hierarchy due to variations in trading volumes and the lack of quoted market prices. Fair value is generally derived through recent reported trades, making adjustments through the reporting date, if necessary, based upon available market observable data including U.S. Treasury securities and implied credit spreads. Significant inputs used to determine the fair value of senior long-term debt and other debt include reported trades, benchmark yields, issuer spreads, bids and offers.

The following tables present the balances of assets measured at fair value on a recurring basis by level within the fair value hierarchy.

	December 31, 2023			
	Level 1	Level 2	Level 3	Total
<i>(dollars in thousands)</i>				
Assets:				
Investments:				
Fixed maturity securities, available-for-sale:				
U.S. Treasury securities	\$ —	\$ 3,784,713	\$ —	\$ 3,784,713
U.S. government-sponsored enterprises	—	1,142,814	—	1,142,814
Obligations of states, municipalities and political subdivisions	—	4,029,305	—	4,029,305
Foreign governments	—	1,783,421	—	1,783,421
Commercial mortgage-backed securities	—	2,243,658	—	2,243,658
Residential mortgage-backed securities	—	470,422	—	470,422
Corporate bonds	—	918,399	—	918,399
Total fixed maturity securities, available-for-sale	—	14,372,732	—	14,372,732
Equity securities:				
Insurance, banks and other financial institutions	3,694,375	—	994	3,695,369
Industrial, consumer and all other	5,882,502	—	—	5,882,502
Total equity securities	9,576,877	—	994	9,577,871
Short-term investments, available-for-sale	2,402,099	169,283	—	2,571,382
Total investments	\$ 11,978,976	\$ 14,542,015	\$ 994	\$ 26,521,985

	December 31, 2022			
	Level 1	Level 2	Level 3	Total
<i>(dollars in thousands)</i>				
Assets:				
Investments:				
Fixed maturity securities, available-for-sale:				
U.S. Treasury securities	\$ —	\$ 2,913,959	\$ —	\$ 2,913,959
U.S. government-sponsored enterprises	—	765,538	—	765,538
Obligations of states, municipalities and political subdivisions	—	3,733,183	—	3,733,183
Foreign governments	—	1,306,778	—	1,306,778
Commercial mortgage-backed securities	—	1,940,448	—	1,940,448
Residential mortgage-backed securities	—	526,793	—	526,793
Corporate bonds	—	670,136	—	670,136
Total fixed maturity securities, available-for-sale	—	11,856,835	—	11,856,835
Equity securities:				
Insurance, banks and other financial institutions	2,952,689	—	899	2,953,588
Industrial, consumer and all other	4,718,324	—	—	4,718,324
Total equity securities	7,671,013	—	899	7,671,912
Short-term investments, available-for-sale	2,510,164	159,098	—	2,669,262
Total investments	\$ 10,181,177	\$ 12,015,933	\$ 899	\$ 22,198,009

The following table summarizes changes in Level 3 investments measured at fair value on a recurring basis.

<i>(dollars in thousands)</i>	2023	2022
Equity securities, beginning of period	\$ 899	\$ 56,472
Purchases	—	—
Sales	—	(56,335)
Net investment gains	95	762
Equity securities, end of period	\$ 994	\$ 899

Previously, Level 3 investments included the Company's investment in an insurance-linked securities fund managed by Markel CATCo Investment Management Ltd. (MCIM). In 2022, the Company's remaining investment was redeemed (\$41.3 million) in conjunction with a buy-out transaction that provided for an accelerated return of all remaining capital to investors. See note 17 for further details about the Company's Markel CATCo operations and the buy-out transaction.

Except as disclosed in note 3 and note 8, the Company did not have any assets or liabilities measured at fair value on a non-recurring basis during the years ended December 31, 2023 and 2022.

6. Equity Method Investments

The Company's equity method investments, which are included in other assets on the consolidated balance sheets, totaled \$605.9 million and \$494.0 million as of December 31, 2023 and 2022, respectively. The Company's proportionate share of earnings in its equity method investments was a loss of \$2.1 million for the year ended December 31, 2023, a loss of \$22.9 million for the year ended December 31, 2022 and income of \$15.0 million for the year ended December 31, 2021.

The Company's most significant equity method investment is an investment in Hagerty, Inc. (Hagerty), which is accounted for on a quarter lag. Hagerty is an automotive enthusiast brand offering integrated membership products and programs as well as a specialty insurance provider focused on the global automobile enthusiast market. The Company's ownership interest in Hagerty was 23% as of December 31, 2023 and 2022. The Company's investment is comprised of Class A common shares, which are listed for trading on the New York Stock Exchange, as well as Class V common shares, associated with the Company's original investment, that have special voting rights and can be converted on a one-for-one basis into Class A common shares. The Company accounts for its investment under the equity method as it is deemed to have the ability to exercise significant influence over Hagerty's operating and financial policies through a combination of its voting interest, its right to designate a board member and business it conducts with Hagerty. As of December 31, 2023 and 2022, the carrying value of the Company's investment in Hagerty was \$237.4 million and \$245.1 million, respectively.

As of December 31, 2023 and 2022, the estimated value of the Company's investment, based on the closing stock price of Hagerty's Class A common shares, was \$608.4 million and \$656.0 million, respectively. See note 18 for further details regarding related party transactions with Hagerty.

7. Receivables

The following table presents the components of receivables.

<i>(dollars in thousands)</i>	December 31,	
	2023	2022
Insurance		
Amounts receivable from agents, brokers and insureds	\$ 2,625,214	\$ 2,176,295
Other insurance receivables	117,436	83,728
Markel Ventures	657,156	645,189
Other	86,589	77,961
	3,486,395	2,983,173
Allowance for credit losses	(31,089)	(22,117)
Receivables	\$ 3,455,306	\$ 2,961,056

8. Goodwill and Intangible Assets

The following table presents a rollforward of the components of goodwill by reportable segment.

<i>(dollars in thousands)</i>	Insurance	Reinsurance	Markel Ventures	Other ⁽¹⁾	Total
January 1, 2022	\$ 774,712	\$ 122,745	\$ 1,196,590	\$ 805,093	\$ 2,899,140
Acquisitions	—	—	41,905	—	41,905
Dispositions	—	—	—	(132,455)	(132,455)
Impairment of goodwill	—	—	—	(80,000)	(80,000)
Adjustments to preliminary purchase price allocation	—	—	(83,358)	—	(83,358)
Foreign currency movements and other adjustments	(3,084)	—	(1,228)	(2,082)	(6,394)
December 31, 2022 ⁽²⁾	\$ 771,628	\$ 122,745	\$ 1,153,909	\$ 590,556	\$ 2,638,838
Adjustments to preliminary purchase price allocation	—	—	(16,752)	—	(16,752)
Foreign currency movements and other adjustments	1,195	—	497	971	2,663
December 31, 2023 ⁽²⁾	\$ 772,823	\$ 122,745	\$ 1,137,654	\$ 591,527	\$ 2,624,749

(1) Amounts included in Other reflect the Company's operations that are not included in a reportable segment and are primarily related to the Company's program services and insurance-linked securities operations.

(2) As of December 31, 2023 and 2022, goodwill was net of accumulated impairment losses of \$190.6 million, of which \$171.9 million was in Other and \$18.7 million was in Markel Ventures.

The Company completed its annual tests for goodwill and indefinite-lived intangible asset impairment as of October 1, 2023 based upon results of operations through September 30, 2023. See note 1 for further details regarding impairment testing. There was no impairment of goodwill during 2023 or 2021 and no impairment of indefinite-lived intangible assets during 2023, 2022 or 2021. For the year ended December 31, 2022, impairment of goodwill was \$80.0 million, which was attributable to our Nephila ILS operations.

Subsequent to the acquisition of Nephila in 2018, through 2022, investment performance in the broader ILS market was adversely impacted by consecutive years of elevated catastrophe losses. These events, as well as volatility in the capital markets, impacted investor decisions around allocation of capital to ILS, which in turn impacted capital raises and redemptions within the funds Nephila manages. As a result, the Company performed a quantitative impairment assessment for the Nephila reporting unit in 2022. The Company estimated the fair value of the Nephila reporting unit primarily using an income approach based on a discounted cash flow model. The discount rates used to determine the fair value estimates were developed based on a capital asset pricing model using market-based inputs, as well as an assessment of the inherent risk in projected future cash flows. As a result of the assessment, the Company recorded an impairment of goodwill attributable to Nephila totaling \$80.0 million, reducing the goodwill of the Nephila reporting unit to \$221.8 million. The Company also evaluated the intangible assets within the Nephila reporting unit for impairment and determined they were not impaired.

The following table presents a rollforward of net intangible assets by reportable segment.

<i>(dollars in thousands)</i>	Underwriting ⁽¹⁾	Market Ventures	Other ⁽²⁾	Total
January 1, 2022	\$ 401,255	\$ 766,179	\$ 655,052	\$ 1,822,486
Acquisitions	—	21,614	—	21,614
Dispositions	—	—	(2,716)	(2,716)
Amortization of intangible assets	(38,533)	(79,043)	(61,202)	(178,778)
Adjustments to preliminary purchase price allocation	—	86,773	—	86,773
Foreign currency movements and other adjustments	(400)	774	(2,289)	(1,915)
December 31, 2022	\$ 362,322	\$ 796,297	\$ 588,845	\$ 1,747,464
Dispositions	—	—	(2,000)	(2,000)
Amortization of intangible assets	(37,076)	(82,370)	(61,168)	(180,614)
Adjustments to preliminary purchase price allocation	—	22,671	—	22,671
Foreign currency movements and other adjustments	98	119	946	1,163
December 31, 2023	\$ 325,344	\$ 736,717	\$ 526,623	\$ 1,588,684

(1) Amounts included in Underwriting reflect the intangible assets associated with the Company's underwriting segments, which are not allocated between the Insurance and Reinsurance segments.

(2) Amounts included in Other reflect the Company's operations that are not included in a reportable segment and are primarily related to the Company's program services and insurance-linked securities operations.

Amortization of intangible assets is estimated to be \$175.7 million for 2024, \$169.0 million for 2025, \$160.6 million for 2026, \$150.7 million for 2027 and \$140.8 million for 2028. Indefinite-lived intangible assets were \$90.4 million and \$92.4 million at December 31, 2023 and 2022, respectively.

The following table presents the components of intangible assets.

<i>(dollars in thousands)</i>	December 31,			
	2023		2022	
	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Customer relationships	\$ 1,450,503	\$ (600,724)	\$ 1,425,330	\$ (498,987)
Investment management agreements	464,000	(149,560)	464,000	(120,394)
Broker and agent relationships	297,693	(168,586)	296,972	(152,142)
Trade names	293,270	(138,040)	293,194	(118,976)
Technology	113,248	(100,781)	113,170	(92,646)
Insurance licenses	72,333	—	74,333	—
Other	169,681	(114,353)	169,775	(106,165)
Total	<u>\$ 2,860,728</u>	<u>\$ (1,272,044)</u>	<u>\$ 2,836,774</u>	<u>\$ (1,089,310)</u>

9. Leases

The Company's leases primarily consist of operating leases for real estate and equipment and have remaining terms of up to 19 years. Total lease costs for operating leases were \$148.4 million, \$126.3 million and \$115.4 million for the years ended December 31, 2023, 2022 and 2021, respectively.

The following table summarizes details for the Company's operating leases recorded on the consolidated balance sheets.

<i>(dollars in thousands)</i>	December 31,	
	2023	2022
Right-of-use lease assets	\$ 628,833	\$ 526,704
Lease liabilities	\$ 657,217	\$ 554,394
Weighted average remaining lease term	9.8 years	11.7 years
Weighted average discount rate	5.2 %	3.1 %

During the years ended December 31, 2023, 2022 and 2021, the Company obtained operating right-of-use lease assets of \$130.2 million, \$64.4 million and \$37.6 million, respectively, in exchange for operating lease obligations.

The following table summarizes maturities of the Company's operating lease liabilities as of December 31, 2023, which reconciles to total operating lease liabilities included in other liabilities on the Company's consolidated balance sheet.

<u>Years Ending December 31,</u>	<u><i>(dollars in thousands)</i></u>
2024	\$ 125,845
2025	107,119
2026	89,952
2027	74,683
2028	65,133
2029 and thereafter	347,168
Total lease payments	809,900
Less imputed interest	(152,683)
Total operating lease liabilities	\$ 657,217

10. Products, Services and Other Revenues

The following table presents revenues from contracts with customers by type, all of which are included in products revenues and services and other revenues in the consolidated statements of income (loss) and comprehensive income (loss), along with a reconciliation to total products revenues and services and other revenues.

<i>(dollars in thousands)</i>	Years Ended December 31,								
	2023			2022			2021		
	Markel Ventures	Other	Total	Markel Ventures	Other	Total	Markel Ventures	Other	Total
Products	\$ 2,487,054	\$ —	\$ 2,487,054	\$ 2,379,399	\$ —	\$ 2,379,399	\$ 1,668,448	\$ —	\$ 1,668,448
Services	2,262,861	10,341	2,273,202	2,184,196	43,875	2,228,071	1,837,029	134,850	1,971,879
Investment management	—	99,509	99,509	—	79,209	79,209	—	86,257	86,257
Total revenues from contracts with customers	4,749,915	109,850	4,859,765	4,563,595	123,084	4,686,679	3,505,477	221,107	3,726,584
Leasing revenues	188,904	—	188,904	157,552	—	157,552	99,994	—	99,994
Program services and other fronting	—	154,838	154,838	—	147,612	147,612	—	123,823	123,823
Equity method and other investments income (loss)	(1,744)	(11,854)	(13,598)	2,541	(17,661)	(15,120)	6,133	7,184	13,317
Disposition gains	—	16,923	16,923	—	225,828	225,828	—	—	—
Other	42,693	40	42,733	32,930	1,040	33,970	32,212	1,515	33,727
Total	\$ 4,979,768	\$ 269,797	\$ 5,249,565	\$ 4,756,618	\$ 479,903	\$ 5,236,521	\$ 3,643,816	\$ 353,629	\$ 3,997,445

Receivables from contracts with customers were \$616.4 million and \$624.1 million as of December 31, 2023 and 2022, respectively.

11. Unpaid Losses and Loss Adjustment Expenses

a) The following table presents a reconciliation of consolidated beginning and ending reserves for losses and loss adjustment expenses.

	Years Ended December 31,		
	2023	2022	2021
<i>(dollars in thousands)</i>			
Gross reserves for losses and loss adjustment expenses, beginning of year	\$ 20,947,898	\$ 18,178,894	\$ 16,222,376
Reinsurance recoverables on unpaid losses, beginning of year	7,994,884	6,876,317	5,736,659
Net reserves for losses and loss adjustment expenses, beginning of year	12,953,014	11,302,577	10,485,717
Effect of foreign currency rate changes on beginning of year balance	70,344	(160,622)	(54,736)
Adjusted net reserves for losses and loss adjustment expenses, beginning of year	13,023,358	11,141,955	10,430,981
Incurred losses and loss adjustment expenses:			
Current accident year	5,360,559	4,613,035	4,061,000
Prior accident years	(38,550)	(167,446)	(478,930)
Total incurred losses and loss adjustment expenses	5,322,009	4,445,589	3,582,070
Payments:			
Current accident year	729,895	580,537	637,169
Prior accident years	2,663,165	2,396,446	2,066,290
Total payments	3,393,060	2,976,983	2,703,459
Effect of foreign currency rate changes on current year activity	(1,532)	(5,468)	(4,253)
Change in net reserves for losses and loss adjustment expenses of Markel CATCo Re (see note 17)	(162,954)	347,921	—
Net reserves for losses and loss adjustment expenses of insurance companies sold	—	—	(2,762)
Reinsurance recoverable on retroactive reinsurance transactions	(125,067)	—	—
Net reserves for losses and loss adjustment expenses, end of year	14,662,754	12,953,014	11,302,577
Reinsurance recoverables on unpaid losses, end of year	8,820,567	7,994,884	6,876,317
Gross reserves for losses and loss adjustment expenses, end of year	\$ 23,483,321	\$ 20,947,898	\$ 18,178,894

In 2023, the Company completed a retroactive reinsurance transaction to cede its portfolio of policies comprised of liabilities for its run-off book of United Kingdom (U.K.) motor casualty business in exchange for payments totaling \$125.1 million, which approximated the carrying value of the Company's reserves for losses and loss adjustment expenses on the ceded policies.

In 2023, the Company recognized losses on its intellectual property collateral protection insurance product written within the Insurance segment's professional liability product line. These losses included \$65.0 million of credit losses recognized in connection with fraudulent letters of credit that were provided by an affiliate of Vesttoo Ltd. as collateral for reinsurance purchased on two policies, which the Company believes represents its full exposure to credit losses on the related reinsurance recoverables. The Company is actively pursuing remedies to make recoveries on the reinsurance recoverables impacted by the fraudulent letters of credit and does not have any other ceded reinsurance contracts with Vesttoo Ltd. or its affiliates.

In 2023, current accident year losses and loss adjustment expenses included \$40.1 million of net losses and loss adjustment expenses attributed to the Hawaiian wildfires and Hurricane Idalia. These losses and loss adjustment expenses were net of ceded losses of \$9.3 million.

In 2022, current accident year losses and loss adjustment expenses included \$46.2 million of net losses and loss adjustment expenses attributed to Hurricane Ian. These losses and loss adjustment expenses were net of ceded losses of \$115.3 million. The Company also had gross losses and loss adjustment expenses of \$850.0 million within its program services and other fronting operations attributed to Hurricane Ian, all of which were ceded to third-party reinsurers managed through the Company's insurance-linked securities operations.

In 2022, current accident year losses and loss adjustment expenses also included \$35.7 million of net losses and loss adjustment expenses attributed to the Russia-Ukraine conflict. These losses and loss adjustment expenses were net of ceded losses of \$44.3 million.

In 2021, current accident year losses and loss adjustment expenses included \$195.0 million of net losses and loss adjustment expenses from Winter Storm Uri, European Floods and Hurricane Ida. These losses and loss adjustment expenses were net of ceded losses of \$221.7 million.

b) Reserving Methodology

The Company uses a variety of techniques to establish the liabilities for unpaid losses and loss adjustment expenses based upon estimates of the ultimate amounts payable. The Company maintains reserves for specific claims incurred and reported (case reserves) and reserves for claims incurred but not reported (IBNR reserves), which include expected development on reported claims. The Company does not discount its reserves for losses and loss adjustment expenses to reflect estimated present value, except for reserves held for a run-off book of U.K. motor business. Additionally, reserves assumed in connection with an acquisition are recorded at fair value at the acquisition date. The fair value adjustment includes an adjustment to reflect the acquired reserves for losses and loss adjustment expenses at present value plus a risk premium, the net of which is amortized to losses and loss adjustment expenses within the consolidated statements of income.

As of any balance sheet date, all claims have not yet been reported, and some claims may not be reported for many years. As a result, the liability for unpaid losses and loss adjustment expenses includes significant estimates for incurred but not reported claims.

There is normally a time lag between when a loss event occurs and when it is reported to the Company. The actuarial methods that the Company uses to estimate losses have been designed to address the lag in loss reporting as well as the delay in obtaining information that would allow the Company to more accurately estimate future payments. There is also often a time lag between cedents establishing case reserves or re-estimating their reserves and notifying the Company of those new or revised case reserves. As a result, the reporting lag is more pronounced in reinsurance contracts than in the insurance contracts. On reinsurance transactions, the reporting lag will generally be 60 to 90 days after the end of a reporting period, but can be longer in some cases. There may also be a more pronounced reporting lag, as well as reliance on third-party claims handling practices and reserve estimates, on insurance contracts for which the Company is not the primary insurer and participates only in excess layers of loss. Based on the experience of the Company's actuaries and management, the Company selects loss development factors and trending techniques to mitigate the difficulties caused by reporting lags. At least annually, the Company evaluates its loss development factors and trending assumptions using its own loss data, as well as cedent-specific and industry data, and updates them as needed.

IBNR reserves are based on the estimated ultimate cost of settling claims, including the effects of inflation and other social and economic factors, using past experience adjusted for current trends and any other factors that would modify past experience. IBNR reserves are calculated by subtracting paid losses and loss adjustment expenses and case reserves from estimated ultimate losses and loss adjustment expenses. IBNR reserves were 72% of total unpaid losses and loss adjustment expenses at December 31, 2023 compared to 70% at December 31, 2022.

In establishing liabilities for unpaid losses and loss adjustment expenses, the Company's actuaries estimate an ultimate loss ratio, by accident year or underwriting year, for each product line with input from underwriting and claims personnel. For product lines in which loss reserves are established on an underwriting year basis, the Company has developed a methodology to convert from underwriting year to accident year for financial reporting purposes. In estimating an ultimate loss ratio for a particular line of business, the actuaries may use one or more actuarial reserving methods and select from these a single point estimate. To varying degrees, these methods include detailed statistical analysis of past claim reporting, settlement activity, claim frequency and severity, policyholder loss experience, industry loss experience and changes in market and economic conditions, policy forms and exposures. Greater judgment may be required when new product lines are introduced or when there have been changes in claims handling practices, as the statistical data available may be insufficient. Greater judgment also may be required for product lines that experience a low frequency of high severity claims, particularly when the Company is reliant on third party case reserve estimates and claims handling practices. These estimates also reflect implicit and explicit assumptions regarding the potential effects of external factors, including economic and social inflation, judicial decisions, changes in law, general economic conditions and recent trends in these factors. Management believes the process of evaluating past experience, adjusted for the effects of current developments and anticipated trends, is an appropriate basis for predicting future events.

Estimates for losses from widespread catastrophic events, such as hurricanes and earthquakes, as well as pandemics and wars, are based on claims received to date, industry loss estimates and output from both industry, broker and proprietary models, as well as analysis of the Company's ceded reinsurance contracts. The Company may also perform detailed policy and reinsurance contract level reviews. The level of reliance on these procedures varies depending on the timing of the event relative to the point at which the Company develops its estimates. The Company also considers loss experience on historical events that may have similar characteristics to the underlying event and current market conditions, including the level of economic inflation. In the period shortly after an event occurs, more weight is put on modeling and industry estimates, whereas with the passage of time, greater reliance is placed on incurred claims data and historical claim patterns. Due to the inherent uncertainty in estimating such losses, these estimates are subject to variability, which increases with the severity and complexity of the underlying event. As additional claims are reported and paid, and industry loss estimates are revised, the Company incorporates this new information into its analysis and adjusts its estimate of ultimate losses and loss adjustment expenses as appropriate.

Loss reserves are established at management's best estimate, which is developed using the actuarially calculated point estimate as the starting point. The actuarial point estimate represents the actuaries' estimate of the most likely amount that will ultimately be paid to settle the losses that have occurred at a particular point in time; however, there is inherent uncertainty in the point estimate as it is the expected value in a range of possible reserve estimates. Similarly, the point estimate for ceded losses is calculated based on the ultimate gross loss amount expected to be paid, as well as the frequency and severity of the underlying claims, which ultimately determines coverage under the applicable ceded reinsurance contracts. Therefore, ceded loss estimates are subject to many of the same judgments and assumptions as the gross loss estimates. In some cases, actuarial analyses, which are generally based on statistical analysis, cannot fully incorporate all of the subjective factors that affect development of losses. In other cases, management's perspective of these more subjective factors may differ from the actuarial perspective. Subjective factors influencing the development of management's best estimate include: the credibility and timeliness of claims and loss information received from cedents and other third parties; and the impacts of economic and social inflation, judicial decisions, changes in law, changes in underwriting or claims handling practices, general economic conditions, the risk of moral hazard and other current and developing trends within the insurance and reinsurance markets, including the effects of competition. For example, the Company's loss experience in recent years has reflected higher than anticipated levels of economic inflation, as well as the impacts of social inflation, including the rising cost to adjust and settle claims and the impact of more pervasive litigation financing trends.

Inherent in the Company's reserving practices is the desire to establish loss reserves that are more likely redundant than deficient, and therefore, will ultimately prove to be adequate. This approach to establishing loss reserves typically results in loss reserves that exceed the calculated actuarial point estimate. However, following an acquisition of insurance operations, acquired reserves initially are recorded at fair value, and therefore the acquired loss reserves may be closer to the actuarial point estimate until the Company builds total loss reserves that are consistent with the Company's historic level of confidence. Management continually attempts to improve its loss estimation process by refining its ability to analyze loss development patterns, claim payments and other information, but uncertainty remains regarding the potential for adverse development of estimated ultimate liabilities.

The Company's ultimate liability may be greater or less than current reserves. Changes in the Company's estimated ultimate liability for loss reserves generally occur as a result of the emergence of unanticipated loss activity, the completion of specific actuarial or claims studies or changes in internal or external factors that impact the assumptions used to derive the Company's estimates. The Company closely monitors new information on reported claims and uses statistical analyses prepared by its actuaries to evaluate the adequacy of recorded reserves. Management exercises judgment when assessing the relative credibility of loss development trends.

Management currently believes the Company's gross and net reserves are adequate. However, there is no precise method for evaluating the impact of any significant factor on the adequacy of reserves, and actual results will differ from original estimates.

c) Prior Accident Year Loss Development

The following tables summarize, by segment, the product lines with the most significant changes in prior accident years loss reserves for the years ended December 31, 2023, 2022 and 2021, along with the corresponding accident years and the trends and factors that impacted management's best estimate of ultimate losses and loss adjustment expenses on underlying products in each of these product lines. The Company does not estimate losses at this level of aggregation as it offers a diverse portfolio of products and manages these products in logical groupings within each underwriting segment. As a result of the trends and factors described in the following tables, the Company's actuaries adjusted their estimates of the ultimate liability for unpaid losses and loss adjustment expenses. For those product lines with favorable development on prior accident years loss reserves, management has now given more credibility to the favorable trends observed by the Company's actuaries and after also incorporating these favorable trends into its best estimate, reduced prior years loss reserves accordingly. The unfavorable claims and loss trends experienced on the Company's U.S. and Bermuda general liability and professional liability product lines in 2023 and 2022 reflected broader market conditions, including the effects of economic and social inflation, and disrupted the development of the claims trend observed in 2021 and prior years. In 2022, these changes in trends were most impactful on the 2018 and 2019 accident years for the professional liability product lines and the 2016 to 2019 accident years for the general liability product lines. In 2023, we continued to observe similar trends on those accident years and also determined that the loss trends on more recent accident years were following a similar loss development trend at the same stage as older accident years. Consistent with the Company's reserving philosophy, management is responding quickly to increase loss reserves following any indication of increased claims frequency or severity in excess of previous expectations, however in instances where trends have been more favorable than previously anticipated, management will wait to reduce loss reserves until those trends are observed over additional periods of time.

	Year Ended December 31, 2023		
	Loss Development	Accident Years with Most Significant Development	Trends and Factors Impacting Loss Estimates
<i>(dollars in millions)</i>			
Insurance segment:			
General liability			
U.S. and Bermuda	\$ 274.0	2016 to 2021	Increased frequency of large claims and unfavorable loss cost trends, primarily on primary casualty contractors' liability and excess and umbrella product lines
International	(36.5)	2020 to 2022	Lower loss frequency and severity than previously anticipated
Professional liability			
U.S. and Bermuda	56.8	Several	Increased frequency of large claims and unfavorable loss cost trends, primarily on risk-managed errors and omissions product line
International	(102.2)	2020	Lower loss frequency and severity than previously anticipated
Property	(95.1)	2020 to 2022	Lower loss severity than previously anticipated and net favorable development on catastrophe events
Marine and energy	(76.5)	2021 and 2022	Lower loss severity than previously anticipated
Personal lines	(42.8)	2022	Lower loss frequency and severity than previously anticipated
Workers' compensation	(36.5)	2021 and 2022	Lower loss severity than previously anticipated
Other products	(45.9)		
Total Insurance	<u>(104.7)</u>		
Reinsurance segment:			
General liability	95.5	2015 to 2021	Large reported claims and adverse loss development trends
Public entity	53.7	2014 to 2019	Increased frequency of large claims on a segment of business that we discontinued writing in 2020
Premium adjustments	11.4	2021 and 2022	Recognition of additional exposures on prior accident years related to net favorable premium adjustments primarily on general liability, partially offset by reduced exposures recognized primarily on professional liability
Property	(21.6)	2017 to 2019	More favorable loss experience and lower loss severity than previously anticipated
Workers' compensation	(14.9)	Several	Lower loss frequency and severity than previously anticipated
Other products	(67.0)		
Total Reinsurance	<u>57.1</u>		
Other underwriting	<u>9.0</u>		
Total decrease	<u>\$ (38.6)</u>		

Year Ended December 31, 2022

<i>(dollars in millions)</i>	Loss Development	Accident Years with Most Significant Development	Trends and Factors Impacting Loss Estimates
Insurance segment:			
Professional liability			
2018 and 2019 accident years	\$ 121.0	2018 and 2019	Unfavorable claims settlements and increased claim frequency and severity, primarily on directors and officers, errors and omissions and employment practices liability lines
All other accident years	(91.1)	Several	More favorable loss experience and lower loss severity than previously anticipated
General liability			
2016 to 2019 accident years	61.6	2016 to 2019	Unfavorable claims settlements and increased claim frequency and severity, primarily on contractors and excess and umbrella lines
All other accident years	(20.5)	Several	Lower loss frequency and severity than previously anticipated
Workers' compensation Programs	(62.1)	2016 to 2021	Lower loss severity than previously anticipated
	(48.3)	2020 and 2021	Lower than expected frequency of claims
Property	(48.1)	2020 and 2021	Lower loss severity than originally anticipated as well as favorable development on COVID-19
Credit and surety	(31.7)	2019 to 2021	Lower than expected frequency of claims
Other products	(23.7)		
Total Insurance	<u>(142.9)</u>		
Reinsurance segment:			
Property	(29.2)	2017 to 2019	Favorable development on catastrophe events
Credit and surety	(22.9)	Several	Favorable commutations on mortgage insurance contracts
Premium adjustments	53.1	2020 and 2021	Recognition of additional exposures on prior accident years related to net favorable premium adjustments primarily on general liability, credit and surety and professional liability
Other products	(27.1)		
Total Reinsurance	<u>(26.1)</u>		
Other underwriting	1.6		
Total decrease	<u>\$ (167.4)</u>		

Year Ended December 31, 2021

<i>(dollars in millions)</i>	Loss Development	Accident Years with Most Significant Development	Trends and Factors Impacting Loss Estimates
Insurance segment:			
General liability	\$ (139.7)	Several	Lower than expected frequency of claims and more favorable experience than originally anticipated across several sub-product lines
Property	(96.5)	2018 to 2020	Lower than expected frequency of large claims as well as favorable development on COVID-19 and catastrophe events
Workers' compensation	(79.0)	Several	Lower loss severity than originally anticipated
Marine and energy	(60.0)	2018 to 2020	Lower loss frequency and severity than originally anticipated
Professional liability	(54.7)	Several	Lower loss frequency and severity than originally anticipated
Other products	(76.4)		
Total Insurance	<u>(506.3)</u>		
Reinsurance segment:			
Property	35.0	2020	Adverse development on COVID-19 and catastrophe events
Professional liability	29.2	Several	Recognition of additional exposures on prior accident years related to net favorable premium adjustments
General liability	(19.2)	2011, 2012, 2017 and 2020	Favorable development on COVID-19 and catastrophe events as well as lower than expected paid losses on reported claims
Credit and surety	(16.6)	2020	Favorable commutations on mortgage insurance contracts
Other products	(8.5)		
Total Reinsurance	<u>19.9</u>		
Other	6.6		
Total decrease	<u>\$ (479.8)</u>		

d) Historic Loss Development

The following tables present undiscounted loss development information, by accident year, for the Company's Insurance and Reinsurance segments, including cumulative incurred and paid losses and allocated loss adjustment expenses, net of reinsurance, as well as the corresponding amount of IBNR reserves as of December 31, 2023. This level of disaggregation is consistent with how the Company analyzes loss reserves for both internal and external reporting purposes. The loss development information for the years ended December 31, 2014 through 2022 is presented as supplementary information. All amounts included in the following tables related to transactions denominated in a foreign currency have been translated into U.S. Dollars using the exchange rates in effect at December 31, 2023.

The difference between the segment loss development implied by the tables for the year ended December 31, 2023 and actual losses and loss adjustment expenses recognized on prior accident years for the Insurance and Reinsurance segments for the year ended December 31, 2023 is primarily attributed to the fact that amounts presented in these tables exclude amounts attributed to the 2013 and prior accident years. Favorable development on 2013 and prior accident years for the year ended December 31, 2023 totaled \$25.9 million for the Insurance segment, reflecting modest favorable development on the segment's professional liability, marine and energy and general liability product lines. Favorable development on 2013 and prior accident years for the year ended December 31, 2023 totaled \$69.4 million for the Reinsurance segment, which was due in part to lower loss severity than previously anticipated on the segment's professional liability and property product lines. Additionally, within the Reinsurance segment, net reserves on the 2014 and 2015 accident years decreased \$28.1 million as a result of reserves ceded in connection with the retroactive reinsurance transaction related to the Company's run-off book of U.K. motor casualty business completed in 2023.

The remaining difference between the segment loss development implied by the tables for the year ended December 31, 2023 and actual losses and loss adjustment expenses on prior accident years is attributed to the fact that amounts presented in these tables exclude unallocated loss adjustment expenses and amounts attributable to reserve discounting, as well as differences in the presentation of foreign currency movements, as previously described, none of which are material to the Insurance or Reinsurance segments.

The Insurance segment table that follows also includes claim frequency information, by accident year. The Company defines a claim as a single claim incident, per policy, which may include multiple claimants and multiple coverages on a single policy. Claim counts include claims closed without a payment as well as claims where the Company is monitoring to determine if an exposure exists, even if a reserve has not been established.

All of the business contained within the Company's Reinsurance segment represents treaty business that is assumed from other insurance or reinsurance companies, for which the Company does not have access to the underlying claim counts. Further, this business includes both quota share and excess of loss treaty reinsurance, through which only a portion of each reported claim results in losses to the Company. As such, the Company has excluded claim count information from the Reinsurance segment disclosures.

Insurance Segment

<i>(dollars in millions)</i>	Ultimate Incurred Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance										Total of Incurred-but-Not-Reported Liabilities, Net of Reinsurance	Cumulative Number of Reported Claims
	Unaudited											
	As of December 31,											
Accident Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	December 31, 2023	
2014	\$1,859.0	\$1,690.3	\$1,622.7	\$1,565.5	\$1,517.2	\$1,496.0	\$1,469.3	\$1,466.2	\$1,446.3	\$ 1,431.5	\$ 30.1	86,000
2015		1,778.1	1,704.8	1,582.0	1,527.9	1,497.2	1,464.9	1,460.6	1,450.4	1,470.7	67.8	90,000
2016			1,866.1	1,862.7	1,763.4	1,710.1	1,683.4	1,676.2	1,687.9	1,742.5	123.9	100,000
2017				2,321.4	2,190.6	2,071.0	2,009.3	2,016.2	2,035.4	2,122.9	138.2	138,000
2018					2,444.6	2,339.2	2,215.0	2,074.1	2,166.1	2,347.4	216.2	191,000
2019						2,569.4	2,421.1	2,257.8	2,308.4	2,486.8	296.4	227,000
2020							3,202.3	2,987.6	2,928.0	2,867.6	770.7	182,000
2021								3,103.7	2,926.7	2,770.9	986.7	143,000
2022									3,767.7	3,385.5	1,765.5	149,000
2023										4,461.3	3,324.3	135,000
Total										<u>\$25,087.1</u>		

	Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance									
	Unaudited									
	As of December 31,									
Accident Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
2014	\$ 331.0	\$ 656.1	\$ 891.0	\$1,058.2	\$1,163.3	\$1,246.9	\$1,290.0	\$1,315.7	\$1,347.1	\$ 1,365.4
2015		321.8	663.0	874.0	1,037.7	1,147.1	1,215.0	1,266.8	1,299.4	1,335.3
2016			371.3	750.0	979.0	1,164.5	1,269.7	1,357.6	1,434.0	1,488.3
2017				437.2	988.2	1,281.2	1,469.8	1,628.1	1,749.7	1,850.1
2018					494.1	1,023.8	1,292.9	1,507.0	1,684.4	1,871.4
2019						526.0	995.8	1,269.8	1,584.0	1,920.3
2020							571.2	1,155.2	1,525.0	1,783.2
2021								475.0	989.7	1,363.0
2022									486.2	1,063.6
2023										598.9
Total										<u>\$14,639.5</u>
All outstanding liabilities for unpaid losses and loss adjustment expenses before 2014, net of reinsurance										<u>258.2</u>
Total liabilities for unpaid losses and loss adjustment expenses, net of reinsurance										<u>\$10,705.8</u>

Variability in claim counts is primarily attributable to claim counts on pet health liability, a product which has a high claim frequency and low claim severity. The Company did not write this product from 2014 to 2016. Additionally, there was an elevated number of claims on this product line in 2018, 2019 and 2020. The related net incurred losses and allocated loss adjustment expenses are not material to the Insurance segment.

Reinsurance Segment

Ultimate Incurred Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance											Total of Incurred- but-Not- Reported Liabilities, Net of Reinsurance
Unaudited										As of December 31,	
As of December 31,											
<i>(dollars in millions)</i>											December 31, 2023
Accident Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
2014	\$ 572.6	\$ 557.1	\$ 529.5	\$ 571.8	\$ 550.4	\$ 526.9	\$ 511.3	\$ 512.7	\$ 508.1	\$ 477.1	\$ 46.0
2015		525.3	511.2	528.1	519.3	508.1	502.8	490.5	490.7	503.2	81.9
2016			513.8	523.6	523.0	521.3	531.1	554.8	558.3	580.3	62.7
2017				899.5	932.5	937.8	939.0	911.0	923.0	934.8	80.3
2018					748.1	772.9	765.5	770.0	765.7	829.3	157.8
2019						661.6	675.5	689.2	700.2	726.1	174.2
2020							681.3	735.0	745.2	764.7	286.6
2021								738.6	739.7	760.8	379.3
2022									664.2	604.5	483.0
2023										660.6	607.2
Total										<u>\$ 6,841.4</u>	

Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance										
Unaudited										As of December 31,
As of December 31,										
Accident Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
2014	\$ 97.6	\$ 156.4	\$ 222.5	\$ 269.5	\$ 306.0	\$ 339.6	\$ 357.3	\$ 373.9	\$ 384.3	\$ 398.1
2015		63.7	132.0	204.1	255.0	302.3	327.2	347.1	364.0	380.2
2016			79.3	168.8	239.3	295.8	347.8	381.6	421.9	455.7
2017				157.6	358.5	480.0	562.1	625.7	694.9	749.9
2018					87.1	240.5	341.3	411.3	481.5	551.0
2019						53.6	172.3	266.3	357.4	441.5
2020							94.0	204.6	311.1	384.5
2021								79.6	188.4	284.0
2022									24.2	66.9
2023										27.3
Total										<u>\$ 3,739.1</u>
All outstanding liabilities for unpaid losses and loss adjustment expenses before 2014, net of reinsurance										<u>210.1</u>
Total liabilities for unpaid losses and loss adjustment expenses, net of reinsurance										<u>\$ 3,312.4</u>

The following table presents supplementary information about average historical claims duration as of December 31, 2023 based on the cumulative incurred and paid losses and allocated loss adjustment expenses presented above.

Unaudited	Average Annual Percentage Payout of Incurred Losses by Age (in Years), Net of Reinsurance									
	1	2	3	4	5	6	7	8	9	10
Insurance	19.4 %	21.2 %	13.3 %	10.4 %	8.2 %	5.8 %	3.9 %	2.4 %	2.3 %	1.3 %
Reinsurance	11.2 %	14.8 %	13.1 %	9.9 %	8.8 %	6.7 %	5.1 %	4.2 %	2.7 %	2.9 %

The following table reconciles the net incurred and paid loss development tables to the liability for losses and loss adjustment expenses on the consolidated balance sheet.

<i>(dollars in thousands)</i>	<u>December 31, 2023</u>
Net outstanding liabilities	
Insurance segment	\$ 10,705,776
Reinsurance segment	3,312,405
Other underwriting	71,575
Program services and other fronting	10,092
Markel CATCo Re (see note 17)	<u>184,967</u>
Liabilities for unpaid losses and loss adjustment expenses, net of reinsurance	<u>14,284,815</u>
Reinsurance recoverable on unpaid losses	
Insurance segment	3,168,100
Reinsurance segment	387,366
Other underwriting	88,701
Program services and other fronting	<u>5,176,400</u>
Total reinsurance recoverable on unpaid losses	<u>8,820,567</u>
Unallocated loss adjustment expenses	<u>377,939</u>
Total gross liability for unpaid losses and loss adjustment expenses	<u>\$ 23,483,321</u>

e) The Company has exposure to asbestos and environmental (A&E) claims primarily resulting from policies written by acquired insurance operations before their acquisition by the Company. The Company's exposure to A&E claims originated from umbrella, excess and commercial general liability insurance policies and assumed reinsurance contracts that were written on an occurrence basis from the 1970s to mid-1980s. Exposure also originated from claims-made policies that were designed to cover environmental risks provided that all other terms and conditions of the policy were met. A&E claims include property damage and clean-up costs related to pollution, as well as personal injury allegedly arising from exposure to hazardous materials. Development on A&E loss reserves is monitored separately from the Company's ongoing underwriting operations and is not included in a reportable segment.

At December 31, 2023, A&E reserves were \$132.5 million and \$39.6 million on a gross and net basis, respectively. At December 31, 2022, A&E reserves were \$153.2 million and \$54.5 million on a gross and net basis, respectively.

The Company's reserves for losses and loss adjustment expenses related to A&E exposures represent management's best estimate of ultimate settlement values based on statistical analysis of these reserves by the Company's actuaries. A&E exposures are subject to significant uncertainty due to potential loss severity and frequency resulting from the uncertain and unfavorable legal climate. A&E reserves could be subject to increases in the future, however, management believes the Company's gross and net A&E reserves at December 31, 2023 are adequate.

12. Reinsurance

In reinsurance and retrocession transactions, an insurance or reinsurance company transfers, or cedes, all or part of its exposure in return for a premium. The ceding of insurance does not legally discharge the Company from its primary liability for the full amount of the policies, and the Company will be required to pay the loss and bear collection risk if the reinsurer fails to meet its obligations under the reinsurance or retrocessional agreement. A credit risk exists with ceded reinsurance to the extent that any reinsurer is unable to meet the obligations assumed under the reinsurance or retrocessional contracts. Allowances are established for credit losses expected to be recognized over the life of the reinsurance recoverables.

Within its underwriting operations, the Company uses reinsurance and retrocessional reinsurance to manage its net retention on individual risks and overall exposure to losses while providing it with the ability to offer policies with sufficient limits to meet policyholder needs.

Within the Company's underwriting operations, balances recoverable at December 31, 2023 from the ten largest reinsurers, by group, represented 65% of the \$4.0 billion reinsurance recoverables before considering reinsurance allowances and collateral. As of December 31, 2022, balances recoverable from the ten largest reinsurers, by group, represented 62% of the \$3.1 billion reinsurance recoverables before considering reinsurance allowances and collateral. At December 31, 2023, the largest reinsurance balance was due from RenaissanceRe and represented 17% of reinsurance recoverables before considering reinsurance allowances and collateral.

Within its program services and other fronting businesses, the Company generally enters into quota share reinsurance agreements whereby the Company cedes to the capacity providers (reinsurers) substantially all of its gross liability under all policies issued by and on behalf of the Company by a general agent. However, there are certain programs that contain limits on the reinsurers' obligations to the Company that expose the Company to underwriting risk, including loss ratio caps, exclusions of the credit risk of producers and aggregate reinsurance limits that the Company believes are unlikely to be exceeded. The Company also remains exposed to the credit risk of the reinsurer, or the risk that one of its reinsurers becomes insolvent or otherwise unable or unwilling to pay policyholder claims. This credit risk is generally mitigated by either selecting well capitalized, highly rated authorized capacity providers or requiring that the capacity provider post substantial collateral to secure the reinsured risks, which, in some instances, exceeds the related reinsurance recoverable.

Within the Company's program services business, balances recoverable at December 31, 2023 from the ten largest reinsurers, by group, represented 56% of the \$4.9 billion reinsurance recoverables before considering reinsurance allowances and collateral. As of December 31, 2022, balances recoverable from the ten largest reinsurers, by group, represented 67% of the \$4.9 billion reinsurance recoverables before considering reinsurance allowances and collateral. At December 31, 2023, the largest reinsurance balance was due from Knight Insurance Company and represented 10% of reinsurance recoverables before considering reinsurance allowances and collateral. All of the Company's other fronting business is conducted on behalf of its Nephila ILS operations; therefore, all of the reinsurance recoverables within these operations are attributable to entities it manages. See note 18.

The following tables summarize the effect of reinsurance and retrocessional reinsurance on premiums written and earned.

<i>(dollars in thousands)</i>	Year Ended December 31, 2023			
	Direct	Assumed	Ceded	Net Premiums
Underwriting:				
Written	\$ 8,657,266	\$ 1,620,366	\$ (1,878,844)	\$ 8,398,788
Earned	\$ 8,363,710	\$ 1,616,630	\$ (1,683,648)	\$ 8,296,692
Program services and other fronting:				
Written	2,649,217	1,075,388	(3,725,818)	(1,213)
Earned	2,636,179	937,400	(3,574,792)	(1,213)
Consolidated:				
Written	<u>\$ 11,306,483</u>	<u>\$ 2,695,754</u>	<u>\$ (5,604,662)</u>	<u>\$ 8,397,575</u>
Earned	<u>\$ 10,999,889</u>	<u>\$ 2,554,030</u>	<u>\$ (5,258,440)</u>	<u>\$ 8,295,479</u>
<i>(dollars in thousands)</i>	Year Ended December 31, 2022			
	Direct	Assumed	Ceded	Net Premiums
Underwriting:				
Written	\$ 8,085,812	\$ 1,761,726	\$ (1,640,165)	\$ 8,207,373
Earned	\$ 7,379,766	\$ 1,589,920	\$ (1,378,191)	\$ 7,591,495
Program services and other fronting:				
Written	2,644,138	710,006	(3,358,127)	(3,983)
Earned	2,688,804	656,885	(3,349,392)	(3,703)
Consolidated:				
Written	<u>\$ 10,729,950</u>	<u>\$ 2,471,732</u>	<u>\$ (4,998,292)</u>	<u>\$ 8,203,390</u>
Earned	<u>\$ 10,068,570</u>	<u>\$ 2,246,805</u>	<u>\$ (4,727,583)</u>	<u>\$ 7,587,792</u>

<i>(dollars in thousands)</i>	Year Ended December 31, 2021			
	Direct	Assumed	Ceded	Net Premiums
Underwriting:				
Written	\$ 6,863,229	\$ 1,622,700	\$ (1,360,763)	\$ 7,125,166
Earned	\$ 6,275,078	\$ 1,482,755	\$ (1,250,392)	\$ 6,507,441
Program services and other fronting:				
Written	2,644,955	307,798	(2,958,188)	(5,435)
Earned	2,453,990	261,591	(2,719,993)	(4,412)
Consolidated:				
Written	<u>\$ 9,508,184</u>	<u>\$ 1,930,498</u>	<u>\$ (4,318,951)</u>	<u>\$ 7,119,731</u>
Earned	<u>\$ 8,729,068</u>	<u>\$ 1,744,346</u>	<u>\$ (3,970,385)</u>	<u>\$ 6,503,029</u>

Substantially all of the premiums written and earned in the Company's program services and other fronting operations for the years ended December 31, 2023, 2022 and 2021 were ceded. The percentage of consolidated ceded earned premiums to gross earned premiums was 39%, 38% and 38% for the years ended December 31, 2023, 2022 and 2021, respectively. The percentage of consolidated assumed earned premiums to net earned premiums was 31%, 30% and 27% for the years ended December 31, 2023, 2022 and 2021, respectively.

Substantially all of the incurred losses and loss adjustment expenses in the Company's program services and other fronting operations were ceded. These losses totaled \$2.5 billion and \$3.0 billion for the years ended December 31, 2023 and 2022, respectively.

The following table summarizes the effect of reinsurance and retrocessional reinsurance on losses and loss adjustment expenses in the Company's underwriting operations.

<i>(dollars in thousands)</i>	Years ended December 31,		
	2023	2022	2021
Gross losses and loss adjustment expenses	\$ 6,817,630	\$ 5,281,424	\$ 4,477,752
Ceded losses and loss adjustment expenses	(1,496,265)	(834,648)	(893,230)
Net losses and loss adjustment expenses	<u>\$ 5,321,365</u>	<u>\$ 4,446,776</u>	<u>\$ 3,584,522</u>

13. Life and Annuity Benefits

The Company's run-off block of life and annuity reinsurance contracts consists primarily of Euro and U.S. Dollar denominated life-contingent payout annuities and traditional and universal life contracts. The following table presents the components of the Company's liabilities for life and annuity benefits.

<i>(dollars in thousands)</i>	December 31,	
	2023	2022
Liability for future policyholder benefits ⁽¹⁾	\$ 557,763	\$ 554,366
Deferred profit liability	52,287	48,569
Other	39,004	47,786
Total	<u>\$ 649,054</u>	<u>\$ 650,721</u>

⁽¹⁾ The undiscounted liability for future policyholder benefits was \$824.6 million and \$861.3 million as of December 31, 2023 and 2022, respectively.

The primary component of the Company's liabilities for life and annuity benefits is the liability for future policyholder benefits. Life and annuity benefit reserves are calculated for aggregated cohorts of contracts, which are determined based on the attributes of the underlying contracts, and are discounted using standard actuarial techniques and cash flow models. Since the development of the life and annuity reinsurance reserves is based upon cash flow projection models, the Company makes estimates and assumptions based on cedent experience and industry mortality tables. The cash flow assumptions used to determine the Company's life and annuity benefit reserves are reviewed, and updated as necessary, at least annually. The discount rate assumptions are updated at each reporting date. There were no changes to the cash flow assumptions used to measure the Company's life and annuity benefit reserves in 2023, 2022 and 2021. The following table presents a rollforward of the present value of the liability for future policyholder benefits.

	Years Ended December 31,		
	2023	2022	2021
<i>(dollars in thousands)</i>			
Liability for future policyholder benefits, beginning of year	\$ 554,366	\$ 821,632	\$ 976,905
Liability for future policyholder benefits at original discount rate, beginning of year	667,761	745,313	838,041
Effect of changes in cash flow assumptions	—	—	—
Effect of actual variances from expected experience	(5,890)	(3,859)	(4,208)
Adjusted liability for future policyholder benefits, beginning of year	661,871	741,454	833,833
Interest accretion	14,889	15,625	17,992
Benefit payments	(52,588)	(53,232)	(60,277)
Effect of foreign currency rate changes	18,705	(36,086)	(46,235)
Liability for future policyholder benefits at original discount rate, end of year	642,877	667,761	745,313
Cumulative effect of changes in discount rate assumptions	(85,114)	(113,395)	76,319
Liability for future policyholder benefits, end of year	\$ 557,763	\$ 554,366	\$ 821,632

The following table summarizes additional details for the Company's liability for future policyholder benefits.

	December 31,	
	2023	2022
Weighted-average interest rate:		
Interest accretion rate	2.3 %	2.3 %
Current discount rate	3.8 %	4.3 %
Weighted-average liability duration	8.6 years	8.6 years

14. Senior Long-Term Debt and Other Debt

The following table summarizes the Company's senior long-term debt and other debt.

	December 31,	
	2023	2022
<i>(dollars in thousands)</i>		
3.625% unsecured senior notes, due March 30, 2023, interest payable semi-annually, net of unamortized discount of \$50 in 2022	—	249,940
3.50% unsecured senior notes, due November 1, 2027, interest payable semi-annually, net of unamortized discount of \$876 in 2023 and \$1,161 in 2022	298,869	298,502
3.35% unsecured senior notes, due September 17, 2029, interest payable semi-annually, net of unamortized discount of \$1,421 in 2023 and \$1,668 in 2022	298,294	297,997
7.35% unsecured senior notes, due August 15, 2034, interest payable semi-annually, net of unamortized discount of \$731 in 2023 and \$800 in 2022	129,076	129,004
5.0% unsecured senior notes, due March 30, 2043, interest payable semi-annually, net of unamortized discount of \$4,311 in 2023 and \$4,535 in 2022	245,451	245,214
5.0% unsecured senior notes, due April 5, 2046, interest payable semi-annually, net of unamortized discount of \$5,445 in 2023 and \$5,689 in 2022	493,860	493,585
4.30% unsecured senior notes, due November 1, 2047, interest payable semi-annually, net of unamortized discount of \$3,516 in 2023 and \$3,669 in 2022	295,870	295,691
5.0% unsecured senior notes, due May 20, 2049, interest payable semi-annually, net of unamortized discount of \$6,639 in 2023 and \$6,900 in 2022	592,233	591,927
4.15% unsecured senior notes, due September 17, 2050, interest payable semi-annually, net of unamortized discount of \$4,740 in 2023 and \$4,917 in 2022	494,546	494,342
3.45% unsecured senior notes, due May 7, 2052, interest payable semi-annually, net of unamortized discount of \$7,904 in 2023 and \$8,182 in 2022	591,000	590,689
Other debt, with a weighted average interest rate of 5.0% in 2023 and 3.4% in 2022	340,597	416,738
Senior long-term debt and other debt	<u>\$ 3,779,796</u>	<u>\$ 4,103,629</u>

In March 2023, the Company retired its 3.625% unsecured senior notes due March 30, 2023 (\$249.9 million aggregate principal outstanding at December 31, 2022).

The Company's 7.35% unsecured senior notes due August 15, 2034 are not redeemable. The Company's other unsecured senior notes are redeemable by the Company at any time, subject to payment of a make-whole premium to the noteholders. None of the Company's senior long-term debt is subject to any sinking fund requirements.

The Company's other debt is primarily comprised of debt associated with its Markel Ventures subsidiaries. As of December 31, 2023 and 2022, debt at the Company's Markel Ventures subsidiaries was \$339.0 million and \$414.1 million, respectively, which includes amounts outstanding on their respective credit facilities. The Markel Ventures debt is non-recourse to the holding company and generally is secured by the assets of those subsidiaries.

Various of the Company's Markel Ventures subsidiaries maintain revolving credit facilities or lines of credit, which provide up to \$680 million of aggregate capacity for working capital and other general operational purposes. A portion of the capacity on certain of these credit facilities may be used as security for letters of credit and other obligations. At December 31, 2023 and 2022, \$169.5 million and \$238.1 million, respectively, of borrowings were outstanding under these credit facilities. As of December 31, 2023, all of the Company's subsidiaries were in compliance with all covenants contained in their respective credit facilities.

The estimated fair value of the Company's senior long-term debt and other debt was \$3.4 billion and \$3.5 billion at December 31, 2023 and 2022, respectively.

The following table summarizes the future principal payments due at maturity on senior long-term debt and other debt as of December 31, 2023.

(dollars in thousands)

<u>Years Ending December 31,</u>	Senior long-term debt	Other debt	Total
2024	\$ —	\$ 76,150	\$ 76,150
2025	—	28,944	28,944
2026	—	28,567	28,567
2027	300,000	154,386	454,386
2028	—	16,178	16,178
2029 and thereafter	<u>3,179,846</u>	<u>39,638</u>	<u>3,219,484</u>
Total principal payments	3,479,846	343,863	3,823,709
Net unamortized discount	(35,585)	—	(35,585)
Net unamortized debt issuance costs	<u>(5,062)</u>	<u>(3,266)</u>	<u>(8,328)</u>
Total	<u>\$ 3,439,199</u>	<u>\$ 340,597</u>	<u>\$ 3,779,796</u>

In June 2023, Markel Group and certain insurance subsidiaries entered into an amended and restated credit agreement for its corporate revolving credit facility, which provides up to \$300 million of capacity for future acquisitions, investments and stock repurchases, and for other working capital and general corporate purposes. At the Company's discretion, up to \$200 million of the total capacity may be used for letters of credit. The Company may increase the capacity of the facility by up to \$200 million subject to obtaining commitments for the increase and certain other terms and conditions. The Company pays interest on balances outstanding under the facility and a utilization fee for letters of credit issued under the facility. The Company also pays a commitment fee (0.20% at December 31, 2023) on the unused portion of the facility based on the Company's leverage ratio as calculated under the credit agreement. The credit agreement includes financial covenants that require that the Company not exceed a maximum debt to capitalization (leverage) ratio and maintain a minimum amount of consolidated net worth, as well as other customary covenants and events of default. Markel Group guaranteed the obligations under the facility of the insurance subsidiaries that are also parties to the credit agreement. This facility expires in June 2028. The credit agreement for this revolving credit facility amended and restated the credit agreement for the Company's previous \$300 million revolving credit facility. At December 31, 2023 and 2022, the Company had no borrowings outstanding under this revolving credit facility. As of December 31, 2023, the Company was in compliance with all covenants contained in its corporate revolving credit facility.

To the extent that Markel Group or any of its subsidiaries are not in compliance with the covenants under their respective credit facilities, access to such credit facilities could be restricted.

The Company paid \$187.8 million, \$197.3 million and \$178.6 million in interest on its senior long-term debt and other debt during the years ended December 31, 2023, 2022 and 2021, respectively.

15. Income Taxes

Income (loss) before income taxes includes the following components, based on country of domicile.

<i>(dollars in thousands)</i>	Years Ended December 31,		
	2023	2022	2021
U.S. operations	\$ 1,711,849	\$ (109,311)	\$ 2,263,748
Foreign operations	941,857	(42,255)	866,080
Income (loss) before income taxes	<u>\$ 2,653,706</u>	<u>\$ (151,566)</u>	<u>\$ 3,129,828</u>

Income tax expense (benefit) includes the following components, based on the taxing authority to which taxes are paid. The Company's most significant U.K. and Bermuda subsidiaries have elected to be taxed as domestic corporations for U.S. tax purposes. U.S. income tax also includes state income tax expense. U.S. income taxes have not been recognized on any undistributed earnings of the Company's foreign subsidiaries that are considered indefinitely reinvested, the amount of which is not material to the consolidated financial statements.

<i>(dollars in thousands)</i>	Years Ended December 31,		
	2023	2022	2021
Current:			
U.S. income tax	\$ 249,149	\$ 222,074	\$ 200,742
Foreign income tax	69,669	12,042	29,811
Total current tax expense	<u>318,818</u>	<u>234,116</u>	<u>230,553</u>
Deferred:			
U.S. income tax	250,041	(301,423)	437,743
Foreign income tax	(16,243)	19,098	15,665
Total deferred tax expense (benefit)	<u>233,798</u>	<u>(282,325)</u>	<u>453,408</u>
Income tax expense (benefit)	<u>\$ 552,616</u>	<u>\$ (48,209)</u>	<u>\$ 683,961</u>

The Company made net income tax payments of \$280.7 million, \$251.5 million and \$204.9 million in 2023, 2022 and 2021, respectively. Income taxes payable were \$29.4 million and \$2.2 million at December 31, 2023 and 2022, respectively, and were included in other liabilities on the consolidated balance sheets. Income taxes receivable were \$0.3 million and \$9.9 million at December 31, 2023 and 2022, respectively, and were included in other assets on the consolidated balance sheets.

The following table presents a reconciliation of the Company's income taxes using the U.S. corporate income tax rate to the Company's income tax expense (benefit).

<i>(dollars in thousands)</i>	Years Ended December 31,					
	2023		2022		2021	
U.S. corporate tax rate	\$ 557,278	21.0 %	\$ (31,829)	21.0 %	\$ 657,264	21.0 %
Increase (decrease) resulting from:						
State income taxes, net of U.S. federal income tax benefit	27,007	1.0	3,369	(2.2)	12,689	0.4
Tax-exempt investment income	(15,328)	(0.6)	(16,063)	10.6	(16,109)	(0.5)
Foreign operations	10,854	0.4	5,335	(3.5)	14,443	0.5
Impairment of goodwill	—	0.0	16,800	(11.1)	—	0.0
Markel CATCo Re income not subject to tax	(15,013)	(0.6)	(18,871)	12.5	—	0.0
Other	(12,182)	(0.4)	(6,950)	4.5	15,674	0.5
Income tax expense (benefit)	<u>\$ 552,616</u>	<u>20.8 %</u>	<u>\$ (48,209)</u>	<u>31.8 %</u>	<u>\$ 683,961</u>	<u>21.9 %</u>

The following table presents the components of domestic and foreign deferred tax assets and liabilities.

<i>(dollars in thousands)</i>	December 31,	
	2023	2022
Assets:		
Unpaid losses and loss adjustment expenses	\$ 216,863	\$ 170,518
Unearned premiums	168,172	161,243
Lease liabilities	161,350	132,735
Life and annuity benefits	39,729	32,149
Accrued incentive compensation	52,853	39,469
Net operating loss carryforwards	43,439	25,305
Tax credit carryforwards	25,396	18,264
Other differences between financial reporting and tax bases	93,693	65,250
Total gross deferred tax assets	801,495	644,933
Less valuation allowance	(13,916)	(16,943)
Total gross deferred tax assets, net of allowance	787,579	627,990
Liabilities:		
Investments	1,196,717	761,421
Goodwill and other intangible assets	175,767	180,186
Deferred policy acquisition costs	176,382	161,220
Property, plant and equipment	152,149	144,259
Right-of-use lease assets	152,939	127,398
Other differences between financial reporting and tax bases	104,024	113,065
Total gross deferred tax liabilities	1,957,978	1,487,549
Net deferred tax liability	\$ 1,170,399	\$ 859,559

Deferred tax assets and liabilities are recorded on the consolidated balance sheets on a net basis by taxing jurisdiction. As of December 31, 2023 and 2022, the Company's consolidated balance sheets included net deferred tax liabilities of \$1.2 billion and \$896.7 million, respectively, in other liabilities and net deferred tax assets of \$23.5 million and \$37.2 million, respectively, in other assets.

At December 31, 2023, the Company had tax credit carryforwards of \$25.4 million, substantially all of which related to foreign tax credits to be used against U.S. income tax. The Company expects to utilize all tax credit carryforwards before expiration. The earliest any of these credits will expire is 2033.

At December 31, 2023, the Company had deferred tax assets of \$32.9 million for U.S. state net operating loss carryforwards and \$9.7 million for foreign net operating loss carryforwards, which are available to offset future taxable income in certain U.S. state and foreign jurisdictions, respectively. The Company's ability to benefit from the majority of these net operating loss carryforwards is not subject to expiration. As described below, the deferred tax assets related to losses at certain of the Company's subsidiaries and branches are offset by valuation allowances.

At December 31, 2023, the Company had total gross deferred tax assets of \$801.5 million. The Company has a valuation allowance of \$13.9 million to offset gross deferred tax assets primarily attributable to cumulative net operating losses at certain of the Company's subsidiaries and branches. The Company believes that it is more likely than not that it will realize the remaining \$787.6 million of gross deferred tax assets through generating taxable income or the reversal of existing temporary differences attributable to the gross deferred tax liabilities. Additionally, the Company's net deferred tax liability for investments includes deferred tax assets attributed to its unrealized losses on fixed maturity securities. The Company has the ability and intent to execute a tax planning strategy such that it is more likely than not that all of these deferred tax assets will be realized.

At December 31, 2023, the Company did not have any material unrecognized tax benefits. The Company does not anticipate any changes in unrecognized tax benefits during 2024 that would have a material impact on the Company's income tax provision.

The Company is subject to income tax in the U.S. and in foreign jurisdictions. The Internal Revenue Service is currently examining the Company's 2017 U.S. federal income tax return. The Company believes its income tax liabilities are adequate as of December 31, 2023, however, these liabilities could be adjusted as a result of this examination. With few exceptions, including the 2017 U.S. federal income tax return, the Company is no longer subject to income tax examination by tax authorities for years ended before January 1, 2020.

16. Employee Benefit Plans

a) The Company maintains defined contribution plans for employees of its U.S. insurance operations in accordance with Section 401(k) of the U.S. Internal Revenue Code of 1986. Employees of the Company's Markel Ventures subsidiaries are provided post-retirement benefits under separate defined contribution plans. The Company also provides various defined contribution plans for employees of its international insurance operations, which are in line with local market terms and conditions of employment. Expenses relating to the Company's defined contribution plans were \$65.4 million, \$57.9 million and \$52.7 million in 2023, 2022 and 2021, respectively.

b) The Terra Nova Pension Plan is a defined benefit plan that covers certain employees in the Company's international insurance operations who meet the eligibility conditions set out in the plan. The plan has been closed to new participants since 2001, and employees have not accrued benefits for future service in the plan since 2012. The projected benefit obligations of the Terra Nova Pension Plan as of December 31, 2023 and 2022 were \$117.3 million and \$108.5 million, respectively, and the related fair value of plan assets was \$184.6 million and \$171.7 million, respectively. The corresponding net asset for pension benefits, also referred to as the funded status of the plan, at December 31, 2023 and 2022 was included in other assets on the Company's consolidated balance sheets.

17. Variable Interest Entities

MCIM, a wholly-owned consolidated subsidiary of the Company, is an insurance-linked securities investment fund manager and reinsurance manager headquartered in Bermuda. Results attributable to MCIM are not included in a reportable segment.

MCIM serves as the insurance manager for Markel CATCo Re Ltd. (Markel CATCo Re), a Bermuda Class 3 reinsurance company, and as the investment manager for Markel CATCo Reinsurance Fund Ltd., a Bermuda exempted mutual fund company comprised of multiple segregated accounts (Markel CATCo Funds). Voting shares in Markel CATCo Reinsurance Fund Ltd. and Markel CATCo Re are held by MCIM, which has the power to direct the activities that most significantly impact the economic performance of these entities. The Markel CATCo Funds issued multiple classes of nonvoting, redeemable preference shares to investors, and the Markel CATCo Funds are primarily invested in nonvoting preference shares of Markel CATCo Re. The underwriting results of Markel CATCo Re are attributed to investors through its nonvoting preference shares. Both Markel CATCo Re and the Markel CATCo Funds were placed into run-off in July 2019.

In March 2022, the Company completed a buy-out transaction with Markel CATCo Re and the Markel CATCo Funds that provided for an accelerated return of all remaining capital to investors in the Markel CATCo Funds. Under the terms of the transaction, the Company provided cash funding of \$45.1 million to purchase substantially all of the Markel CATCo Funds' interests in Markel CATCo Re. As part of the transaction, substantially all of the preference shares held by investors in the Markel CATCo Funds were redeemed, including preference shares previously held by the Company. See note 5 for details regarding the Company's investment in the Markel CATCo Funds. In order to complete the transaction, the Company also made \$101.9 million in additional payments, net of insurance proceeds, to or for the benefit of investors, which were recognized as an expense to the Company and included in services and other expenses in 2022.

During June 2022, the Company received a return of \$24.9 million of the capital it provided in March 2022 and the related preference shares were redeemed. As of December 31, 2023 and 2022, the Company's investment in the remaining preference shares of Markel CATCo Re totaled \$20.1 million, which comprised 23% of the equity of Markel CATCo Re. Through that investment, the Company has exposure to adverse loss development on reinsurance contracts previously written by Markel CATCo Re for loss events that occurred from 2014 to 2020. If loss reserves held by Markel CATCo Re are sufficient to settle claims on the remaining open contracts, the Company will receive a full return of the remaining \$20.1 million in capital. Favorable development on loss reserves held by Markel CATCo Re, less operating expenses, will be distributed to the Markel CATCo Funds, and ultimately to investors in the Markel CATCo Funds.

Markel CATCo Re is considered a VIE, as the equity at risk does not have the right to receive residual returns that exceed the capital provided by the Company in the buy-out transaction. As a result of the preference shares acquired by the Company in the buy-out transaction, and the voting shares held by its consolidated subsidiary, MCIM, the Company consolidates Markel CATCo Re as its primary beneficiary. Results attributed to the run-off of Markel CATCo Re are reported with the Company's other ILS operations, within services and other revenues and expenses, and are not included in a reportable segment. For the years ended December 31, 2023 and 2022, there was \$71.5 million and \$89.9 million, respectively, of favorable loss reserve development on the run-off of reinsurance contracts written by Markel CATCo Re, all of which was included in services and other expenses and attributable to noncontrolling interests. During the years ended December 31, 2023 and 2022, \$62.6 million and \$22.3 million, respectively, of preference shares of Markel CATCo Re held by noncontrolling interests were redeemed.

The Company's consolidated balance sheets includes the following amounts attributable to Markel CATCo Re.

<i>(dollars in thousands)</i>	December 31,	
	2023	2022
Assets		
Cash and cash equivalents	\$ 91,301	\$ 104,443
Restricted cash and cash equivalents	173,800	317,577
Other assets and receivables due from cedents	19,292	41,357
Total Assets	\$ 284,393	\$ 463,377
Liabilities and Equity		
Unpaid losses and loss adjustment expenses	\$ 184,967	\$ 347,921
Other liabilities	1,842	26,717
Total Liabilities	186,809	374,638
Shareholders' equity	21,139	21,139
Noncontrolling interests	76,445	67,600
Total Equity	97,584	88,739
Total Liabilities and Equity	\$ 284,393	\$ 463,377

In connection with the buy-out transaction, the Company also entered into a tail risk cover with Markel CATCo Re to allow for the release of collateral to investors. Through this contract, the Company has \$95.0 million of uncollateralized exposure to adverse development on loss reserves held by Markel CATCo Re for loss exposures in excess of limits that the Company believes are unlikely to be exceeded.

18. Related Party Transactions

The Company engages in certain related party transactions in the normal course of business at arm's length.

Insurance-Linked Securities

Within the Company's insurance-linked securities operations, the Company provides investment and insurance management services through Nephila Holdings Ltd. (together with its subsidiaries, Nephila). Nephila serves as the investment manager to several Bermuda based private funds (the Nephila Funds). To provide access for the Nephila Funds to a variety of insurance-linked securities in the property catastrophe, climate and specialty markets, Nephila also acts as an insurance manager to certain Bermuda Class 3 and 3A reinsurance companies, Lloyd's Syndicate 2357 and Lloyd's Syndicate 2358 (collectively, the Nephila Reinsurers). Nephila receives management fees for investment and insurance management services provided through its insurance-linked securities operations primarily based on the net asset value of the accounts managed, and, for certain funds, incentive fees based on their annual performance. Prior to the disposition of Velocity in February 2022, Nephila also provided managing general agent services to the Nephila Reinsurers in exchange for commissions. For the years ended December 31, 2023, 2022 and 2021, total revenues attributed to unconsolidated entities managed by Nephila were \$97.5 million, \$79.5 million and \$141.9 million, respectively.

Through the Company's program services and other fronting operations, the Company has programs with Nephila through which the Company writes insurance policies that are fully ceded to Nephila Reinsurers. Through these programs, Nephila utilizes certain of the Company's licensed insurance companies to write U.S. catastrophe-exposed property and specialty risks that are then ceded to Nephila Reinsurers. A portion of this business is placed by Velocity, which the Company retained a minority interest in following its disposition. Additionally, through the Company's insurance underwriting operations, the Company has a quota share agreement with Nephila through which it cedes a portion of its property business to Nephila Reinsurers. The following table summarizes the premiums ceded to Nephila Reinsurers.

<i>(dollars in thousands)</i>	Years Ended December 31,		
	2023	2022	2021
Program services and other fronting:			
Gross and ceded written premiums attributable to Nephila programs	\$ 1,064,121	\$ 1,008,851	\$ 689,153
Underwriting:			
Premiums ceded to Nephila Reinsurers	\$ 52,295	\$ 65,648	\$ 54,970

As of December 31, 2023 and 2022, reinsurance recoverables on the consolidated balance sheets included \$794.3 million and \$1.4 billion, respectively, due from Nephila Reinsurers. Under its programs with Nephila Reinsurers, the Company bears underwriting risk for annual aggregate agreement year losses in excess of a limit the Company believes is unlikely to be exceeded. To the extent losses under these programs exceed the prescribed limits, the Company is obligated to pay such losses to the cedents without recourse to the Nephila Reinsurers. While the Company believes losses under these programs are unlikely, those losses, if incurred, could be material to the Company's consolidated results of operations and financial condition.

The Company has also entered into other assumed and ceded reinsurance transactions with the Nephila Reinsurers in the normal course of business, which are not material to the Company's consolidated financial statements.

In June 2023, the Company sold ISIC, one of the licensed insurance subsidiaries within its program services operations, to Velocity, which resulted in a gain of \$16.9 million during the second quarter of 2023.

Hagerty

The Company holds a minority ownership interest in Hagerty, which operates primarily as a managing general agent and also includes Hagerty Reinsurance Limited (Hagerty Re), a Bermuda Class 3 reinsurance company. Through the Company's underwriting operations, the Company underwrites insurance for Hagerty, a portion of which is ceded to Hagerty Re. The amounts attributed to these arrangements are summarized in the following table.

<i>(dollars in thousands)</i>	Years Ended December 31,		
	2023	2022	2021
Gross written premiums attributable to Hagerty	\$ 805,673	\$ 689,670	\$ 596,904
Premiums ceded to Hagerty Re	\$ 616,491	\$ 456,637	\$ 338,850

As of December 31, 2023 and 2022, reinsurance recoverables on the consolidated balance sheets included \$214.8 million and \$159.7 million, respectively, due from Hagerty Re.

19. Shareholders' Equity

a) The Company has 50,000,000 shares of no par value common stock authorized. The following table presents a rollforward of changes in common shares issued and outstanding.

<i>(in thousands)</i>	Years Ended December 31,	
	2023	2022
Issued and outstanding common shares, beginning of year	13,423	13,632
Issuance of common shares	31	24
Repurchase of common shares	(322)	(233)
Issued and outstanding common shares, end of year	13,132	13,423

b) The Company also has 10,000,000 shares of no par value preferred stock authorized, of which 600,000 shares were issued and outstanding at December 31, 2023 and 2022. The Company has the option to redeem the preferred shares:

- in whole but not in part, at any time, within 90 days after the occurrence of a "rating agency event," at \$1,020 per preferred share, plus accrued and unpaid dividends,
- in whole but not in part, at any time, within 90 days after the occurrence of a "regulatory capital event" at \$1,000 per preferred share, plus accrued and unpaid dividends, or
- in whole or in part, on June 1, 2025, or every fifth anniversary of that date, at \$1,000 per preferred share, plus accrued and unpaid dividends.

A "rating agency event" means that any nationally recognized statistical rating organization that publishes a rating for the Company amends, clarifies or changes the criteria it uses to assign equity credit to securities like the preferred shares, which results in shortening the length of time that the preferred shares are assigned a particular level of equity credit or in the lowering of the equity credit assigned to the preferred shares.

A "regulatory capital event" means that the Company becomes subject to capital adequacy supervision by a capital regulator and determines that, under such capital adequacy guidelines, the liquidation preference amount of the preferred shares would not qualify as capital.

The preferred shares rank senior to the Company's common stock with respect to the payment of dividends and liquidation rights. Holders of the preferred shares are entitled to receive non-cumulative cash dividends, when, as and if declared by the Board of Directors, from the original issue date, semi-annually in arrears on the first day of June and December of each year. The Company accrues dividends when they are declared by the Board of Directors. To the extent declared, these dividends will accrue, on the liquidation preference of \$1,000 per share, at a fixed annual rate of 6.00% from the original issue date to June 1, 2025. After June 1, 2025, the dividend rate will reset every five years and accrue at an annual rate equal to the five-year U.S. Treasury Rate as of two business days prior to the reset date, plus 5.662%. Dividends will not be cumulative and will not be mandatory. Accordingly, if dividends are not declared for any dividend period, then dividends for that dividend period will not accrue and will not be payable.

For both years ended December 31, 2023 and 2022, the Company declared and paid dividends on preferred shares of \$36.0 million, or \$60.00 per share.

c) The following table presents net income (loss) per common share and diluted net income (loss) per common share.

	Years Ended December 31,		
	2023	2022	2021
<i>(in thousands, except per share amounts)</i>			
Net income (loss) to common shareholders	\$ 1,960,060	\$ (252,277)	\$ 2,387,135
Adjustment of redeemable noncontrolling interests	6,212	(69,896)	46,874
Adjusted net income (loss) to common shareholders	\$ 1,966,272	\$ (322,173)	\$ 2,434,009
Basic common shares outstanding	13,347	13,580	13,768
Dilutive potential common shares from restricted stock units and restricted stock ⁽¹⁾⁽²⁾	31	—	32
Diluted common shares outstanding	13,378	13,580	13,800
Basic net income (loss) per common share	\$ 147.32	\$ (23.72)	\$ 176.79
Diluted net income (loss) per common share ⁽¹⁾⁽²⁾	\$ 146.98	\$ (23.72)	\$ 176.38

⁽¹⁾ The Company has issued grants and awards of restricted stock units to employees as performance, retention or hiring incentives, as well as awards of restricted stock to non-employee directors, under its equity incentive compensation plan. At December 31, 2023, there were 86,144 shares available for future awards under the Company's equity incentive compensation plan.

⁽²⁾ The impact of 33 thousand shares from restricted stock units and restricted stock was excluded from the computation of diluted net loss per common share for the year ended December 31, 2022 because the effect would have been anti-dilutive.

20. Other Comprehensive Income

Other comprehensive income includes changes in net unrealized gains (losses) on available-for-sale investments, which is comprised of net holding gains (losses) arising during the period, changes in unrealized other-than-temporary impairment losses, if any, and reclassification adjustments for net realized gains included in net income. Other comprehensive income also includes changes in the discount rate for life and annuity benefits, changes in foreign currency translation adjustments and changes in net actuarial pension loss. The following table presents the change in accumulated other comprehensive income (loss) by component, net of noncontrolling interests.

<i>(dollars in thousands)</i>	Net unrealized gains (losses) on available-for-sale investments	Life and annuity discount rate assumption	Foreign currency	Net actuarial pension loss	Accumulated other comprehensive income (loss)
December 31, 2020	\$ 698,810	\$ —	\$ (56,420)	\$ (58,014)	\$ 584,376
Cumulative effect of adoption of ASU No. 2018-12	94,443	(109,702)	—	—	(15,259)
January 1, 2021	793,253	(109,702)	(56,420)	(58,014)	569,117
Total other comprehensive income (loss) before income taxes	(513,084)	62,546	(2,091)	10,663	(441,966)
Income tax (expense) benefit	108,385	(13,135)	1,880	(2,273)	94,857
Total other comprehensive income (loss)	(404,699)	49,411	(211)	8,390	(347,109)
December 31, 2021	\$ 388,554	\$ (60,291)	\$ (56,631)	\$ (49,624)	\$ 222,008
Total other comprehensive income (loss) before income taxes	(1,463,876)	189,714	(9,677)	31,222	(1,252,617)
Income tax (expense) benefit	309,046	(39,840)	401	(6,492)	263,115
Total other comprehensive income (loss)	(1,154,830)	149,874	(9,276)	24,730	(989,502)
December 31, 2022	\$ (766,276)	\$ 89,583	\$ (65,907)	\$ (24,894)	\$ (767,494)
Total other comprehensive income (loss) before income taxes	390,558	(28,281)	4,650	94	367,021
Income tax (expense) benefit	(83,655)	5,938	—	(20)	(77,737)
Total other comprehensive income (loss)	306,903	(22,343)	4,650	74	289,284
December 31, 2023	\$ (459,373)	\$ 67,240	\$ (61,257)	\$ (24,820)	\$ (478,210)

21. Commitments and Contingencies

Contingencies arise in the normal course of the Company's operations and are not expected to have a material impact on the Company's financial condition or results of operations.

22. Statutory Financial Information

a) The following table summarizes statutory capital and surplus for the Company's insurance subsidiaries.

<i>(dollars in thousands)</i>	December 31,	
	2023	2022
United States	\$ 5,958,801	\$ 5,236,793
United Kingdom	\$ 977,604	\$ 749,495
Bermuda	\$ 2,353,058	\$ 1,895,132
Germany	\$ 166,403	\$ 125,194

As of December 31, 2023, the Company's actual statutory capital and surplus significantly exceeded the regulatory requirements. As a result, the amount of statutory capital and surplus necessary to satisfy regulatory requirements is not significant in relation to actual statutory capital and surplus.

The following table summarizes statutory net income (loss) for the Company's insurance subsidiaries.

<i>(dollars in thousands)</i>	Years Ended December 31,		
	2023	2022	2021
United States	\$ 196,952	\$ 689,341	\$ 705,908
United Kingdom	\$ 116,436	\$ 35,719	\$ 56,546
Bermuda	\$ 484,417	\$ (144,239)	\$ 556,275
Germany	\$ 5,543	\$ (2,471)	\$ 1,780

Amounts presented for the Company's U.S. insurance subsidiaries have been calculated in accordance with prescribed statutory accounting rules. For the Company's international insurance subsidiaries, the regulations that govern the calculation of statutory capital and surplus do not provide requirements for the calculation of net income. Rather, such amounts are reported in accordance with a basis of accounting permitted by their respective regulator. Amounts presented for the Company's U.K., Bermuda and German insurance subsidiaries have been calculated in accordance with U.K. GAAP, U.S. GAAP and German GAAP, respectively.

United States

The laws of the domicile states of the Company's U.S. insurance subsidiaries govern the amount of dividends that may be paid to the holding company. Generally, statutes in the domicile states of the Company's U.S. insurance subsidiaries require prior approval for payment of extraordinary, as opposed to ordinary, dividends. As of December 31, 2023, the Company's U.S. insurance subsidiaries could pay up to \$592.5 million to the holding company during the following 12 months under the ordinary dividend regulations.

In converting from U.S. statutory accounting principles to U.S. GAAP, typical adjustments include deferral of policy acquisition costs, differences in the calculation of deferred income taxes and the inclusion of net unrealized gains or losses relating to fixed maturity securities in shareholders' equity. The Company does not use any permitted statutory accounting practices that are different from prescribed statutory accounting practices which impact statutory capital and surplus.

United Kingdom

The Company's U.K. insurance subsidiary, Markel International Insurance Company Limited (MIICL), and its Lloyd's managing agent, Markel Syndicate Management Limited (MSM), are authorized by the Prudential Regulation Authority (PRA) and regulated by both the PRA and the Financial Conduct Authority (FCA). The PRA oversees compliance with established periodic auditing and reporting requirements, minimum solvency margins and individual capital assessment requirements under the Solvency II Directive (Solvency II) and imposes dividend restrictions, while both the PRA and the FCA oversee compliance with risk assessment reviews and various other requirements. MIICL is required to give advance notice to the PRA for any transaction or proposed transaction with a connected or related person. MSM is required to satisfy the solvency requirements of Lloyd's. In addition, the Company's U.K. subsidiaries must comply with the United Kingdom Companies Act of 2006, which provides that dividends may only be paid out of profits available for that purpose. Earnings of the Company's U.K. insurance subsidiaries are available for distribution to the holding company to the extent not otherwise restricted.

Bermuda

The Company's Bermuda insurance subsidiary, Markel Bermuda Limited (MBL), is subject to enhanced capital requirements in addition to minimum solvency and liquidity requirements. The enhanced capital requirement is determined by reference to a risk-based capital model that determines a control threshold for statutory capital and surplus by taking into account the risk characteristics of different aspects of the insurer's business. At December 31, 2023, MBL satisfied both the enhanced capital requirements and the minimum solvency and liquidity requirements.

Under the Bermuda Insurance Act, MBL is prohibited from paying or declaring dividends during a fiscal year if it is in breach of its enhanced capital requirement, solvency margin or minimum liquidity ratio or if the declaration or payment of the dividend would cause a breach of those requirements. If an insurer fails to meet its solvency margin or minimum liquidity ratio on the last day of any financial year, it is prohibited from declaring or paying any dividends during the next financial year without the approval of the Bermuda Monetary Authority (BMA). Further, MBL is prohibited from declaring or paying, in any financial year, dividends of more than 25% of its total statutory capital and surplus as set forth in its previous year's statutory balance sheet unless at least seven days before payment of those dividends it files with the BMA an affidavit stating that it will continue to meet its solvency margin and minimum liquidity ratio. MBL must obtain the BMA's prior approval for a reduction by 15% or more of the total statutory capital as set forth in its previous year's financial statements. In addition, as a long-term insurer, MBL may not declare or pay a dividend to any person other than a policyholder unless the value of the assets in its long-term business fund, as certified by MBL's approved actuary, exceeds the liabilities of its long-term business. The amount of the dividend cannot exceed the aggregate of that excess and any other funds legally available for the payment of the dividend. As of December 31, 2023, MBL could pay up to \$588.3 million to the holding company during the following 12 months without making any additional filings with the BMA.

Germany

The Company's German insurance subsidiary, Markel Insurance SE, is regulated by the Federal Financial Conduct Authority in Germany and is also subject to capital and solvency requirements under Solvency II.

b) Lloyd's sets the corporate members' required capital annually based on each syndicates' business plans, rating environment, reserving environment and input arising from Lloyd's discussions with, among others, regulatory and rating agencies. Such required capital is referred to as Funds at Lloyd's (FAL) and comprises cash and investments. The amount of cash and investments held as FAL as of December 31, 2023 was \$1.0 billion. Of this amount, \$380.4 million was provided by the holding company and is not available for general use by the Company. The remaining amount, provided by the Company's insurance subsidiaries, is not available for distribution to the holding company. The Company's corporate member may also be required to maintain funds under the control of Lloyd's in excess of its capital requirements and such funds also may not be available for distribution to the holding company.

23. Markel Group Inc. (Parent Company Only) Financial Information

The following parent company only condensed financial information reflects the financial position, results of operations and cash flows of Markel Group Inc.

CONDENSED BALANCE SHEETS

	December 31,	
	2023	2022
	<i>(dollars in thousands)</i>	
ASSETS		
Investments, at estimated fair value:		
Fixed maturity securities, available-for-sale (amortized cost of \$139,766 in 2023 and \$164,100 in 2022)	\$ 131,544	\$ 154,039
Equity securities (cost of \$1,089,332 in 2023 and \$1,107,796 in 2022)	1,731,839	1,473,116
Short-term investments, available-for-sale (estimated fair value approximates cost)	1,032,118	1,436,387
Total Investments	<u>2,895,501</u>	<u>3,063,542</u>
Cash and cash equivalents	635,047	594,101
Restricted cash and cash equivalents	15,908	21,146
Investments in consolidated subsidiaries	14,928,756	12,990,913
Notes receivable from subsidiaries	—	60,111
Other assets	441,977	458,945
Total Assets	<u>\$ 18,917,189</u>	<u>\$ 17,188,758</u>
LIABILITIES AND SHAREHOLDERS' EQUITY		
Senior long-term debt	\$ 3,439,197	\$ 3,686,892
Income taxes payable	213,770	120,616
Net deferred tax liability	201,140	148,365
Other liabilities	79,154	81,791
Total Liabilities	<u>3,933,261</u>	<u>4,037,664</u>
Shareholders' equity:		
Preferred stock	591,891	591,891
Common stock	3,517,146	3,493,893
Retained earnings	11,353,101	9,832,804
Accumulated other comprehensive loss	(478,210)	(767,494)
Total Shareholders' Equity	<u>14,983,928</u>	<u>13,151,094</u>
Total Liabilities and Shareholders' Equity	<u>\$ 18,917,189</u>	<u>\$ 17,188,758</u>

CONDENSED STATEMENTS OF INCOME (LOSS) AND COMPREHENSIVE INCOME (LOSS)

	Years Ended December 31,		
	2023	2022	2021
	<i>(dollars in thousands)</i>		
REVENUES			
Net investment income	\$ 92,080	\$ 34,781	\$ 9,099
Dividends on common stock of consolidated subsidiaries	310,000	278,557	1,081,988
Net investment gains (losses):			
Net realized investment gains (losses)	(515)	7,620	23,652
Change in fair value of equity securities	275,048	(397,906)	514,727
Net investment gains (losses)	274,533	(390,286)	538,379
Gain on sale of subsidiary	—	107,293	—
Other revenues (losses)	(28,718)	(29,487)	11,078
Total Revenues	<u>647,895</u>	<u>858</u>	<u>1,640,544</u>
EXPENSES			
Services and other expenses	19,716	111,848	22,379
Interest expense	156,953	172,125	185,568
Net foreign exchange losses (gains)	9,038	(13,143)	(6,236)
Total Expenses	<u>185,707</u>	<u>270,830</u>	<u>201,711</u>
Income (Loss) Before Equity in Undistributed Earnings (Losses) of Consolidated Subsidiaries and Income Taxes	462,188	(269,972)	1,438,833
Equity in undistributed earnings (losses) of consolidated subsidiaries	1,580,347	(72,125)	1,080,108
Income tax (expense) benefit	(46,475)	125,820	(95,806)
Net Income (Loss) to Shareholders	<u>1,996,060</u>	<u>(216,277)</u>	<u>2,423,135</u>
Preferred stock dividends	(36,000)	(36,000)	(36,000)
Net Income (Loss) to Common Shareholders	<u>\$ 1,960,060</u>	<u>\$ (252,277)</u>	<u>\$ 2,387,135</u>
OTHER COMPREHENSIVE INCOME (LOSS) TO SHAREHOLDERS			
Change in net unrealized gains (losses) on available-for-sale investments, net of taxes:			
Net holding gains (losses) arising during the period	\$ 1,453	\$ (24,465)	\$ (5,885)
Consolidated subsidiaries' net holding gains (losses) arising during the period	276,910	(1,175,271)	(392,191)
Reclassification adjustments for net gains (losses) included in net income (loss) to shareholders	(92)	1,965	(34)
Consolidated subsidiaries' reclassification adjustments for net gains (losses) included in net income (loss) to shareholders	28,632	42,941	(6,589)
Change in net unrealized gains (losses) on available-for-sale investments, net of taxes	<u>306,903</u>	<u>(1,154,830)</u>	<u>(404,699)</u>
Consolidated subsidiaries' change in discount rate for life and annuity benefits, net of taxes	(22,343)	149,874	49,411
Consolidated subsidiaries' change in foreign currency translation adjustments, net of taxes	4,650	(9,276)	(211)
Consolidated subsidiaries' change in net actuarial pension loss, net of taxes	74	24,730	8,390
Total Other Comprehensive Income (Loss) to Shareholders	<u>289,284</u>	<u>(989,502)</u>	<u>(347,109)</u>
Comprehensive Income (Loss) to Shareholders	<u>\$ 2,285,344</u>	<u>\$ (1,205,779)</u>	<u>\$ 2,076,026</u>

CONDENSED STATEMENTS OF CASH FLOWS

Years Ended December 31,

	2023	2022	2021
	<i>(dollars in thousands)</i>		
OPERATING ACTIVITIES			
Net income (loss) to shareholders	\$ 1,996,060	\$ (216,277)	\$ 2,423,135
Adjustments to reconcile net income (loss) to shareholders to net cash provided by operating activities	(1,664,382)	489,413	(2,211,393)
Net Cash Provided By Operating Activities	331,678	273,136	211,742
INVESTING ACTIVITIES			
Proceeds from sales, maturities, calls and prepayments of fixed maturity securities	72,834	13,047	37,607
Cost of fixed maturity securities purchased	(48,501)	—	—
Proceeds from sales of equity securities	24,237	65,379	105,700
Cost of equity securities purchased	(7,731)	(16,660)	(73,644)
Net change in short-term investments	451,846	58,970	(224,646)
Return of capital from subsidiaries	—	—	17,193
Decrease (increase) in notes receivable due from subsidiaries	—	75,645	(50,000)
Capital contributions to subsidiaries	(55,575)	(94,585)	(271,729)
Proceeds from sale of subsidiary	16,090	165,615	—
Cost of equity method investments	(5,000)	—	(38,550)
Other	(12,691)	4,779	(5,368)
Net Cash Provided (Used) By Investing Activities	435,509	272,190	(503,437)
FINANCING ACTIVITIES			
Repayment of senior long-term debt	(250,000)	(350,000)	—
Additions to senior long-term debt	—	—	591,354
Decrease in notes payable to subsidiaries	—	(32,753)	—
Repurchases of common stock	(445,479)	(290,796)	(206,518)
Dividends paid on preferred stock	(36,000)	(36,000)	(36,000)
Other	—	—	(1,181)
Net Cash Provided (Used) By Financing Activities	(731,479)	(709,549)	347,655
Increase (decrease) in cash, cash equivalents, restricted cash and restricted cash equivalents	35,708	(164,223)	55,960
Cash, cash equivalents, restricted cash and restricted cash equivalents at beginning of year	615,247	779,470	723,510
CASH, CASH EQUIVALENTS, RESTRICTED CASH AND RESTRICTED CASH EQUIVALENTS AT END OF YEAR	\$ 650,955	\$ 615,247	\$ 779,470

SUPPLEMENTAL CASH FLOW INFORMATION

Cash dividends received from subsidiaries	\$ 310,000	\$ 245,102	\$ 270,293
Non-cash capital contributions to subsidiaries	\$ 43,111	\$ 923,980	\$ —

Note to Condensed Financial Information of Markel Group Inc. (Parent Company Only)

Basis of Presentation. The parent company financial information note should be read in conjunction with the consolidated financial statements and other notes included herein. For purposes of this condensed financial information, the Company's wholly owned and majority owned subsidiaries are recorded based upon its proportionate share of the subsidiaries' net assets.

Debt. All of the Company's senior long-term debt was issued and is held by Markel Group. Markel Group also is party to a revolving credit facility. There were no borrowings outstanding under this revolving credit facility at December 31, 2023 and 2022. See note 14 for further details about Markel Group's revolving credit facility and senior long-term debt, including a five-year schedule of debt maturities.

Guarantees. Markel Group has guaranteed intercompany loans to Markel Ventures, Inc. from certain insurance subsidiaries of Markel Group. The outstanding loan balance was \$738.0 million and \$808.1 million as of December 31, 2023 and 2022, respectively, all of which was eliminated in consolidation. Additionally, Markel Group guarantees any obligations under the revolving credit facility of its insurance subsidiaries that are parties to the related credit agreement, however, there were no borrowings outstanding at December 31, 2023 and 2022. Markel Group has also made certain guarantees on other financial obligations, including leases, for other subsidiaries, which, individually and in the aggregate, were not material to Markel Group.

Item 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As of December 31, 2023, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures (Disclosure Controls), as defined under Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934 (Exchange Act). This evaluation was conducted under the supervision and with the participation of our management, including the Principal Executive Officer (PEO) and the Principal Financial Officer (PFO).

Based upon this evaluation, the PEO and PFO concluded that effective Disclosure Controls were in place to ensure that the information required to be disclosed in reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms.

Management's Report On Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act. Our 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.

Management does not expect that its internal control over financial reporting will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. The design of any system of internal control over financial reporting also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions.

Under the supervision and with the participation of management, including the PEO and the PFO, we evaluated the effectiveness of our internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation, we have concluded that we maintained effective internal control over financial reporting as of December 31, 2023.

KPMG LLP, our independent registered public accounting firm, has issued an attestation report on the effectiveness of our internal control over financial reporting as of December 31, 2023, which is included herein.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the fourth quarter of 2023 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors
Markel Group Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited Markel Group Inc. and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2023, 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, 2023, 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, 2023 and 2022, the related consolidated statements of income (loss) and comprehensive income (loss), changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2023, and the related notes (collectively, the consolidated financial statements), and our report dated February 23, 2024 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

Richmond, Virginia
February 23, 2024

Item 9B. OTHER INFORMATION

Adoption or Termination of Trading Arrangements by Directors or Officers

During the Company's quarterly period ended December 31, 2023, no director or officer (as defined in Exchange Act Rule 16a-1(f)) of the Company adopted or terminated a "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement" as defined in Regulation S-K Item 408.

PART III

Except for the information set forth under "Information About Our Executive Officers" in Part I, the information required by Part III (Items 10, 11 (excluding information required pursuant to Item 402(v) of Regulation S-K), 12, 13 and 14) will be incorporated by reference from the Company's Proxy Statement for its 2024 Annual Meeting of Shareholders pursuant to instructions G(1) and G(3) of the General Instructions to Form 10-K.

Our independent registered public accounting firm is KPMG LLP, Richmond, VA, Auditor Firm ID: 185.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) 1. Financial Statements

The following consolidated financial statements, as well as the Report of Independent Registered Public Accounting Firm, are included in Item 8.

	<u>Page Number</u>
Report of Independent Registered Public Accounting Firm	10K - 73
Consolidated Balance Sheets—December 31, 2023 and 2022	10K - 75
Consolidated Statements of Income (Loss) and Comprehensive Income (Loss)—Years Ended December 31, 2023, 2022 and 2021	10K - 76
Consolidated Statements of Changes in Equity—Years Ended December 31, 2023, 2022 and 2021	10K - 77
Consolidated Statements of Cash Flows—Years Ended December 31, 2023, 2022 and 2021	10K - 78
Notes to Consolidated Financial Statements	10K - 79

Other schedules are omitted because they are not required, information therein is not applicable, or is reflected in the consolidated financial statements or notes to consolidated financial statements.

(b) Exhibits

See Exhibit Index.

EXHIBIT INDEX

Exhibit No.	Document Description
3.1(a)	Amended and Restated Articles of Incorporation (incorporated by reference from Exhibit 3.1 in the Registrant's report on Form 8-K filed with the Commission May 13, 2011)
3.1(b)	Articles of Amendment to the Amended and Restated Articles of Incorporation (incorporated by reference from Exhibit 3.1 in the Registrant's report on Form 8-K filed with the Commission May 27, 2020)
3.1(c)	Articles of Amendment to the Amended and Restated Articles of Incorporation (incorporated by reference from Exhibit 3.1 in the Registrant's report on Form 8-K filed with the Commission May 16, 2023)
3.2	Bylaws, as amended and restated May 26, 2023 (incorporated by reference from Exhibit 3.2 in the Registrant's report on Form 10-Q filed with the Commission August 2, 2023)
4.1	Description of Registrant's Securities**
4.2(a)	Indenture dated as of June 5, 2001 between Markel Corporation and The Chase Manhattan Bank, as Trustee (incorporated by reference from Exhibit 4.1 in the Registrant's report on Form 8-K filed with the Commission June 5, 2001)
4.2(b)	Form of Third Supplemental Indenture dated as of August 13, 2004 between Markel Corporation and JPMorgan Chase Bank (formerly known as The Chase Manhattan Bank), as Trustee, including form of the securities as Exhibit A (incorporated by reference from Exhibit 4.2 in the Registrant's report on Form 8-K filed with the Commission August 11, 2004)
4.2(c)	Form of Ninth Supplemental Indenture dated as of March 8, 2013 between Markel Corporation and The Bank of New York Mellon (as successor to The Chase Manhattan Bank), as Trustee, including form of the securities as Exhibit A (incorporated by reference from Exhibit 4.3 in the Registrant's report on Form 8-K filed with the Commission March 7, 2013)
4.2(d)	Form of Tenth Supplemental Indenture dated as of April 5, 2016 between Markel Corporation and The Bank of New York Mellon (as successor to The Chase Manhattan Bank), as Trustee, including form of the securities as Exhibit A (incorporated by reference from Exhibit 4.2 in the Registrant's report on Form 8-K filed with the Commission March 31, 2016)
4.2(e)	Eleventh Supplemental Indenture dated as of November 2, 2017 between Markel Corporation and The Bank of New York Mellon (as successor to The Chase Manhattan Bank), as Trustee, including form of the securities as Exhibit A (incorporated by reference from Exhibit 4.2 in the Registrant's report on Form 8-K filed with the Commission November 2, 2017)
4.2(f)	Twelfth Supplemental Indenture dated as of November 2, 2017 between Markel Corporation and The Bank of New York Mellon (as successor to The Chase Manhattan Bank), as Trustee, including form of the securities as Exhibit A (incorporated by reference from Exhibit 4.3 in the Registrant's report on Form 8-K filed with the Commission November 2, 2017)
4.2(g)	Thirteenth Supplemental Indenture, dated as of May 20, 2019, between Markel Corporation and The Bank of New York Mellon (as successor to The Chase Manhattan Bank), as Trustee, including form of the securities as Exhibit A (incorporated by reference from Exhibit 4.2 in the Registrant's report on Form 8-K filed with the Commission May 20, 2019)
4.2(h)	Fourteenth Supplemental Indenture, dated as of September 17, 2019, between Markel Corporation and The Bank of New York Mellon (as successor to The Chase Manhattan Bank), as Trustee, including form of the securities as Exhibit A (incorporated by reference from Exhibit 4.2 in the Registrant's report on Form 8-K filed with the Commission September 17, 2019)
4.2(i)	Fifteenth Supplemental Indenture, dated as of September 17, 2019, between Markel Corporation and The Bank of New York Mellon (as successor to The Chase Manhattan Bank), as Trustee, including form of the securities as Exhibit A (incorporated by reference from Exhibit 4.3 in the Registrant's report on Form 8-K filed with the Commission September 17, 2019)
4.2(j)	Sixteenth Supplemental Indenture, dated as of May 7, 2021, between Markel Corporation and The Bank of New York Mellon (as successor to The Chase Manhattan Bank), as Trustee, including form of the securities as Exhibit A (incorporated by reference from Exhibit 4.2 in the Registrant's report on Form 8-K filed with the Commission May 7, 2021)

The registrant hereby agrees to furnish to the Securities and Exchange Commission, upon request, a copy of all other instruments defining the rights of holders of long-term debt of the registrant and its subsidiaries.

Exhibit No.	Document Description
10.1	Amended and Restated Credit Agreement, dated as of June 23, 2023, among Markel Group Inc., Markel Bermuda Limited, Markel Global Reinsurance Company, the lenders party from time to time thereto, and Wells Fargo Bank, National Association, as administrative agent (incorporated by reference from Exhibit 10.1 in the Registrant's report on Form 8-K filed with the Commission June 23, 2023)
10.2	Form of Amended and Restated Employment Agreement with Anthony F. Markel (incorporated by reference from Exhibit 10.4 in the Registrant's report on Form 10-K filed with the Commission for the year ended December 31, 2008)*
10.3(a)	Amended and Restated Employment Agreement with Steven A. Markel (incorporated by reference from Exhibit 10.1 in the Registrant's report on Form 10-Q filed with the Commission for the quarter ended September 30, 2015)*
10.3(b)	Amendment dated as of December 31, 2017 to Amended and Restated Employment Agreement with Steven A. Markel (incorporated by reference from Exhibit 10.6 in the Registrant's report on Form 10-K filed with the Commission for the year ended December 31, 2017)*
10.4	Form of Amended and Restated Executive Employment Agreement with Brian J. Costanzo, Andrew G. Crowley, Thomas S. Gayner, Teresa S. Gendron, Richard R. Grinnan, Michael R. Heaton, and Jeremy A. Noble (incorporated by reference from Exhibit 10.2 in the Registrant's report on Form 10-Q filed with the Commission for the quarter ended June 30, 2023)*
10.5(a)	Markel Corporation Voluntary Deferral Plan (incorporated by reference from Exhibit 10.14 in the Registrant's report on Form 10-K filed with the Commission for the year ended December 31, 2015)*
10.5(b)	Amendment to Markel Corporation Voluntary Deferral Plan (incorporated by reference from Exhibit 10.20 in the Registrant's report on Form 10-K filed with the Commission for the year ended December 31, 2018)*
10.5(c)	Amendment to Markel Corporation Voluntary Deferral Plan (incorporated by reference from Exhibit 10.1 in the Registrant's report on Form 10-Q filed with the Commission for the quarter ended September 30, 2019)*
10.6(a)	Markel Corporation Omnibus Incentive Plan (incorporated by reference from Appendix B in the Registrant's Proxy Statement and Definitive 14A filed with the Commission April 2, 2003)*
10.6(b)	May 2010 Restricted Stock Units Deferral Election Form (incorporated by reference from Exhibit 10.2 in the Registrant's report on Form 10-Q filed with the Commission for the quarter ended June 30, 2010)*
10.7	Restricted Stock Units Deferral Election Form for the 2012 Equity Incentive Compensation Plan (incorporated by reference from Exhibit 10.24 in the Registrant's report on Form 10-K filed with the Commission for the year ended December 31, 2012)*
10.8	Markel Corporation Executive Bonus Plan, as amended and restated May 14, 2018 (incorporated by reference from Exhibit 10.1 in the Registrant's report on Form 10-Q filed with the Commission for the quarter ended June 30, 2018)*
10.9(a)	2016 Equity Incentive Compensation Plan (incorporated by reference from Exhibit 10.1 in the Registrant's report on Form 8-K filed with the Commission May 19, 2016)*
10.9(b)	Form of Restricted Stock Award Agreement for Outside Directors for the 2016 Equity Incentive Compensation Plan (incorporated by reference from Exhibit 10.2 in the Registrant's report on Form 10-Q filed with the Commission for the quarter ended June 30, 2020)*
10.9(c)	Form of Performance-Based Restricted Stock Unit Award Agreement (adopted 2021) for Executive Officers for the 2016 Equity Incentive Compensation Plan (incorporated by reference from Exhibit 10.1(a) in the Registrant's report on Form 10-Q filed with the Commission for the quarter ended March 31, 2021)*
10.9(d)	Form of Time-Based Restricted Stock Unit Award Agreement (adopted 2021) for Executive Officers for the 2016 Equity Incentive Compensation Plan (incorporated by reference from Exhibit 10.1(b) in the Registrant's report on Form 10-Q filed with the Commission for the quarter ended March 31, 2021)*
10.9(e)	Form of Performance-Based Restricted Unit Award Agreement (adopted 2022) for Executive Officers for the 2016 Equity Incentive Compensation Plan (incorporated by reference from Exhibit 10.10(f) in the Registrant's report on Form 10-K filed with the Commission February 17, 2023)*

10.9(f)	Form of Time-Based Restricted Stock Unit Award Agreement (adopted 2022) for Executive Officers for the 2016 Equity Incentive Compensation Plan (incorporated by reference from Exhibit 10.10(g) in the Registrant's report on Form 10-K filed with the Commission February 17, 2023)*
10.9(g)	Restricted Stock Units Deferral Election Form (incorporated by reference from Exhibit 10.10(h) in the Registrant's report on Form 10-K filed with the Commission February 17, 2023)*
10.10	Markel Corporation 2020 Employee Stock Purchase Plan (incorporated by reference from Exhibit 10.1 in the Registrant's report on Form 8-K filed with the Commission May 15, 2020)*
21	Certain Subsidiaries of Markel Group Inc.**
23	Consent of KPMG LLP**
31.1	Certification of Principal Executive Officer Pursuant to Rule 13a-14(a)/ 15d-14(a)**
31.2	Certification of Principal Financial Officer Pursuant to Rule 13a-14(a)/ 15d-14(a)**
32.1	Certification furnished Pursuant to 18 U.S.C. Section 1350**
97	Compensation Recovery Policy**
101	The following consolidated financial statements from Markel Group Inc.'s Annual Report on Form 10-K for the year ended December 31, 2023, filed on February 23, 2024, formatted in Inline XBRL: (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Income (Loss) and Comprehensive Income (Loss), (iii) Consolidated Statements of Changes in Equity, (iv) Consolidated Statements of Cash Flows and (v) Notes to Consolidated Financial Statements.**
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

* Indicates management contract or compensatory plan or arrangement

** Filed with this report

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.

MARKEL GROUP INC.

<u>/s/ Thomas S. Gayner</u> Thomas S. Gayner Chief Executive Officer (Principal Executive Officer) February 23, 2024	<u>/s/ Brian J. Costanzo</u> Brian J. Costanzo Chief Financial Officer (Principal Financial Officer) February 23, 2024
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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.

<u>Signatures</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Steven A. Markel</u> Steven A. Markel	Chairman of the Board	February 23, 2024
<u>/s/ Thomas S. Gayner</u> Thomas S. Gayner	Director, Chief Executive Officer (Principal Executive Officer)	February 23, 2024
<u>/s/ Brian J. Costanzo</u> Brian J. Costanzo	Chief Financial Officer (Principal Financial Officer)	February 23, 2024
<u>/s/ Meade P. Grandis</u> Meade P. Grandis	Chief Accounting Officer and Controller (Principal Accounting Officer)	February 23, 2024
<u>/s/ Mark M. Besca</u> Mark M. Besca	Director	February 23, 2024
<u>/s/ K. Bruce Connell</u> K. Bruce Connell	Director	February 23, 2024
<u>/s/ Lawrence A. Cunningham</u> Lawrence A. Cunningham	Director	February 23, 2024
<u>/s/ Greta J. Harris</u> Greta J. Harris	Director	February 23, 2024
<u>/s/ Morgan E. Housel</u> Morgan E. Housel	Director	February 23, 2024
<u>/s/ Diane Leopold</u> Diane Leopold	Director	February 23, 2024
<u>/s/ Anthony F. Markel</u> Anthony F. Markel	Director	February 23, 2024
<u>/s/ Harold L. Morrison, Jr.</u> Harold L. Morrison, Jr.	Director	February 23, 2024
<u>/s/ Michael O'Reilly</u> Michael O'Reilly	Director	February 23, 2024
<u>/s/ A. Lynne Puckett</u> A. Lynne Puckett	Director	February 23, 2024

DIRECTORS

Steven A. Markel
Chairman of the Board
Markel Group Inc.

Mark M. Besca
Retired New York City Managing Partner and Senior Audit Partner
EY (formerly Ernst & Young)

K. Bruce Connell
Retired Executive Vice President and Group Chief Underwriting Officer
XL Capital Ltd.

Lawrence A. Cunningham
Special Counsel
Mayor Brown LLP

Thomas S. Gayner
Chief Executive Officer
Markel Group Inc.

Greta J. Harris
President and Chief Executive Officer
Better Housing Coalition

Morgan E. Housel
Partner
The Collaborative Fund

Diane Leopold
Executive Vice President and Chief Operating Officer
Dominion Energy

Anthony F. Markel
Retired Vice Chairman, President and Chief Operating Officer
Markel Group Inc.

Harold L. Morrison, Jr.
Retired Senior Vice President, Chubb Group and
Division President, Field Operations, North America Insurance
Chubb Insurance Company

Michael O'Reilly
Retired Vice Chairman and Chief Financial Officer
The Chubb Corporation

A. Lynne Puckett
Retired Senior Vice President and General Counsel
Celanese Corporation

Our Family of Companies

BRAHMIN



CapTech.

COSTA
FARMS



HAYCO



StateNational

MARKEL



ROSEMONT
INVESTMENT GROUP



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Glen Allen, VA 23060
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