



White Mountains Insurance Group, Ltd.

2022



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Non-GAAP Financial Measures

Non-GAAP financial measures are identified by the superscript ^{"NGM"}. The management team believes these measures to be useful in evaluating White Mountains's financial performance. For a reconciliation of these non-GAAP financial measures from their most comparable GAAP financial measures, please see pages 17 through 19 and our website at www.whitemountains.com.

Safe Harbor Statement Under the Private Securities Litigation Reform Act of 1995

This document may contain "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. All statements, other than statements of historical facts, included or referenced in this document which address activities, events or developments which White Mountains expects or anticipates will or may occur in the future are forward-looking statements. The words "could", "will", "believe", "intend", "expect", "anticipate", "project", "estimate", "predict" and similar expressions are also intended to identify forward-looking statements.

For a discussion of risks and uncertainties that could cause actual results to differ from the expectations and predictions contained in the forward-looking statements, see "Risk Factors", "Management's Discussion and Analysis of Financial Condition and Results of Operations", and "Quantitative and Qualitative Disclosures About Market Risk" in White Mountains's Annual Report on Form 10-K for the year ended December 31, 2022.

G. Manning Rountree

Chief Executive Officer
White Mountains

Dear Fellow Shareholders:

2022 was one of the best years on record at White Mountains. ABVPS^{NGM} grew 26%, ending the year at \$1,495. MVPS (including dividends) grew 40%, ending the year at \$1,414. These are top shelf returns vs. insurance sector peers and broader equity markets. The key drivers were:

1. The successful sale of NSM generated a gain of more than \$300 per share.
2. Our largest businesses posted good to better than good operating results.
3. The share price of MAX declined, driven by the cyclical pullback in auto insurance advertising spend.
4. The investment portfolio produced negative absolute returns but excellent relative returns.
5. Capital management added value: \$0.6 billion of share repurchases and \$0.2 billion into Outrigger Re.



BAM posted a record year, writing \$147 million of gross written premiums and member surplus contributions in 2022, up 24% year over year. Primary market volume actually declined 21% year over year, largely due to rising interest rates. On the other hand, insured penetration remained steady, market share increased a touch, primary market pricing improved, and secondary market activity spiked up more than 3x year over year. In December, BAM made a \$36 million cash payment of surplus note principal and interest, its sixth consecutive year of increasing regular cash payments. BAM's insured portfolio has held up well across the pandemic, and credit quality generally improved in 2022.

Ark posted an excellent year. The combined ratio was

82%. Gross written premiums were \$1.5 billion, up 37% year over year (and nearly 3x since 2020). Tangible Book Value^{NGM} grew 15%, despite headwinds in the investment portfolio. January 2023 renewals reflected the hardest market conditions we have seen in many years. Ark is well-positioned to capitalize, and we are leaning into the opportunity. In December, we closed Outrigger Re, a de novo sidecar to Ark's global property cat book in Bermuda.

Kudu had a good all-around year in 2022. Including the impact of participation contracts sold, the fair value of Kudu's portfolio grew 8% year over year. Kudu deployed \$100 million of capital, primarily into three new portfolio companies. Kudu closed three value-adding sales — Versus, Sequoia and TIG — which

2022 Returns in Context

Book value returns

White Mountains ABVPS ^{NGM}	25.7%
Dowling & Partners Composite TVC ¹	-13.5%

Market value returns

White Mountains	39.6%
Dowling & Partners Composite ²	1.8%
S&P 500	-18.1%
S&P P&C Insurance Total Return	18.9%
S&P Financials	10.5%

¹ Total Value Creation (TBV plus dividends) composite of 47 publicly-traded underwriters reported by Dowling & Partners.

² Composite performance for 55 publicly-traded underwriters and brokers reported by Dowling & Partners.

collectively generated a 2.4x MOIC and 28% pretax IRR. At year end, Annualized Adjusted EBITDA^{NGM} was \$39 million, implying a Levered Return^{NGM} of 8%. These run rate financials were negatively impacted by the sales as well as higher interest expense; we plan to drive these figures higher, one deployment at a time. Kudu is in a strong position, with both dry powder and a robust pipeline of deals.

During 2022, the MediaAlpha share price declined from \$15.44 to \$9.95, creating an unrealized mark-to-market loss of roughly \$100 million. The main event was the continuing hard market in personal auto insurance, attenuated by a number of factors, including high inflation rates and Hurricane Ian. While working to restore underwriting profitability, carriers held back on advertising spend, resulting in lower volumes on

the MediaAlpha platform. We believe we have seen the bottom. We expect an increase in ad spend and a return to growth at MediaAlpha over the course of 2023.

PassportCard/DavidShield posted a record year in 2022. Core premiums were \$212 million, up nearly 2x year over year, and core EBITDA was \$23 million, up 68% year over year. Both figures are now well north of pre-COVID levels. Travel insurance through PassportCard has driven the growth: insured penetration is up, market share is up, premium rates are up, and days traveled are more or less at pre-COVID levels. Our international growth initiatives are also gaining momentum, with strong growth in European expat medical insurance through PassportCard-Germany in 2022 and a relaunch of TravelCard in Australia in 2023.

Our Track Record

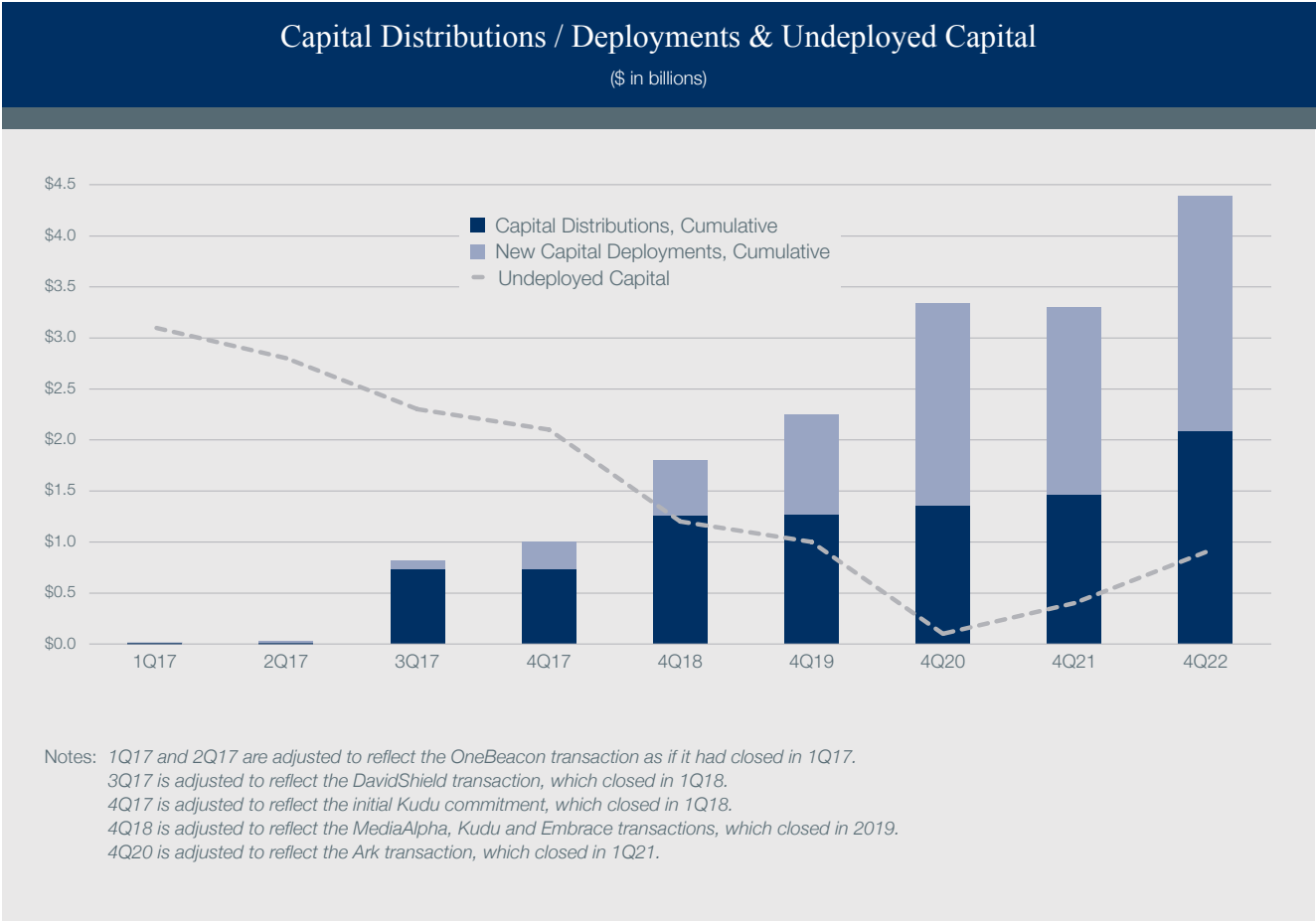
	Return Periods Ended December 31, 2022				
	1-year	5-year	10-year	20-year	Since IPO
White Mountains ABVPS ^{NGM}	25.7%	10.4%	9.9%	9.7%	13.4%
White Mountains MVPS	39.6%	10.8%	10.8%	8.1%	12.1%
S&P 500	-18.1%	9.4%	12.6%	9.8%	10.8%

Elementum had a tough year: fund returns were modestly negative, nicked by Hurricane Ian losses, and both AUM and EBITDA declined year over year. The silver lining: current conditions for ILS investing are highly favorable.

Our Total Portfolio Return^{NGM} was -2.1% for the year. A negative absolute result, sure. But an excellent relative result, well ahead of all benchmarks: total return, fixed income and equities. The highlight was our Equity Portfolio Return^{NGM}, which excludes MediaAlpha. Driven by strong returns in private equities and alternatives, it generated a return of +7.9% vs. S&P 500 return of -18.1%.

Owners' Capital Per Share	
(as of December 31, 2022)	
	\$ / share
HG Global	\$ 309
Ark	280
Outrigger Re	80
Kudu	210
MediaAlpha	66
PassportCard/DavidShield	53
Other operating businesses	70
Strategic investments and other	80
Undeployed capital	348
Total - Adjusted Book Value Per Share^{NGM}	\$ 1,495

Note: Per share values assume all capital committed is fully deployed.



Over the summer, we executed a successful tender offer. And, for the full year, we returned \$616 million via share repurchases at an average price per share of \$1,335. With New Year's looming, we closed and launched Outrigger Re, deploying \$205 million with compelling expected risk-adjusted returns. We ended 2022 with undeployed capital of roughly \$900 million.

In 2022, we said goodbye to NSM, selling the business to Carlyle for \$1.775 billion. The letter on page 12 takes a look back at the arc of our ownership of NSM. There is not much that I can add, other than to say "thank you," on behalf of all WTM shareholders, to Geof, Billy and the entire NSM team. Job very well done indeed.

Your company is in great shape as we enter 2023. We may see a modest step back at BAM, coming off a record year. We have work to do to redeploy the fallow capital at Kudu. We anticipate another step forward at Ark and at PassportCard/DavidShield. We see headwinds receding and tailwinds emerging at MediaAlpha and Elementum. We have substantial undeployed capital, and we are pursuing new deployments with vigor.

Looking forward, you should expect more of the same from us: intelligent stewardship of our operating businesses, careful deployments into new opportunities and opportunistic return of capital to shareholders.

Respectfully submitted,

A handwritten signature in black ink that reads "G. Manning Rountree". The signature is written in a cursive style with a large, stylized initial "G".

G. Manning Rountree

Operating Principles

White Mountains strives to operate within the spirit of four operating principles. These are:

What We Care Most About

Underwriting Comes First An insurance enterprise must respect the fundamentals of insurance. There must be a realistic expectation of underwriting profit on all business written, and demonstrated fulfillment of that expectation over time, with focused attention to the loss ratio and to all the professional insurance disciplines of pricing, underwriting and claims management.

Maintain a Disciplined Balance Sheet The first concern here is that assets must always be fairly stated and liabilities must always be fully recognized. Balance sheet accounts must be solid before any other aspect of the business can be managed effectively.

Invest For Total Return Historically, the insurance industry has emphasized investment income (interest and dividends) above capital gains. White Mountains invests to maximize total return over time. White Mountains manages its bond portfolios for after-tax total return and also invests prudently in equities.

Think Like Owners Thinking like owners has a value all its own. There are stakeholders in a business enterprise, and doing good work requires more than this quarter's profit. Thinking like an owner embraces all of that and is the touchstone of a capitalist enterprise.

What We Care Least About

Trying to produce a regular stream of quarterly operating earnings often produces disaster. Trying to manage your Company according to generally accepted accounting principles can often be silly. We prefer to measure ourselves as we would hope owners measure us - by growth in intrinsic business value per share.

Growth in Revenues We applaud owners who reward executives on premium growth. This often provides fine opportunities for us later.

Market Share Often introduced by business consultants. In our personal experience, chasing market share has produced the biggest disasters in our business. Often, we have profited later from that excitement.

Strategic Purchases We have never made a strategic purchase... maybe we will someday. We often sell to strategic buyers. Our problem is we really don't have much of a strategy other than to increase intrinsic business value per share.

Putting Our Capital To Work

Intellectually, we really don't care much about leaving our capital lying fallow for years at a time. Better to leave it fallow and to wait for the occasional high-return opportunity. Frankly, sometimes shareholders would be better off if we all just went to play golf. Overall, we should be students of capital and business. Adam Smith had it right:

“Capital will flow according to its own nature; the invisible hand.”

If we do not earn and deserve our owners' capital, we will not long have it. We also admire Benjamin Graham who said:

“In the short run, the market is a voting machine, but in the long run it is a weighing machine.”

Look Through Parent Company Balance Sheets^{NGM}

(unaudited)

As of December 31

\$ in millions, except per share amounts

	2022	2021
Assets		
Investments and cash:		
Fixed maturity, short-term investments and cash	\$ 704	\$ 505
Common equity securities and other investments	442	-
Total investments	1,146	505
Investments in affiliates:		
HG Global ^{NGM}	790	866
Ark	717	674
Outrigger Re	204	-
NSM	-	465
Kudu	478	454
MediaAlpha	169	262
PassportCard/DavidShield	135	120
Other operating businesses	138	133
Strategic investments	111	119
Total investments in affiliates	2,742	3,092
Other assets	28	29
Total Assets	\$ 3,916	\$ 3,627
 Liabilities and Adjusted Common Equity		
Liabilities		
Other liabilities	\$ 91	\$ 51
Total Liabilities	91	51
 Adjusted Common Equity		
Common equity	3,747	3,548
Less: 97% of TVM discount on BAM surplus notes	(95)	(126)
Plus: 97% of HG Global's unearned premium reserve	242	215
Less: 97% of HG Global's net deferred acquisition costs	(69)	(61)
Total Adjusted Common Equity^{NGM}	3,825	3,576
Total Liabilities and Adjusted Common Equity	\$ 3,916	\$ 3,627
 Adjusted Common Shares Outstanding ^{NGM} (thousands)	2,558	3,004
Adjusted Book Value Per Share ^{NGM}	\$ 1,495	\$ 1,190

Look Through Parent Company Income Statements^{NGM}

<i>(unaudited)</i>	Years Ended December 31	
<i>\$ in millions</i>	2022	2021
Comprehensive Income (Loss) of Affiliates, After Tax:		
HG Global	\$ (15)	\$ 23
Ark	58	26
NSM	900	(19)
Kudu	47	68
MediaAlpha	(93)	(380)
PassportCard/DavidShield	16	25
Other operating businesses	(20)	1
Strategic investments	31	28
Discontinued operations	-	19
Total comprehensive income (loss) of affiliates, after tax	923	(209)
Other Parent Company Activities:		
Investment return	(15)	(4)
Other revenue	3	3
Total revenues	(12)	(1)
Operating expenses	(132)	(76)
Total expenses	(132)	(76)
Parent income (loss), pretax	(144)	(77)
Parent income tax benefit (expense)	9	13
Parent comprehensive income (loss), after tax	(135)	(64)
Comprehensive income (loss) attributable to WTM's common shareholders	\$ 788	\$ (273)

HG Global / BAM

Build America Mutual is the first and only mutual municipal bond insurance company in the United States. By insuring the timely payment of principal and interest, BAM provides market access to, and lowers interest expense for, issuers of municipal bonds used to finance essential public purposes. BAM is owned by and operated for the benefit of its policyholders, the municipalities that purchase BAM's insurance for their debt issuances.

HG Global, through its wholly-owned reinsurance subsidiary HG Re, provides up to 15%-of-par, first loss reinsurance protection for policies underwritten by BAM.

White Mountains owns 97% of the preferred equity (88% of the common equity) of HG Global.

BAM posted a record year in 2022, writing \$147 million of gross written premiums and member surplus contributions. Results were driven by improved pricing in the primary market and robust secondary market activity.

Total par insured was \$16.0 billion, down 8% year over year. Primary market volume was down 21% year over year. Rising interest rates gave would-be issuers reason to pause and also slowed refunding activity. On the other hand, insured penetration remained steady; BAM's market share increased a touch; and BAM wrapped a record \$3.8 billion of bonds in the secondary market, up more than 3x year over year.

Pricing improved in 2022, driven by higher interest rates, wider credit spreads, and the increased volume of (higher-priced) secondary market business. Total pricing for BAM as a whole improved from 0.67% to 0.91%. Total pricing in the primary market improved from 0.58% to 0.69%. Risk adjusted pricing remained above target, at 4.10%.

In December, BAM made a \$36 million cash payment of surplus note principal and interest, up from \$34 million in 2021 and the sixth consecutive year of increasing regular cash payments. In June, S&P affirmed BAM's rating at AA/Stable. In November, BAM closed the Fidus III transaction, adding \$150 million of fresh capital in the form of collateralized excess of loss reinsurance.

Interest rates moved higher in 2022, producing unrealized losses in the HG Global/BAM investment portfolios on the year. This is temporary. In the fullness of time, higher rates and wider spreads are unequivocally positive for the HG Global/BAM enterprise.

In April, HG Global received proceeds from its new investment grade rated term loan credit facility and, in turn, paid a \$116 million cash dividend to White Mountains.

BAM's insured portfolio held up remarkably well through the pandemic, and credit quality generally improved across the course of 2022. All BAM-insured debt service payments have been made, and there are no credits on the BAM watchlist.

As we enter 2023, BAM is looking back at its best year ever but looking forward at a market environment that is exceedingly difficult to predict. There is elevated uncertainty around interest rate policy, the level of primary market volume, and the level and nature of secondary market activity. We would not be surprised to see premium levels take a modest step back in 2023.

BAM will continue to focus on growing intelligently, while maintaining underwriting discipline and achieving good pricing. We continue to approach BAM with patience and perspective.

HG Global / BAM Financial Highlights & Market Environment

\$ in millions (except where stated)	Years ended December 31	
	2022	2021
Par insured (\$ in billions)	\$ 16.0	\$ 17.5
Total pricing	0.91%	0.67%
Gross written premiums and MSC collected	\$ 147	\$ 118
Claims paying resources at December 31	\$ 1,423	\$ 1,192
Total issuance (\$ in billions)	\$ 359.7	\$ 457.7
10YT (year end)	3.88%	1.52%
AA-A credit spread (average)	13 bps	11 bps
BAM market share (transactions)	56%	53%
Insured penetration, target market	26%	27%

HG Global / BAM HG Global Adjusted Book Value & BAM Surplus Notes

\$ in millions	As of December 31	
	2022	2021
WTM interest in HG Global - GAAP	\$ 712	\$ 838
Less: 97% of TVM discount on BAM surplus notes	(95)	(126)
Plus: 97% of HG Global's UPR	242	215
Less: 97% of HG Global's net DAC	(69)	(61)
WTM interest in HG Global - Adjusted Book Value ^{NGM}	\$ 790	\$ 866
HG Global distributions to WTM	\$ 116	\$ 20
Principal and interest paid on BAM surplus notes	\$ 36	\$ 34
Cumulative principal & interest paid on BAM surplus notes	\$ 225	\$ 189
BAM surplus notes, principal & accrued interest outstanding	\$ 498	\$ 522

Ark

Ark is a specialty property and casualty insurance and reinsurance company that offers coverages across five major lines of business: property, specialty, marine & energy, casualty, and accident & health. Ark underwrites select coverages through Lloyd's Syndicates 4020 and 3902 in the United Kingdom and Group Ark Insurance Limited in Bermuda.

White Mountains owns 72% of the basic shares outstanding and 63% of the shares after taking account of management's equity incentives. The remaining shares are owned by management. In the future, certain management shareholders could earn additional shares in Ark if and to the extent that White Mountains achieves certain multiple of invested capital return thresholds.

Outrigger Re Ltd. is a Bermuda registered special purpose insurer and segregated accounts company providing collateralized reinsurance capacity to Group Ark Insurance Limited. White Mountains's segregated account, WM Outrigger Re, represents 82% of the total non-voting redeemable preference shares issued to investors.

Ark posted excellent results in 2022. The combined ratio was 82%. Gross written premiums were \$1.5 billion, up 37% year over year (and nearly 3x since 2020). Tangible Book Value^{NGM} grew 15%, despite headwinds in the investment portfolio.

We closed our scale-up transaction with Ark on January 1, 2021. The transaction marked White Mountains's re-entry into the p&c underwriting business, four years after selling OneBeacon. Ark's execution over the past two years has been remarkable. Ark has secured and reaffirmed its "A" rating from A.M. Best; licensed and fully staffed its new Bermuda Class IV insurer; optimized its capital structure by issuing Tier 2 subordinated debt; remained a top performer at Lloyd's; and produced \$269 million of underwriting profit.

Hurricane Ian, the ongoing war in Ukraine, and an above-average year for aggregate global natural catastrophe losses have all combined to exacerbate supply-demand imbalances in the (re)insurance markets. January 2023 renewals reflected the hardest market conditions we have seen in decades. Ark is well positioned, and we anticipate profitable growth across most lines of business, including both specialty and property lines.

In support of Ark, and leaning into the hard market, we closed Outrigger Re in December 2022. Outrigger Re is a de novo sidecar to Ark's global property cat book in Bermuda. White Mountains deployed \$205 million of capital into Outrigger Re, filling out the raise with \$45 million principally from Aquiline and Enstar, partners we are delighted to welcome onboard. Price and terms on the January 2023 placements to Outrigger Re were attractive, as expected.

Ark has a strong focus on risk management and shares our belief that "underwriting comes first." We and Ark enjoy strong alignment of interests, on the downside and the upside, through management's share ownership and equity incentives. We are confident in Ark's ability to continue to drive value creation for shareholders in 2023 and beyond.

Ark Financial Highlights

\$ in millions	Years ended December 31	
	2022	2021
Income Statement		
Gross written premiums	\$ 1,452	\$ 1,059
Net written premiums	\$ 1,195	\$ 859
Total investment return	\$ (39)	\$ 19
Growth in Tangible Book Value ^{NGM}	15%	13%
Underwriting Ratios		
Loss and LAE ratio	51%	49%
Acquisition expense ratio	23%	28%
Other underwriting expense ratio	8%	10%
Combined ratio	82%	87%
Balance Sheet		
Total assets	\$ 3,486	\$ 3,027
Total cash and investments	\$ 1,862	\$ 1,630
Loss and LAE reserves	\$ 1,297	\$ 895
WTM common shareholders' equity	\$ 717	\$ 674
Capital Metrics		
Ark common equity	\$ 965	\$ 905
Subordinated debt	184	186
Total capital	1,149	1,090
Less: Goodwill & intangibles, net	(203)	(221)
Total tangible capital	\$ 946	\$ 870

Ark Business Profile

\$ in millions	Years ended December 31		
	2022	2021	2020
Gross Written Premiums			
Property	\$ 605	\$ 438	\$ 236
Specialty	380	257	118
Marine & Energy	315	242	129
Casualty	85	54	24
Accident & Health	66	67	91
Total	\$ 1,452	\$ 1,059	\$ 598



In September 2017, we sold OneBeacon, leaving White Mountains with a market cap of \$4 billion, of which \$3.1 billion was undeployed. A pretty unusual state of affairs for a public company. The late 2010s were tough years in our core p&c sector, characterized by soft market conditions but stubbornly high take-out prices for insurance underwriting businesses. We felt confident that hitting the bid on the OneBeacon sale was the right decision for WTM shareholders. But it was not at all clear where the redeployment journey would take us; only that, in classic WTM fashion, we would figure something out that added value for shareholders. Well, it turns out that the first stop on that journey was Conshohocken, Pennsylvania...

In early 2018, a longtime friend introduced us to Geof McKernan, the founder and CEO of NSM. Geof and his brother Billy had spent the last two decades turning a retail agency into a pretty good-sized specialty managing general agency ("MGA") business through a mix of organic growth and seventeen acquisitions. First impressions: these guys are as Philly as it gets; they are jacked up on Wawa coffee; and they know a lot about specialty p&c insurance. We knew right away – our kind of guys.

As an MGA, NSM provides its carrier partners with efficient access to specialty markets. NSM manages all aspects of the placement process – product development, marketing, underwriting, policy issuance and claims oversight – and earns commissions based on the volume and profitability of insurance it places. But NSM does not take insurance risk. Basically, NSM delivers everything but the balance sheet.

Looking back, NSM was at a bit of an inflection point. The McKernans were keen to find a long-term partner with insurance chops, willing to put capital and a little elbow grease behind their vision for taking NSM to the next level.

We were intrigued. While riding out the soft market for p&c underwriting businesses, we had begun nosing around a number of fee-based businesses in insurance distribution and services. If you can't beat 'em, join 'em. We understood the value that a well-run specialty MGA can deliver to its carrier partners and create for its shareholders. Valuations for insurance distribution businesses were high by our standards but not untethered from fundamentals, and we sensed a generally rising tide.

We saw in NSM a company with a solid foundation and a handful of top-notch specialty programs – collector car, social services & behavioral health, sports & wellness, and coastal condo associations. More importantly, we saw two natural leaders with deep industry relationships, a burning drive to succeed and a willingness to make the hard calls. As Geof is fond of saying, "there is no elevator to success, you must take the stairs."

It took one meeting, one lunch, and one cocktail napkin to sketch out a deal that both sides honored, signing and announcing the deal a couple months later. It really was that simple. We closed in May 2018, acquiring a 95% equity stake in a deal valuing NSM at \$388 million. Geof, Billy and other management team partners retained a 5% hard equity stake in the business.

The McKernan brothers hit the road, traveling from Calgary to Phoenix to London and spreading the NSM gospel to best-in-class specialty program managers. Out of 500+ meetings over four years came six accretive acquisitions: two home runs, two doubles, a base hit, and a three-pitch strikeout. The McKernan slugging percentage makes Bryce Harper look like Mario Mendoza.

NSM's acquisition activity allowed White Mountains to deploy an incremental \$225 million of equity capital. "Roll-up" acquisition activity under a well-led "platform" business fits White Mountains like a glove. We are a supportive capital partner. We like to back founder-led businesses. We like businesses that generate undeployed capital, but we love businesses that generate both undeployed capital and capital deployment opportunities.

NSM Transaction Overview

\$ in millions

Total company valuation \$ 1,775

WTM NSM return metrics

WTM cash returned¹ \$ 1,381

WTM gross invested equity capital \$ 502

WTM MOIC 2.7x

WTM IRR 31%

¹Total cash returned, including distributions and sale proceeds.

NSM Bolt-on Acquisitions Overview

\$ in millions

	Date	Total capital deployed ¹
Fresh	2Q18	\$ 48
KBK	4Q18	80
Embrace	2Q19	77
Collector car renewal rights	2Q19	83
Kingsbridge	2Q20	127
JC Taylor	3Q21	60
Total		\$ 475

Bolt-on acquisition key metrics

Aggregate bolt-on Pro forma Adjusted EBITDA acquired, @ acquisition \$ 35

Total bolt-on capital deployed / Pro forma Adjusted EBITDA, @ acquisition 13x

Total bolt-on capital deployed / Pro forma Adjusted EBITDA, @ 12/31/21 8x

¹Total capital deployed, including equity capital, third party debt capital, and earn-out consideration, net of divestiture proceeds.

At the same time, we reinvested in the core NSM business. We took big steps forward in the collector car and UK lines of business; we invested in technology; we broadened and deepened the insurance carrier panel; and we added key operating partners in COO Marc Castellucci, CFO Jonathan Costello, President of Embrace Pet Brian Macias and President of Collector Car Paul Choi, to name a few. White Mountains is a long-term investor, not focused in the least on next quarter's earnings. This perspective helped NSM, during our four years as a shareholder, to add nearly \$25 million to its expense base, nicking our reported earnings dollar-for-dollar but adding tremendous long-term value.

As we entered 2022, we were happy shareholders of NSM, with our typical "plan" to hold indefinitely. However, investor interest in specialty distribution platforms in general, and in NSM in particular, had risen to something of a fevered pitch. We discussed these opportunities with Geof and Billy, and, with interests firmly aligned, we agreed to engage in earnest to explore alternatives. In May 2022, we inked a deal to sell NSM to Carlyle at a valuation of \$1.775 billion.

NSM is right up there with the most successful investments in White Mountains's history. Our total return on the NSM investment was about \$875 million (\$1.4 billion of net proceeds against our \$0.5 billion of invested capital), implying a 2.7x MOIC and 31% IRR over our holding period.

The NSM experience was also a helluva lot of fun. It was a bit like a raucous family gathering – hearty laughs, heated debates, and the occasional blasphemy, but underneath it all, a deep sense of loyalty and respect. We always made decisions together with common sense, financial discipline, and mutual fairness. A partnership in its truest sense.

It has been our distinct pleasure to support Geof, Bill, Marc, Jonathan, and the NSM team in building a fantastic business and crystallizing substantial value for shareholders. Guys, we are deeply grateful for your hard work, and we congratulate you on your achievements. Carlyle got a good one, and we look forward to following your continued success.

Kudu

Kudu provides capital solutions for boutique asset and wealth managers for generational ownership transfers, management buyouts, acquisition and growth finance and legacy partner liquidity. Kudu also provides strategic assistance to its portfolio companies from time to time. Kudu's capital solutions are generally structured as minority preferred equity stakes with distribution rights, typically tied to gross revenues and designed to generate immediate strong, stable cash yields.

White Mountains owns 89% of the basic units outstanding and 76% of the units on a fully diluted, fully converted basis.

2022 was a good all-around year for Kudu.

Annualized Revenue^{NGM} was \$51 million, implying a Cash Revenue Yield^{NGM} of 10%. Annualized Adjusted EBITDA^{NGM} was \$39 million, implying a Levered Return^{NGM} of 8%. These are running cash-on-cash returns that exclude (i) all realized and unrealized gains and (ii) all carried interest economics.

Kudu's portfolio of investee companies performed well in 2022. Ongoing portfolio AUM grew 8% year over year. Ongoing portfolio fair value grew 2% year over year, excluding the impact of participation contracts sold, and grew 8% year over year, including the impact of such sales. Kudu closed three value-adding sales — Versus, Sequoia, and TIG — which combined to generate a 2.4x MOIC and a 28% IRR for Kudu.

In 2022, Kudu deployed \$100 million of capital, primarily into three new companies:

- Gramercy Funds Management, an emerging markets credit specialist;
- Gentrust, a wealth manager; and
- Escalate Capital Partners, a private credit manager.

Levered Return^{NGM} declined in 2022, negatively impacted by the portfolio company sales as well as higher interest expense on floating rate debt. We plan to drive Levered Return^{NGM} back into the low to mid-teens over time; the first step is deploying fallow capital into new portfolio companies.

Rob Jakacki, Charlie Ruffel and the Kudu team have built a resilient portfolio that showed its mettle in a tough year for financial markets. Through year end, Kudu had deployed \$713 million of gross capital with 20 managers, spanning a diverse set of strategies, geographies and formats. Kudu's value proposition resonates with current and potential investee companies, and Kudu continues to enjoy a robust pipeline of potential deals with high quality managers. We look forward to supporting the continued growth and success of the business.

Kudu Financial Highlights

\$ in millions	Years ended December 31		
	2022	2021	2020
GAAP net income	\$ 62	\$ 78	\$ 21
GAAP return on equity	12%	20%	7%
Annualized Revenue ^{NGM} [a]	\$ 51	\$ 59	\$ 37
Annualized Adjusted EBITDA ^{NGM} [b]	\$ 39	\$ 48	\$ 29
Interest expense [c]	\$ 15	\$ 12	\$ 6
Equity capital drawn	\$ 437	\$ 369	\$ 303
Cumulative distributions	(133)	(23)	(4)
Equity capital drawn, net [d]	304	346	299
Debt capital drawn	215	225	89
Total capital drawn, net [e]	\$ 519	\$ 571	\$ 388
Cash Revenue Yield ^{NGM} [= a/e]	10%	10%	9%
Levered Return ^{NGM} [= (b-c)/d]	8%	11%	8%
Fair value of participation contracts	\$ 696	\$ 670	\$ 401
Proceeds from exited investments	\$ 138	\$ 44	\$ -

Kudu Managers by Core Strategy

As of December 31, 2022	
Core strategy	% of capital deployed
Private credit	39%
Public equity/credit	26%
Wealth management	22%
Real estate	7%
Private equity	7%

MediaAlpha

MediaAlpha is a marketing technology company. It operates a transparent and efficient online customer acquisition technology platform that facilitates real-time transactions between buyers and sellers of consumer referrals (i.e., clicks, calls and leads), primarily in the property & casualty, health and life insurance verticals.

White Mountains owns 27% of the shares outstanding and 25% of the shares on a fully-diluted, fully-converted basis.

MediaAlpha Financial Highlights

<i>\$ in millions</i>	Years ended December 31	
	2022	2021
Transaction value	\$ 738	\$ 1,019
Revenue	\$ 459	\$ 645
Adjusted EBITDA	\$ 23	\$ 58

MediaAlpha Ownership & Investment Metrics

<i>\$ in millions</i>	As of December 31	
	2022	2021
WTM cash received	\$ 407	\$ 407
MAX per share price	\$ 9.95	\$15.44
WTM # of MAX shares owned (millions)	16.9	16.9
WTM MediaAlpha carrying value	\$ 169	\$ 262
WTM gross invested capital	\$ 46	\$ 46
WTM MOIC, cash received	8.9x	8.9x
WTM MOIC, remaining MAX shares	3.7x	5.7x

The decline in MediaAlpha's share price during 2022 negatively impacted White Mountains's financial results. During the year, MediaAlpha's share price declined from \$15.44 to \$9.95, creating an unrealized mark-to-market loss of \$93 million (or \$36 per WTM share).

The ongoing hard market in personal auto insurance weighed heavily on MediaAlpha in 2022. While working to restore underwriting profitability, carriers held back on customer acquisition and advertising spend. Elevated claims inflation and catastrophe losses from Hurricane Ian worked to delay the turn in the market cycle.

MediaAlpha's financial performance suffered as a result. In 2022, transaction value declined to \$738 million, down 28% year over year (down 39% in the p&c vertical). Adjusted EBITDA declined to \$23 million, down 60% year over year.

MediaAlpha nevertheless generated strong free cash flow in 2022. MediaAlpha used excess cash to fund the bolt-on acquisition of Customer Helper Team, to pay down debt and to execute a share buyback program.

We believe we have seen the bottom for auto insurance advertising spend. We expect that, over the course of 2023 and notwithstanding some fits and starts, carriers will begin to turn spend back on and MediaAlpha's p&c vertical will return to growth mode.

We remain true believers in MediaAlpha. The recent pullback in auto insurance ad spend is cyclical. Over time, the bigger force is secular – the ongoing shift from offline to online advertising in the insurance sector. We believe MediaAlpha is well-positioned to win for years to come.

PassportCard/DavidShield

PassportCard/DavidShield (“PC/DS”) is principally an MGA that provides two insurance products: leisure travel insurance and expatriate medical insurance (“IPMI”). PC/DS delivers a real-time, paperless insurance solution that facilitates claims payouts in minutes, wherever customers need them around the world. PC/DS offers its products to both individuals and organizations, primarily in Israel (its home market) as well as in the European Union and Australia.

White Mountains owns 54% of the basic shares outstanding of PC/DS.

2022 was a record year for PC/DS. PassportCard Israel wrote \$145 million of premiums, up nearly 3x year over year and 65% above pre-COVID levels. Premium rates are up; market share is up; and days traveled have more or less recovered to pre-COVID levels. Leisure travel is back, and it’s insured! DavidShield wrote \$58 million of premiums, up 8% year over year and nearly 40% above pre-COVID levels.

For the PC/DS business as a whole, core premiums nearly doubled year over year, growing from \$108 million to \$212 million, while core EBITDA increased from \$14 million to \$23 million.

Meanwhile, international growth initiatives are also (re)gaining momentum. PassportCard Germany, our European IPMI business, grew premiums nearly 4x year over year to \$9 million, and we see a profitable business emerging there. In late 2022, we took the decision to relaunch the TravelCard business in Australia, in hibernation since the COVID lockdown. Policy sales in Australia will resume in 2023, and we intend to build a substantial business there in the coming years.

PC/DS’s differentiated products are perfectly suited to post-pandemic customer needs. We remain true believers, and we expect another record year in 2023.

PassportCard/DavidShield Financial Highlights

\$ in millions	Years ended December 31		
	2022	2021	2020
Core controlled premiums ¹			
Leisure travel	\$ 145	\$ 54	\$ 12
Expatriate medical	67	54	49
Subtotal	212	108	61
Managed premiums	20	17	14
Total	\$ 232	\$ 125	\$ 75
Core EBITDA ¹	\$ 23	\$ 14	\$ 2
WTM carrying value	\$ 135	\$ 120	\$ 95

¹Excludes international growth initiatives; PassportCard Germany classified as core beginning in 2022.

Non-GAAP Financial Measures

Our 2022 Management Report includes non-GAAP financial measures that have been reconciled from their most comparable GAAP financial measures. White Mountains believes these measures are useful to management and investors in evaluating White Mountains's financial performance.

White Mountains - Look Through Parent Company Balance Sheets and Income Statements

The Look Through Parent Company Balance Sheets and Income Statements present White Mountains's principle operating businesses under the equity method of accounting. Under the equity method of accounting, each operating business is generally presented on the Look Through Balance Sheet at its GAAP equity, net of non-controlling interests, and the comprehensive income (loss) of each operating business is presented on the Look Through Income Statements at its GAAP comprehensive income (loss) attributable to White Mountains's common shareholders. As of December 31, 2022, under GAAP, White Mountains consolidated HG Global, Ark, Outrigger Re, Kudu and certain other operating businesses. White Mountains also consolidated BAM, but its balances and results are entirely attributable to non-controlling interests. White Mountains's investment in HG Global is also presented under the equity method of accounting, but its GAAP equity has been adjusted for the items described in Adjusted Book Value Per Share Numerator below. See page 10 for a reconciliation of White Mountains's interest in HG Global on a GAAP basis to an adjusted book value basis. As of December 31, 2022, the Look Through Parent Company Balance Sheet also presents \$70 million of pre-funded investments in ILS funds within fixed income, short-term investments and cash. Under GAAP, this was recorded as a receivable within other assets in White Mountains's consolidated financial statements.

White Mountains - Adjusted Common Equity, Adjusted Common Shares Outstanding and Adjusted Book Value Per Share

Adjusted Book Value Per Share is a non-GAAP financial measure which is derived by adjusting (i) the GAAP book value per share numerator and (ii) the common shares outstanding denominator, as described below. The GAAP book value per share numerator is adjusted (i) to include a discount for the time value of money arising from the modeled timing of cash payments of principal and interest on the BAM Surplus Notes and (ii) to add back the unearned premium reserve, net of deferred acquisition costs, at HG Global. The denominator used in the calculation of Adjusted Book Value Per Share equals the number of common shares outstanding adjusted to exclude unearned restricted common shares, the compensation cost of which, at the date of calculation, has yet to be amortized. Restricted common shares are earned on a straight-line basis over their vesting periods.

	As of December 31	
	2022	2021
Book value per share numerators (\$ in millions):		
GAAP common shareholders' equity	\$ 3,747	\$ 3,548
97% of the time value of money discount on expected future payments on the BAM surplus notes	(95)	(126)
97% of HG Global's unearned premium reserve	242	215
97% of HG Global's net deferred acquisition costs	(69)	(61)
Adjusted Common Equity (ABVPS numerator)	\$ 3,825	\$ 3,576
Book value per share denominators (in thousands):		
GAAP common shares outstanding	2,572	3,018
Unearned restricted common shares	(14)	(14)
Adjusted Common Shares Outstanding (ABVPS denominator)	2,558	3,004
GAAP book value per share	\$ 1,457	\$ 1,176
Adjusted Book Value Per Share	\$ 1,495	\$ 1,190

White Mountains - Growth in Adjusted Book Value Per Share

The Company calculates its annual growth in value per share on an IRR basis, which reflects the value per share at the beginning of the year, the dividends received each year and the value per share at the end of the year. See the table below for comparison of growth in GAAP book value per share and growth in ABVPS over a range of return periods:

	Return Periods Ended December 31, 2022				
Annualized Growth:	1-year	5-year	10-year	20-year	Since IPO
GAAP book value per share	24.0%	9.5%	9.5%	9.6%	13.3%
Adjusted Book Value Per Share	25.7%	10.4%	9.9%	9.7%	13.4%

White Mountains - Total Portfolio Return and Equity Portfolio Return

Total Portfolio Return is a non-GAAP financial measure that begins with GAAP investment return and removes the returns of our holdings in MediaAlpha, Kudu's and BAM's invested assets, PassportCard/DavidShield and unconsolidated other operating businesses. Equity Portfolio Return is a non-GAAP measure that begins with GAAP equity return and removes the return from our investment in MediaAlpha, Kudu's invested assets, PassportCard/DavidShield, unconsolidated other operating businesses and ILS funds.

	Year Ended December 31, 2022	
	Total Portfolio Return	Equity Portfolio Return
GAAP investment returns	-1.6%	2.3%
Remove:		
MediaAlpha	1.9%	5.8%
Kudu invested assets	-2.9%	-5.0%
BAM invested assets	0.9%	0.0%
PassportCard/DavidShield	-0.6%	-1.2%
Unconsolidated other operating businesses	0.2%	1.1%
ILS funds (reclassified as fixed income)	0.0%	4.9%
Portfolio Returns	-2.1%	7.9%

HG Global - Adjusted Book Value

See page 10 for a reconciliation of White Mountains's interest in HG Global on a GAAP basis to an adjusted book value basis.

Ark - Tangible Book Value and Growth in Tangible Book Value

Ark's Tangible Book Value is a non-GAAP financial measure derived by adjusting GAAP book value (i) to exclude net goodwill and intangibles and (ii) to add back one-time transaction expenses. Growth in Tangible Book Value is the result of dividing the change in Tangible Book Value for the period plus dividends, by Beginning Tangible Book Value.

(\$ in millions)	Years Ended December 31	
	2022	2021
Beginning GAAP equity	\$ 905	\$ 867
Less: One-time transaction expenses	-	(25)
Less: Goodwill & intangibles, net	(221)	(237)
Beginning Tangible Book Value	\$ 684	\$ 605
Ending GAAP equity,	\$ 965	\$ 905
Less: Goodwill & intangibles, net	(203)	(221)
Ending Tangible Book Value	\$ 762	\$ 684
Dividends	\$ 21	\$ -
Growth in Tangible Book Value	15%	13%

Kudu - EBITDA, Adjusted EBITDA, Annualized Adjusted EBITDA, Levered Return, Annualized Revenue and Cash Revenue Yield

Kudu's EBITDA is a non-GAAP financial measure that excludes interest expense on debt, income tax expense (benefit), depreciation and amortization of other intangible assets from GAAP net income (loss). Adjusted EBITDA is a non-GAAP financial measure that excludes certain other items in GAAP net income (loss) in addition to those excluded from EBITDA. The adjustments relate to (i) net realized and unrealized investment (gains) losses on Kudu's participation contracts, (ii) non-cash equity-based compensation expense and (iii) transaction expenses.

A description of each adjustment follows:

- *Net realized and unrealized investment (gains) losses* - Represents net unrealized investment gains and losses recorded on Kudu's participation contracts, which are recorded at fair value under GAAP, and realized investment gains and losses from participation contracts sold during the period.
- *Non-cash equity-based compensation expense* - Represents non-cash expenses related to Kudu's management compensation that are settled with equity units in Kudu.
- *Transaction expenses* - Represents costs directly related to Kudu's mergers and acquisitions activity, such as external lawyer, banker, consulting and placement agent fees, which are not capitalized and are expensed under GAAP.

Annualized Adjusted EBITDA is a non-GAAP financial measure that (i) annualizes partial year revenues related to Kudu's participation contracts acquired during the previous 12-month period and (ii) removes revenues related to participation contracts sold during the previous 12-month period. Annualized revenues related to participation contracts acquired during the previous 12-month period are calculated on a contract-by-contract basis by annualizing the revenues received for the partial 12-month period. For example, if a participation contract was in effect for four months, the amount added equals twice that amount. The adjustment to remove revenues for contracts sold during the previous 12-month period is calculated on a contract-by-contract basis based on actual revenues earned.

Annualized Adjusted EBITDA Including Year End Acquisitions is a non-GAAP financial measure that adds a full year of estimated revenues from participation contracts that were acquired at the end of the year, which are not captured in the Annualized Adjusted EBITDA adjustments described above. Levered Annualized Adjusted EBITDA adjusts the aforementioned metric for interest expense on debt.

Annualized Revenue is a non-GAAP financial measure that adds the adjustments made in the Annualized Adjusted EBITDA calculation to GAAP net investment income. Annualized Revenue Including Year End Acquisitions is a non-GAAP financial measure that adds the adjustments made in Annualized Adjusted EBITDA Including Year End Acquisitions to GAAP net investment income.

(\$ in millions)		Years Ended December 31		
		2022	2021	2020
GAAP net income (loss)	[a]	\$ 62	\$ 78	\$ 21
Add back:				
Interest expense		15	12	6
Income tax expense (benefit)		27	30	7
General and administrative expenses - depreciation		-	-	-
Amortization of other intangible assets		-	-	-
EBITDA		104	120	34
Exclude:				
Net realized and unrealized (gains) losses		(64)	(90)	(16)
Non-cash equity-based compensation expense		-	1	-
Transaction expenses		2	2	4
Adjusted EBITDA		42	33	22
Adjustment to annualize partial year revenues of participation contracts acquired		3	9	2
Adjustment to remove partial year revenues of participation contracts sold		(6)	(2)	-
Annualized Adjusted EBITDA		39	39	24
Add: Impact of year end acquisitions		-	9	5
Annualized Adjusted EBITDA Including Year End Acquisitions		39	48	29
Remove: Interest expense		(15)	(12)	(6)
Levered Annualized Adjusted EBITDA	[b]	\$ 24	\$ 36	\$ 23
Average GAAP equity	[c]	\$ 509	\$ 400	\$ 284
GAAP return on equity	[a/c]	12%	20%	7%
Equity capital drawn, net	[d]	\$ 304	\$ 346	\$ 299
Levered Return	[b/d]	8%	11%	8%

(\$ in millions)		Years Ended December 31		
		2022	2021	2020
GAAP net investment income	[a]	\$ 54	\$ 44	\$ 30
Adjustment to annualize partial year revenues of participation contracts acquired		3	9	2
Adjustment to remove partial year revenues of participation contracts sold		(6)	(2)	-
Annualized Revenue		51	50	32
Add: Impact of year end acquisitions		-	9	5
Annualized Revenue Including Year End Acquisitions	[b]	\$ 51	\$ 59	\$ 37
Total net capital drawn and invested	[c]	\$ 519	\$ 571	\$ 388
GAAP net investment income revenue yield	[a/c]	10%	8%	8%
Cash Revenue Yield	[b/c]	10%	10%	9%

Corporate Information

Shareholder Inquiries

White Mountains Insurance Group, Ltd.
The A.S. Cooper Building
26 Reid Street, Suite 601
Hamilton HM 11, Bermuda
Tel: (441) 278-3160
Fax: (441) 278-3170

Written shareholder inquiries should be sent to the Corporate Secretary at the Company's Bermuda corporate headquarters. Written inquiries from the investment community should be directed to the Investor Relations Department at the Company's Bermuda corporate headquarters.

Principal Executive Office

White Mountains Insurance Group, Ltd.
23 South Main Street, Suite 3B
Hanover, New Hampshire 03755
Tel: (603) 640-2200
Fax: (603) 640-2250

Registered Office

White Mountains Insurance Group, Ltd.
Clarendon House
2 Church Street
Hamilton HM 11, Bermuda

Annual General Meeting

The 2023 Annual General Meeting (AGM) of Members will be held on Thursday, May 25, 2023, at Rosewood Bermuda, in Hamilton, Bermuda, and will commence at 8:00 a.m. Atlantic Time.

Proxy materials for the AGM, including the Chief Executive Officer's Letter, Notice of 2023 Annual General Meeting of Members and Proxy Statement and Form 10-K are available online at www.edocumentview.com/wtm for viewing and downloading.

Annual Investor Meeting

The 2023 Annual Investor Meeting will be held on Tuesday, June 6, 2023 at the Mandarin Oriental Hotel, 80 Columbus Circle, New York NY at 10:00 a.m. Eastern Time. Please refer to the Company's website for further details.

Stock Exchange Information

The Company's common shares are listed on the New York Stock Exchange under the symbol "WTM" and on the Bermuda Stock Exchange under the symbol "WTM.BH."

Form 10-K

For comprehensive audited financial statements, please refer to the Annual Report on Form 10-K filed with the SEC on February 27, 2023 which is attached hereto. In addition, the Company's Form 10-K is available for viewing online at www.edocumentview.com/wtm. Additional copies of the Form 10-K are also available without charge upon written request to the Corporate Secretary at the Company's Bermuda corporate headquarters.

Transfer Agent and Registrar for Common Shares

Mailing Address:

Computershare Trust Company, N.A.
P.O. Box 43006
Providence, RI 02940-3006

Private Couriers/Registered Mail:

Computershare Trust Company, N.A.
150 Royall St., Suite 101
Canton, MA 02021

Registered shareholders (shares are held by you in your name) may obtain information about transfer requirements, replacement dividend checks, duplicate 1099 forms, and changes of address by calling the Transfer Agent's Telephone Response Center at (877) 373-6374 or (800) 952-9245 for the hearing impaired or visiting the Transfer Agent's website at <https://www.computershare.com/investor>. Please be prepared to provide your tax identification or social security number, description of securities, and address of record. Other inquiries concerning your shareholder account should be addressed in writing to the Transfer Agent and Registrar.

Additional Information

All reports, including press releases, SEC filings, and other information for the Company, its subsidiaries, and its affiliates are available for viewing at our website at www.whitemountains.com. Please come visit us.

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, 2022

OR

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

For the transition period from to
Commission file number 1-8993

WHITE MOUNTAINS INSURANCE GROUP, LTD.

(Exact name of Registrant as specified in its charter)

Bermuda
(State or other jurisdiction of incorporation or organization)

94-2708455
(I.R.S. Employer Identification No.)

23 South Main Street, Suite 3B

**Hanover,
New Hampshire**

(Address of principal executive offices)

03755-2053
(Zip Code)

Registrant's telephone number, including area code: **(603) 640-2200**

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

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common Shares, par value \$1.00 per share	WTM	New York Stock Exchange
	WTM.BH	Bermuda 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 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 voting shares (based on the closing price of those shares listed on the New York Stock Exchange and the consideration received for those shares not listed on a national or regional exchange) held by non-affiliates of the Registrant as of June 30, 2022, was \$3,569,108,224.

As of February 21, 2023, 2,567,527 common shares, par value of \$1.00 per share, were outstanding (which includes 26,700 restricted common shares that were not vested at such date).

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Definitive Proxy Statement to be filed with the Securities and Exchange Commission ("SEC") pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), relating to the Registrant's Annual General Meeting of Members scheduled to be held May 25, 2023 are incorporated by reference into Part III of this Form 10-K. With the exception of the portions of the Proxy Statement specifically incorporated herein by reference, the Proxy Statement is not deemed to be filed as part of this Form 10-K.



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PART I

Item 1. Business

GENERAL

White Mountains Insurance Group, Ltd. (the “Company” or the “Registrant”) is an exempted Bermuda limited liability company whose principal businesses are conducted through its subsidiaries and affiliates. Within this report, the term “White Mountains” is used to refer to one or more entities within the consolidated organization, as the context requires. The Company’s headquarters is located at 26 Reid Street, Hamilton, Bermuda HM 11, its principal executive office is located at 23 South Main Street, Suite 3B, Hanover, New Hampshire 03755-2053 and its registered office is located at Clarendon House, 2 Church Street, Hamilton, Bermuda HM 11. The Company’s website is located at www.whitemountains.com. The information contained on White Mountains’s website is not incorporated by reference into, and is not a part of, this report.

White Mountains is engaged in the business of making opportunistic and value-oriented acquisitions of businesses and assets in the insurance, financial services and related sectors, operating these businesses and assets through its subsidiaries and, if and when attractive exit valuations become available, disposing of these businesses and assets.

As of December 31, 2022, White Mountains conducted its business primarily in four areas: municipal bond insurance, property and casualty insurance and reinsurance, capital solutions for asset and wealth management firms and other operations. White Mountains’s municipal bond insurance business is conducted through its subsidiary HG Global Ltd. and its reinsurance subsidiary HG Re Ltd. (“HG Re”), (collectively, “HG Global”). HG Global was established to fund the startup of and provide reinsurance, through HG Re, to Build America Mutual Assurance Company (“BAM”), a mutual municipal bond insurance company (collectively, “HG Global/BAM”). White Mountains’s property and casualty insurance and reinsurance business is conducted through its subsidiary Ark Insurance Holdings Limited and its subsidiaries (collectively, “Ark”). White Mountains provides capital solutions for asset and wealth management firms through its subsidiary Kudu Investment Management, LLC and its subsidiaries (collectively, “Kudu”).

White Mountains’s Other Operations consists of the Company and its wholly-owned subsidiary, White Mountains Capital, LLC (“WM Capital”), its other intermediate holding companies, its wholly-owned investment management subsidiary, White Mountains Advisors LLC (“WM Advisors”), investment assets managed by WM Advisors, its interests in MediaAlpha, Inc. (“MediaAlpha”), PassportCard Limited (“PassportCard”) and DavidShield Life Insurance Agency (2000) Ltd. (“DavidShield”) (collectively, “PassportCard/ DavidShield”), Elementum Holdings LP (“Elementum”), Outrigger Re Ltd. Segregated Account 2023-1 (“WM Outrigger Re”), certain other consolidated and unconsolidated entities and certain other assets. As of December 31, 2022, White Mountains’s reportable segments were HG Global/BAM, Ark and Kudu with our remaining operating businesses, holding companies and other assets included in Other Operations.

HG GLOBAL/BAM

Overview

The HG Global/BAM segment consists of the consolidated results of HG Global, HG Re and BAM. BAM is the first and only mutual municipal bond insurance company in the United States. By insuring the timely payment of principal and interest on municipal bonds, BAM provides market access to, and lowers interest expense for, issuers of municipal bonds used to finance essential public purpose projects. BAM is domiciled in New York and is owned by and operated for the benefit of its policyholders, the municipalities that purchase BAM’s insurance for their debt issuances. Generally accepted accounting principles in the United States (“GAAP”) require White Mountains to consolidate BAM’s results in its financial statements, which are attributed to non-controlling interests. BAM reports on a statutory accounting basis to the New York State Department of Financial Services (“NYDFS”) and does not report stand-alone GAAP financial results.

HG Global was established to fund the startup of BAM and, through HG Re, to provide up to 15%-of-par, first loss reinsurance protection for policies underwritten by BAM. HG Global and HG Re are domiciled in Bermuda. At inception in 2012, HG Global was capitalized with \$609 million. HG Global, together with its subsidiaries, funded the initial capitalization of BAM through the purchase of \$503 million of surplus notes issued by BAM (the “BAM Surplus Notes”). See **“CRITICAL ACCOUNTING ESTIMATES — Surplus Notes Valuation — BAM Surplus Notes”** on page 76 for a discussion on the accounting and risks associated with the BAM Surplus Notes. BAM launched in 2012 after securing its “AA/stable” rating from Standard & Poor’s Financial Services LLC (“Standard & Poor’s”). In June 2022, Standard & Poor’s affirmed BAM’s “AA/stable” rating. “AA” is the third highest of 23 financial strength ratings assigned by Standard & Poor’s.

BAM charges an insurance premium on each municipal bond insurance policy it underwrites. A portion of the premium is a member's surplus contribution ("MSC") and the remainder is a risk premium. In the event of a municipal bond refunding, a portion of the MSC from original issuance can be reutilized, in effect serving as a credit against the total insurance premium on the refunding of the municipal bond. Issuers of debt insured by BAM are members of BAM so long as any of their BAM-insured debt is outstanding. As members, they have certain interests in BAM, including the right to vote for BAM's directors and to receive dividends, if declared.

BAM focuses on municipal bonds issued to finance essential public purpose projects, such as schools, utilities and transportation facilities. BAM focuses on small-to-medium sized investment grade municipal bonds, primarily in the AA, A and BBB categories. BAM seeks to build a relatively low risk insurance portfolio with prudent single risk limits. White Mountains believes that municipal bonds insured by BAM have strong appeal to retail investors, who buy smaller, less liquid issues, have less portfolio diversification and have fewer credit differentiation skills and analytical resources than institutional investors.

BAM is exposed to climate-related events to the extent that those events impact a municipal issuer's ability to service its debt obligations. BAM incorporates climate change risk in its credit underwriting process. In doing so, BAM considers both the short-term economic impact from climate change-related severe weather events (including flooding, wildfires, and drought) as well as longer-term impacts on population and property values from rising sea levels and changing temperature patterns.

As of December 31, 2022 and 2021, White Mountains reported \$1,125 million and \$1,084 million of total assets and \$364 million and \$446 million of total equity related to HG Global. As of December 31, 2022 and 2021, White Mountains owned 96.9% of HG Global's preferred equity and 88.4% of its common equity. As of December 31, 2022 and 2021, White Mountains reported \$(1) million and \$9 million of non-controlling interests related to HG Global.

As of December 31, 2022 and 2021, White Mountains reported \$507 million and \$550 million of total assets and \$(155) million and \$(124) million of non-controlling interests related to BAM.

Reinsurance Treaties

FLRT

BAM is a party to a first loss reinsurance treaty ("FLRT") with HG Re under which HG Re provides first loss protection up to 15%-of-par outstanding on each municipal bond insured by BAM. For capital appreciation bonds, par is adjusted to the estimated equivalent par value for current interest paying bonds. In return, BAM cedes approximately 60% of the risk premium charged for insuring the municipal bond, which is net of a ceding commission.

The FLRT is a perpetual agreement with terms that can be renegotiated after a specified period of time. During 2021, BAM and HG Re agreed that the terms may be renegotiated at the end of 2024, and each subsequent five-year period thereafter.

If the parties are unable to mutually agree to amended terms, the dispute is resolved through arbitration, according to certain principles agreed to by the parties. Amended contract terms must be approved by the NYDFS. Should BAM consider the amended terms unacceptable, it has the option to purchase HG Re or cause another reinsurer to purchase HG Re, at fair value.

Pursuant to the FLRT, BAM's underwriting guidelines may only be amended with the consent of HG Re. In addition, HG Holdings Ltd, a subsidiary of HG Global, has the right to designate two directors for election to BAM's board of directors.

Fidus Re

BAM is party to a collateralized excess of loss reinsurance agreement that serves to increase BAM's claims paying resources and is provided by Fidus Re, Ltd. ("Fidus Re"), a Bermuda based special purpose insurer created in 2018 solely to provide reinsurance protection to BAM.

Fidus Re was initially capitalized in 2018 via the issuance of \$100 million of insurance linked securities (the "Fidus Re 2018 Agreement"). The proceeds from issuance were placed in a collateral trust supporting Fidus Re's obligations to BAM. The insurance linked securities were issued with an initial term of 12 years and are callable five years after the date of issuance. Under the Fidus Re 2018 Agreement, Fidus Re reinsures 90% of aggregate losses exceeding \$165 million on a portion of BAM's financial guarantee portfolio (the "2018 Covered Portfolio") up to a total reimbursement of \$100 million. The Fidus Re 2018 Agreement does not provide coverage for losses in excess of \$276 million. The 2018 Covered Portfolio consists of approximately 27% of BAM's gross par outstanding as of December 31, 2022.

In 2021, Fidus Re issued an additional \$150 million of insurance linked securities (the "Fidus Re 2021 Agreement"), which have an initial term of 12 years and are callable five years after the date of issuance. The proceeds from issuance were placed in a collateral trust supporting Fidus Re's obligations to BAM. Under the Fidus Re 2021 Agreement, Fidus Re reinsures 90% of aggregate losses exceeding \$135 million on a portion of BAM's financial guarantee portfolio (the "2021 Covered Portfolio") up to a total reimbursement of \$150 million. The Fidus Re 2021 Agreement does not provide coverage for losses in excess of \$302 million. The 2021 Covered Portfolio consists of approximately 32% of BAM's gross par outstanding as of December 31, 2022.

In 2022, Fidus Re issued an additional \$150 million of insurance linked securities (the “Fidus Re 2022 Agreement”), which have an initial term of 12 years and are callable seven years after the date of issuance. The proceeds from issuance were placed in a collateral trust supporting Fidus Re’s obligations to BAM. Under the Fidus Re 2022 Agreement, Fidus Re reinsures 90% of aggregate losses exceeding \$110 million on a portion of BAM’s financial guarantee portfolio (the “2022 Covered Portfolio”) up to a total reimbursement of \$150 million. The Fidus Re 2022 Agreement does not provide coverage for losses in excess of \$277 million. The 2022 Covered Portfolio consists of approximately 33% of BAM’s gross par outstanding as of December 31, 2022.

XOLT

In 2020, BAM entered into an excess of loss reinsurance agreement (the “XOLT”) with HG Re. Under the XOLT, HG Re provides last dollar protection for exposures on municipal bonds insured by BAM in excess of NYDFS single issuer limits. The XOLT is subject to an aggregate limit equal to the lesser of \$125 million or the assets held in the Supplemental Trust at any point in time. Cessions under the XOLT are subject to approval by HG Re. As of December 31, 2022, BAM had ceded \$80 million of exposure to HG Re under the XOLT.

Collateral Trusts

HG Re’s obligations under the FLRT are subject to an aggregate limit equal to the assets in two collateral trusts: a Regulation 114 Trust and a supplemental collateral trust (the “Supplemental Trust” and, together with the Regulation 114 Trust, the “Collateral Trusts”) at any point in time.

On a monthly basis, BAM deposits cash equal to ceded premiums, net of ceding commissions, due to HG Re under the FLRT directly into the Regulation 114 Trust. The Regulation 114 Trust target balance is equal to HG Re’s unearned premiums and unpaid loss and loss adjustment expense (“LAE”) reserves, if any. If, at the end of any quarter, the Regulation 114 Trust balance is below the target balance, funds will be withdrawn from the Supplemental Trust and deposited into the Regulation 114 Trust in an amount equal to the shortfall. If, at the end of any quarter, the Regulation 114 Trust balance is above 102% of the target balance, funds will be withdrawn from the Regulation 114 Trust and deposited into the Supplemental Trust. The Regulation 114 Trust balance as of December 31, 2022 and 2021 was \$289 million and \$250 million.

The Supplemental Trust target balance is \$603 million, less the amount of cash and securities in the Regulation 114 Trust in excess of its target balance (the “Supplemental Trust Target Balance”). If, at the end of any quarter, the Supplemental Trust balance exceeds the Supplemental Trust Target Balance, such excess may be distributed to HG Re. The distribution will be made first as an assignment of accrued interest on the BAM Surplus Notes and second in cash and/or fixed income securities. As the BAM Surplus Notes are repaid over time, the BAM Surplus Notes will be replaced in the Supplemental Trust by cash and fixed income securities. The Supplemental Trust balance as of December 31, 2022 and 2021 was \$568 million and \$602 million, which included \$215 million and \$231 million of cash and investments, \$340 million and \$365 million of BAM Surplus Notes and \$14 million and \$6 million of interest receivable on the BAM Surplus Notes.

If, at any point in time, the sum of the Regulation 114 Trust balance and the Supplemental Trust balance equals zero, BAM may choose to terminate the FLRT on a runoff basis. However, HG Re can elect to continue the FLRT by depositing into the Regulation 114 Trust assets with a fair market value not less than the greater of (i) \$100 million or (ii) 10% of the then Regulation 114 Trust target balance.

As of December 31, 2022 and 2021, the Collateral Trusts held assets of \$857 million and \$852 million, which included \$503 million and \$481 million of cash and investments, \$340 million and \$365 million of BAM Surplus Notes and \$14 million and \$6 million of interest receivable on the BAM Surplus Notes.

As of December 31, 2022 and 2021, total interest receivable on the BAM Surplus Notes for both periods was \$158 million, which includes amounts held outside the Collateral Trusts.

Competition/Pricing

The municipal bond insurance industry is highly competitive. BAM’s primary competitor is Assured Guaranty Ltd. (“Assured”).

BAM and Assured each seeks to differentiate itself through financial strength ratings, claims paying resources and underwriting strategies. BAM believes it has a number of distinct competitive advantages. BAM’s insured portfolio consists only of essential public purpose U.S. municipal bonds, and it has no exposure to mortgage and asset-backed securities, derivatives, non-U.S. structured or sovereign credits or territorial credits, such as Puerto Rico. BAM believes that, over time, its mutual structure will deliver a cost of capital advantage relative to its stock company competitors.

BAM seeks to provide transparency with respect to its insured portfolio and each insured issuer. In order to allow issuers and investors in BAM-insured municipal bonds to monitor financial strength first-hand, BAM publishes credit profiles on every insured issuer. Credit profiles are accessible by CUSIP, obligor, state or sector on BAM's website.

Pricing (i.e., premium level) is affected by a number of factors, including interest rate levels, credit spreads, trading value, and capture rate (i.e., the percentage of total interest savings captured in the form of insurance premium). All other things being equal, pricing is generally higher when interest rates are higher, credit spreads are wider, BAM's trading value is higher relative to competitors and the capture rate is higher.

Insured Portfolio

The following table presents BAM's insured portfolio by asset class as of December 31, 2022 and 2021:

Millions	December 31, 2022		December 31, 2021	
	Gross Par Outstanding	Average Standard & Poor's Credit Rating ⁽¹⁾	Gross Par Outstanding	Average Standard & Poor's Credit Rating ⁽¹⁾
General Obligation	\$ 55,955.0	A	\$ 50,375.0	A
Utility	13,583.3	A	11,826.6	A
Dedicated Tax	10,755.0	A	9,740.1	A
General Fund	8,218.7	A+	7,650.2	A
Higher Education	6,947.5	A-	6,291.5	A-
Enterprise Systems	4,537.4	A	3,313.1	A
Total insured portfolio	\$ 99,996.9	A	\$ 89,196.5	A

⁽¹⁾ The average credit ratings are based on Standard & Poor's credit ratings, or if unrated by Standard & Poor's, the Standard & Poor's equivalent of credit ratings provided by Moody's Investor Service ("Moody's").

The following tables present BAM's ten largest direct exposures based upon gross par outstanding as of December 31, 2022 and 2021:

\$ in Millions	December 31, 2022		
	Gross Par Outstanding ⁽²⁾	Percent of Total Gross Par Outstanding ⁽²⁾	Standard & Poor's Credit Rating ⁽¹⁾
Pennsylvania Turnpike Commission, PA, Toll Roads	\$ 441.3	0.4 %	A
City of Chicago, IL (Cook County), Sales Tax - Local	409.0	0.4	AA-
Clark County SD, NV (Clark County)	383.1	0.4	A+
New Jersey Transportation Trust Fund Authority, System & Program Bonds, NJ, Gas Tax ⁽²⁾	375.9	0.4	BBB+
State of Illinois	369.8	0.4	BBB+
Miami-Dade County School Board (Miami-Dade County)	366.8	0.4	AA-
Metropolitan Pier & Exposition Authority, IL (Cook County)	366.3	0.4	A-
South Carolina Public Service Authority	366.0	0.4	A-
Sacramento City USD, CA (Sacramento County)	349.4	0.3	BBB
Metropolitan Transit Authority (MTA), NY, Mass Transit - Farebox ⁽²⁾	346.9	0.3	BBB+
Total of top ten exposures	\$ 3,774.5	3.8 %	

⁽¹⁾ "AA-" is the fourth highest, "A+" is the fifth highest, "A" is the sixth highest, "A-" is the seventh highest, "BBB+" is the eighth highest and "BBB" is the ninth highest of 23 credit ratings assigned by Standard & Poor's.

⁽²⁾ For capital appreciation bonds, the amounts shown equal the estimated equivalent par value had the bonds been current interest paying bonds.

\$ in Millions	December 31, 2021		
	Gross Par Outstanding ⁽²⁾	Percent of Total Gross Par Outstanding ⁽²⁾	Standard & Poor's Credit Rating ⁽¹⁾
Clark County SD, NV (Clark County)	\$ 387.4	0.4 %	A+
City of Chicago, IL (Cook County), Sales Tax - Local	376.8	0.4	AA-
New Jersey Transportation Trust Fund Authority, System & Program Bonds, NJ, Gas Tax ⁽²⁾	376.5	0.4	BBB
State of Illinois	365.6	0.4	BBB
Metropolitan Transit Authority (MTA), NY, Mass Transit - Farebox ⁽²⁾	346.9	0.4	BBB+
Pennsylvania Turnpike Commission, PA, Toll Roads	341.5	0.4	A
Suffolk County, NY (Suffolk County)	335.2	0.4	A-
Pennsylvania, Commonwealth of ⁽²⁾	325.6	0.4	BBB-
Oregon State University, OR, Public Higher Education - Gross Revenue	320.7	0.4	A
Municipal Authority of Westmoreland County, PA, Water	318.6	0.4	A+
Total of top ten exposures	\$ 3,494.8	4.0 %	

⁽¹⁾ "AA-" is the fourth highest, "A+" is the fifth highest, "A" is the sixth highest, "A-" is the seventh highest, "BBB+" is the eighth highest, "BBB" is the ninth highest and "BBB-" is the tenth highest of 23 credit ratings assigned by Standard & Poor's.

⁽²⁾ For capital appreciation bonds, the amounts shown equal the estimated equivalent par value had the bonds been current interest paying bonds.

The following tables present the geographic distribution of BAM's insured portfolio as of December 31, 2022 and 2021:

\$ in Millions	December 31, 2022		
	Number of Risks	Gross Par Outstanding	Percent of Total Gross Par Outstanding
California	824	\$ 20,055.5	20.1 %
Texas	976	13,615.4	13.6
Pennsylvania	535	10,880.2	10.9
Illinois	467	9,065.9	9.1
New York	413	5,822.4	5.8
New Jersey	197	4,195.8	4.2
Florida	83	3,184.1	3.2
Alabama	206	3,172.7	3.2
Ohio	181	2,844.5	2.8
Michigan	163	2,342.4	2.3
Other States	1,374	24,818.0	24.8
Total insured portfolio	5,419	\$ 99,996.9	100.0 %

\$ in Millions	December 31, 2021		
	Number of Risks	Gross Par Outstanding	Percent of Total Gross Par Outstanding
California	785	\$ 18,813.3	21.1 %
Texas	910	11,802.6	13.2
Pennsylvania	520	10,596.1	11.9
Illinois	456	8,091.6	9.1
New York	364	4,557.6	5.1
New Jersey	179	3,959.9	4.4
Alabama	197	2,865.2	3.2
Ohio	176	2,762.5	3.1
Florida	81	2,662.3	3.0
Louisiana	92	1,914.9	2.1
Other States	1,293	21,170.5	23.8
Total insured portfolio	5,053	\$ 89,196.5	100.0 %

The following table presents BAM's insured portfolio by issuer size of exposure as of December 31, 2022 and 2021:

\$ in Millions	December 31, 2022			December 31, 2021		
	Number of Risks	Gross Par Outstanding	Percent of Total Gross Par Outstanding	Number of Risks	Gross Par Outstanding	Percent of Total Gross Par Outstanding
Original Par Amount Per Issuer⁽¹⁾						
Less than \$10 million	2,822	\$ 10,937.1	10.9 %	2,831	\$ 11,314.9	12.7 %
\$10 to \$50 million	2,074	38,372.2	38.4	1,788	35,313.3	39.6
\$50 to \$100 million	332	19,090.3	19.1	288	17,791.2	19.9
\$100 to \$200 million	124	14,596.8	14.6	93	11,493.1	12.9
\$200 to \$300 million	38	7,747.1	7.7	39	8,662.5	9.7
\$300 to \$400 million	25	7,855.7	7.9	13	4,286.3	4.8
\$400 to \$500 million	4	1,397.7	1.4	1	335.2	0.4
Total insured portfolio	5,419	\$ 99,996.9	100.0 %	5,053	\$ 89,196.5	100.0 %

⁽¹⁾ The original par amount per issuer does not include refunded and re-issued deals.

Insured Credit Surveillance

BAM management maintains a surveillance committee that evaluates the credit profile of each insured municipal bond on a periodic basis. The surveillance committee places each insured municipal bond into one of four surveillance categories, the last two of which represent insured municipal bonds that are on BAM's insured credit watchlist. Surveillance category 3 represents insured municipal bonds whose issuers are experiencing financial, legal or administrative issues causing overall credit quality deterioration, but whose probability of generating an insured loss is considered remote. Surveillance category 4 represents insured municipal bonds where a loss is expected or losses have been paid and have not been recovered or are not recoverable.

Insured municipal bonds on the watchlist are monitored closely and are subject to BAM's distressed credit management procedures, including a remediation plan developed in consultation with BAM's legal counsel and consultants. The objectives of any remediation plan are to address the problems the issuer is facing, to address any external factors impacting the credit, to ensure that creditors' rights are enforced and to cure any breaches that may have occurred with respect to any credit triggers or covenants. BAM may work with other insurers, municipal bondholders and/or interested parties on remediation efforts, as applicable.

ARK

Overview

On January 1, 2021, White Mountains acquired a controlling ownership interest in Ark (the “Ark Transaction”). See **Note 2 — “Significant Transactions”** on page F-17 for a discussion of the Ark Transaction. Ark is a specialty property and casualty insurance and reinsurance company that offers a wide range of niche insurance and reinsurance products. Ark underwrites select coverages through its two major subsidiaries in the United Kingdom and Bermuda.

In the United Kingdom, Ark participates in the Lloyd’s of London (“Lloyd’s”) market through Ark Corporate Member Limited (“ACML”), Ark’s wholly-owned Lloyd’s corporate member, which in turn provides underwriting capacity to Lloyd’s Syndicates 4020 and 3902 (the “Syndicates”). Ark Syndicate Management Limited (“ASML”) is Ark’s wholly-owned Lloyd’s managing agent, oversees the underwriting of the Syndicates. The Syndicates underwrite a diversified portfolio of insurance and reinsurance, including property, specialty, marine & energy, casualty and accident & health. Syndicate 4020 commenced underwriting on April 1, 2007 and Syndicate 3902 on January 1, 2017.

For the years of account prior to the Ark Transaction, a significant proportion of the Syndicates’ underwriting capital was provided by third-party insurance and reinsurance groups (“TPC Providers”) using whole account reinsurance contracts with Ark’s corporate member. The TPC Providers’ participation in the Syndicates for the 2020 open year of account is 43% of the total net result of the Syndicates. For the years of account subsequent to the Ark Transaction, Ark is no longer using TPC Providers to provide underwriting capital for the Syndicates.

In January 2021, in response to an improved underwriting environment and with the capital provided from the Ark Transaction, Ark converted its wholly-owned subsidiary Group Ark Insurance Limited (“GAIL”) into a Class 4 Bermuda-domiciled insurance and reinsurance company and began to underwrite third-party business. Prior to this conversion, GAIL had been a Class 3 Bermuda-domiciled reinsurance company that only underwrote intercompany quota share reinsurance with ACML and provided additional capital to support ACML’s capital requirements at Lloyd’s (“Funds at Lloyd’s”). As a result of the Ark Transaction, GAIL underwent significant expansion of operations during 2021, with the recruitment of staff and enhancement of operations, to support this growth. GAIL now underwrites a range of third-party business from Bermuda including property, specialty, marine & energy and casualty lines. In December 2022, AM Best affirmed GAIL’s ‘A/stable’ rating.

In both jurisdictions, Ark underwrites business primarily through insurance and reinsurance brokers and wholesalers, both in the open market and through managing general agencies (“MGA”).

As of December 31, 2022 and 2021, White Mountains reported \$3,486 million and \$3,027 million of total assets and \$965 million and \$905 million of total equity related to Ark. As of December 31, 2022 and 2021, White Mountains owned 72.0% of Ark (63.0% after taking account of management’s equity incentives) and reported \$248 million and \$231 million of non-controlling interests related to Ark. The remaining shares are owned by current and former employees. In the future, management rollover shareholders could earn additional shares in Ark if and to the extent that White Mountains achieves certain multiple of invested capital return thresholds. If fully earned, these additional shares would represent 12.5% of the shares outstanding at closing.

Insurance and Reinsurance Overview

Generally, insurance companies underwrite insurance policies in exchange for premiums paid by their customers (the insureds). An insurance policy is a contract between the insurance company and the insured where the insurance company agrees to pay for losses suffered by the insured or a third-party claimant that are covered under the contract. Such contracts are often subject to subsequent legal interpretation by courts, legislative action, and arbitration.

Reinsurance is an arrangement in which a reinsurance company (the reinsurer) agrees to indemnify an insurance company (the ceding company) for insurance risks underwritten by the ceding company. Reinsurance can benefit a ceding company in several ways, including reducing net exposure to individual risks, providing protection from large or catastrophic losses and assisting in maintaining required capital levels and financial or operating leverage ratios. Reinsurance can provide a ceding company with additional underwriting capacity by permitting it to accept larger risks and underwrite a greater number of risks without increasing its capital as much as would be the case without reinsurance. Reinsurers themselves, may also purchase reinsurance, which is known as retrocessional reinsurance to cover risks assumed from ceding companies. Reinsurance companies often enter into retrocessional reinsurance agreements for many of the reasons that ceding companies enter into reinsurance agreements.

Reinsurance is generally written on a treaty or facultative basis. Treaty reinsurance is an agreement whereby the reinsurer assumes a specified portion or category of risk under all qualifying policies issued by the ceding company during the term of the agreement, usually one year. When underwriting treaty reinsurance, the reinsurer does not evaluate each individual risk and generally accepts the original underwriting decisions made by the ceding company. Treaty reinsurance is typically written on either a proportional or excess of loss basis. A proportional reinsurance treaty is an arrangement whereby a reinsurer assumes a predetermined proportional share of the premiums and losses generated on specified business. An excess of loss treaty is an arrangement whereby a reinsurer assumes losses that exceed a specific retention of loss by the ceding company. Facultative reinsurance, on the other hand, is underwritten on a risk-by-risk basis, which allows the reinsurer to determine individual pricing for each exposure.

Insurance and reinsurance companies incur a significant amount of their total expenses from policy obligations, which are commonly referred to as claims or losses. In settling claims, various LAE are incurred such as insurance adjusters' fees and litigation expenses. Losses and LAE are categorized by the year in which the policy is underwritten (the year of account or underwriting year) for purposes of Ark's claims management and estimation of the ultimate loss and LAE reserves. For purposes of Ark's reporting under GAAP, losses and LAE are categorized by the year in which the claim is incurred (the accident year). In the following calendar years, as Ark increases or decreases its estimate for the ultimate loss and LAE for claims in prior underwriting years, or prior accident years for reporting under GAAP, it will record favorable or unfavorable loss reserve development, which is recorded in the calendar year when such loss reserve development is determined. In addition, insurance companies incur policy acquisition expenses, such as commissions paid to agents and premium taxes, and other expenses related to the underwriting process, including employee compensation and benefits. A key measure of absolute and relative underwriting performance for an insurance company is the combined ratio. An insurance company's combined ratio is calculated by adding the ratio of incurred loss and LAE to earned premiums (the loss ratio) and the ratio of policy acquisition and other underwriting expenses to earned premiums (the expense ratio). A combined ratio under 100% indicates that an insurance company is generating an underwriting profit, while a combined ratio over 100% indicates that an insurance company is generating an underwriting loss.

Ark derives substantially all of its revenues from earned premiums, investment income and net realized and unrealized investment gains (losses). Written premiums represent the amount charged to an insured or reinsured party to provide coverage under an insurance or reinsurance contract, which are recognized as earned premiums within revenue over the period that insurance coverage period is provided (i.e., ratably over the life of the policy or, in the case of catastrophe premiums, in proportion to the level of insurance protection provided.) Unearned premiums represent the portion of premiums written that are applicable to future insurance coverage provided by policies. A significant period often elapses between receipt of insurance premiums and payment of insurance claims. During this time, Ark invests the premiums, earns investment income and generates net realized and unrealized investment gains (losses).

Lines of Business

Ark writes specialized lines of insurance and reinsurance across its United Kingdom and Bermuda platforms within five major lines of business: property, specialty, marine & energy, casualty and accident & health. Claims for property, specialty, marine & energy and accident & health coverages are typically reported and settled in a relatively short period of time. Casualty insurance (often referred to as liability insurance) generally covers the financial consequences of a legal liability of an individual or an organization resulting from negligent acts or omissions causing bodily injury, property damages and/or economic damages to a third party. Settlements for casualty/liability coverages can extend for long periods of time as claims are often reported and ultimately paid or settled years after the related loss events occur.

Ark has recently added, and expects to continue to add, new business to its portfolio, as it focuses on profitable business opportunities while carefully managing underwriting risk. Ark also leads two Lloyd's market consortia that target renewable energy clients including wind farms, solar plants, hydroelectric plants, geothermal plants and wave and tidal projects.

The following table presents Ark's gross written premiums by line of business for the years ended December 31, 2022, 2021 and 2020, which includes the period prior to White Mountains's ownership of Ark. White Mountains believes this information is useful in understanding the newly acquired business.

Millions	Year Ended December 31,		
	2022	2021	2020
Property	\$ 605.0	\$ 438.4	\$ 235.7
Specialty	380.1	256.7	118.3
Marine & Energy	315.1	242.2	129.1
Casualty	85.4	54.4	24.4
Accident & Health	66.4	67.0	90.6
Total Gross Written Premiums	\$ 1,452.0	\$ 1,058.7	\$ 598.1

A description of business written within each line of business follows:

Property

Ark's property business is underwritten on both an insurance and reinsurance basis covering the financial consequences of accidental losses to an insured's property, such as a business's building, inventory and equipment, or personal property. Coverages provided include all risks of direct physical loss or damage, business interruption and natural catastrophe perils. Ark's property insurance business consists primarily of direct and facultative contracts, lineslips and MGA binding authorities. Ark's property insurance business is underwritten on a worldwide basis with a focus on excess & surplus lines in the United States and on large international accounts. Ark's property reinsurance business consists primarily of treaty reinsurance underwritten on a catastrophe excess of loss, per risk excess and proportional basis. Ark's property reinsurance business is underwritten on a worldwide basis with particular focus on risks in the United States, Europe and Asia.

Specialty

Ark's specialty business is underwritten on both an insurance and reinsurance basis covering a range of individual risks and treaties primarily including aviation, space, political and credit, cyber, terrorism and political violence, product defect and contamination, nuclear, fine art & specie, surety and mortgage. Ark's specialty insurance and reinsurance business is underwritten on a worldwide basis.

Aviation

Aviation insurance primarily covers airlines and general aviation for loss of, or damage to, aircraft hull and ensuing passenger and third-party liability. Perils include war and war-like actions such as terrorism. Additionally, liability arising out of non-aircraft operations such as hangars and airports may be covered.

Space

Space insurance primarily covers loss of, or damage to, satellites during launch and in orbit, including faulty design that leads to early loss of operating life. Ark's space insurance is primarily written through binders supporting specialized, technical MGAs.

Political and Credit

Political and credit insurance primarily covers risks relating to the confiscation, expropriation, nationalization and deprivation of insured assets due to war, political, or government action as well as contract frustration and non-payment by obligors.

Cyber

Cyber insurance primarily covers the physical damage and liabilities arising from cyber-attacks, including coverage for ransomware, loss of data and third-party liabilities.

Terrorism and Political Violence

Terrorism and political violence insurance primarily covers physical loss or damage and threat thereof, including ensuing loss through business interruption, caused by declared terror events, political violence, and war and war-like actions in developed and developing countries around the world.

Product Defect and Contamination

Product defect and contamination insurance primarily covers first and third-party costs associated with product recall or contamination including malicious product tampering, product safety, or government mandated recall. Ark's product defect and contamination insurance covers a wide range of industries including food & beverage, manufacturing, and consumer products.

Nuclear

Nuclear insurance covers country specific nuclear pools and companies and institutions with nuclear exposure excluded from standard property and casualty policies for coverage of physical damage and third-party liability.

Fine Art & Specie

Fine art & specie insurance primarily covers loss to fine art, specie, cash in transit and vault, and jewelers' block risks as a result of theft or damage in transit or at exhibition.

Surety

Surety insurance covers financial guarantee risks between a bond issuer, principal and obligee designed to address responsibility for debt payments, default or other financial obligations. Ark underwrites this portfolio on a reinsurance basis, primarily excess of loss, for U.S. domiciled clients. The underlying assureds cover a variety of industries including construction, oil & gas, hotel & leisure, and transportation projects.

Mortgage

Mortgage insurance covers financial guarantee risks between a lending institution and a borrower designed to address responsibility for debt payments and default. Ark underwrites a small reinsurance book on behalf of one client for government-sponsored enterprises that offer insurers excess of loss credit insurance coverage on mortgage loans via Fannie Mae's Credit Insurance Risk Transfer and Freddie Mac's Agency Credit Insurance Structure programs.

Marine & Energy

Ark's marine & energy business is underwritten on both an insurance and reinsurance basis primarily covering marine hull, cargo, specie, marine & energy liabilities and upstream energy platform physical damage and liability. Marine hull consists primarily of coastal and ocean-going vessels and covers worldwide risks on an all perils or total loss only basis together with lighter craft, including yachts. Cargo consists of worldwide transits and moveable goods with a particular emphasis on bulk cargo, project cargo and pre-launch satellite risks. Specie is the transit and storage of high value goods including semi-precious and precious metals. Marine & energy liabilities consists of liability risks arising from doing business in their respective industries including liabilities arising from pollution and damage covered by protection and indemnity clubs, including for example the International Group of Protection & Indemnity Clubs. Upstream energy platform physical damage and liability covers a variety of oil and gas industry construction, exploration and production risks.

Ark's marine & energy insurance business consists of direct and facultative risks written primarily in the open market, as well as through lineslips and MGA binding authorities. Ark's marine & energy reinsurance business consists of treaty reinsurance underwritten on both a proportional and excess of loss basis. Ark's marine & energy insurance and reinsurance business is underwritten on a worldwide basis.

Casualty

Ark's casualty business is underwritten on an insurance and reinsurance basis primarily covering medical malpractice, professional liability and general liability. Ark's casualty insurance business is generally written on an excess of loss basis arising from operations of a wide range of predominantly large U.S. companies, including energy companies, with global operations. Ark's casualty reinsurance business is underwritten on an excess of loss and proportional treaty basis.

Accident & Health

Ark's accident & health business is underwritten on both an insurance and reinsurance basis covering a wide range of personal accident, sickness, travel and medical insurance risks. Ark's accident & health insurance business consists of direct and facultative contracts written in the open market and through Accident & Health Underwriting Limited ("AHU"), Ark's wholly-owned MGA domiciled in the United Kingdom. Ark's accident & health insurance and reinsurance business is underwritten on a worldwide basis.

Geographic Concentration

The following table shows Ark's gross written premiums by geographic region based on the location of Ark's underwriting offices for the years ended December 31, 2022, 2021 and 2020, which includes the period prior to White Mountains's ownership of Ark. White Mountains believes this information is useful in understanding the newly acquired business.

Millions	Year Ended December 31,		
	2022	2021	2020
Gross written premiums by country			
United Kingdom	\$ 833.4	\$ 695.9	\$ 598.1
Bermuda	618.6	362.8	—
Total	\$ 1,452.0	\$ 1,058.7	\$ 598.1

Marketing and Distribution

Ark offers its products and services through a network of brokers, MGAs and reinsurance intermediaries (collectively “insurance and reinsurance intermediaries”). In the United Kingdom, Ark operates through the Syndicates with Lloyd’s approved brokers and MGAs. In Bermuda, Ark primarily derives its reinsurance business through reinsurance intermediaries that represent the ceding company and its insurance business through brokers based in Bermuda and London. Ark pays acquisition costs to brokers, MGAs and reinsurance intermediaries as compensation for facilitating the flow and processing of business, typically on industry standard percentages of premium underwritten. In addition, Ark pays certain MGAs profit commissions based on the underwriting profit of the business they produce.

During the years ended December 31, 2022, 2021 and 2020, Ark received a significant portion of its gross written premiums from four insurance and reinsurance intermediaries. The following table shows the proportion of business produced by the top four insurance and reinsurance intermediaries for the years ended December 31, 2022, 2021 and 2020, which includes the period prior to White Mountains’s ownership of Ark. White Mountains believes this information is useful in understanding the newly acquired business.

Gross written premiums by insurance and reinsurance intermediary	Year Ended December 31,		
	2022	2021	2020
Marsh & McLennan Companies, Inc.	27.1 %	26.5 %	16.2 %
Aon plc	17.1	15.6	11.6
Arthur J. Gallagher & Co	12.5	8.6	6.3
Willis Towers Watson plc	9.4	13.8	11.2
Total proportion of business produced by the top four insurance and reinsurance intermediaries	66.1 %	64.5 %	45.3 %

Underwriting and Pricing

Ark aims to build a diversified and balanced portfolio of risks that generates an underwriting profit each year. Ark believes in a disciplined underwriting strategy that aims to consistently outperform the market. In hard market conditions, Ark aims to grow premiums rapidly, as pricing, terms and conditions and limit deployment are more favorable and can lead to enhanced returns on capital. In soft markets, Ark is willing to reduce its business volume when pricing, terms and conditions and limit deployment can make it more difficult to achieve an adequate return on capital. Ark is willing to forgo business if it believes it is not priced appropriately for the exposure or risk assumed.

Ark operates an underwriting controls framework which includes individual underwriting authorities, continual quality monitoring and peer review of risks. The framework aims to ensure a high quality of underwriting through monitoring of pricing and rate change, contract certainty and appropriate terms and conditions. The nature of delegated underwriting naturally increases the risk of underwriting, through the ability of third parties being able to bind Ark to risks without detailed review of the risk involved. This risk is mitigated through the application of strict guidelines, managed by a dedicated team within the Ark compliance department. This team reviews MGA and third-party binding authority approvals pre-bind and monitors a program of audits to ensure compliance with regulations and guidelines.

Ark uses bespoke pricing models for each of the products that it underwrites. These pricing models seek to generate a pricing metric required to achieve an acceptable return on capital for each class of business, and each of the risks priced therein. These models rely on several factors depending on the class of business, including exposure analysis, historical experience, estimates of future loss costs, claims experience and natural catastrophe outlook, including the physical risk of climate change and inflation. See “Ark — Catastrophe Risk Management and Reinsurance Protection” on page 12.

Ark actively monitors price adequacy at various points between individual risks and the portfolio level to measure and evaluate overall performance. In addition, Ark updates rates to achieve targeted returns on capital at an individual risk as well as portfolio level to enhance return on capital.

Competition

Specialized lines of insurance and reinsurance are highly competitive. Ark competes with other Lloyd's syndicates, London market participants and major U.S., Bermuda, European and other international insurance and reinsurance companies. The significant competitive factors for most products are price, terms and conditions, broker relationships, underwriting service, rating agency financial strength rating, and claims service. Ark competes with insurance and reinsurance companies who operate in the Bermuda and Lloyd's markets such as:

- Bermuda insurance and reinsurance market: American International Group, Inc. ("AIG"), Arch Capital Group Ltd., Aspen Insurance Holdings Ltd., Everest Re Group, RenaissanceRe Holdings Ltd. and others;
- Lloyd's market: MS Amlin Ltd, Lancashire Holdings Ltd, Beazley plc, Hiscox plc, and other syndicates.

Claims Management

Effective claims management is a critical factor in achieving satisfactory underwriting results. Ark maintains an experienced staff of dedicated claims handlers and loss adjusters. These individuals seek to ensure that Ark has the appropriate level of expertise to handle complex claims. Within the claims departments, Ark also uses various shared services. These include third-party claims administrators, particularly for lower value, less specialized claims (for example in Ark's MGA produced business), subrogation and recovery support, and legal representation.

For business written in the Lloyd's market, claims handling and case reserves are established in accordance with the applicable Lloyd's Claim Scheme and Lloyd's Claims Management Principles and Oversight Framework.

Catastrophe Risk Management and Reinsurance Protection

Catastrophe Risk Management

Ark has exposure to losses caused by unpredictable catastrophic events including natural and other disasters such as hurricanes, windstorms, earthquakes, floods, wildfires, tornadoes, tsunamis, and severe winter weather all over the world. Catastrophes can also include large losses driven by public health crises, terrorist attacks, war and war-like actions, explosions, infrastructure failures, and cyber-attacks. The extent of a catastrophe loss is a function of both the severity of the event and total amount of insured exposure to the event as well as the coverage provided to customers. Increases in the value and concentration of insured property or insured employees, the effects of inflation, changes in weather patterns and increased terrorism and war and war-like actions could increase the future frequency and/or severity of claims from catastrophic events. Climate change, which is characterized by higher temperatures, sea level rise and more extreme weather events including droughts, heavy storms, wildfires, and stronger hurricanes, increases the frequency and severity of certain major natural catastrophes. There is also a growing threat of cyber catastrophes due to the increasing interconnectivity of global systems.

Ark seeks to manage its exposure to catastrophic losses by limiting and monitoring the aggregate insured value of policies in geographic areas with exposure to catastrophic events and by buying reinsurance. To manage, monitor and analyze insured values and potential losses, Ark utilizes proprietary and third-party catastrophe management software to estimate potential losses for many different catastrophe scenarios. Ark incorporates the physical risk of climate change in its underwriting process through sensitivity and stress testing of its catastrophe models, including increased frequency of U.S. windstorms and the implications of storm surge.

Ark licenses third-party global property catastrophe models from Risk Management Solutions Inc. ("RMS"), as well as utilizing its own proprietary models to calculate expected probable maximum loss estimates ("PML") from various property and non-property catastrophe scenarios. Ark prices property catastrophe contracts using its own proprietary models that can take inputs from third-party software and other data as appropriate. For business that Ark determines to have exposure to catastrophic perils, as part of its underwriting process, it models and evaluates the exposure to assess whether there is an appropriate premium charged for the exposure assumed.

Ark's two largest natural catastrophe PML zones on a per occurrence basis for a 1-in-250 year event as of January 2023, as measured on a net after-tax exposure basis, are U.S. windstorm and U.S. earthquake. The net after-tax exposure is net of amounts ceded to reinsurers and reinstatement premiums. Different perils are more prevalent at different times of the year, and Ark tailors its outwards reinsurance program to incept accordingly throughout the year. Once the placement of Ark's 2023 outwards reinsurance program is completed, Ark expects its net after-tax exposure for a 1-in-250 year event to each of these PML zones to approximate 25-35% of total tangible capital (tangible shareholders equity and subordinated debt). Total tangible capital was \$946 million as of December 31, 2022.

In addition, Ark also has loss exposures to other global natural catastrophe events including, but not limited to, Japanese earthquakes, Japanese windstorms, European windstorms, and U.S. wildfires.

Ark's estimates of potential losses are dependent on many variables, including assumptions about storm intensity, storm surge, and loss amplification, loss adjustment expenses and insurance-to-value in the aftermath of weather-related catastrophes. In addition, Ark has to account for quality of data provided by insureds. Accordingly, if the assumptions are incorrect, the losses Ark might incur from an actual catastrophe could be materially different than the expectation of losses generated from modeled catastrophe scenarios. There could also be unmodelled losses which exceed the amounts estimated for U.S. windstorm and U.S. earthquake catastrophes.

Outside of natural catastrophe losses, Ark has exposure to non-natural or man-made large losses. Ark uses data from clients and combines this with accumulation tools and PML assessments to obtain potential loss scenarios. The current largest exposures are cyber, offshore energy production platforms, terrorism events, war and war-like actions and political risk.

Cyber loss can be derived from a number of scenarios that include major data security breach on large multinational organizations, business blackout from cyber-attack on power generation and distribution facilities, malicious attack on cloud service provider data center and ransomware contagion across both individual and multiple corporations. Catastrophic loss in respect of offshore energy production facilities can include physical damage, business interruption, pollution liability, extra expenses and control of oil or gas flow therefrom. Terrorism and war and war-like actions can include physical damage, business interruption, liability, loss of life and fire following at locations around the world either in a single city or in coordinated attacks across multiple cities, countries or regions. Political risk scenarios can include confiscation, expropriation, nationalization and deprivation of assets, non-payment of obligations, political violence and war derived from geo-political instability, country overthrow and commodity price movement. Ark estimates its largest net after-tax loss from non-natural/man-made loss scenarios to be approximately 15% of total tangible capital.

Reinsurance Protection

As part of its enterprise risk management function, Ark purchases reinsurance for risk mitigation purposes.

Ark utilizes reinsurance and retrocession agreements to reduce earnings volatility, protect capital, limit its exposure to risk concentration and accumulation of loss and to manage within its overall internal risk tolerances or those set and agreed by regulators, ratings agencies, and Lloyd's. Ark also enters into reinsurance and retrocession agreements to reduce its liability on individual risks and enable it to underwrite policies with higher limits where Ark believes this has a broader business benefit.

Ark seeks to protect its downside risk from catastrophes and large loss events by purchasing reinsurance, including quota share and excess of loss protections, aggregate covers, and industry loss warranties. Ark also considers alternative structures such as collateralized reinsurance, retrocessional reinsurance and catastrophe bonds.

For the 2023 underwriting year, Ark has entered into two new quota share arrangements. The first is a 40% collateralized quota share to Outrigger Re Ltd., a Bermuda special purpose insurer, covering Ark's Bermuda global property catastrophe excess of loss portfolio. See "**WM Outrigger Re**" on page 16. The second is a 10% quota share to third-party reinsurers covering Ark's Bermuda property catastrophe excess of loss portfolio.

The purchase of reinsurance does not discharge Ark from its primary liability for the full value of its policies, and thus the collectability of balances due from Ark's reinsurers is critical to its financial strength. Ark monitors the financial strength and ratings of its reinsurers on an ongoing basis. See **Note 6 — "Third-party Reinsurance"** on page F-43 for a discussion of Ark's top reinsurers.

Loss and LAE Reserves

Ark establishes loss and LAE reserves that are estimates of amounts needed to pay claims and related expenses in the future for insured events that have already occurred, including both reported and unreported claims. Loss reserves are established due to the significant periods of time that may occur between the occurrence, reporting and payment of a loss. The process of estimating reserves involves a considerable degree of judgment by management and is inherently uncertain. See "**CRITICAL ACCOUNTING ESTIMATES — Loss and LAE Reserves**" on page 76 and **Note 5 — "Losses and Loss Adjustment Expense Reserves"** on page F-32 for a full discussion regarding Ark's loss reserving process.

KUDU

Overview

Kudu provides capital solutions for boutique asset and wealth managers for a variety of purposes including generational ownership transfers, management buyouts, acquisition and growth finance and legacy partner liquidity. Kudu also provides strategic assistance to investees from time to time. Kudu's capital solutions generally are structured as minority preferred equity stakes with distribution rights, typically tied to gross revenues and designed to generate immediate cash yields.

In 2018, White Mountains acquired a non-controlling interest in Kudu with an agreement to provide up to \$125 million to Kudu. In 2019, White Mountains acquired an additional ownership interest in Kudu and increased its total capital commitment to \$350 million. As a result, White Mountains obtained a controlling financial interest in Kudu and began consolidating Kudu as a reportable segment in its financial statements in the second quarter of 2019. During the fourth quarter of 2021, White Mountains increased its total capital commitment to Kudu by an additional \$19 million to \$369 million. During the second quarter of 2022, White Mountains increased its total capital commitment to Kudu by an additional \$50 million to \$419 million.

On May 26, 2022, Kudu raised \$115 million of equity capital (the "Kudu Transaction") from Massachusetts Mutual Life Insurance Company ("Mass Mutual"), White Mountains and Kudu management. Mass Mutual, White Mountains and Kudu management contributed \$64 million, \$50 million and \$0.4 million at a pre-money valuation of 1.3x, or \$114 million, above the December 31, 2021 equity value of Kudu's go-forward portfolio of participation contracts. Kudu's go-forward portfolio of participation contracts excluded \$54 million of enterprise value as of December 31, 2021 relating to two portfolio companies that had announced sales transactions prior to the capital raise. As a result of the Kudu Transaction, White Mountains's basic ownership of Kudu decreased from 99.1% to 89.3%.

Kudu expects to fund new capital deployments through funds remaining from the Kudu Transaction, excess operating cash flows, recycling of certain sales transaction proceeds, available debt capacity and additional equity commitments.

As of December 31, 2022 and 2021, White Mountains reported \$826 million and \$727 million of total assets and \$553 million and \$466 million of total equity related to Kudu. As of December 31, 2022 and 2021, White Mountains owned 89.3% and 99.3% of Kudu (76.1% and 84.7% on a fully diluted, fully converted basis) and reported \$75 million and \$12 million of non-controlling interests related to Kudu.

Portfolio

As of December 31, 2022, Kudu has deployed \$713 million in 20 asset and wealth management firms globally, including two that have been exited. As of December 31, 2022, the asset and wealth management firms had combined assets under management of approximately \$74 billion, spanning a range of asset classes including real estate, wealth management, hedge funds, private equity and alternative credit strategies. Kudu's capital was deployed at an average gross cash yield at inception of 9.9%.

Kudu's philosophy is to partner with asset and wealth management firms that exhibit strong cash flow generation and growth. Kudu seeks to provide its solutions across a diverse mix of investment strategies and asset classes in the middle market.

Kudu's average capital deployment to date has been approximately \$36 million, with a range from \$15 million to \$81 million. Apportioned by manager type, Kudu's portfolio is deployed 42% in liquid alternatives segments, 30% in private capital, 23% in wealth management and 5% in traditional asset management. Kudu seeks diversity across asset classes. Kudu also prioritizes the private capital segment as the underlying clients of these firms tend to be locked-up for an extended period, which can provide stability of revenues in a potential market downturn.

Kudu expects that no single manager will represent more than 25% of total firm revenues. As more capital is deployed, the reliance on any one manager is expected to decrease. Additionally, Kudu seeks to diversify geographically. Its portfolio currently includes 14 firms headquartered in nine different states in the United States, two in the United Kingdom, one in Australia, and one in Canada.

OTHER OPERATIONS

White Mountains's Other Operations consists of the Company and its wholly-owned subsidiary WM Capital, its other intermediate holding companies, its wholly-owned investment management subsidiary WM Advisors, investment assets managed by WM Advisors, its interests in MediaAlpha, PassportCard/DavidShield, Elementum, WM Outrigger Re, certain other consolidated and unconsolidated entities ("Other Operating Businesses") and certain other assets.

MediaAlpha

MediaAlpha is a marketing technology company. It operates a transparent and efficient customer acquisition technology platform that facilitates real-time transactions between buyers and sellers of consumer referrals (i.e., clicks, calls and leads), primarily in the property & casualty, health and life insurance verticals. MediaAlpha generates revenue by earning a fee for each consumer referral sold on its platform. A transaction becomes payable only on a qualifying consumer action, and is not contingent on the sale of a product to the consumer.

On October 30, 2020, MediaAlpha completed an initial public offering (the "MediaAlpha IPO"). In the offering, White Mountains sold 3.6 million shares at \$19.00 per share (\$17.67 per share net of underwriting fees) and received total proceeds of \$64 million. White Mountains also received \$55 million of net proceeds related to a dividend recapitalization at MediaAlpha prior to the MediaAlpha IPO.

On March 23, 2021, MediaAlpha completed a secondary offering of 8.1 million shares. In the secondary offering, White Mountains sold 3.6 million shares at \$46.00 per share (\$44.62 per share net of underwriting fees) for net proceeds of \$160 million.

Prior to the MediaAlpha IPO, White Mountains's non-controlling equity interest in MediaAlpha was accounted for at fair value within other long-term investments. Following the MediaAlpha IPO, White Mountains's non-controlling equity interest in MediaAlpha is accounted for at fair value based on the publicly traded share price of MediaAlpha's common stock. As of December 31, 2022, White Mountains owned 16.9 million shares, representing a 27.1% basic ownership interest (25.1% on a fully-diluted/fully-converted basis). At the December 31, 2022 closing price of \$9.95 per share, the fair value of White Mountains's investment in MediaAlpha was \$169 million. As of December 31, 2021, White Mountains owned 16.9 million MediaAlpha shares, representing a 28.0% ownership interest (25.7% on a fully-diluted, fully converted basis). At the December 31, 2021 closing price of \$15.44 per share, the fair value of White Mountains's investment in MediaAlpha was \$262 million.

PassportCard/DavidShield

PassportCard/DavidShield is, principally, an MGA that offers the leisure travel and expatriate medical insurance markets the first real-time, paperless insurance solution, facilitating claims payouts in minutes, wherever customers need them. In 2020, PassportCard/DavidShield received regulatory approval for its wholly-owned carrier. The carrier writes both the leisure travel and expatriate medical insurance in Israel and cedes 100% of the underwriting risks to its reinsurance partners.

PassportCard is a U.K. domiciled global MGA. PassportCard receives commissions for placing policies with its insurance carrier partners and licensing fees for use of its card-based technology. PassportCard distributes its products through the broker channel and on a direct-to-consumer basis, and also franchises its solutions in certain markets to major travel insurance and medical assistance companies.

DavidShield is an MGA that is the leading provider of expatriate medical insurance in Israel. Since 2000, DavidShield has delivered industry-leading medical insurance solutions to diplomats, non-governmental organizations and thousands of multinational corporations and individuals in over 95 countries. DavidShield receives structured commissions for placing policies with its insurance carrier partners and licensing fees for use of its card-based technology.

There are a number of distinct advantages to the PassportCard/DavidShield insurance solutions that differentiate them in the marketplace. Through the real-time claims handling process, PassportCard/DavidShield is generally able to control claims, loss costs and fraud upfront, driving lower than industry average loss ratios for their reinsurance partners. Further, the card-based, paperless delivery model enables a superior customer experience, commanding industry-leading customer retention rates and strong brand loyalty. PassportCard/DavidShield originally launched in, and remains principally focused on, the Israeli marketplace.

As of December 31, 2022 and 2021, White Mountains owned 53.8% of PassportCard/DavidShield. The governance structures for both PassportCard and DavidShield were designed to give White Mountains and its co-investor equal power to make the decisions that most significantly impact operations.

White Mountains's non-controlling equity interest in PassportCard/DavidShield is accounted for at fair value within other long-term investments. As of December 31, 2022 and 2021, the fair value of White Mountains's interest in PassportCard/DavidShield was \$135 million and \$120 million.

Elementum

Elementum is a third-party registered investment adviser specializing in natural catastrophe insurance-linked securities ("ILS"). On May 31, 2019, White Mountains acquired a 30.0% limited partnership interest in Elementum for \$55 million (the "Elementum Transaction"). In January 2021, White Mountains invested an additional \$2 million in Elementum. White Mountains's non-controlling equity interest in Elementum is accounted for at fair value within other long-term investments. As of December 31, 2022 and 2021, the fair value of White Mountains's interest in Elementum totaled \$30 million and \$45 million. As of December 31, 2022 and 2021, White Mountains had a 29.7% limited partnership interest in Elementum.

Elementum manages separate accounts and pooled investment vehicles across various ILS sectors, including catastrophe bonds, collateralized reinsurance investments and industry loss warranties, on behalf of third-party clients. As part of the Elementum Transaction, White Mountains also committed to invest \$50 million in ILS funds managed by Elementum, which was fully invested as of December 31, 2020. As of December 31, 2022 and 2021, White Mountains had \$49 million and \$52 million invested in the ILS funds managed by Elementum.

During the fourth quarter of 2022, White Mountains agreed to invest an additional \$100 million into ILS funds managed by Elementum beginning in 2023. White Mountains pre-funded \$70 million of this investment as of December 31, 2022, which has been recorded as a receivable within other assets.

WM Outrigger Re

During the fourth quarter of 2022, Ark sponsored the formation of Outrigger Re Ltd., a Bermuda company registered as a special purpose insurer and segregated accounts company, to provide reinsurance capacity to Ark. On December 20, 2022, Outrigger Re Ltd. issued \$250 million of non-voting redeemable preference shares on behalf of four segregated accounts to White Mountains and unrelated third party investors. Upon issuance of the preference shares, Outrigger Re Ltd. entered into collateralized quota share agreements with GAIL to provide reinsurance protection on Ark's Bermuda global property catastrophe excess of loss portfolio written in calendar year 2023. The proceeds from the issuance of the preference shares were deposited into collateral trust accounts to fund any potential obligations under the reinsurance agreements with GAIL. Outrigger Re Ltd.'s obligations under the reinsurance agreements with GAIL are subject to an aggregate limit equal to the assets in the collateral trusts at any point in time. The terms of the reinsurance agreements are renewable upon the mutual agreement of Ark and the applicable preference shareholder.

White Mountains purchased 100% of the preference shares issued by its segregated account, WM Outrigger Re, for \$205 million.

Catastrophe Risk Management

Effective January 1, 2023, through its quota share reinsurance agreement with GAIL, WM Outrigger Re has exposure to losses caused by unpredictable catastrophic events including natural and other disasters such as hurricanes, windstorms, earthquakes, floods, wildfires, tornadoes, tsunamis, severe winter weather, and infrastructure failures all over the world. The extent of a catastrophe loss is a function of both the severity of the event and total amount of insured exposure to the event as well as the coverage provided to customers. Increases in the value and concentration of insured property or insured employees, the effects of inflation and changes in weather patterns could increase the future frequency and/or severity of claims from catastrophic events. Climate change, which is characterized by higher temperatures, sea level rise and more extreme weather events including droughts, heavy storms, wildfires, and stronger hurricanes, increases the frequency and severity of certain major natural catastrophes.

WM Outrigger Re's two largest natural catastrophe PML zones on a per occurrence basis for a 1-in-250 year event as of January 2023, as measured on a net after-tax exposure basis, are U.S. windstorm and U.S. earthquake. WM Outrigger Re's obligations under the reinsurance agreement with GAIL are subject to an aggregate limit equal to the assets in the collateral trust at any point in time.

When considering both Ark and WM Outrigger Re, White Mountains's two largest natural catastrophe PML zones on a per occurrence basis for a 1-in-250 year event as of January 2023, as measured on a net after-tax exposure basis, are U.S. windstorm and U.S. earthquake. The net after-tax exposure is net of amounts ceded to reinsurers and reinstatement premiums. Different perils are more prevalent at different times of the year, and Ark tailors its outwards reinsurance program to incept accordingly throughout the year. Once the placement of Ark's 2023 outwards reinsurance program is completed, White Mountains expects its consolidated net after-tax exposure for a 1-in-250 year event to each of these PML zones will be roughly 10% of White Mountains's common shareholders' equity as of December 31, 2022.

Other Operating Businesses

White Mountains has controlling equity interests in various other operating businesses, which are consolidated. As of December 31, 2022, White Mountains reported \$154 million of total assets, \$74 million of total equity (net of intercompany eliminations) and \$20 million of non-controlling interests related to these businesses. As of December 31, 2021, White Mountains reported \$100 million of total assets (including \$16 million of assets held for sale), \$63 million of total equity (net of intercompany eliminations including \$16 million of equity associated with a business classified as held for sale), and \$12 million of non-controlling interests related to these businesses.

White Mountains also has non-controlling equity interests in various other operating businesses and private debt instruments with various other operating businesses, which are generally accounted for at fair value within other long-term investments. As of December 31, 2022 and 2021, the fair value of these interests totaled \$35 million and \$37 million.

WM Advisors

As of December 31, 2022, WM Advisors managed and/or provided oversight and administration for substantially all of White Mountains's fixed maturity investments, short-term investments, common equity securities and other long-term investments, with the exception of BAM's investment portfolio, which is managed by BAM and sub-advised to an outside third-party registered investment manager.

INVESTMENTS

White Mountains's investment philosophy is to maximize long-term after-tax total returns while taking prudent levels of risk and maintaining a diversified portfolio, subject to White Mountains's investment guidelines and various regulatory restrictions. Under White Mountains's investment philosophy, each dollar of after-tax investment income or investment gains (realized or unrealized) is valued equally. White Mountains' investment philosophy also incorporates Environmental, Social and Governance ("ESG") considerations. For investment assets actively managed by WM Advisors, thorough credit risk assessments are conducted, utilizing Nationally-Recognized Statistical Rating Organizations research and ratings. For actively managed investment assets sub-advised to third-party registered investment managers, WM Advisors only utilizes managers who incorporate ESG factors into their investment processes.

White Mountains maintains a fixed income portfolio that consists primarily of high-quality, short-duration, fixed maturity investments and short-term investments. White Mountains invests in fixed maturity investments that are attractively priced in relation to their investment risks and actively manages the average duration of the fixed income portfolio. As of December 31, 2022, the fixed income portfolio duration, including short-term investments, was 2.3 years. White Mountains has established relationships with select third-party registered investment advisers to manage a portion of its fixed income portfolio. See "**Portfolio Composition**" on page 60.

White Mountains maintains an equity portfolio that consists of common equity securities, its investment in MediaAlpha and other long-term investments. As of December 31, 2022, White Mountains's portfolio of common equity securities consists of passive exchange traded funds ("ETFs") and international common equity listed funds. White Mountains's other long-term investments consist primarily of unconsolidated entities, including Kudu's revenue and earnings participation contracts ("Kudu's Participation Contracts"), private equity funds and hedge funds, a bank loan fund, Lloyd's trust deposits, ILS funds and private debt instruments.

DISCONTINUED OPERATIONS

NSM

On August 1, 2022, White Mountains Holdings (Luxembourg) S.à r.l. (“WTM Holdings Seller”), an indirect wholly owned subsidiary of White Mountains, completed the previously announced sale of White Mountains Catskill Holdings, Inc. and NSM Insurance HoldCo, LLC (“NSM” and, collectively with White Mountains Catskill Holdings, Inc., the “NSM Group”) to Riser Merger Sub, Inc., an affiliate of The Carlyle Group Inc. (the “NSM Transaction”), pursuant to the terms of the securities purchase agreement, dated May 9, 2022. See **Note 2 — “Significant Transactions”** on page F-17. NSM is a full-service MGA and program administrator with delegated binding authorities for specialty property and casualty insurance.

As a result of the NSM Transaction, the assets and liabilities of NSM Group have been presented in the balance sheet as held for sale for periods prior to the closing of the transaction, and the results of operations for NSM Group have been classified as discontinued operations in the statements of operations and comprehensive income through the closing of the transaction. Prior period amounts have been reclassified to conform to the current period’s presentation. See **Note 21 — “Held for Sale and Discontinued Operations”** on page F-68.

REGULATION

United States

Insurance Regulation

BAM is subject to regulation and supervision in New York and each of the states where it is licensed to conduct business. Generally, state regulatory authorities have broad supervisory and administrative powers over such matters as licenses, standards of solvency, premium rates, policy forms, investments, statutory deposits, methods of accounting, form and content of financial statements, claims reserves and LAE liabilities, reinsurance, minimum capital and surplus requirements, dividends and other distributions to shareholders, annual and other report filings and other market conduct. In general, such regulation is for the protection of policyholders rather than shareholders. White Mountains believes that BAM is in compliance with all applicable laws and regulations pertaining to its business that would have a material effect on its financial condition and results of operations in the event of non-compliance.

State Accreditation and Monitoring

State insurance laws and regulations include numerous provisions governing marketplace activities of insurers, including provisions governing marketing and sales practices, policyholder services, claims management and complaint handling. State regulatory authorities generally test and enforce these provisions through periodic market conduct examinations. The NYDFS conducts periodic examinations of insurance companies domiciled in New York, usually at five-year intervals. In 2019, the NYDFS commenced and in early 2020 completed its examination of BAM and issued a Report on Examination of BAM for the period ending December 31, 2018. The reports did not note any significant regulatory issues concerning BAM.

Risk Limits

New York Insurance Law establishes single and aggregate risk limits for financial guaranty insurers. Single risk limits for financial guaranty insurers are applicable to all obligations issued by a single entity and backed by a single revenue source. Insurance on municipal obligations is subject to a limit where the insured average annual debt service for a single risk, net of qualifying reinsurance and collateral, may not exceed 10% of policyholders' surplus and contingency reserves. In addition, the insured principal of municipal obligations attributable to any single risk, net of qualifying reinsurance and collateral, is limited to 75% of policyholders' surplus and contingency reserves.

The New York Insurance Law also establishes aggregate risk limits on the basis of total outstanding principal and interest of guaranteed obligations insured net of qualifying reinsurance and collateral (the “Aggregate Net Liability”), compared to the sum of the insurer’s policyholders’ surplus and contingency reserves. Under these limits, policyholders' surplus and contingency reserves for municipal obligations must not be less than 0.33% of the Aggregate Net Liability. If a financial guaranty insurer fails to comply with single or aggregate risk limits, the NYDFS has broad discretion to order the insurer to cease new business originations. As of December 31, 2022, BAM was in compliance with the single and aggregate risk limits.

Distributions

No payment of principal or interest on the BAM Surplus Notes may be made without the approval of the NYDFS.

Contingency Reserves

The New York Insurance Law and the insurance laws of other non-domiciliary states in which BAM is licensed require BAM to maintain a contingency reserve. The contingency reserve is established to protect policyholders against the effect of adverse economic developments or other unforeseen circumstances. BAM records a contingency reserve in accordance with New York Insurance Law and calculates and monitors contingency reserves required by other non-domiciliary states in which it is licensed.

Cybersecurity

NYDFS's cybersecurity regulation ("Part 500") requires financial services institutions, including BAM, to establish and maintain a cybersecurity program designed to protect consumers' private data and the confidentiality, integrity and availability of the institution's information systems.

Investments

BAM is subject to state laws and regulations that require investment portfolio diversification and that dictate the quality, quantity and general types of investments it may hold. Non-compliance may cause non-conforming investments to be non-admitted when measuring statutory surplus and, in some instances, may require divestiture.

Holding Company Structure

Regulations under certain state insurance holding company acts contain reporting requirements relating to the capital structure, ownership, financial condition and general business operations of insurance entities. These regulations also contain special reporting and prior approval requirements with respect to certain transactions among affiliates. The domiciliary states of insurance entities impose regulatory application and approval requirements on acquisitions that may be deemed to confer control. In some states as little as 5% may be deemed to confer control, and the application process for approval can be extensive and time consuming. Although BAM has no ownership relationship with HG Re or HG Global, BAM agreed with the NYDFS to submit any agreements, or amendments thereto, among BAM and HG Re, HG Global and their affiliated entities or controlling persons to the NYDFS as if they were subject to Article 15 of the New York Insurance Law, which relates to transactions with holding companies.

Federal Regulation

Although the federal government does not directly regulate the insurance business, federal legislation and administrative policies impact the industry. In addition, legislation has been introduced that, if enacted, could result in the federal government assuming a more direct role in the regulation of the insurance industry. Notably, the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act") created the Federal Insurance Office ("FIO") within the Treasury Department, which is responsible for gathering information and monitoring the insurance industry to identify gaps in the regulation of insurers that could contribute to a systemic crisis in the insurance industry or U.S. financial system.

Investment Regulation

Kudu Investment Holdings, LLC, a subsidiary of Kudu, is an investment adviser that is registered with the SEC under Section 203 of the United States Investment Advisers Act of 1940.

Bermuda

Insurance Regulation

The Insurance Act 1978 of Bermuda and related regulations, as amended (the "Insurance Act"), regulates the insurance business of HG Re, a special purpose insurer, GAIL, Ark's wholly-owned Class 4 insurance and reinsurance company, and Outrigger Re Ltd., a special purpose insurer. Outrigger Re Ltd. is also registered as a segregated accounts company under the Bermuda Segregated Accounts Companies Act 2000, as amended (the "SAC Act"). The Insurance Act provides that no person may carry on any insurance business in or from within Bermuda unless registered as an insurer under the Insurance Act by the Bermuda Monetary Authority ("BMA"). The BMA, in deciding whether to grant registration, has broad discretion to act as it thinks fit in the public interest. From time to time, HG Re, GAIL and Outrigger Re Ltd. may apply for, and be granted, certain modifications to, or exemptions from, regulatory requirements, which may otherwise apply to them.

The Insurance Act imposes solvency and liquidity standards as well as auditing and reporting requirements and confers on the BMA powers to supervise, investigate and intervene in the affairs of insurance companies. The SAC Act stipulates its own solvency test for the declaration of dividends and distributions for segregated accounts, which takes into account the solvency of each segregated account individually, rather than the solvency of the company itself.

Classification

GAIL is registered as a Class 4 insurer. Class 4 insurers carry on general insurance business including excess liability business or property catastrophe, marine & energy, casualty and specialty reinsurance business and have a total statutory capital and surplus of not less than \$100 million.

As special purpose insurers, HG Re and Outrigger Re Ltd. are insurers that carry on special purpose business. Special purpose business under the Insurance Act is insurance business under which an insurer fully collateralizes its liabilities to the insured persons through (i) the proceeds of any one or more of (a) a debt issuance where the repayment rights of the providers of such debt are subordinated to the rights of the person insured, or (b) some other financing mechanism approved by the BMA; (ii) cash; and (iii) time deposits. Special purpose insurers may be registered to carry on either restricted special purpose business or unrestricted special purpose business. Restricted special purpose business is special purpose business conducted between a special purpose insurer and specific insureds approved by the BMA. Unrestricted special purpose business means special purpose business conducted by a special purpose insurer with any insured. Both HG Re and Outrigger Re Ltd. are only able to carry on restricted purpose business.

Capital and Solvency Return

As a Class 4 insurer, GAIL is required to file, on an annual basis, a capital and solvency return in respect of its general business, which currently includes, among other items, a statutory economic balance sheet, a schedule of risk management, a catastrophe risk return, a schedule of loss triangles or reconciliation of net loss reserves (where applicable), a schedule of eligible capital and the Enhanced Capital Requirement (“ECR”) as calculated by the Bermuda Solvency and Capital Requirement (“BSCR”) model (or an approved internal model). The BSCR is a mathematical model designed to give the BMA robust methods for determining an insurer’s capital adequacy. Underlying the BSCR is the belief that all insurers should operate on an ongoing basis with a view to maintaining their capital at a prudent level in excess of the minimum solvency margin otherwise prescribed under the Insurance Act. The 2022 BSCR must be filed with the BMA before April 30, 2023; at this time, we believe GAIL will exceed the minimum amount required to be maintained under Bermuda law.

As special purpose insurers, HG Re and Outrigger Re Ltd. are also required to file annually with the BMA a statutory return which includes, among other matters, the statutory financial statements, a statement of control and changes of control, a solvency certificate, an annual statutory declaration, an own-risk assessment, alternative capital arrangements report, cyber risk management report and compliance with sanctions report.

Financial Condition Report

As a Class 4 insurer, GAIL is required to prepare and publish a financial condition report (“FCR”), which provides, among other things, details of measures governing the business operations, corporate governance framework and solvency and financial performance of the insurer/insurance group. The FCR will be made available in accordance with the requirements of the Insurance Act.

As special purpose insurers, HG Re and Outrigger Re Ltd. are not subject to this requirement.

Minimum Solvency Margin

As a general business insurer, GAIL is required to maintain statutory assets in excess of its statutory liabilities by an amount, equal to or greater than the prescribed minimum solvency margin, which varies with the category of its registration. The minimum solvency margin that must be maintained by a Class 4 insurer is the greater of (i) \$100 million, (ii) 50% of net premiums written (with a credit for reinsurance ceded not exceeding 25% of gross premiums), (iii) 15% of net aggregate loss and loss expense provisions and other insurance reserves, or (iv) 25% of the ECR, which is established by reference to the BSCR model.

As special purpose insurers, HG Re and Outrigger Re Ltd. must maintain a minimum solvency margin whereby their special purpose business assets must exceed their special purpose business liabilities by at least \$1.

Enhanced Capital Requirement

As a Class 4 insurer, GAIL is required to maintain its available statutory economic capital and surplus at a level at least equal to its ECR. In either case, the ECR shall at all times equal or exceed the insurer’s minimum solvency margin and may be adjusted in circumstances where the BMA concludes that the insurer’s risk profile deviates significantly from the assumptions underlying its ECR or the insurer’s assessment of its risk management policies and practices used to calculate the ECR applicable to it. While not specifically referred to in the Insurance Act, the BMA has also established a target capital level for each Class 4 insurer equal to 120% of the respective ECR. While a Class 4 insurer is not currently required to maintain its statutory economic capital and surplus at this level, the target capital level serves as an early warning tool for the BMA and failure to maintain statutory capital at least equal to the target capital level will likely result in increased BMA regulatory oversight.

As special purpose insurers, HG Re and Outrigger Re Ltd. are not subject to this requirement.

Minimum Liquidity Ratio

The Insurance Act provides a minimum liquidity ratio for general business insurers such as GAIL. An insurer engaged in general business is required to maintain the value of its relevant assets at not less than 75% of the amount of its relevant liabilities. Relevant assets include, but are not limited to, cash and time deposits, quoted investments, unquoted bonds and debentures, investment income due and accrued, accounts and premiums receivable, insurance and reinsurance balances receivable and funds held by ceding reinsurers. Relevant liabilities include, but are not limited to, general business insurance reserves and total other liabilities less deferred income tax and sundry liabilities, letters of credit and guarantees.

As special purpose insurers, HG Re and Outrigger Re Ltd. are not subject to this requirement.

Eligible Capital

As a Class 4 insurer, GAIL must maintain available capital in accordance with a “three tiered capital system” to enable the BMA to better assess the quality of an insurer’s capital resources. All capital instruments are classified as either basic or ancillary capital, which in turn are classified into one of three tiers (Tier 1, Tier 2 and Tier 3) based on their “loss absorbency” characteristics. Eligibility limits are then applied to each tier in determining the amounts eligible to cover regulatory capital requirement levels. The highest capital is classified as Tier 1 capital and lesser quality capital is classified as either Tier 2 capital or Tier 3 capital. Under this regime, not more than certain specified percentages of Tier 1, Tier 2 and Tier 3 capital may be used to satisfy the Class 4 insurers' minimum solvency margin, ECR requirements and target capital level.

As special purpose insurers, HG Re and Outrigger Re Ltd. are not subject to this requirement.

Restrictions on Dividends, Distributions and Reductions of Capital

As a Class 4 insurer, GAIL is prohibited from declaring or paying any dividends if in breach of the required minimum solvency margin or minimum liquidity ratio (the “Relevant Margins”) or if the declaration or payment of such dividend would cause the insurer to fail to meet the Relevant Margins. Further, Class 4 insurers are prohibited from declaring or paying in any financial year dividends of more than 25% of its total statutory capital and surplus (as shown on its previous financial year’s statutory balance sheet) unless it files (at least seven days before payment of such dividends) with the BMA an affidavit stating that it will continue to meet its Relevant Margins. Class 4 insurers 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. These restrictions on declaring or paying dividends and distributions under the Insurance Act are in addition to the solvency requirements under the Companies Act 1981 of Bermuda, as amended (the “Companies Act”). See “**LIQUIDITY AND CAPITAL RESOURCES — Dividend Capacity**” on page 63 for further discussion.

As special purpose insurers, HG Re and Outrigger Re Ltd. are not required to obtain the BMA’s prior approval in connection with any reduction of total statutory capital, but are prohibited from declaring or paying a dividend if they are in breach of their minimum solvency margin or if the declaration or payment of such dividend would cause such a breach. As a segregated account, the solvency test for the declaration of dividends and distributions is evaluated based upon the solvency of WM Outrigger Re, rather than the solvency of Outrigger Re Ltd.

Insurance Code of Conduct and Insurance Sector Operational Cyber Risk Management Code of Conduct

All Bermuda insurers are required to comply with the BMA’s Insurance Code of Conduct, which establishes duties, requirements and standards to be complied with to ensure each insurer implements sound corporate governance, risk management and internal controls. Failure to comply with these requirements will be a factor taken into account by the BMA in determining whether an insurer is conducting its business in a sound and prudent manner under the Insurance Act and, in the case of GAIL, in calculating the operational risk charge applicable in accordance with the insurer's BSCR model (or an approved internal model)

All Bermuda insurers are also required to comply with the BMA’s Insurance Sector Operational Cyber Risk Management Code of Conduct, which establishes duties, requirements and standards to be complied with by each insurer in relation to operational cyber risk management.

Powers of Investigation, Intervention and Obtaining Information

The BMA has certain powers of investigation and intervention relating to insurers and their holding companies, subsidiaries and other affiliates, which it may exercise in the interest of such insurer’s policyholders or if there is any risk of insolvency or of a breach of the Insurance Act or the insurer’s license conditions. The BMA may cancel an insurer’s registration on certain grounds specified in the Insurance Act.

Notification of Cyber Reporting Events

Every insurer subject to the Insurance Act is required to notify the BMA where the insurer has reason to believe that a Cyber Reporting Event has occurred. Within 14 days of such notification, the insurer must also furnish the BMA with a written report setting out all of the particulars of the Cyber Reporting Event that are available to it. A Cyber Reporting Event includes any act that results in the unauthorized access to, disruption, or misuse of electronic systems or information stored on such systems of an insurer, including breach of security leading to the loss or unlawful destruction or unauthorized disclosure of or access to such systems or information where there is a likelihood of an adverse impact to policyholders, clients or the insurer's insurance business, or a similar event for which notice is required to be provided to a regulatory body or government agency.

Policyholder Priority

In the event of a liquidation or winding up of an insurer, policyholders' liabilities receive payment ahead of general unsecured creditors. Subject to the prior payment of preferential debts under the Employment Act 2000 and the Companies Act, the insurance debts of an insurer must be paid in priority to all other unsecured debts of the insurer.

Certain Other Bermuda Law Considerations

The Company is an exempted company incorporated and organized under the Companies Act. As a result, the Company is required to comply with the provisions of the Companies Act regulating the payment of dividends and making of distributions from contributed surplus. A company is prohibited from declaring or paying a dividend, or making a distribution out of contributed surplus, if there are reasonable grounds for believing that:

- (1) the company is, or would after the payment be, unable to pay its liabilities as they become due; or
- (2) the realizable value of the company's assets would thereby be less than its liabilities.

In addition, the Companies Act regulates return of capital, reduction of capital and any purchase or redemption of shares by the Company.

The Economic Substance Act 2018, as amended ("ESA") impacts every Bermuda registered entity engaged in a "relevant activity," requiring impacted entities to maintain a substantial economic presence in Bermuda and to satisfy economic substance requirements. Under the ESA, insurance or holding entity activities (both as defined in the ESA and the Economic Substance Regulations 2018, as amended) are relevant activities. To the extent that the ESA applies to any of our Bermuda entities, we are required to demonstrate compliance with economic substance requirements by filing an annual economic substance declaration with the Bermuda Registrar of Companies. Any entity that must satisfy economic substance requirements but fails to do so could face automatic disclosure to competent authorities in the EU of the information filed by the entity with the Bermuda Registrar of Companies in connection with the economic substance requirements. Additionally, a company may also face penalties, restriction or regulation of its business activities and may be struck off as a registered entity in Bermuda for failure to satisfy economic substance requirements. The Company believes it complies with all of the applicable laws and regulations pertaining to economic substance that would have a material effect on its financial condition and results of operations in the event of non-compliance.

United Kingdom

PRA and FCA Regulation

As an insurer in the United Kingdom, Ark is dual-regulated by the Financial Conduct Authority (the “FCA”) and the Prudential Regulation Authority (the “PRA”) (collectively, the “U.K. Regulators”). The PRA currently has ultimate responsibility for the prudential supervision of financial services in the U.K. The FCA has responsibility for market conduct regulation. The U.K. Regulators regulate insurers, insurance intermediaries and Lloyd’s. Both the PRA and FCA have substantial powers of intervention in relation to regulated firms.

Lloyd’s Regulation

Lloyd’s as a whole is authorized by the PRA and regulated by both the FCA and the PRA. Lloyd’s is required to implement certain rules prescribed by the PRA and by the FCA; such rules are to be implemented by Lloyd’s pursuant to its powers under the Lloyd’s Act 1982 relating to the operation of the Lloyd’s market. Lloyd’s prescribes, in respect of its managing agents and corporate and individual members (“Members”), certain minimum standards relating to their management and control, solvency and various other requirements. If it appears to either the PRA or the FCA that either Lloyd’s is not fulfilling its delegated regulatory responsibilities or that managing agents are not complying with the applicable regulatory rules and guidance, the PRA or the FCA may intervene at their discretion.

Lloyd’s permits its Members to underwrite insurance risks through Lloyd’s syndicates. Members of Lloyd’s may participate in a syndicate for one or more underwriting year(s) by providing capital to support the syndicate’s underwriting. All syndicates are managed by Lloyd’s approved managing agents. Managing agents receive fees and profit commissions in respect of the underwriting and administrative services they provide to the syndicates. Lloyd’s prescribes, in respect of its managing agents and Members, certain minimum standards relating to their management and control, solvency and various other requirements.

General

The operations of ASML, Ark’s wholly-owned Lloyd’s managing agent, are subject to oversight by Lloyd’s, through the Lloyd’s Council. ASML’s business plan for the Syndicates, including maximum stamp capacity, requires annual approval by Lloyd’s. Stamp capacity is a measure of the amount of net premium (premiums written less acquisition costs) that a syndicate is authorized by Lloyd’s to write. Lloyd’s may require changes to any business plan presented to it or additional capital to be provided to support the underwriting plan. Lloyd’s approved stamp capacity in 2023 for Syndicate 4020 is £500 million (\$600 million based upon the foreign exchange spot rate as of December 31, 2022), and for Syndicate 3902 is £200 million (\$240 million based upon the foreign exchange spot rate as of December 31, 2022). Both Syndicate 4020 and 3902 are supported by capital provided through ACML, Ark’s wholly-owned Lloyd’s Corporate Member.

Ark has deposited certain assets with Lloyd’s to support ACML’s underwriting business at Lloyd’s. Dividends from a Lloyd’s managing agent or a Member of Lloyd’s can be declared and paid provided the relevant syndicate has sufficient profits available for distribution subject to Lloyd’s solvency requirements. By entering into a membership agreement with Lloyd’s, ACML has undertaken to comply with all Lloyd’s bye-laws and regulations as well as the provisions of the Lloyd’s Acts and the Financial Services and Markets Act 2000, as amended by the Financial Services Act 2012.

Capital Requirements

The underwriting capacity of a Member of Lloyd’s must be supported by a deposit in the form of cash, securities or letters of credit in an amount determined under the capital adequacy regime of the U.K.’s PRA. The amount of such deposit is calculated for each Member through the completion of an annual capital adequacy exercise. Under these requirements, Lloyd’s must demonstrate that each Member has sufficient assets to meet its underwriting liabilities plus a required solvency margin. The required amount of Funds at Lloyd’s is determined by Lloyd’s based on each syndicate’s solvency and capital requirement as calculated through its internal model.

Intervention Powers

The Lloyd's Council has wide discretionary powers to regulate Members' underwriting at Lloyd's. It may, for instance, withdraw a Member's permission to underwrite business or to underwrite a particular class of business. The Lloyd's Council may change the basis on which syndicate expenses are allocated or vary the Funds at Lloyd's requirements or the investment criteria applicable to the provision of Funds at Lloyd's. Exercising any of these powers might affect the return on the Member's participation in a given underwriting year. If a Member of Lloyd's is unable to pay its debts to policyholders, the Member may obtain financial assistance from the Lloyd's Central Fund, which in many respects acts as an equivalent to a state guaranty fund in the U.S. If Lloyd's determines that the Central Fund needs to be increased, it has the power to assess premium levies on current Members of Lloyd's. The Lloyd's Council has discretion to call or assess up to 3% of a Member's underwriting capacity in any one year as a Central Fund contribution.

While not currently material to our operations, Syndicates 4020 and 3902 also access insurance business from the European Economic Area through the London Branch of Lloyd's Insurance Company. Lloyd's Insurance Company is authorized and regulated by the National Bank of Belgium and regulated by the Financial Services and Markets Authority.

Solvency II and the U.K.'s Domestic Prudential Regime

The European Parliament's Solvency II regulation represents a risk-based approach to insurance regulation and capital adequacy. Its principal goals are to improve the correlation between capital and risk, effect group supervision of insurance and reinsurance affiliates, implement a uniform capital adequacy structure for (re)insurers across the EU Member States, establish consistent corporate governance standards for insurance and reinsurance companies, and establish transparency through standard reporting of insurance operations. Under Solvency II, an insurer's or reinsurer's capital adequacy in relation to various insurance and business risks may be measured with an internal model developed by the insurer or reinsurer and approved for use by the Member State's regulator or pursuant to a standard formula developed by the European Commission. Following the U.K.'s exit from the EU, and the expiry of the transition period on December 31, 2020, U.K. authorized insurers are subject to the U.K.'s separate domestic prudential regime. This regime is identical to the Solvency II regime from January 1, 2021, although the two regimes may begin to diverge over time. The U.K. is currently undertaking a review of Solvency II and of the regulatory regime applicable to U.K. authorized insurers and reinsurers.

Each year, the PRA requires Lloyd's to satisfy an annual solvency test which measures whether Lloyd's has sufficient assets in the aggregate to meet all outstanding liabilities of its Members, both current and run-off. If Lloyd's fails this test, the PRA may require the entire Lloyd's market to cease underwriting or individual Lloyd's Members may be required to cease or reduce their underwriting.

Cybersecurity

The EU General Data Privacy Regulation (the "GDPR") requires companies to satisfy requirements regarding the notification of data breaches and the handling of personal and sensitive data, including its use, protection and the ability of persons whose data is stored to correct or delete such data about themselves. The GDPR permits regulators to impose fines of up to €20 million or 4% of global annual revenue, whichever is higher, and establishes a private right of action.

The GDPR was transposed into U.K. domestic law in January 2021 following the United Kingdom's exit from the EU ("U.K. GDPR") and supplements the United Kingdom's Data Protection Act of 2018. The UK GDPR mirrors the compliance requirements and fine structure of the GDPR.

Climate Change

In 2019, the PRA issued Supervisory Statement 3/19 "Enhancing banks' and insurers' approaches to managing the financial risks from climate change" and the "Framework for assessing financial impacts of physical climate change" (collectively the "PRA 2019 climate change risk management guidelines"). In response to the PRA 2019 climate change risk management guidelines, Ark has established a climate change working group and has undertaken a climate change risk assessment. The risk assessment highlighted regulatory, claims, and underwriting, and investment risks associated with climate change. Ark regularly analyzes climate change risk as part of its risk management framework. Ark also engages with industry peers through the Lloyd's Climate Change market group. Ark has assigned its Chief Risk Officer responsibility under the PRA Senior Insurance Managers Regime for climate change risk. The Chief Risk Officer reports to the Ark Board on climate change matters on a quarterly basis.

General

Cybersecurity

We are subject to various state, federal and international laws and regulations that address the collection, storing, use, disclosure, security, privacy, transfer and other processing of personal information and other data, including Part 500, GDPR, the California Consumer Privacy Act, and the California Privacy Rights Act, among others.

Change of Control

The jurisdictions where we operate have laws and regulations that require regulatory approval of a change of control. Where such laws apply to us, there can be no effective change in our control (or in the control of some or our subsidiaries) unless the person seeking to acquire control has filed a statement with the regulators and obtained prior approval for the proposed change.

RATINGS

Insurance companies are evaluated by various rating agencies in order to measure each company's financial strength. Higher ratings generally indicate financial stability and a stronger ability to pay claims. White Mountains believes that strong ratings are important factors in the marketing and sale of insurance products and services to agents, consumers and ceding companies.

As of February 24, 2023, BAM was rated "AA/stable" by Standard & Poor's. "AA" is the third highest of 23 financial strength ratings assigned by Standard & Poor's.

As of February 24, 2023, each of Lloyd's Syndicates 4020 and 3902, benefits from the financial strength rating of "A/stable" by A.M. Best Company, Inc. ("A.M. Best") and "A+/stable" by Standard & Poor's assigned to the Lloyd's marketplace. "A" is the third highest of 16 financial strength ratings assigned by A.M. Best and "A+" is the fifth highest of 23 financial strength ratings assigned by Standard & Poor's.

As of February 24, 2023, GAIL was rated "A/stable" by A.M. Best.

HUMAN CAPITAL

As of December 31, 2022, White Mountains employed 803 people (consisting of 70 people at the Company, WM Capital, its other intermediate holding companies, WM Advisors and HG Global, 87 people at BAM, 221 people at Ark, 15 people at Kudu, and 410 people at the consolidated Other Operating Businesses).

One of White Mountains's key strengths lies in its people and it proactively supports each employee's well-being and development. White Mountains's Board of Directors receives periodic reporting on employee satisfaction and concerns and interacts with employees across the organization. White Mountains has an inclusive, team-oriented culture in which all employees are treated with respect. Under the guidelines of its Code of Business Conduct, White Mountains is firmly committed to providing equal employment opportunities. White Mountains is committed to the long-term development of our workforce and the cultivation of our next generation of leaders.

Throughout the unique challenges since 2020, White Mountains commitment to the health and safety of its employees and their families has been a guiding priority. To support its employees during this time, White Mountains expanded and encouraged remote work, introduced protocols and practices that emphasized employee well-being, regularly solicited feedback from its employees and significantly increased senior leadership communication.

Item 1A. Risk Factors

The information contained in this report may contain “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. See “**FORWARD-LOOKING STATEMENTS**” on page 94 for specific important factors that could cause actual results to differ materially from those contained in forward-looking statements. The Company’s actual future results and trends may differ materially depending on a variety of factors including, but not limited to, the risks and uncertainties discussed below.

Risks Related to White Mountains

We have successfully created shareholder value through acquisitions and dispositions. We may not be able to continue to create shareholder value through such transactions in the future, which could materially adversely affect our results of operations and financial condition.

In past years, we have completed numerous acquisitions and dispositions, many of which have contributed significantly to creating shareholder value. Failure to identify and complete future acquisitions and dispositions could limit our ability to create shareholder value. Even if we were to identify and complete future acquisitions and dispositions, there is no assurance that such transactions will ultimately achieve their anticipated benefits, and such transactions could materially adversely affect our results of operation and financial condition.

If we are required to write down goodwill and other intangible assets, it could materially adversely affect our results of operations and financial condition.

As of December 31, 2022, we had total goodwill and other intangible assets of \$392 million on our consolidated balance sheet, \$293 million of which relates to our acquisition of Ark.

We periodically review goodwill and other intangible assets to determine whether an impairment has occurred. An impairment of goodwill or other intangible assets occurs when the carrying value of the asset exceeds its fair value. The evaluation of goodwill or other intangible assets for impairment requires the use of significant judgment in determining fair value, including assumptions about the future performance of the associated business. We may experience unexpected circumstances that cause future results to differ significantly from those assumptions used in our estimation of the fair value of our goodwill and other intangible assets that could cause us to conclude that goodwill and other intangible assets are impaired. Such an impairment would result in a non-cash charge to income that could materially adversely affect our results of operations and financial condition.

Risks Related to HG Global/BAM's Business and Industry

BAM may not maintain a favorable financial strength rating, which could materially adversely affect its ability to conduct business and, consequently, could materially adversely affect our results of operations and financial condition.

Third-party rating agencies assess and rate the financial strength of insurers, including claims-paying ability. These ratings are based upon criteria established by the rating agencies and are subject to revision at any time at the sole discretion of the rating agencies. Some of the criteria relate to general economic conditions and other circumstances outside the rated insurer's control. The financial strength rating of Standard & Poor's is used by outside parties to assess the suitability of BAM as a business counterparty and is an important factor in establishing BAM's competitive position.

Standard & Poor's periodically evaluates BAM to confirm that it continues to meet the criteria of the rating previously assigned to it. On June 6, 2017, Standard & Poor's placed BAM on credit watch negative and initiated a detailed review of BAM's financial strength rating. On June 26, 2017, Standard & Poor's concluded its review and affirmed BAM's "AA/stable" financial strength rating. During the time that BAM's financial strength rating was placed on credit watch negative by Standard & Poor's, it voluntarily withdrew from the marketplace and did not write any municipal bond insurance policies.

The maintenance of an "AA" or better financial strength rating from Standard & Poor's is particularly important to BAM's ability to write municipal bond insurance policies and meet its debt service obligations under the BAM Surplus Notes. On June 16, 2022, Standard & Poor's concluded its most recent review and affirmed BAM's "AA/stable" financial strength rating. See "RATINGS" on page 25. A downgrade, withdrawal or negative watch/outlook of BAM's financial strength rating could severely limit or prevent BAM's ability to write municipal bond insurance policies, which could materially adversely affect our results of operations and financial condition.

If BAM does not pay some or all of the principal and interest due on the BAM Surplus Notes, it could materially adversely affect our results of operations and financial condition.

As of December 31, 2022, White Mountains owned \$340 million in BAM Surplus Notes and had accrued \$158 million of interest thereon. No payment of principal or interest on the BAM Surplus Notes may be made without the approval of the NYDFS. Under its agreements with HG Global, BAM is required to seek regulatory approval to pay principal and interest on the BAM Surplus Notes only to the extent that its capital resources continue to support its outstanding obligations, business plan and rating. It is unlikely that BAM would pay principal and interest on the BAM Surplus Notes if such payments could lead to a rating downgrade. In December 2022, the NYDFS approved a \$36 million cash payment of principal and interest on the BAM Surplus Notes. We cannot guarantee that the NYDFS will approve payments on the BAM Surplus Notes in the future.

If BAM does not repay some or all of the principal and interest on the BAM Surplus Notes, it could materially adversely affect our results of operations and financial condition. BAM's ability to repay principal and interest on the BAM Surplus Notes is dependent on a number of factors, many of which are beyond BAM's control, including primary municipal bond issuance levels, insured penetration rates, interest rate levels, credit spreads, trading value, capture rate and market share. BAM also could incur significant losses from the municipal bonds it insures. In addition, the municipal bond insurance industry is highly competitive. BAM's primary competitor is Assured. BAM and Assured each seeks to differentiate itself through financial strength ratings, claims paying resources and underwriting strategies. If BAM is unable to compete effectively against Assured, it could result in fewer policies issued, lower premium levels and less favorable policy terms and conditions.

We are exposed to losses from municipal bond insurance written by BAM through our reinsurance arrangements between BAM and HG Re, which could materially adversely affect our results of operations and financial condition.

Our reinsurance subsidiary, HG Re, reinsures (i) losses up to the first 15%-of-par outstanding on each municipal bond insured by BAM and (ii) certain municipal bonds insured by BAM on an excess of loss basis. Should the policies underwritten by BAM experience insured losses for any reason, it could materially adversely affect our results of operations and financial condition.

Risks Related to Ark's and WM Outrigger Re's Business and Industry

Unpredictable catastrophic events could materially adversely affect our results of operations and financial condition.

Ark and WM Outrigger Re write insurance and reinsurance policies that cover unpredictable catastrophic events. Ark and WM Outrigger Re have exposure to losses caused by unpredictable catastrophic events including natural and other disasters such as hurricanes, windstorms, earthquakes, floods, wildfires, tornadoes, tsunamis, and severe winter weather all over the world. Catastrophes can also include large losses driven by public health crises, terrorist attacks, war and war-like actions, explosions, infrastructure failures, and cyber-attacks.

The extent of a catastrophe loss is a function of both the severity of the event and total amount of insured exposure to the event as well as the coverage provided to customers. Increases in the value and concentration of insured property or insured employees, the effects of inflation, changes in weather patterns and increased terrorism and war and war-like actions could increase the future frequency and/or severity of claims from catastrophic events. Climate change, which is characterized by higher temperatures, sea level rise and more extreme weather events including droughts, heavy storms, wildfires, and stronger hurricanes, increases the frequency and severity of certain major natural catastrophes. There is also a growing threat of cyber risks due to the increasing interconnectivity of global systems. Claims from catastrophic events could materially adversely affect our results of operations and financial condition. Ark's ability to write new insurance and reinsurance policies could also be impacted as a result of corresponding reductions in its capital levels. WM Outrigger Re's obligations under the quota share reinsurance agreement with GAIL are subject to an aggregate limit equal to the assets in the collateral trust account at any point in time.

Ark seeks to manage its exposure to catastrophic losses by limiting and monitoring the aggregate insured value of policies in geographic areas with exposure to catastrophic events and by buying reinsurance. To manage, monitor and analyze insured values and potential losses, Ark utilizes proprietary and third-party catastrophe management software to estimate potential losses for many different catastrophe scenarios. Ark incorporates the physical risk of climate change in its underwriting process through sensitivity and stress testing of its catastrophe models, including increased frequency of U.S. windstorms and the implications of storm surge. Ark's estimates of potential losses are dependent on many variables, including assumptions about storm intensity, storm surge, loss amplification, loss adjustment expenses and insurance-to-value in the aftermath of weather-related catastrophes. In addition, Ark has to account for quality of data provided by insureds. Accordingly, if the assumptions are incorrect, the losses Ark and WM Outrigger Re might incur from an actual catastrophe could be materially different than the expectation of losses generated from modeled catastrophe scenarios, which could materially adversely affect our results of operations and financial condition.

Ark and its subsidiaries benefit from favorable financial strength ratings from A.M. Best and Standard & Poor's, the deterioration of which could materially adversely affect its ability to conduct business and, consequently, could materially adversely affect our results of operations and financial condition.

Third-party rating agencies assess and rate the financial strength, including claims-paying ability, of insurers, reinsurers and the Lloyd's marketplace. These ratings are based upon criteria established by the rating agencies and are subject to revision at any time at the sole discretion of the agencies. Some of the criteria relate to general economic conditions and other circumstances outside the rated company's control. These financial strength ratings are used by policyholders, agents and brokers to assess the suitability of insurers and reinsurers as business counterparties and are an important factor in establishing the competitive position of insurance and reinsurance companies. Rating agencies periodically evaluate Ark to confirm that it continues to meet the criteria of the ratings previously assigned to it.

The maintenance of "A-" or better financial strength ratings is particularly important to Ark's ability to write new or renewal property and casualty insurance and reinsurance business in most markets. Ark writes insurance and reinsurance through Lloyd's Syndicates 4020 and 3902, each of which benefits from the financial strength rating of "A/stable" by A.M. Best and "A+/stable" by Standard & Poor's assigned to the Lloyd's marketplace. Beginning in January 2021, Ark began writing certain classes of its business through GAIL, Ark's wholly-owned Bermuda-based insurance and reinsurance company, which has been assigned an "A/stable" financial strength rating by A.M. Best. See "**RATINGS**" on page 25.

A downgrade, withdrawal or negative watch/outlook of these financial strength ratings could severely limit or prevent Ark from writing new policies or renewing existing policies, which could materially adversely affect our results of operations and financial condition. A downgrade, withdrawal or negative watch/outlook of these financial strength ratings also could limit Ark's ability to raise new debt or could make new and certain existing debt more costly and/or have more restrictive conditions.

Ark may not successfully alleviate risk through reinsurance and retrocessional arrangements, which could materially adversely affect our results of operations and financial condition.

Ark attempts to limit its risk of loss through reinsurance and retrocessional arrangements, including through its quota share reinsurance agreements with Outrigger Re Ltd. Retrocessional arrangements refer to reinsurance purchased by a reinsurer to cover its own risks assumed from ceding companies. The availability and cost of reinsurance and retrocessional protection is subject to market conditions, which are outside of Ark's control. In addition, the coverage provided by Ark's reinsurance and retrocessional arrangements may be inadequate to cover its future liabilities. As a result, Ark may not be able to successfully alleviate risk through these arrangements, which could materially adversely affect our results of operations and financial condition.

In addition, due to factors such as the price or availability of reinsurance or retrocessional coverage, Ark sometimes decides to increase the amount of risk retained by purchasing less reinsurance. Such determinations have the effect of increasing Ark's financial exposure to losses associated with such risks and, in the event of significant losses associated with a given risk, could materially adversely affect our results of operations and financial condition.

Purchasing reinsurance does not relieve Ark of its underlying obligations to policyholders or ceding companies, so any inability to collect amounts due from reinsurers could materially adversely affect our results of operations and financial condition. Inability to collect amounts due from reinsurers, including Outrigger Re Ltd., can result from a number of scenarios, including: (i) reinsurers choosing to withhold payment due to a dispute or other factors beyond Ark's control; (ii) reinsurers becoming unable to pay amounts owed to Ark as a result of a deterioration in their financial condition; and (iii) losses exceeding amounts within the collateral trust accounts for Outrigger Re Ltd. While we currently believe the condition of Ark's reinsurers is strong, it is possible that one or more of Ark's reinsurers will be adversely affected by future significant losses or economic events, causing them to be unable or unwilling to pay amounts owed.

The property and casualty insurance and reinsurance industries are highly competitive and cyclical, and Ark may not be able to compete effectively in the future, which could materially adversely affect our results of operations and financial condition.

The property and casualty insurance and reinsurance industries are highly competitive and have historically been cyclical, experiencing periods of severe price competition and less selective underwriting standards (soft markets) followed by periods of relatively high prices and more selective underwriting standards (hard markets). Ark competes with other Lloyd's syndicates, London market participants and major U.S., Bermuda, European and other international insurance and reinsurance companies. Many of these competitors have greater resources than Ark does, have established long-term and continuing business relationships throughout the insurance and reinsurance industries and may have higher financial strength ratings, which can represent significant competitive advantages for them.

Soft primary insurance market conditions could lead to a significant reduction in reinsurance premium rates, less favorable contract terms and fewer submissions for Ark's reinsurance underwriting capacity. The supply of reinsurance is also related to the level of reinsured losses and the level of industry capital which, in turn, may fluctuate in response to changes in rates of return earned in the reinsurance industry. As a result, the reinsurance business historically has been a cyclical industry characterized by periods of intense price competition due to excess underwriting capacity as well as periods when shortages of capacity permitted improvements in reinsurance rate levels and terms and conditions. In addition, in recent years the persistent low interest rate environment and ease of entry into the reinsurance sector has led to increased competition from third-party capital in the property catastrophe excess reinsurance line. This alternative capital provides collateralized property catastrophe protection in the form of catastrophe bonds, industry loss warranties, sidecars and other vehicles that facilitate the ability for non-reinsurance entities, such as hedge funds and pension funds, to compete for property catastrophe excess reinsurance business outside of the traditional treaty market.

We expect to continue to experience the effects of the insurance and reinsurance industries' cyclicity. If Ark is unable to maintain its competitive position throughout soft and hard market cycles, its business may be adversely affected, and it may not be able to compete effectively in the future, which could materially adversely affect our results of operations and financial condition.

Ark's loss and LAE reserves may be inadequate to cover the ultimate liability for losses, and as a result, our results of operations and financial condition could be adversely affected.

Ark must maintain reserves adequate to cover its estimated ultimate liabilities for loss and LAE. Loss and LAE reserves are typically comprised of (i) case reserves for reported claims and (ii) incurred but not reported (“IBNR”) reserves for losses that have occurred but for which claims have not yet been reported and for expected future development on case reserves. Loss and LAE reserves are estimates of what Ark believes the settlement and administration of claims will cost based on facts and circumstances then known to Ark. These estimates involve actuarial and claims assessments and require Ark to make a number of assumptions about future events that are subject to unexpected changes and are beyond Ark’s control, such as future trends in claim severity, emerging coverage issues, frequency, inflation, legislative and judicial changes and other factors. Because of uncertainties associated with estimating ultimate loss and LAE reserves, we cannot be certain that Ark’s reserves are adequate. In the event that Ark’s reserves become insufficient to cover the actual losses and LAE, Ark may need to add to the reserves, which could have a material adverse effect on our results of operations and financial condition. For further discussion of our loss and LAE reserves, see “**CRITICAL ACCOUNTING ESTIMATES — Loss and LAE Reserves**” on page 76.

Risks Related to Kudu’s Business and Industry

Kudu’s financial performance is dependent upon its clients’ asset and performance-based fees, which are subject to a variety of economic, market and other risks.

Through our subsidiary Kudu, we provide capital solutions for asset and wealth management firms through non-controlling equity interests in the form of revenue and earnings participation contracts. Kudu’s clients generate their revenues and earnings by charging asset based fees, which are typically a percentage of the value of the assets they manage for their clients, and/or performance based fees, which are typically a portion of actual returns achieved for their clients above a target return. The revenue that Kudu generates from its clients is subject to the same general economic and market risks that may affect our investment portfolio. See “*Our investment portfolio may suffer reduced returns or losses, which could materially adversely affect our results of operations and financial condition. Adverse changes in equity markets, interest rates, debt markets or foreign currency exchange rates could result in significant losses to the value of our investment portfolio.*” on page 31.

Additionally, Kudu’s clients participate in a highly competitive, highly regulated industry that subjects their operations to a number of other risks that are out of our control and could materially adversely affect our results of operations and financial condition, including (i) changes in investor preference from the actively-managed investments offered by Kudu’s clients to passively-managed investments; (ii) the ability of Kudu’s clients to successfully attract new clients and retain existing ones; (iii) the ability of Kudu’s clients to avoid fee compression; (iv) the reliance of Kudu’s clients on a small number of key personnel; and (v) future changes to regulations that make Kudu’s clients’ businesses more cumbersome and expensive to operate.

Risks Related to Investments

Our investment portfolio may suffer reduced returns or losses, which could materially adversely affect our results of operations and financial condition. Adverse changes in equity markets, interest rates, debt markets or foreign currency exchange rates could result in significant losses to the value of our investment portfolio.

Our investment portfolio primarily consists of fixed maturity investments, short-term investments, common equity securities, our investment in MediaAlpha and other long-term investments. We invest to maximize long-term after-tax total returns while taking prudent levels of risk and maintaining a diversified portfolio subject to our investment guidelines and various regulatory restrictions. However, investing entails substantial risks. We may not achieve our investment objectives, and our investment performance may vary substantially over time. Losses or volatility in the equity or fixed income markets could materially adversely affect our results of operations and financial condition.

The fair market value of our investment portfolio is affected by general economic and market conditions that are outside of our control, including (i) fluctuations in equity market levels, interest rates, debt market levels and foreign currency exchange rates; (ii) public health crises, natural disasters, terrorist attacks and other outside events; and (iii) credit losses sustained by issuers. A significant decline in the equity markets such as that experienced from September 2008 to March 2009 could materially adversely affect our results of operations and financial condition. In addition to causing declines in the fair value of securities that we own in our investment portfolio, public health crises, natural disasters, terrorist attacks and other outside events can adversely affect general commercial activity and the economies of many countries, which could materially adversely affect the business, financial condition and results of operations of the entities in which we have invested. For example, reductions of travel, including travel restrictions and bans imposed by governments due to the COVID-19 pandemic, negatively impacted revenues at PassportCard/DavidShield in 2020. We are also exposed to changes in debt markets. Interest rates are highly sensitive to many factors, including governmental monetary policies, economic and political conditions and other factors beyond our control. In particular, a significant increase in interest rates, as experienced in 2022, could result in significant losses in the fair value of our investment portfolio. A significant increase in interest rates that causes severe losses could materially adversely affect our results of operations and financial condition. We also hold investments, such as unconsolidated entities, including Kudu's Participation Contracts, private equity funds and hedge funds, a bank loan fund, Lloyd's trust deposits, ILS funds and private debt instruments that are not regularly traded in active investment markets and may be illiquid. These investments can experience volatility in their returns or valuation, which could materially adversely affect our results of operations and financial condition.

We may be subject to greater volatility from our investment in MediaAlpha, which could materially adversely affect our results of operations and financial condition.

Following the MediaAlpha IPO in October 2020, White Mountains's investment in MediaAlpha is valued based on the publicly-traded share price of MediaAlpha's common stock, which at the December 31, 2022 closing price of \$9.95 per share was \$169 million. As a result, White Mountains's reported book value per share and adjusted book value per share may be subject to greater volatility in the future, as the valuation of its investment in MediaAlpha based on the publicly-traded share price of MediaAlpha's common stock could be more volatile than the valuation of its investment in MediaAlpha based on the private discounted cash flow model used in White Mountains's financial statements in periods prior to the MediaAlpha IPO. Should there be a significant decrease in the publicly-traded share price of MediaAlpha's common stock, it could materially adversely affect our results of operations and financial condition.

Our investment portfolio includes securities that do not have readily observable market prices. We use valuation methodologies that are inherently subjective and uncertain to value these securities. The values of securities established using these methodologies may never be realized, which could materially adversely affect our results of operations and financial condition.

As of December 31, 2022, White Mountains owned \$912 million in securities, including our investments in Kudu's Participation Contracts and PassportCard/DavidShield, that are not actively traded in public markets, do not have readily observable market prices, and are classified as Level 3 investments in the GAAP fair value hierarchy. On a quarterly basis, we make a good faith determination of the fair value of our Level 3 investments in our GAAP financial statements using valuation techniques that are inherently subjective and uncertain.

In determining the GAAP fair value of these securities, we use judgment in selecting the fair value methodology and the significant inputs that are employed by that methodology for each such investment. See "**Level 3 Measurements**" under "**CRITICAL ACCOUNTING ESTIMATES - Fair Value Measurements**" on page 73 for a description of the methodologies we use to determine GAAP fair value of our investments without a readily observable market price. Given the inherent subjectivity and uncertainty in the methodologies we use to determine the fair value of our investments without a readily observable market price, the values of such investments established using these methodologies may never be realized, which could materially adversely affect our results of operations and financial condition.

Risks Related to Taxation

We may be treated as a PFIC, in which case a U.S. holder of our common shares could be subject to disadvantageous rules under U.S. federal income tax laws.

Significant potential adverse U.S. federal income tax consequences apply to any U.S. person who owns shares in a passive foreign investment company ("PFIC"). In general, a non-U.S. corporation is classified as a PFIC for a taxable year in which, after taking into account the income and assets of the corporation and certain subsidiaries pursuant to certain "look-through" rules, either (i) 75% or more of its gross income is passive income or (ii) 50% or more of the average quarterly value of its gross assets is attributable to assets that produce passive income or are held for the production of passive income. If a corporation is treated as a PFIC for a taxable year, it is generally treated as a PFIC for all later taxable years. Passive income for PFIC purposes generally includes interest, dividends and other investment income, subject to certain exceptions.

On January 15, 2021, new final and proposed PFIC regulations issued by the U.S. Department of the Treasury were published in the Federal Register. The final regulations are generally effective for tax years of shareholders beginning on or after their date of publication. The proposed regulations may be selectively adopted by shareholders prior to their finalization. We are carefully studying the final and proposed regulations, including their effective dates and their application to White Mountains to determine their effects on our PFIC status in the future.

While we believe that White Mountains should not currently be treated as a PFIC based upon the income and assets of White Mountains and the income and assets of its subsidiaries (taking into account certain applicable subsidiary "look-through" rules), there is no assurance that White Mountains will not become a PFIC in the future as a result of changes in law or regulations (or their application to White Mountains) or changes in our assets, income or business operations. Nor is there assurance that the Internal Revenue Service will not successfully argue that White Mountains is now, or in the future may become, a PFIC.

If we are determined to be a PFIC, a U.S. person may be subject to less advantageous tax consequences upon the sale, exchange or receipt of dividends with respect to our common shares and may be required to pay U.S. federal income tax at ordinary income rates for gains and dividends, as well as an interest charge on certain "excess distributions." Certain elections designed to mitigate the adverse consequences of owning shares in a PFIC, including a "Protective QEF Election," may be available. If you are a U.S. person, we encourage you to consult your own tax advisor concerning the potential tax consequences to you under the PFIC rules.

The Company and certain of our non-U.S. subsidiaries may become subject to U.S. tax, which could materially adversely affect our results of operations and financial condition.

The Company and our non-U.S. subsidiaries without U.S. branches operate in a manner such that none of these companies should be subject to U.S. tax (other than U.S. excise tax on insurance and reinsurance premium income attributable to insuring or reinsuring U.S. risks and U.S. withholding tax on some types of U.S. source investment income) because none of these companies should be treated as engaged in a trade or business within the United States. However, because there is considerable uncertainty as to the activities that constitute being engaged in a trade or business within the United States, we cannot be certain that the Internal Revenue Service will not contend successfully that the Company or its non-U.S. subsidiaries without U.S. branches are engaged in a trade or business in the United States. If the Company or any of its non-U.S. subsidiaries without U.S. branches were considered to be engaged in a trade or business in the United States, such entity could be subject to U.S. corporate income and branch profits taxes on the portion of its earnings effectively connected to such U.S. business, which could materially adversely affect our results of operations and financial condition.

Changes in tax laws or tax treaties could materially adversely affect our results of operations and financial condition.

The income of our U.S. subsidiaries is subject to U.S. federal, state and local income tax and other taxes. The income of our non-U.S. subsidiaries is generally subject to a lower tax rate than that imposed by the United States. Certain of our non-U.S. subsidiaries are eligible for the benefits of tax treaties between the United States and other countries. We believe our non-U.S. subsidiaries will continue to be eligible for treaty benefits. However, it is possible that factual changes or changes to U.S. tax laws or changes to tax treaties that presently apply to our non-U.S. subsidiaries could increase income subject to tax, or the tax rate on income, in the United States. Similarly, changes to the applicable tax laws, treaties or regulations of other countries could subject the income of members of our group to higher rates of tax outside the United States. Additionally, the base erosion and profit shifting project currently being undertaken by the Organization for Economic Cooperation and Development (“OECD”) and the European Commission’s investigation into illegal state aid may result in changes to long standing tax principles, which could materially adversely affect our results of operations and financial condition.

Our non-U.S. subsidiaries are treated as CFCs and may subject a U.S. 10% shareholder of our common shares to disadvantageous rules under U.S. federal income tax laws.

The Tax Cuts and Jobs Act of 2017 (“TCJA”) modified certain U.S. tax rules that apply to controlled foreign corporations (“CFCs”). As a result of these changes, each of our non-U.S. subsidiaries is treated as a CFC. If any of our shareholders is a “U.S. 10% shareholder” (as described below) that directly or indirectly owns stock in White Mountains, that shareholder must include in its taxable income each year its pro rata share of our CFC subsidiaries’ “subpart F income” for that year, even if no distributions are received by the U.S. 10% shareholder.

Due to changes made by the TCJA, a shareholder is treated as a U.S. 10% shareholder if the shareholder is a U.S. person who owns directly, indirectly or through constructive ownership rules 10% or more of either the voting power or the total value of our shares. As a result, a U.S. person that owns (directly, indirectly or through constructive ownership rules) 10% or more of our shares will generally be treated as a U.S. 10% shareholder of our CFC subsidiaries, notwithstanding the voting power restrictions of our shares. However, a person that is a U.S. 10% shareholder solely as a result of constructive ownership rules (i.e., such person does not directly or indirectly own stock of White Mountains) should not have a subpart F income inclusion with respect to our CFC subsidiaries.

If you are a U.S. person who might be a U.S. 10% shareholder, we encourage you to consult your own tax advisor concerning the CFC rules.

Proposed regulations could subject U.S. persons who are shareholders to disadvantageous rules under U.S. federal income tax laws pertaining to “related person insurance income.”

Proposed regulations issued on January 24, 2022, address the subpart F “related person insurance income” (“RPII”) tax regime. The proposed regulations would expand the scope of relationships giving rise to RPII by treating intra-group reinsurance transactions as generating RPII if a non-U.S. parent entity of the group is majority owned by U.S. persons. If the proposed regulations are finalized as written, U.S. shareholders of the Company could be required to include in their taxable income a proportionate share of White Mountains’s RPII income annually as subpart F income, even if no distributions are received by the U.S. shareholder.

The proposed regulations generally would apply to tax years of corporations beginning on or after the date finalized regulations are published in the Federal Register, and to tax years of U.S. persons in which or with which those corporations’ tax years end. We encourage shareholders who are U.S. persons to consult their own tax advisors concerning the proposed regulations.

Risks Related to Laws and Regulation

Regulation may have a material adverse effect on our operations and financial condition.

We are subject to supervision and regulation by regulatory authorities in the various jurisdictions in which we conduct business, including state, national and international insurance regulators. Regulatory authorities have broad regulatory, supervisory and administrative powers relating to, among other things, data protection and data privacy, solvency standards, licensing, coverage requirements, policy rates and forms and the form and content of financial reports. Regulatory authorities continue to implement new or enhanced regulatory requirements. Regulatory authorities also may seek to exercise their supervisory or enforcement authority in new or more extensive ways. These actions, if they occur, could affect the competitive market and the way we conduct our business and 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.

Bermuda law differs from the laws in effect in the United States and may afford less protection to shareholders.

We are organized under the laws of Bermuda, and a portion of our assets are located outside the United States. As a result, it may not be possible for our shareholders to enforce court judgments obtained in the United States against us based on the civil liability provisions of the federal or state securities laws of the United States, either in Bermuda or in countries other than the United States where we will have assets. In addition, there is some doubt as to whether the courts of Bermuda and other countries would recognize or enforce judgments of U.S. courts obtained against us or our directors or officers based on the civil liabilities provisions of the federal or state securities laws of the United States or would hear actions against us or those persons based on those laws.

Our corporate affairs are governed by the Bermuda Companies Act. The Companies Act differs in some material respects from laws generally applicable to U.S. corporations and shareholders, including the provisions relating to interested directors, amalgamations, mergers and acquisitions, takeovers, shareholder lawsuits and indemnification of directors. Generally, the duties of directors and officers of a Bermuda company are owed to the company only. Shareholders of Bermuda companies generally do not have rights to take action against directors or officers of the company and may only do so in limited circumstances. Class actions and derivative actions are generally not available to shareholders under Bermuda law. The Bermuda courts, however, would ordinarily be expected to permit a shareholder to commence an action in the name of a company to remedy a wrong to the company where the act complained of is alleged to be beyond the corporate power of the company or illegal, or would result in the violation of the company's memorandum of association or bye-laws. Furthermore, a Bermuda court would ordinarily be expected to permit a shareholder to commence an action that alleges a fraud against non-controlling shareholders or, for instance, where an act requires the approval of a greater percentage of the company's shareholders than that which actually approved it.

When the affairs of a company are being conducted in a manner that is oppressive or prejudicial to the interests of some part of the shareholders, one or more shareholders may apply to the Supreme Court of Bermuda, which may make such order as it sees fit, including an order regulating the conduct of the company's affairs in the future or ordering the purchase of the shares of any shareholders by other shareholders or by the company. Additionally, under our bye-laws and as permitted by Bermuda law, each shareholder has waived any claim or right of action against our directors or officers for any action taken by directors or officers in the performance of their duties, except for actions involving fraud or dishonesty. In addition, the rights of our shareholders and the fiduciary responsibilities of our directors under Bermuda law are not as clearly established as under statutes or judicial precedent in existence in jurisdictions in the United States, particularly the State of Delaware. Therefore, our shareholders may have more difficulty protecting their interests than would shareholders of a corporation incorporated in a jurisdiction within the United States.

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

Our business is highly dependent on our ability to successfully execute a large number of transactions, many of which are complex. These processes are often subject to internal guidelines and policies, and government regulation. A control system, no matter how well designed and operated, can provide only reasonable assurance that the control system's objectives will be met. If controls are not effective, it could lead to unanticipated risk exposure, or damage to our reputation and, consequently, could materially adversely affect our results of operations and financial condition.

Other Risks Related to White Mountains and its Subsidiaries

We may be unable to adequately maintain our systems and safeguard the security of our data, which could adversely impact our ability to operate our business and cause reputational harm and, consequently, could materially adversely affect our results of operations and financial condition.

Because our business and operations rely on secure and efficient information technology systems, we depend on our ability, and the ability of certain third parties, including vendors and business partners, to access our computer systems to perform necessary functions such as providing quotes and product pricing, billing and processing transactions, administering claims, and reporting our financial results. The functioning of these systems may be impacted by any number of events, including power outages, natural and manmade catastrophes, and cyber-attacks. In the event we are unable to access any of our systems, or any third-party system that we rely upon, our ability to operate our business effectively may be significantly impaired.

Our business also depends upon our ability to securely process, store, transmit and safeguard confidential and proprietary information that is in our possession. This information includes confidential information relating to our business, and personally identifiable information (“PII”) and protected health information (“PHI”) belonging to our employees, customers, claimants and business partners. Because our systems may be vulnerable to a variety of forms of unauthorized access that could result in a data breach, including hackers, computer viruses, and other cyber-attacks, as well as breaches that result from dishonest employees, errors by employees or lost or stolen computer devices, we may not be able to protect the confidentiality of such information.

Third parties present an additional risk of cyber-related events. We outsource certain technological and business process functions to third-party providers. We rely on these third parties to maintain and store PII and PHI and other confidential information on their systems. We also routinely transmit such information by e-mail and other electronic means. Although we attempt to establish sufficient controls and secure capabilities to transmit such information and to prevent unauthorized disclosure, these controls may not be sufficient. Furthermore, third-party providers may not have appropriate controls in place to protect such information.

Our computer systems have been and will continue to be the target of cyber-attacks, although we are not aware that we have experienced a material cybersecurity breach. We are also not aware of any third-party vendor having experienced a material cybersecurity breach that impacted our data. The risk of a cyber-attack may increase, and we may experience more significant attacks in the future.

The risks identified above could expose us to data breaches, disruptions of service, financial losses and significant increases in compliance costs and reputational harm. In addition, a data breach could subject us to legal liability or regulatory action under data protection and privacy laws and regulations enacted by federal, state and foreign governments, or other regulatory bodies. As a result, our ability to conduct our business and our results of operations and financial condition could be materially adversely affected.

We may suffer losses from unfavorable outcomes from litigation and other legal proceedings, which could materially adversely affect our results of operations and financial condition.

From time to time we are subject to legal proceedings. In the event of an unfavorable outcome in one or more legal matters, our ultimate liability may be in excess of amounts we have reserved and such additional amounts could materially adversely affect our results of operations and financial condition. Furthermore, it is possible that these legal proceedings could result in equitable remedies or other unexpected outcomes that could materially adversely affect our results of operations and financial condition.

We depend on our key personnel to manage our business effectively and they may be difficult to replace, which could materially adversely affect our results of operations and financial condition.

Much of our competitive advantage is based on the expertise, experience and know-how of our key personnel. We do not have fixed term employment agreements with any of our key personnel or key man life insurance, and the loss of one or more of these key personnel could materially adversely affect our results of operations and financial condition. Our success also depends on the ability to hire and retain additional personnel. Difficulty in hiring or retaining personnel could materially adversely affect our results of operations and financial condition.

Item 1B. Unresolved Staff Comments

As of the date of this report, the Company had no unresolved comments from the Commission staff regarding its periodic or current reports under the Exchange Act.

Item 2. Properties

The Company maintains two professional offices in Hamilton, Bermuda, which serve as its headquarters and its registered office. The Company's principal executive office is in Hanover, New Hampshire. In addition, White Mountains maintains a professional office in Guilford, Connecticut, which houses its corporate finance and investment functions, and in Boston, Massachusetts, which houses its corporate accounting, reporting and internal audit functions. All of the Company's professional offices are leased.

HG Global's and Ark's headquarters are located in Hamilton, Bermuda. In addition, Ark maintains underwriting offices in London, England and Hamilton, Bermuda. BAM's and Kudu's headquarters are located in New York, New York.

The various offices and facilities of the consolidated Other Operating Businesses are owned or leased. Management considers its office facilities suitable and adequate for its current level of operations.

Item 3. Legal Proceedings

None.

Item 4. Mine Safety Disclosures

None.

AVAILABLE INFORMATION

The Company is subject to the informational reporting requirements of the Exchange Act. In accordance therewith, the Company files reports, proxy statements and other information with the SEC. These documents are available at www.sec.gov and www.whitemountains.com shortly after such material is electronically filed with or furnished to the SEC. In addition, the Company's code of business conduct and ethics as well as the various charters governing the actions of certain of the Company's Committees of its Board of Directors, including its Audit Committee, Compensation Committee and Nominating and Governance Committee, are available at www.whitemountains.com.

The Company will provide to any shareholder, upon request and without charge, copies of these documents (excluding any applicable exhibits unless specifically requested). Written or telephone requests should be directed to the Corporate Secretary, White Mountains Insurance Group, Ltd., 26 Reid Street, Hamilton, HM 11 Bermuda, telephone number (441) 278-3160. Additionally, all such documents are physically available at the Company's registered office at Clarendon House, 2 Church Street, Hamilton, HM 11 Bermuda.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS (As of February 24, 2023)

Name	Position	Age	Executive Officer Since
G. Manning Rountree	Chief Executive Officer	50	2009
Liam P. Caffrey	Executive Vice President and Chief Financial Officer	50	2022
Reid T. Campbell	President	55	2007
Michaela J. Hildreth	Managing Director and Chief Accounting Officer	55	2021
Robert L. Seelig	Executive Vice President and General Counsel	54	2002

All executive officers of the Company and its subsidiaries are elected by the Board for a term of one year or until their successors have been elected and have duly qualified. Information with respect to the principal occupation and relevant business experience of the Executive Officers follows:

Mr. Rountree was appointed as a director and Chief Executive Officer of the Company in March 2017. Prior to that, he served as an Executive Vice President of the Company and President of WM Capital. He joined White Mountains in 2004 and served as President of WM Advisors from March 2009 until December 2014. Prior to joining White Mountains, Mr. Rountree was a Senior Vice President at Putnam Investments for two years. Prior to joining Putnam Investments, Mr. Rountree spent three years with McKinsey & Company. Mr. Rountree also serves as a director of BAM.

Mr. Caffrey was appointed Executive Vice President and Chief Financial Officer of the Company in March 2022. Prior to joining the Company, Mr. Caffrey served as Chief Executive Officer of Aon's Global Affinity business. Prior to that, he served as Chief Financial Officer of Aon Risk Solutions globally and as Chief Financial Officer of Aon Risk Solutions Americas. Prior to joining Aon, Mr. Caffrey spent 12 years with McKinsey & Company.

Mr. Campbell was appointed President of the Company in March 2022 and previously served as Executive Vice President and Chief Financial Officer from May 2017 until March 2022. Prior to that, he served as a Managing Director of WM Capital and as President of WM Advisors. He joined White Mountains in 1994 and has served in a variety of financial management positions with the Company and its subsidiaries. Prior to joining White Mountains, Mr. Campbell spent three years with KPMG. Mr. Campbell also serves as a director of BAM.

Ms. Hildreth was appointed as Managing Director and Chief Accounting Officer of the Company in May 2021. Prior to that, she served as Managing Director and General Auditor of WM Capital. She joined White Mountains in 2003 and has served in a variety of accounting and auditing-related positions with the Company and its subsidiaries. Prior to joining the Company, Ms. Hildreth spent 13 years with PricewaterhouseCoopers.

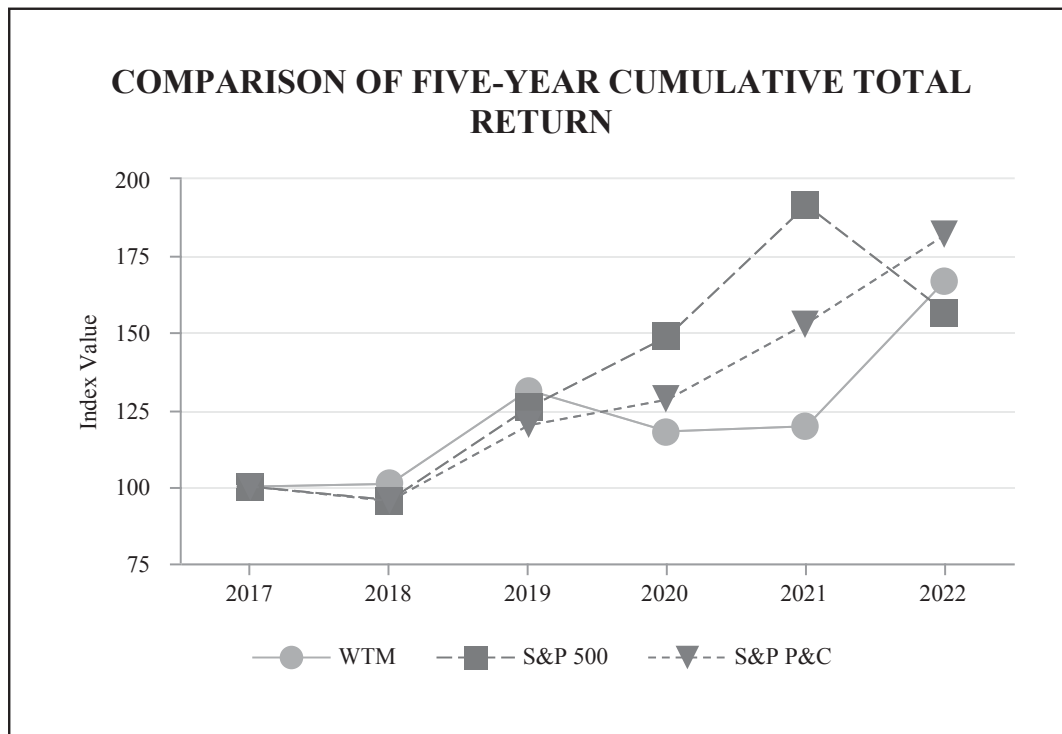
Mr. Seelig is Executive Vice President and General Counsel of the Company. Prior to joining White Mountains in 2002, Mr. Seelig was with the law firm of Cravath, Swaine & Moore.

PART II

Item 5. Market for the Company’s Common Equity, Related Shareholder Matters and Issuer Purchases of Equity Securities

White Mountains’s common shares are listed on the New York Stock Exchange (symbol “WTM”) and the Bermuda Stock Exchange (symbol “WTM-BH”). As of February 21, 2023, there were 234 registered holders of White Mountains common shares, par value \$1.00 per share. For information on securities authorized for issuance under the Company’s equity compensation plans, see “**Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**” on page 98.

The following graph presents the five-year cumulative total return for a shareholder who invested \$100 in common shares as of December 31, 2017, assuming re-investment of dividends. Cumulative returns for the five-year period ended December 31, 2022 are also shown for the Standard & Poor’s 500 Stocks Capitalization Weighted Index (“S&P 500”) and the Standard & Poor’s 500 Stocks (Property & Casualty) Capitalization Weighted Index (“S&P P&C”) for comparison.



Purchases of Equity Securities by the Company

The following table provides information regarding common shares repurchased by the Company during the fourth quarter of 2022:

Months	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans ⁽¹⁾	Maximum Number of Shares that May Yet Be Purchased Under the Plans ⁽¹⁾
October 1 - October 31, 2022	—	\$ —	—	324,626
November 1 - November 30, 2022	1,333	\$ 1,297.85	1,333	323,293
December 1 - December 31, 2022	2,743	\$ 1,298.24	2,743	320,550
Total	4,076	\$ 1,298.11	4,076	320,550

⁽¹⁾ White Mountains’s board of directors has authorized the Company to repurchase its common shares, from time to time, subject to market conditions. The repurchase authorizations do not have a stated expiration date.

Item 6. Selected Financial Data

None.

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

The following discussion contains “forward-looking statements.” White Mountains intends statements that are not historical in nature, which are hereby identified as forward-looking statements, to be covered by the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. White Mountains cannot promise that its expectations in such forward-looking statements will turn out to be correct. White Mountains’s actual results could be materially different from and worse than its expectations. See “FORWARD-LOOKING STATEMENTS” on page 94 for specific important factors that could cause actual results to differ materially from those contained in forward-looking statements.

The following discussion also includes ten non-GAAP financial measures: (i) adjusted book value per share, (ii) growth in adjusted book value per share excluding net realized and unrealized investment losses from White Mountains’s investment in MediaAlpha, (iii) Ark’s adjusted loss and LAE ratio, (iv) Ark’s adjusted insurance acquisition expense ratio, (v) Ark’s adjusted other underwriting expense ratio, (vi) Ark’s adjusted combined ratio (vii) Kudu’s earnings before interest, taxes, depreciation and amortization (“EBITDA”), (viii) Kudu’s adjusted EBITDA, (ix) total consolidated portfolio returns excluding MediaAlpha, and (x) total adjusted capital, that have been reconciled from their most comparable GAAP financial measures on page 69. White Mountains believes these measures to be useful in evaluating White Mountains’s financial performance and condition.

RESULTS OF OPERATIONS FOR THE YEARS ENDED DECEMBER 31, 2022, 2021 AND 2020

Overview—Year Ended December 31, 2022 versus Year Ended December 31, 2021

White Mountains ended 2022 with book value per share of \$1,457 and adjusted book value per share of \$1,495. During 2022, book value per share increased 24% and adjusted book value per share increased 26%, including dividends. Comprehensive income (loss) attributable to common shareholders was \$788 million in 2022 compared to \$(273) million in 2021.

Results in 2022 were driven primarily by the net gain from the NSM Transaction. On August 1, 2022, White Mountains closed the NSM Transaction. White Mountains received \$1.4 billion in net cash proceeds at closing and recognized a net gain of \$876 million in the third quarter of 2022, which was comprised of \$887 million of net gain from sale of discontinued operations and \$3 million of comprehensive income related to the recognition of foreign currency translation gains (losses) from the sale, partially offset by \$14 million of compensation and other costs related to the transaction recorded in Other Operations. Results in 2021 were driven primarily by \$380 million of net realized and unrealized investment losses from White Mountains’s investment in MediaAlpha.

During 2022, White Mountains repurchased and retired 461,256 of its common shares for \$616 million at an average share price of \$1,335.11, or 92% of White Mountains’s book value per share and 89% of White Mountains’s adjusted book value per share at December 31, 2022. As of December 31, 2022, White Mountains’s undeployed capital was approximately \$0.9 billion.

In the HG Global/BAM segment, gross written premiums and MSC collected totaled \$147 million in 2022 compared to \$118 million in 2021. Total pricing was 91 basis points in 2022 compared to 67 basis points in 2021. BAM insured municipal bonds with par value of \$16.0 billion in 2022 compared to \$17.5 billion in 2021. During 2022, BAM completed an assumed reinsurance transaction to insure municipal bonds with a par value of \$43 million. During 2021, BAM completed an assumed reinsurance transaction to insure municipal bonds with a par value of \$806 million. BAM’s total claims paying resources were \$1,423 million at December 31, 2022 compared to \$1,192 million at December 31, 2021. During 2022 and 2021, BAM completed reinsurance agreements with Fidus Re that increased BAM’s claims paying resources by \$150 million in each year. In December 2022, BAM made a \$36 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global. In December 2021, BAM made a \$34 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global. In June 2022, Standard & Poor’s affirmed BAM’s “AA/stable” rating.

Ark’s GAAP combined ratio was 82% in 2022 compared to 87% in 2021. Ark’s adjusted combined ratio, which adds back amounts ceded to TPC Providers, was 81% in 2022 compared to 85% in 2021. The GAAP combined ratio in 2022 included six points of favorable prior year loss reserve development compared to three points in 2021. The GAAP combined ratio for 2022 included 13 points of catastrophe losses compared to 10 points in 2021. Catastrophe losses in 2022 included \$45 million related to events in the Ukraine and \$44 million related to Hurricane Ian on a net basis after reinstatement premiums. Ark reported gross written premiums of \$1,452 million, net written premiums of \$1,195 million and net earned premiums of \$1,043 million in 2022 compared to gross written premiums of \$1,059 million, net written premiums of \$859 million and net earned premiums of \$637 million in 2021. Ark reported pre-tax income of \$95 million in 2022 compared to \$53 million in 2021, which reflected \$25 million of transaction expenses related to the Ark Transaction. In December 2022, AM Best affirmed GAIL’s ‘A/stable’ rating. In the January 2023 renewal season, Ark wrote gross written premiums in excess of \$575 million, with risk adjusted rate change of 15%.

During the fourth quarter of 2022, White Mountains invested \$205 million into Outrigger Re Ltd., a newly-formed Bermuda special purpose insurer that will provide reinsurance protection on a portion of Ark’s Bermuda global property catastrophe portfolio written in calendar year 2023.

Kudu reported total revenues of \$119 million, pre-tax income of \$89 million and adjusted EBITDA of \$42 million in 2022 compared to total revenues of \$134 million, pre-tax income of \$108 million and adjusted EBITDA of \$33 million in 2021. Total revenues and pre-tax income in 2022 included \$54 million of net investment income and \$64 million of net realized and unrealized investment gains compared to \$44 million and \$90 million in 2021. Kudu deployed \$101 million, including transaction costs, in five asset management firms in 2022. As of December 31, 2022, Kudu had deployed \$713 million in 20 asset and wealth management firms globally, including two that have been exited. As of December 31, 2022, the asset and wealth management firms have combined assets under management of approximately \$74 billion, spanning a range of asset classes.

White Mountains's investment in MediaAlpha was \$169 million as of December 31, 2022 at the closing price of \$9.95 per share, compared to \$262 million as of December 31, 2021 at the closing price of \$15.44 per share. Based on White Mountains's ownership of 16.9 million shares of MediaAlpha as of December 31, 2022, each \$1.00 per share increase or decrease in the stock price of MediaAlpha will result in an approximate \$6.60 per share increase or decrease in White Mountains's book value per share and adjusted book value per share. On March 23, 2021, MediaAlpha completed a secondary offering of 8.05 million shares at \$46.00 per share (\$44.62 per share net of underwriting fees). In the secondary offering, White Mountains sold 3.6 million shares for net proceeds of \$160 million.

White Mountains's total consolidated portfolio return on invested assets was -1.6% in 2022. This return included \$93 million of net unrealized investment losses from White Mountains's investment in MediaAlpha. Excluding MediaAlpha, the total consolidated portfolio return on invested assets was 0.3% in 2022. Excluding MediaAlpha, investment returns in 2022 were driven primarily by favorable other long-term investments results, which more than offset net unrealized investment losses in the fixed income portfolio due to rising interest rates.

White Mountains's total consolidated portfolio return on invested assets was -3.4% in 2021. This return included \$380 million of net realized and unrealized investment losses from White Mountains's investment in MediaAlpha. Excluding MediaAlpha, the total consolidated portfolio return on invested assets was 6.4% in 2021. Excluding MediaAlpha, investment returns in 2021 were driven primarily by favorable other long-term investment results.

Overview—Year Ended December 31, 2021 versus Year Ended December 31, 2020

White Mountains ended 2021 with book value per share of \$1,176 and adjusted book value per share of \$1,190, a decrease of 6.5% and 5.7% in the year, including dividends. Comprehensive (loss) income attributable to common shareholders was \$(273) million in 2021 compared to \$716 million in 2020. The results in 2021 included \$380 million of net realized and unrealized investment losses from White Mountains's investment in MediaAlpha. Excluding net realized and unrealized investment losses from White Mountains's investment in MediaAlpha, adjusted book value per share increased 4.3% in 2021, including dividends, reflecting strong results within White Mountains's operating businesses. The results in 2020 included \$746 million of net investment income and net realized and unrealized investment gains from White Mountains's investment in MediaAlpha. The results in 2020 also included \$131 million from the release of a deferred tax liability as a result of an internal reorganization in connection with the MediaAlpha IPO.

Substantially all of White Mountains's capital base was deployed at the end of 2020 with approximately \$150 million of undeployed capital. During 2021, White Mountains repurchased and retired 98,511 of its common shares for \$108 million. This was more than offset by (i) the \$160 million of net proceeds from the MediaAlpha secondary offering and (ii) the termination of White Mountains commitment to provide up to \$200 million of additional equity capital to Ark as a result of Ark raising \$163 million in new subordinated debt during the third quarter. As a result, White Mountains finished 2021 with approximately \$400 million of undeployed capital.

In the HG Global/BAM segment, gross written premiums and MSC collected totaled \$118 million in 2021 compared to \$131 million in 2020. Total pricing was 67 basis points in 2021 compared to 76 basis points in 2020. BAM insured municipal bonds with par value of \$17.5 billion in 2021 compared to \$17.3 billion in 2020. During 2021, BAM completed an assumed reinsurance transaction to insure municipal bonds with a par value of \$806 million. During 2020, BAM completed an assumed reinsurance transaction to insure municipal bonds with a par value of \$37 million.

In December 2021, BAM made a \$34 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global. In December 2020, BAM made a \$30 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global. In January 2020, BAM made a one-time \$65 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global. BAM's total claims paying resources were \$1,192 million as of December 31, 2021 compared to \$987 million as of December 31, 2020. During 2021, BAM completed a reinsurance agreement with Fidus Re that increased BAM's claims paying resources by \$150 million.

On January 1, 2021, White Mountains closed the Ark Transaction. Ark's GAAP combined ratio was 87% in 2021. Ark's adjusted combined ratio, which adds back amounts ceded to TPC Providers, was 85% in 2021. The adjusted combined ratio in 2021 included 10 points of catastrophe losses and six points of net favorable prior year loss reserve development. Ark reported gross written premiums of \$1,059 million, net written premiums of \$859 million and net earned premiums of \$637 million in 2021. Ark reported pre-tax income of \$53 million in 2021, which reflected \$25 million of transaction expenses related to the Ark Transaction. In the January 2022 renewal season, Ark wrote gross written premiums in excess of \$500 million.

Kudu reported total revenues of \$134 million, pre-tax income of \$108 million and adjusted EBITDA of \$33 million in 2021 compared to total revenues of \$46 million, pre-tax income of \$28 million and adjusted EBITDA of \$22 million in 2020. Total revenues and pre-tax income included \$90 million of net realized and unrealized gains on Kudu's Participation Contracts in 2021 compared to \$16 million of net unrealized gains on Kudu's Participation Contracts in 2020. Kudu deployed \$225 million, including transaction costs, in six asset management firms in 2021. As of December 31, 2021, Kudu had deployed \$612 million in 17 asset and wealth management firms globally, including one that has been exited. As of December 31, 2021, the asset and wealth management firms have combined assets under management of approximately \$66 billion, spanning a range of asset classes, including real estate, real assets, wealth management, hedge funds, private equity and alternative credit strategies.

White Mountains's investment in MediaAlpha was \$262 million as of December 31, 2021 at the closing price of \$15.44 per share, compared to \$802 million as of December 31, 2020 at the closing price of \$39.07 per share. On March 23, 2021, MediaAlpha completed a secondary offering of 8.05 million shares at \$46.00 per share (\$44.62 per share net of underwriting fees). In the secondary offering, White Mountains sold 3.6 million shares for net proceeds of \$160 million.

White Mountains's total consolidated portfolio return on invested assets was -3.4% in 2021. This return included \$380 million of net realized and unrealized investment losses from White Mountains's investment in MediaAlpha. Excluding MediaAlpha, the total consolidated portfolio return on invested assets was 6.4% in 2021. Excluding MediaAlpha, investment returns in 2021 were driven primarily by favorable other long-term investments results.

White Mountains's total consolidated portfolio return on invested assets was 31.9% in 2020. This return included \$746 million of net investment income and net realized and unrealized investment gains from White Mountains's investment in MediaAlpha. Excluding MediaAlpha, the total consolidated portfolio return on invested assets was 4.6% in 2020. Excluding MediaAlpha, investment returns in 2020 were impacted by White Mountains's decision to liquidate its portfolio of common equity securities in the second half of 2020 in preparation for funding the Ark Transaction as equity markets rallied in the fourth quarter.

Adjusted Book Value Per Share

The following table presents White Mountains's adjusted book value per share, a non-GAAP financial measure, as of December 31, 2022, 2021 and 2020 and reconciles this non-GAAP measure from book value per share, the most comparable GAAP measure. See "NON-GAAP FINANCIAL MEASURES" on page 69.

	December 31,		
	2022	2021	2020
Book value per share numerators (in millions):			
White Mountains's common shareholders' equity - GAAP book value per share numerator	\$ 3,746.9	\$ 3,548.1	\$ 3,906.0
Time-value of money discount on expected future payments on the BAM Surplus Notes ⁽¹⁾	(95.1)	(125.9)	(142.5)
HG Global's unearned premium reserve ⁽¹⁾	242.1	214.6	190.0
HG Global's net deferred acquisition costs ⁽¹⁾	(69.0)	(60.8)	(52.4)
Adjusted book value per share numerator	<u>\$ 3,824.9</u>	<u>\$ 3,576.0</u>	<u>\$ 3,901.1</u>
Book value per share denominators (in thousands of shares):			
Common shares outstanding - GAAP book value per share denominator	2,572.1	3,017.8	3,102.0
Unearned restricted common shares	(14.1)	(13.7)	(14.8)
Adjusted book value per share denominator	<u>2,558.0</u>	<u>3,004.1</u>	<u>3,087.2</u>
GAAP book value per share	<u>\$ 1,456.74</u>	<u>\$ 1,175.73</u>	<u>\$ 1,259.19</u>
Adjusted book value per share	<u>\$ 1,495.28</u>	<u>\$ 1,190.39</u>	<u>\$ 1,263.64</u>
Year-to-date dividends paid per share	<u>\$ 1.00</u>	<u>\$ 1.00</u>	<u>\$ 1.00</u>

⁽¹⁾ Amounts reflects White Mountains's preferred share ownership in HG Global of 96.9%.

Goodwill and Other Intangible Assets

The following table presents goodwill and other intangible assets that are included in White Mountains's adjusted book value as of December 31, 2022, 2021 and 2020:

Millions	December 31,		
	2022	2021	2020
Goodwill:			
Ark	\$ 116.8	\$ 116.8	\$ —
Kudu	7.6	7.6	7.6
Other Operations	52.1	17.9	11.5
Total goodwill	176.5	142.3	19.1
Other intangible assets:			
Ark	175.7	175.7	—
Kudu	1.0	1.3	1.6
Other Operations	39.1	21.2	24.9
Total other intangible assets	215.8	198.2	26.5
Total goodwill and other intangible assets ⁽¹⁾	392.3	340.5	45.6
Total goodwill and other intangible assets attributed to non-controlling interests	(102.7)	(91.8)	(3.0)
Total goodwill and other intangible assets included in White Mountains's common shareholders' equity	\$ 289.6	\$ 248.7	\$ 42.6

⁽¹⁾ See Note 4 — “Goodwill and Other Intangible Assets” on page F-30 for details of other intangible assets.

Summary of Consolidated Results

The following table presents White Mountains's consolidated financial results by industry for the years ended December 31, 2022, 2021 and 2020:

Millions	Year Ended December 31,		
	2022	2021	2020
Revenues:			
Financial Guarantee revenues	\$ (46.4)	\$ 23.0	\$ 68.5
P&C Insurance and Reinsurance revenues	1,009.5	668.5	—
Asset Management revenues	118.5	134.0	45.7
Other Operations revenues	76.3	(211.1)	781.4
Total revenues	1,157.9	614.4	895.6
Expenses:			
Financial Guarantee expenses	88.6	65.4	63.8
P&C Insurance and Reinsurance expenses	914.4	615.6	—
Asset Management expenses	29.7	26.5	18.1
Other Operations expenses	274.6	180.5	153.3
Total expenses	1,307.3	888.0	235.2
Pre-tax income (loss)			
Financial Guarantee pre-tax income (loss)	(135.0)	(42.4)	4.7
P&C Insurance and Reinsurance pre-tax income (loss)	95.1	52.9	—
Asset Management, pre-tax income (loss)	88.8	107.5	27.6
Other Operations pre-tax income (loss)	(198.3)	(391.6)	628.1
Total pre-tax income (loss) from continuing operations	(149.4)	(273.6)	660.4
Income tax (expense) benefit	(41.4)	(44.4)	14.8
Net income (loss) from continuing operations	(190.8)	(318.0)	675.2
Net income (loss) from discontinued operations, net of tax - NSM Group	16.4	(22.6)	(9.5)
Net gain (loss) from sale of discontinued operations, net of tax - NSM Group	886.8	—	—
Net gain (loss) from sale of discontinued operations, net of tax - Sirius Group	—	18.7	(2.3)
Net income (loss)	712.4	(321.9)	663.4
Net (income) loss attributable to non-controlling interests	80.4	46.5	45.3
Net income (loss) attributable to White Mountains's common shareholders	792.8	(275.4)	708.7
Other comprehensive income (loss), net of tax	(3.8)	1.7	1.4
Other comprehensive income (loss) from discontinued operations, net of tax - NSM Group	(5.2)	.2	5.9
Net gain (loss) from foreign currency translation from sale of discontinued operations, net of tax - NSM Group	2.9	—	—
Comprehensive income (loss)	786.7	(273.5)	716.0
Other comprehensive (income) loss attributable to non-controlling interests	.9	.2	(.5)
Comprehensive income (loss) attributable to White Mountains's common shareholders	\$ 787.6	\$ (273.3)	\$ 715.5

I. Summary of Operations By Segment

As of December 31, 2022, White Mountains conducted its operations through three reportable segments: (1) HG Global/BAM, (2) Ark, and (3) Kudu, with our remaining operating businesses, holding companies and other assets included in Other Operations. White Mountains has made its segment determination based on consideration of the following criteria: (i) the nature of the business activities of each of the Company's subsidiaries and affiliates; (ii) the manner in which the Company's subsidiaries and affiliates are organized; (iii) the existence of primary managers responsible for specific subsidiaries and affiliates; and (iv) the organization of information provided to the chief operating decision makers and the Board of Directors. Significant intercompany transactions among White Mountains's segments have been eliminated herein. White Mountains's segment information is presented in **Note 16 — "Segment Information"** on page F-62.

As a result of the NSM Transaction, the results of operations for NSM, previously reported as a segment, have been classified as discontinued operations in the statements of operations and comprehensive income through the closing of the transaction. Prior period amounts have been reclassified to conform to the current period's presentation. See **Note 21 — "Held for Sale and Discontinued Operations"** on page F-68.

As a result of the Ark Transaction, White Mountains began consolidating Ark in its financial statements as of January 1, 2021. See **Note 2 — "Significant Transactions"** on page F-17.

A discussion of White Mountains's consolidated investment operations is included after the discussion of operations by segment.

HG Global/BAM

The following tables present the components of pre-tax income (loss) included in White Mountains's HG Global/BAM segment related to the consolidation of HG Global, which includes HG Re and its other wholly-owned subsidiaries, and BAM for the years ended December 31, 2022, 2021 and 2020:

Millions	December 31, 2022			
	HG Global	BAM	Eliminations	Total
Direct written premiums	\$ —	\$ 63.8	\$ —	\$ 63.8
Assumed written premiums	55.9	1.3	(55.9)	1.3
Gross written premiums	55.9	65.1	(55.9)	65.1
Ceded written premiums	—	(55.9)	55.9	—
Net written premiums	\$ 55.9	\$ 9.2	\$ —	\$ 65.1
Earned insurance and reinsurance premiums	\$ 27.5	\$ 5.8	\$ —	\$ 33.3
Net investment income (loss)	10.3	11.2	—	21.5
Net investment income (loss) – BAM Surplus Notes	11.7	—	(11.7)	—
Net realized and unrealized investment gains (losses)	(52.5)	(53.3)	—	(105.8)
Other revenues	.5	4.1	—	4.6
Total revenues	(2.5)	(32.2)	(11.7)	(46.4)
Insurance and reinsurance acquisition expenses	9.3	1.9	—	11.2
Other underwriting expenses	—	—	—	—
General and administrative expenses	2.8	66.3	—	69.1
Interest expense	8.3	—	—	8.3
Interest expense – BAM Surplus Notes	—	11.7	(11.7)	—
Total expenses	20.4	79.9	(11.7)	88.6
Pre-tax income (loss)	\$ (22.9)	\$ (112.1)	\$ —	\$ (135.0)
Supplemental information:				
MSC collected ⁽¹⁾	\$ —	\$ 81.4	\$ —	\$ 81.4

⁽¹⁾ MSC collected are recorded directly to BAM's equity, which is recorded as non-controlling interest on White Mountains's balance sheet.

Millions	December 31, 2021			
	HG Global	BAM	Eliminations	Total
Direct written premiums	\$ —	\$ 51.0	\$ —	\$ 51.0
Assumed written premiums	47.6	4.6	(47.6)	4.6
Gross written premiums	47.6	55.6	(47.6)	55.6
Ceded written premiums	—	(47.6)	47.6	—
Net written premiums	\$ 47.6	\$ 8.0	\$ —	\$ 55.6
Earned insurance and reinsurance premiums	\$ 22.2	\$ 4.7	\$ —	\$ 26.9
Net investment income (loss)	7.2	10.3	—	17.5
Net investment income (loss) - BAM Surplus Notes	12.0	—	(12.0)	—
Net realized and unrealized investment gains (losses)	(13.7)	(9.2)	—	(22.9)
Other revenues	.5	1.0	—	1.5
Total revenues	28.2	6.8	(12.0)	23.0
Insurance and reinsurance acquisition expenses	5.7	2.6	—	8.3
General and administrative expenses	2.0	55.1	—	57.1
Interest expense - BAM Surplus Notes	—	12.0	(12.0)	—
Total expenses	7.7	69.7	(12.0)	65.4
Pre-tax income (loss)	\$ 20.5	\$ (62.9)	\$ —	\$ (42.4)
Supplemental information:				
MSC collected ⁽¹⁾	\$ —	\$ 62.2	\$ —	\$ 62.2

⁽¹⁾ MSC collected are recorded directly to BAM's equity, which is recorded as non-controlling interest on White Mountains's balance sheet.

Millions	December 31, 2020			
	HG Global	BAM	Eliminations	Total
Direct written premiums	\$ —	\$ 61.5	\$ —	\$ 61.5
Assumed written premiums	53.0	.2	(53.0)	.2
Gross written premiums	53.0	61.7	(53.0)	61.7
Ceded written premiums	—	(53.0)	53.0	—
Net written premiums	\$ 53.0	\$ 8.7	\$ —	\$ 61.7
Earned insurance and reinsurance premiums	\$ 18.7	\$ 4.1	\$ —	\$ 22.8
Net investment income (loss)	7.8	11.7	—	19.5
Net investment income (loss) - BAM Surplus Notes	18.8	—	(18.8)	—
Net realized and unrealized investment gains (losses)	11.8	11.9	—	23.7
Other revenues	.3	2.2	—	2.5
Total revenues	57.4	29.9	(18.8)	68.5
Insurance and reinsurance acquisition expenses	4.7	2.3	—	7.0
General and administrative expenses	2.6	54.2	—	56.8
Interest expense - BAM Surplus Notes	—	18.8	(18.8)	—
Total expenses	7.3	75.3	(18.8)	63.8
Pre-tax income (loss)	\$ 50.1	\$ (45.4)	\$ —	\$ 4.7
Supplemental information:				
MSC collected ⁽¹⁾	\$ —	\$ 68.9	\$ —	\$ 68.9

⁽¹⁾ MSC collected are recorded directly to BAM's equity, which is recorded as non-controlling interest on White Mountains's balance sheet.

HG Global/BAM Results—Year Ended December 31, 2022 versus Year Ended December 31, 2021

BAM is required to prepare its financial statements on a statutory accounting basis for the NYDFS and does not report stand-alone GAAP financial results. BAM is owned by its members, the municipalities that purchase BAM's insurance for their debt issuances. BAM charges an insurance premium on each municipal bond insurance policy it writes. A portion of the premium is MSC and the remainder is a risk premium. In the event of a municipal bond refunding, a portion of the MSC from original issuance can be reutilized, in effect serving as a credit against the total insurance premium on the refunding of the municipal bond.

Gross written premiums and MSC collected in the HG Global/BAM segment totaled \$147 million and \$118 million in 2022 and 2021. BAM insured \$16.0 billion of municipal bonds, \$12.2 billion of which were in the primary market, in 2022 compared to \$17.5 billion of municipal bonds, \$15.6 billion of which were in the primary market, in 2021. During 2022, BAM completed an assumed reinsurance transaction to insure municipal bonds with a par value of \$43 million. During 2021, BAM completed an assumed reinsurance transaction to insure municipal bonds with a par value of \$806 million. Demand remained strong for insured bonds in the primary market, as insured penetration in the primary market was 8.0% in 2022 compared to 8.1% in 2021.

Total pricing increased to 91 basis points in 2022 compared to 67 basis points in 2021. The increase in total pricing was driven primarily by increased secondary market activity and higher pricing in the primary market in 2022 compared to 2021. Pricing in the primary market increased to 69 basis points in 2022 compared to 57 basis points in 2021, driven primarily by an increase in transactions insured in specific credit sectors with higher pricing. Pricing in the secondary and assumed reinsurance markets, which is more transaction-specific than pricing in the primary market, increased to 163 basis points in 2022 compared to 155 basis points in 2021.

Increased secondary market activity and higher pricing in the primary market, driven in part by the volatility in interest rates experienced in 2022, contributed to the increase in gross written premiums and MSC collected in 2022 compared to 2021. It is uncertain if these market factors will continue in the near term.

The following table presents the gross par value of primary and secondary market policies issued, the gross par value of assumed reinsurance, the gross written premiums and MSC collected and total pricing for the years ended December 31, 2022 and 2021:

\$ in Millions	Year Ended December 31,	
	2022	2021
Gross par value of primary market policies issued	\$ 12,169.7	\$ 15,560.8
Gross par value of secondary market policies issued	3,824.2	1,118.9
Gross par value of assumed reinsurance	42.5	805.5
Total gross par value of market policies issued	<u>\$ 16,036.4</u>	<u>\$ 17,485.2</u>
Gross written premiums	\$ 65.1	\$ 55.6
MSC collected	81.4	62.2
Total gross written premiums and MSC collected	<u>\$ 146.5</u>	<u>\$ 117.8</u>
Total pricing	91 bps	67 bps

HG Global reported pre-tax income (loss) of \$(23) million in 2022 compared to \$21 million in 2021. The change in pre-tax income (loss) was driven primarily by higher net unrealized investment losses on the HG Global fixed income portfolio in 2022 compared to 2021 as interest rates increased. HG Global's results in 2022 and 2021 both included \$12 million of interest income on the BAM Surplus Notes.

BAM is a mutual insurance company that is owned by its members. BAM's results are consolidated into White Mountains's GAAP financial statements and attributed to non-controlling interests. White Mountains reported pre-tax loss from BAM of \$112 million in 2022 compared to \$63 million in 2021. The increase in pre-tax loss was driven primarily by higher net unrealized investment losses on the BAM fixed income portfolio in 2022 compared to 2021 as interest rates increased. BAM's results included \$12 million of interest expense on the BAM Surplus Notes and \$66 million of general and administrative expenses in 2022 compared to \$12 million of interest expense on the BAM Surplus Notes and \$55 million of general and administrative expenses in 2021. The increase in general and administrative expenses was driven primarily by higher incentive compensation costs.

In December 2022, BAM made a \$36 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global. Of this payment, \$25 million was a repayment of principal held in the Supplemental Trust, \$1 million was a payment of accrued interest held in the Supplemental Trust and \$10 million was a payment of accrued interest held outside the Supplemental Trust.

In December 2021, BAM made a \$34 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global. Of this payment, \$24 million was a repayment of principal held in the Supplemental Trust and \$10 million was a payment of accrued interest held outside the Supplemental Trust.

As of December 31, 2022, White Mountains's debt service model indicated that the BAM Surplus Notes would be fully repaid approximately six years prior to final maturity, which is generally consistent with the results of the update of the debt service model as of December 31, 2021.

HG Global/BAM Results—Year Ended December 31, 2021 versus Year Ended December 31, 2020

Gross written premiums and MSC collected in the HG Global/BAM segment totaled \$118 million and \$131 million in 2021 and 2020. BAM insured \$17.5 billion of municipal bonds, \$15.6 billion of which were in the primary market, in 2021 compared to \$17.3 billion of municipal bonds, \$15.3 billion of which were in the primary market, in 2020. During 2021, BAM completed an assumed reinsurance transaction to insure municipal bonds with a par value of \$806 million. During 2020, BAM completed an assumed reinsurance transaction to insure municipal bonds with a par value of \$37 million. Demand remained strong for insured bonds in the primary market, as insured penetration in the primary market was 8.1% in 2021 compared to 7.6% in 2020.

Total pricing decreased to 67 basis points in 2021 compared to 75 basis points in 2020. The decrease in total pricing was driven primarily by a decrease in pricing and the amount of par insured in the secondary market during 2021, partially offset by the assumed reinsurance transaction in the first quarter of 2021. Additionally, during 2021 BAM wrote more higher credit quality business, which can pressure absolute pricing but, at the same time, improve risk-adjusted pricing. Pricing in the primary market decreased to 57 basis points in 2021 compared to 59 basis points in 2020, driven primarily by a decrease in credit spreads. Pricing in the secondary and assumed reinsurance markets, which is more transaction-specific than pricing in the primary market, decreased to 155 basis points in 2021 compared to 197 basis points in 2020.

The following table presents the gross par value of primary and secondary market policies issued, the gross par value of assumed reinsurance, the gross written premiums and MSC collected and total pricing for the years ended December 31, 2021 and 2020:

\$ in Millions	Year Ended December 31,	
	2021	2020
Gross par value of primary market policies issued	\$ 15,560.8	\$ 15,279.6
Gross par value of secondary market policies issued	1,118.9	2,022.9
Gross par value of assumed reinsurance	805.5	36.9
Total gross par value of market policies issued	<u>\$ 17,485.2</u>	<u>\$ 17,339.4</u>
Gross written premiums	\$ 55.6	\$ 61.7
MSC collected	62.2	68.9
Total gross written premiums and MSC collected	<u>\$ 117.8</u>	<u>\$ 130.6</u>
Total pricing	67 bps	75 bps

HG Global reported pre-tax income of \$21 million in 2021 compared to \$50 million in 2020. The decrease in pre-tax income was driven primarily by lower investment returns on the HG Global investment portfolio and a decrease in interest income on the BAM Surplus Notes. HG Global's results in 2021 included \$12 million of interest income on the BAM Surplus Notes compared to \$19 million in 2020.

BAM is a mutual insurance company that is owned by its members. BAM's results are consolidated into White Mountains's GAAP financial statements and attributed to non-controlling interests. White Mountains reported pre-tax loss from BAM of \$63 million in 2021 compared to \$45 million in 2020. The increase in the pre-tax loss was driven primarily by lower investment returns on the BAM investment portfolio partially offset by a decrease in interest expense on the BAM surplus notes. BAM's results included \$12 million of interest expense on the BAM Surplus Notes and \$55 million of general and administrative expenses in 2021 compared to \$19 million of interest expense on the BAM Surplus Notes and \$54 million of general and administrative expenses in 2020.

In December 2021, BAM made a \$34 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global. Of this payment, \$24 million was a repayment of principal held in the Supplemental Trust and \$10 million was a payment of accrued interest held outside the Supplemental Trust.

In December 2020, BAM made a \$30 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global. Of this payment, \$22 million was a repayment of principal held in the Supplemental Trust and \$8 million was a payment of accrued interest held outside the Supplemental Trust.

In January 2020, BAM made a one-time \$65 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global. Of this payment, \$48 million was a repayment of principal held in the Supplemental Trust, \$1 million was a payment of accrued interest held in the Supplemental Trust and \$16 million was a payment of accrued interest held outside the Supplemental Trust.

Claims Paying Resources

BAM's claims paying resources represent the capital and other financial resources BAM has available to pay claims and, as such, is a key indication of BAM's financial strength.

BAM's claims paying resources were \$1,423 million as of December 31, 2022 compared to \$1,192 million as of December 31, 2021 and \$987 million as of December 31, 2020. The increase in claims paying resources was driven primarily by the Fidus Re 2022 and 2021 Agreements and increases in the statutory value of the collateral trusts resulting from positive cash flow from operations, partially offset by the portion of cash payments on the BAM surplus notes related to accrued interest held outside the Supplemental Trust.

The following table presents BAM's total claims paying resources on a statutory basis as of December 31, 2022, 2021 and 2020:

Millions	December 31, 2022	December 31, 2021	December 31, 2020
Policyholders' surplus	\$ 283.4	\$ 298.1	\$ 324.7
Contingency reserve	118.2	101.8	86.4
Qualified statutory capital	401.6	399.9	411.1
Net unearned premiums	55.3	49.5	45.2
Present value of future installment premiums and MSC	13.3	13.8	14.0
HG Re Collateral Trusts	553.1	478.9	417.0
Fidus Re collateral trust	400.0	250.0	100.0
Claims paying resources	\$ 1,423.3	\$ 1,192.1	\$ 987.3

HG Global/BAM Balance Sheets

The following table presents amounts from HG Global, which includes HG Re and its other wholly-owned subsidiaries, and BAM that are contained within White Mountains's consolidated balance sheet as of December 31, 2022 and 2021:

Millions	December 31, 2022			
	HG Global	BAM	Eliminations and Segment Adjustment	Total Segment
Assets				
Fixed maturity investments	\$ 489.6	\$ 420.3	\$ —	\$ 909.9
Short-term investments	42.0	23.9	—	65.9
Total investments	531.6	444.2	—	975.8
Cash	13.2	5.0	—	18.2
BAM Surplus Notes	340.0	—	(340.0)	—
Accrued interest receivable on BAM Surplus Notes	157.9	—	(157.9)	—
Insurance premiums receivable	4.3	6.6	(4.3)	6.6
Deferred acquisition costs	71.2	36.0	(71.2)	36.0
Other assets	7.0	15.1	(.2)	21.9
Total assets	\$ 1,125.2	\$ 506.9	\$ (573.6)	\$ 1,058.5
Liabilities				
BAM Surplus Notes ⁽¹⁾	\$ —	\$ 340.0	\$ (340.0)	\$ —
Accrued interest payable on BAM Surplus Notes ⁽²⁾	—	157.9	(157.9)	—
Preferred dividends payable to White Mountains's subsidiaries ⁽³⁾	341.4	—	—	341.4
Preferred dividends payable to non-controlling interests	12.5	—	—	12.5
Unearned insurance premiums	249.8	48.5	—	298.3
Debt	146.5	—	—	146.5
Intercompany debt ⁽⁴⁾	6.0	—	—	6.0
Accrued incentive compensation	1.3	26.7	—	28.0
Other liabilities	3.7	88.5	(75.7)	16.5
Total liabilities	761.2	661.6	(573.6)	849.2
Equity				
White Mountains's common shareholders' equity ⁽³⁾	364.6	—	—	364.6
Non-controlling interests	(.6)	(154.7)	—	(155.3)
Total equity	364.0	(154.7)	—	209.3
Total liabilities and equity	\$ 1,125.2	\$ 506.9	\$ (573.6)	\$ 1,058.5

⁽¹⁾ Under GAAP, the BAM Surplus Notes are classified as debt by the issuer. Under U.S. Statutory accounting, they are classified as policyholders' surplus.

⁽²⁾ Under GAAP, interest accrues daily on the BAM Surplus Notes. Under U.S. Statutory accounting, interest is not accrued on the BAM Surplus Notes until it has been approved for payment by insurance regulators.

⁽³⁾ HG Global preferred dividends payable to White Mountains's subsidiaries is eliminated in White Mountains's consolidated financial statements. For segment reporting, the HG Global preferred dividends payable to White Mountains's subsidiaries included within the HG Global/BAM segment are eliminated against the offsetting receivable included within Other Operations, and therefore are added back to White Mountains's common shareholders' equity within the HG Global/BAM segment.

⁽⁴⁾ HG Global's intercompany debt is eliminated in White Mountains's consolidated financial statements.

Millions	December 31, 2021			
	HG Global	BAM	Eliminations and Segment Adjustment	Total Segment
Assets				
Fixed maturity investments	\$ 461.7	\$ 472.4	\$ —	\$ 934.1
Short-term investments	17.8	14.6	—	32.4
Total investments	479.5	487.0	—	966.5
Cash	13.4	6.4	—	19.8
BAM Surplus Notes	364.6	—	(364.6)	—
Accrued interest receivable on BAM Surplus Notes	157.6	—	(157.6)	—
Insurance premiums receivable	4.3	6.9	(4.3)	6.9
Deferred acquisition costs	62.7	33.1	(62.7)	33.1
Other assets	2.1	16.6	(.2)	18.5
Total assets	\$ 1,084.2	\$ 550.0	\$ (589.4)	\$ 1,044.8
Liabilities				
BAM Surplus Notes ⁽¹⁾	\$ —	\$ 364.6	\$ (364.6)	\$ —
Accrued interest payable on BAM Surplus Notes ⁽²⁾	—	157.6	(157.6)	—
Preferred dividends payable to White Mountains's subsidiaries ⁽³⁾	400.5	—	—	400.5
Preferred dividends payable to non-controlling interests	14.2	—	—	14.2
Unearned insurance premiums	221.5	44.8	—	266.3
Accrued incentive compensation	1.1	23.6	—	24.7
Other liabilities	.5	83.4	(67.2)	16.7
Total liabilities	637.8	674.0	(589.4)	722.4
Equity				
White Mountains's common shareholders' equity ⁽³⁾	437.5	—	—	437.5
Non-controlling interests	8.9	(124.0)	—	(115.1)
Total equity	446.4	(124.0)	—	322.4
Total liabilities and equity	\$ 1,084.2	\$ 550.0	\$ (589.4)	\$ 1,044.8

⁽¹⁾ Under GAAP, the BAM Surplus Notes are classified as debt by the issuer. Under U.S. Statutory accounting, they are classified as policyholders' surplus.

⁽²⁾ Under GAAP, interest accrues daily on the BAM Surplus Notes. Under U.S. Statutory accounting, interest is not accrued on the BAM Surplus Notes until it has been approved for payment by insurance regulators.

⁽³⁾ HG Global preferred dividends payable to White Mountains's subsidiaries is eliminated in White Mountains's consolidated financial statements. For segment reporting, the HG Global preferred dividends payable to White Mountains's subsidiaries included within the HG Global/BAM segment are eliminated against the offsetting receivable included within Other Operations, and therefore are added back to White Mountains's common shareholders' equity within the HG Global/BAM segment.

Ark

On January 1, 2021, White Mountains completed the Ark Transaction. See **Note 2 — “Significant Transactions”**. Ark is a specialty property and casualty insurance and reinsurance company that offers a wide range of niche insurance and reinsurance products, including property, specialty, marine & energy, casualty and accident & health. Ark underwrites select coverages through its two major subsidiaries in the United Kingdom and Bermuda.

In the third quarter of 2021, Ark issued \$163 million of floating rate unsecured subordinated notes (the “Ark 2021 Subordinated Notes”) in three separate transactions. See **Note 7 — “Debt”**. In connection with the issuance of the Ark 2021 Subordinated Notes, White Mountains and Ark terminated White Mountains’s commitment to provide up to \$200 million of additional equity capital to Ark.

The following table presents the components of pre-tax income (loss) included in White Mountains’s Ark segment for the year-ended December 31, 2022 and 2021:

Millions	Year Ended December 31,	
	2022	2021
Earned insurance and reinsurance premiums	\$ 1,043.4	\$ 637.3
Net investment income	16.3	2.9
Net realized and unrealized investment gains (losses)	(55.2)	16.5
Other revenues	5.0	11.8
Total revenues	<u>1,009.5</u>	<u>668.5</u>
Losses and LAE	536.4	314.8
Insurance and reinsurance acquisition expenses	239.4	178.0
General and administrative expenses - other underwriting	78.7	64.6
General and administrative expenses - all other	44.8	50.9
Interest expense	15.1	7.3
Total expenses	<u>914.4</u>	<u>615.6</u>
Pre-tax income (loss)	\$ 95.1	\$ 52.9

For the years of account prior to the Ark Transaction, a significant proportion of the Syndicates’ underwriting capital was provided by TPC Providers using whole account reinsurance contracts with Ark’s corporate member. The TPC Providers’ participation in the Syndicates for the 2020 open year of account is 43% of the total net result of the Syndicates. For the years of account subsequent to the Ark Transaction, Ark is no longer using TPC Providers to provide underwriting capital for the Syndicates. Captions within Ark’s results of operations are shown net of amounts relating to the TPC Providers’ share of the Syndicates’ results, including investment results.

Ark Results—Year Ended December 31, 2022 versus Year Ended December 31, 2021

Ark reported gross written premiums of \$1,452 million, net written premiums of \$1,195 million and net earned premiums of \$1,043 million in 2022 compared to gross written premiums of \$1,059 million, net written premiums of \$859 million and net earned premiums of \$637 million in 2021. Premium growth at Ark has been supported by favorable market conditions across most classes with general inflationary concerns and market capacity constraints, along with the ongoing conflict in Ukraine driving positive rate momentum.

Ark reported pre-tax income of \$95 million in 2022 compared to \$53 million in 2021. Ark’s pre-tax income for 2022 included \$(55) million of net realized and unrealized investment losses, driven primarily by net unrealized losses on fixed income securities and the impact of foreign currency on its investment portfolio, compared to \$17 million of net realized and unrealized investment gains in 2021.

Ark's GAAP combined ratio was 82% in 2022 compared to 87% in 2021. The GAAP combined ratio for 2022 included 13 points of catastrophe losses, driven primarily by the events in Ukraine and Hurricane Ian, compared to 10 points of catastrophe losses in 2021, driven primarily by Hurricane Ida, Winter Storm Uri and European floods. Catastrophe losses for 2022 included \$45 million related to events in the Ukraine and \$44 million related to Hurricane Ian on a net basis after reinstatement premiums. The GAAP combined ratio for 2022 included five points of favorable prior year loss reserve development, driven primarily by the property and accident & health, specialty and marine & energy reserving lines of business, predominantly from business underwritten in London. This compared to three points of favorable prior year loss reserve development in 2021, driven primarily by the property and accident & health reserving line of business.

Ark's adjusted combined ratio, which adds back amounts attributable to TPC Providers, was 81% in 2022 compared to 85% in 2021. The adjusted combined ratio for 2022 included 13 points of catastrophe losses compared to 10 points of catastrophe losses in 2021. The adjusted combined ratio for 2022 included seven points of favorable prior year loss reserve development compared to six points of favorable prior year loss reserve development in 2021. The underlying drivers of year-over-year changes were the same as those impacting the GAAP combined ratio.

The following tables present Ark's loss and loss adjustment expense, insurance acquisition expense, other underwriting expense and combined ratios on both a GAAP basis and an adjusted basis, which adds back amounts ceded to TPC Providers, for the year ended December 31, 2022 and 2021:

\$ in Millions	Year Ended December 31, 2022		
	GAAP	TPC Providers' Share ⁽¹⁾	Adjusted
<i>Insurance premiums:</i>			
Gross written premiums	\$ 1,452.0	\$ —	\$ 1,452.0
Net written premiums	\$ 1,195.2	\$ 2.5	\$ 1,197.7
Net earned premiums	\$ 1,043.4	\$ 10.7	\$ 1,054.1
<i>Insurance expenses:</i>			
Loss and loss adjustment expenses	\$ 536.4	\$ (5.7)	\$ 530.7
Insurance acquisition expenses	239.4	—	239.4
Other underwriting expenses	78.7	3.2	81.9
Total insurance expenses	<u>\$ 854.5</u>	<u>\$ (2.5)</u>	<u>\$ 852.0</u>
<i>Ratios:</i>			
Loss and loss adjustment expense	51.4 %		50.3 %
Insurance acquisition expense	22.9 %		22.7 %
Other underwriting expense	7.5 %		7.8 %
Combined Ratio	<u>81.8 %</u>		<u>80.8 %</u>

⁽¹⁾ See "NON-GAAP FINANCIAL MEASURES" on page 69.

\$ in Millions	Year Ended December 31, 2021		
	GAAP	TPC Providers' Share ⁽¹⁾	Adjusted
<i>Insurance premiums:</i>			
Gross written premiums	\$ 1,058.7	\$ —	\$ 1,058.7
Net written premiums	\$ 859.1	\$ (6.5)	\$ 852.6
Net earned premiums	\$ 637.3	\$ 76.3	\$ 713.6
<i>Insurance expenses:</i>			
Loss and loss adjustment expenses	\$ 314.8	\$ 39.8	\$ 354.6
Insurance acquisition expenses	178.0	—	178.0
Other underwriting expenses	64.6	9.2	73.8
Total insurance expenses	<u>\$ 557.4</u>	<u>\$ 49.0</u>	<u>\$ 606.4</u>
<i>Ratios:</i>			
Loss and loss adjustment expense	49.4 %		49.7 %
Insurance acquisition expense	27.9 %		24.9 %
Other underwriting expense	10.1 %		10.3 %
Combined Ratio	<u>87.4 %</u>		<u>84.9 %</u>

⁽¹⁾ See “NON-GAAP FINANCIAL MEASURES” on page 69.

Gross Written Premiums

The following table presents Ark’s gross written premiums by line of business for the years ended December 31, 2022, 2021 and 2020, which includes the period prior to White Mountains’s ownership of Ark. White Mountains believes this information is useful in understanding the underwriting growth in the business. Gross written premiums increased 37% to \$1,452 million in 2022 compared to 2021, with risk adjusted rate change of 9%. In 2022 and 2021, in response to an improved underwriting environment, Ark substantially increased its gross written premiums, principally in the property, specialty and marine & energy lines of business.

Millions	Year Ended December 31,		
	2022	2021	2020
Property	\$ 605.0	\$ 438.4	\$ 235.7
Specialty	380.1	256.7	118.3
Marine & Energy	315.1	242.2	129.1
Casualty	85.4	54.4	24.4
Accident & Health	66.4	67.0	90.6
Total Gross Written Premium	<u>\$ 1,452.0</u>	<u>\$ 1,058.7</u>	<u>\$ 598.1</u>

Kudu

Kudu provides capital solutions for boutique asset and wealth managers for a variety of purposes including generational ownership transfers, management buyouts, acquisition and growth finance and legacy partner liquidity. Kudu also provides strategic assistance to investees from time to time.

As of December 31, 2022, Kudu has deployed a total of \$713 million, including transaction costs, in 20 asset and wealth management firms globally, including two that have been exited. As of December 31, 2022, the asset and wealth management firms have combined assets under management of approximately \$74 billion, spanning a range of asset classes, including real estate, wealth management, hedge funds, private equity and alternative credit strategies. Kudu's capital was deployed at an average gross cash yield at inception of 9.9%.

As a result of the Kudu Transaction, White Mountains's basic ownership of Kudu decreased from 99.1% to 89.3%. See **Note 2 — "Significant Transactions."**

The following table presents the components of GAAP net income, EBITDA and adjusted EBITDA included in White Mountains's Kudu segment for the years ended December 31, 2022, 2021 and 2020:

Millions	Year Ended December 31,		
	2022	2021	2020
Net investment income	\$ 54.4	\$ 43.9	\$ 29.5
Net realized and unrealized investment gains (losses)	64.1	89.9	15.9
Other revenues	—	.2	.3
Total revenues	118.5	134.0	45.7
General and administrative expenses	14.4	14.5	11.8
Amortization of other intangible assets	.3	.3	.3
Interest expense	15.0	11.7	6.0
Total expenses	29.7	26.5	18.1
GAAP pre-tax income (loss)	\$ 88.8	\$ 107.5	\$ 27.6
Income tax (expense) benefit	(26.9)	(29.5)	(7.0)
GAAP net income (loss)	61.9	78.0	20.6
Add back:			
Interest expense	15.0	11.7	6.0
Income tax expense (benefit)	26.9	29.5	7.0
General and administrative expenses – depreciation	.1	—	—
Amortization of other intangible assets	.3	.3	.3
EBITDA ⁽¹⁾	104.2	119.5	33.9
Exclude:			
Net realized and unrealized investment (gains) losses	(64.1)	(89.9)	(15.9)
Non-cash equity-based compensation expense	.2	1.2	.4
Transaction expenses	1.5	2.0	3.7
Adjusted EBITDA ⁽¹⁾	\$ 41.8	\$ 32.8	\$ 22.1

⁽¹⁾ See "NON-GAAP FINANCIAL MEASURES" on page 69.

The following table presents the changes in Kudu's Participation Contracts:

Millions	December 31,	
	2022	2021
Beginning balance of Kudu's Participation Contracts	\$ 669.5	\$ 400.6
Contributions to participation contracts	99.8	223.4
Proceeds from participation contracts sold	(137.5)	(44.4)
Net realized and unrealized investment gains on participation contracts sold and pending sale ⁽¹⁾	53.2	29.5
Net unrealized investment gains (losses) on participation contracts - all other ⁽²⁾	10.9	60.4
Ending balance of Kudu's Participation Contracts	\$ 695.9	\$ 669.5

⁽¹⁾ Includes realized and unrealized investment gains (losses) recognized from participation contracts beginning in the quarter a contract is classified as pending sale.

⁽²⁾ Includes unrealized investment gains (losses) recognized from (i) ongoing participation contracts and (ii) participation contracts prior to classification as pending sale.

Kudu Results — Year Ended December 31, 2022 versus Year Ended December 31, 2021

Kudu reported total revenues of \$119 million, pre-tax income of \$89 million and adjusted EBITDA of \$42 million for the year ended December 31, 2022 compared to total revenues of \$134 million, pre-tax income of \$108 million and adjusted EBITDA of \$33 million for the year ended December 31, 2021. Total revenues and pre-tax income included \$67 million of realized investment gains, partially offset by \$3 million of net unrealized investment losses, on Kudu's Participation Contracts in 2022 compared to \$22 million of realized investment gains and \$68 million of net unrealized investment gains on Kudu's Participation Contracts in 2021. Realized investment gains on Kudu's Participation Contracts were driven by two sales transactions in 2022 and one sales transaction in 2021. The net unrealized investment losses on Kudu's Participation Contracts for the year ended December 31, 2022 were driven primarily by declines in assets under management at several managers with public equity exposure, an increase in discount rates as a result of the rising interest rate environment and foreign exchange losses, partially offset by an increase in the fair value of two Participation Contracts with pending sales transactions. Total revenues, pre-tax income, and adjusted EBITDA for the year ended 2022 also included \$54 million of net investment income compared to \$44 million for the year ended 2021. The increase in net investment income was driven primarily by amounts earned from \$310 million (including \$2.9 million of transaction costs) in new deployments that Kudu made during 2022 and 2021. The two sales transactions in 2022 will negatively impact net investment income in the near-term until proceeds are redeployed.

Kudu Results—Year Ended December 31, 2021 versus Year ended December 31, 2020

Kudu reported total revenues of \$134 million, pre-tax income of \$108 million and adjusted EBITDA of \$33 million in 2021 compared to total revenues of \$46 million, pre-tax income of \$28 million and adjusted EBITDA of \$22 million in 2020. Total revenues and pre-tax income included \$22 million of realized investment gains and \$68 million of net unrealized investment gains on Kudu's Participation Contracts in 2021 compared to \$16 million of net unrealized investment gains on Kudu's Participation Contracts in 2020. Realized investment gains on Kudu's Participation Contracts were driven by one sales transaction in 2021. The increase in net unrealized investment gains on Kudu's Participation Contracts was driven primarily by asset growth and the performance of Kudu's underlying asset management businesses. Total revenues, pre-tax income and adjusted EBITDA in 2021 also included \$44 million of net investment income compared to \$30 million in 2020. The increase in net investment income was driven primarily by amounts earned from the \$347 million (including \$5 million of transaction costs) in new deployments that Kudu made during 2021 and 2020.

Other Operations

The following table presents White Mountains's financial results from Other Operations for the years ended December 31, 2022, 2021 and 2020:

Millions	Year Ended December 31,		
	2022	2021	2020
Net investment income	\$ 32.2	\$ 18.2	\$ 82.0
Net realized and unrealized investment gains (losses)	(1.6)	50.7	(8.8)
Net realized and unrealized investment gains (losses) from investment in MediaAlpha	(93.0)	(380.3)	686.0
Commission revenues	11.5	9.6	8.3
Other revenues	127.2	90.7	13.9
Total revenues	76.3	(211.1)	781.4
Cost of sales	98.6	69.3	11.3
General and administrative expenses	169.2	105.4	139.3
Amortization of other intangible assets	4.9	4.3	1.3
Interest expense	1.9	1.5	1.4
Total expenses	274.6	180.5	153.3
Pre-tax income (loss)	\$ (198.3)	\$ (391.6)	\$ 628.1

Other Operations Results—Year Ended December 31, 2022 versus Year Ended December 31, 2021

White Mountains's Other Operations reported pre-tax loss of \$198 million in 2022 compared to \$392 million in 2021. White Mountains's Other Operations reported net realized and unrealized investment losses from its investment in MediaAlpha of \$93 million in 2022 compared to \$380 million in 2021. White Mountains's Other Operations reported net realized and unrealized investment gains (losses) of \$(2) million in 2022 compared to \$51 million in 2021. White Mountains's Other Operations reported net investment income of \$32 million in 2022 compared to \$18 million in 2021. See "**Summary of Investment Results**" on page 57. The increase in net investment income in 2022 was driven primarily by the increase in the invested assets resulting from the NSM Transaction.

White Mountains's Other Operations reported \$127 million of other revenues in 2022 compared to \$91 million in 2021. White Mountains's Other Operations reported \$99 million of cost of sales in 2022 compared to \$69 million in 2021. The increases in other revenues and cost of sales were driven primarily by a business acquired within Other Operations in 2021.

White Mountains's Other Operations reported general and administrative expenses of \$169 million in 2022 compared to \$105 million in 2021. The increase in general and administrative expenses was driven primarily by higher incentive compensation costs and advisory fees, primarily in connection with the NSM Transaction

Share repurchases

In the year ended December 31, 2022, White Mountains repurchased and retired 461,256 of its common shares for \$616 million at an average price of \$1,335.11. The majority of these shares were repurchased through a self-tender offer that White Mountains completed on September 26, 2022, through which it repurchased 327,795 of its common shares at a purchase price of \$1,400 per share for a total cost of approximately \$461 million, including expenses.

Other Operations Results—Year Ended December 31, 2021 versus Year Ended December 31, 2020

White Mountains's Other Operations reported pre-tax income (loss) of \$(392) million in 2021 compared to \$628 million in 2020. White Mountains's Other Operations reported net realized and unrealized investment gains (losses) from its investment in MediaAlpha of \$(380) million in 2021 compared to \$686 million in 2020. White Mountains's Other Operations reported net realized and unrealized investment gains (losses) of \$51 million in 2021 compared to \$(9) million in 2020. White Mountains's Other Operations reported net investment income of \$18 million in 2021 compared to \$82 million in 2020. Net investment income in the year ended December 31, 2020 included \$55 million of net proceeds received from a dividend recapitalization at MediaAlpha. See "**Summary of Investment Results**" on page 57.

White Mountains's Other Operations reported \$91 million of other revenues in 2021 compared to \$14 million in 2020. White Mountains's Other Operations reported \$69 million of cost of sales in 2021 compared to \$11 million in 2020. The increases in other revenues and cost of sales were driven primarily by a business acquired within Other Operations in 2021.

White Mountains's Other Operations reported general and administrative expenses of \$105 million in 2021 compared to \$139 million in 2020. The decrease in general and administrative expenses was driven primarily by lower incentive compensation costs, driven primarily by a decrease in the assumed harvest percentage on outstanding performance shares.

Share repurchases

For the year ended December 31, 2021, White Mountains repurchased and retired 98,511 of its common shares for \$108 million at an average share price of \$1,091.29.

II. Summary of Investment Results

White Mountains's total investment results include results from all segments. For purposes of discussing rates of return all percentages are presented on a pre-tax basis, gross of management fees and trading expenses, and before any adjustments for TPC Providers, in order to produce a better comparison to benchmark returns.

Gross Investment Returns and Benchmark Returns

Prior to the MediaAlpha IPO, White Mountains's investment in MediaAlpha was presented within other long-term investments. Following the MediaAlpha IPO, White Mountains presents its investment in MediaAlpha in a separate line item on the balance sheet. Amounts for periods prior to the MediaAlpha IPO have been reclassified to be comparable to the current period.

The following table presents the investment returns for White Mountains's consolidated portfolio for the years ended December 31, 2022, 2021 and 2020:

	Year Ended December 31,		
	2022	2021	2020
Fixed income investments	(4.8)%	(0.4)%	4.9 %
<i>Bloomberg Barclays U.S. Intermediate Aggregate Index</i>	(9.5)%	(1.3)%	5.6 %
Common equity securities	(1.0)%	11.0 %	3.6 %
Investment in MediaAlpha	(35.6)%	(60.1)%	520.3 %
Other long-term investments	10.5 %	20.7 %	2.5 %
Total common equity securities, investment in MediaAlpha and other long-term investments	2.3 %	(7.1)%	80.0 %
Total common equity securities and other long-term investments	8.1 %	19.3 %	4.9 %
<i>S&P 500 Index (total return)</i>	(18.1)%	28.7 %	18.4 %
Total consolidated portfolio	(1.6)%	(3.4)%	31.9 %
Total consolidated portfolio - excluding MediaAlpha	0.3 %	6.4 %	4.6 %

Investment Returns—Year Ended December 31, 2022 versus Year Ended December 31, 2021

White Mountains's total consolidated portfolio return on invested assets was -1.6% in 2022. This return included \$93 million of net unrealized investment losses from White Mountains's investment in MediaAlpha. Excluding MediaAlpha, the total consolidated portfolio return on invested assets was 0.3% in 2022. Excluding MediaAlpha, investment returns in 2022 were driven primarily by favorable other long-term investments results, which more than offset net unrealized investment losses in the fixed income portfolio due to rising interest rates.

White Mountains's total consolidated portfolio return on invested assets was -3.4% in 2021. This return included \$380 million of net realized and unrealized investment losses from White Mountains's investment in MediaAlpha. Excluding MediaAlpha, the total consolidated portfolio return on invested assets was 6.4% in 2021. Excluding MediaAlpha, investment returns in 2021 were driven primarily by favorable other long-term investment results.

Fixed Income Results

White Mountains's fixed income portfolio, including short-term investments, was \$2.8 billion and \$2.4 billion as of December 31, 2022 and 2021, which represented 55% and 56% of total invested assets. See Note 3 — “Investment Securities”. The increase was driven primarily by the receipt of cash proceeds from the NSM Transaction, partially offset by outflows relating to White Mountains's self-tender offer in the third quarter of 2022. The duration of White Mountains's fixed income portfolio, including short-term investments, was 2.3 years and 2.6 years as of December 31, 2022 and 2021. White Mountains's fixed income portfolio includes fixed maturity and short-term investments held on deposit or as collateral. See Note 3 — “Investment Securities”.

White Mountains's fixed income portfolio returned -4.8% in 2022 compared to -0.4% in 2021, outperforming the Bloomberg Barclays U.S. Intermediate Aggregate Index returns of -9.5% and -1.3% for the comparable periods. The results in both 2022 and 2021 were driven primarily by the short duration positioning of White Mountains's fixed income portfolio as interest rates increased in each period.

Common Equity Securities, Investment in MediaAlpha and Other Long-Term Investments Results

White Mountains's portfolio of common equity securities, its investment in MediaAlpha and other long-term investments was \$2.3 billion and \$1.9 billion as of December 31, 2022 and 2021, which represented 45% and 44% of total invested assets. **See Note 3 — "Investment Securities"**. The increase was driven primarily by an increase in White Mountains's common equity exposure, as a portion of the cash proceeds from the NSM Transaction was invested in ETFs, additional investments in international listed common equity funds at Ark, and an increase in the fair value of Kudu's Participation Contracts, partially offset by a decline in the fair value of White Mountains's investment in MediaAlpha.

White Mountains's portfolio of common equity securities, its investment in MediaAlpha and other long-term investments returned 2.3% in 2022, which included \$93 million of net unrealized investment losses from MediaAlpha. White Mountains's portfolio of common equity securities and other long-term investments returned 8.1% in 2022. White Mountains's portfolio of common equity securities, its investment in MediaAlpha and other long-term investments returned -7.1% in 2021, which included \$380 million of net realized and unrealized investment losses from MediaAlpha. White Mountains's portfolio of common equity securities and other long-term investments returned 19.3% in 2021.

White Mountains's portfolio of common equity securities consists of passive ETFs that seek to provide investment results that generally correspond to the performance of the S&P 500 Index and international listed common equity funds. White Mountains's portfolio of common equity securities was \$668 million and \$251 million as of December 31, 2022 and 2021.

White Mountains's portfolio of common equity securities returned -1.0% in 2022 compared to 11.0% in 2021, outperforming and underperforming the S&P 500 Index returns of -18.1% and 28.7% for the comparable periods. The results for 2022 and 2021 were driven primarily by relative outperformance and underperformance in White Mountains's international listed common equity funds versus the S&P 500 Index.

White Mountains maintains a portfolio of other long-term investments that consists primarily of unconsolidated entities, including Kudu's Participation Contracts, private equity funds and hedge funds, a bank loan fund, Lloyd's trust deposits, ILS funds and private debt instruments. White Mountains's portfolio of other long-term investments was \$1.5 billion and \$1.4 billion as of December 31, 2022 and 2021.

White Mountains's other long-term investments portfolio returned 10.5% in 2022 compared to 20.7% in 2021. Investment returns for 2022 were driven primarily by net investment income and net realized and unrealized investment gains from Kudu's Participation Contracts, net investment income and net realized and unrealized investment gains from private equity funds, and an increase in the fair value of White Mountains's investment in PassportCard/DavidShield, partially offset by unrealized losses from foreign currency. Investment returns for 2021 were driven primarily by net investment income and net realized and unrealized investment gains from Kudu's Participation Contracts, net investment income and net realized and unrealized investment gains from private equity funds, and an increase in the fair value of White Mountains's investment in PassportCard/DavidShield.

Investment Returns—Year Ended December 31, 2021 versus Year Ended December 31, 2020

White Mountains's total consolidated portfolio return on invested assets was -3.4% in 2021. This return included \$380 million of net realized and unrealized investment losses from White Mountains's investment in MediaAlpha. Excluding MediaAlpha, the total consolidated portfolio return on invested assets was 6.4% in 2021. Excluding MediaAlpha, investment returns in 2021 were driven primarily by favorable other long-term investments results. White Mountains's total consolidated portfolio return on invested assets was 31.9% in 2020. This return included \$746 million of net investment income and net realized and unrealized investment gains from White Mountains's investment in MediaAlpha. Excluding MediaAlpha, the total consolidated portfolio return on invested assets was 4.6% in 2020. Excluding MediaAlpha, investment returns in 2020 were impacted by White Mountains's decision to liquidate its portfolio of common equity securities in the second half of 2020 in preparation for funding the Ark Transaction as equity markets rallied in the fourth quarter.

Fixed Income Results

White Mountains's fixed income portfolio, including short-term investments, was \$2.4 billion and \$1.4 billion as of December 31, 2021 and 2020, which represented 56% and 46% of total invested assets. **See Note 3 — "Investment Securities"**. The increase was driven primarily by the inclusion of Ark's invested assets as a result of the Ark Transaction. The duration of White Mountains's fixed income portfolio, including short-term investments, was 2.6 years and 3.2 years as of December 31, 2021 and 2020. White Mountains's fixed income portfolio includes fixed maturity and short-term investments held on deposit or as collateral. **See Note 3 — "Investment Securities"**.

White Mountains's fixed income portfolio returned -0.4% in 2021 compared to 4.9% in 2020, outperforming and underperforming the Bloomberg Barclays U.S. Intermediate Aggregate Index returns of -1.3% and 5.6% for the comparable periods. The results in 2021 were driven primarily by the short duration positioning of White Mountains's fixed income portfolio as interest rates increased during the period, partially offset by currency losses. The results in 2020 were driven primarily by the short duration positioning of White Mountains's fixed income portfolio as interest rates declined significantly during the period.

Common Equity Securities, Investment in MediaAlpha and Other Long-Term Investments Results

White Mountains's portfolio of common equity securities, its investment in MediaAlpha and other long-term investments was \$1.9 billion and \$1.6 billion as of December 31, 2021 and 2020, which represented 44% and 54% of total invested assets. See **Note 3 — "Investment Securities"**. The increase was driven primarily by the inclusion of Ark's invested assets as a result of the Ark Transaction, an increase in the fair value of Kudu's Participation Contracts, and the addition of international listed common equity funds and a bank loan fund at Ark, partially offset by a decline in the fair value of White Mountains's investment in MediaAlpha.

White Mountains's portfolio of common equity securities, its investment in MediaAlpha and other long-term investments returned -7.1% in 2021, which included \$380 million of net realized and unrealized investment losses from MediaAlpha. White Mountains's portfolio of common equity securities and other long-term investments returned 19.3% in 2021. White Mountains's portfolio of common equity securities, its investment in MediaAlpha and other long-term investments returned 80.0% in 2020, which included \$746 million of net investment income and net realized and unrealized investment gains from MediaAlpha. White Mountains's portfolio of common equity securities and other long-term investments returned 4.9% in 2020.

In the second half of 2020, White Mountains liquidated its portfolio of common equity securities, including its portfolio of ETFs and international common equity securities, in preparation for funding the Ark Transaction. Following the Ark Transaction, White Mountains's portfolio of common equity securities consisted of international listed common equity funds held in the Ark portfolio. As of December 31, 2021, the fair value of White Mountains's international listed common equity funds was \$251 million.

White Mountains's portfolio of common equity securities returned 11.0% in 2021 compared to 3.6% in 2020, underperforming the S&P 500 Index returns of 28.7% and 18.4% for the comparable periods. The results for 2021 were driven primarily by relative underperformance in White Mountains's international listed common equity funds versus the S&P 500 Index. The results for 2020 were driven primarily by White Mountains's lack of common equity exposure during the fourth quarter equity market rally and the relative underperformance from White Mountains's international common equity portfolio versus the S&P 500 Index prior to the liquidation of these positions.

In 2020, White Mountains's portfolio of ETFs essentially earned the effective index return, before expenses, over the period in which White Mountains was invested in these funds. White Mountains's portfolio of ETFs was fully liquidated in the fourth quarter of 2020. White Mountains also maintained relationships with a small number of third-party registered investment advisers (the "actively managed common equity portfolio"), who primarily invested in non-U.S. equity securities through unit trusts. At the end of the third quarter of 2020, White Mountains fully redeemed its actively managed common equity portfolio. White Mountains's actively managed common equity portfolio returned -11.0% in 2020, underperforming the S&P 500 Index return of 18.4%. The results were driven primarily by the lack of exposure to actively managed common equities in the fourth quarter of 2020 and relative underperformance in international stocks versus the S&P 500 Index.

White Mountains's portfolio of other long-term investments was \$1.4 billion and \$787 million as of December 31, 2021 and 2020. The change in other long-term investments was driven primarily by an increase in the fair value of Kudu's Participation Contracts, the inclusion of invested assets relating to the Ark Transaction and the addition of a bank loan fund at Ark.

White Mountains's other long-term investments portfolio returned 20.7% in 2021 compared to 2.5% in 2020. Investment returns for 2021 were driven primarily by net investment income and net realized and unrealized investment gains from Kudu's Participation Contracts, net investment income and net realized and unrealized investment gains from private equity funds, and an increase in the fair value of White Mountains's investment in PassportCard/DavidShield. Investment returns for 2020 were driven primarily by net investment income and net unrealized gains from Kudu's Participation Contracts, partially offset by a decrease in the fair value of White Mountains's investment in PassportCard/DavidShield, and net unrealized investment losses from hedge funds and private debt instruments.

Portfolio Composition

The following table presents the composition of White Mountains's total investment portfolio as of December 31, 2022 and 2021:

\$ in Millions	December 31, 2022		December 31, 2021	
	Carrying Value	% of Total	Carrying Value	% of Total
Fixed maturity investments	\$ 1,920.9	37.2 %	\$ 1,908.9	44.8 %
Short-term investments	924.1	17.9	465.9	10.9
Common equity securities	668.4	12.9	251.1	5.9
Investment in MediaAlpha	168.6	3.3	261.6	6.1
Other long-term investments	1,488.0	28.7	1,377.8	32.3
Total investments	\$ 5,170.0	100.0 %	\$ 4,265.3	100.0 %

The following table presents the breakdown of White Mountains's fixed maturity investments as of December 31, 2022 by credit class, based upon issuer credit ratings provided by Standard & Poor's, or if unrated by Standard & Poor's, long-term obligation ratings provided by Moody's:

\$ in Millions	December 31, 2022			
	Amortized Cost	% of Total	Carrying Value	% of Total
U.S. government and government-sponsored entities ⁽¹⁾	\$ 481.8	23.2 %	\$ 438.0	22.8 %
AAA/Aaa	179.0	8.6	171.0	8.9
AA/Aa	385.8	18.6	358.1	18.6
A/A	656.7	31.6	610.2	31.8
BBB/Baa	364.4	17.6	337.7	17.6
Other/not rated	8.3	0.4	5.9	0.3
Total fixed maturity investments	\$ 2,076.0	100.0 %	\$ 1,920.9	100.0 %

⁽¹⁾ Includes mortgage-backed securities, which carry the full faith and credit guaranty of the U.S. government (i.e., GNMA) or are guaranteed by a government sponsored entity (i.e., FNMA, FHLMC).

The following table presents the cost or amortized cost and carrying value of White Mountains's fixed maturity investments by contractual maturity as of December 31, 2022. Actual maturities could differ from contractual maturities because borrowers may have the right to call or prepay certain obligations with or without call or prepayment penalties.

Millions	December 31, 2022	
	Cost or Amortized Cost	Carrying Value
Due in one year or less	\$ 204.8	\$ 201.2
Due after one year through five years	914.0	853.2
Due after five years through ten years	374.4	337.4
Due after ten years	103.3	92.0
Mortgage and asset-backed securities and collateralized loan obligations	479.5	437.1
Total fixed maturity investments	\$ 2,076.0	\$ 1,920.9

The following table presents the composition of White Mountains's other long-term investments portfolio as of December 31, 2022 and 2021:

\$ in Millions	December 31, 2022		December 31, 2021	
	Carrying Value	% of Total	Carrying Value	% of Total
Kudu Participation Contracts	\$ 695.9	46.8 %	\$ 669.5	48.6 %
PassportCard/DavidShield	135.0	9.1	120.0	8.7
Elementum Holdings L.P.	30.0	2.0	45.0	3.3
Other unconsolidated entities	37.2	2.5	34.4	2.5
Total unconsolidated entities	898.1		868.9	
Private equity funds and hedge funds	197.8	13.3	153.8	11.2
Bank loan fund	174.8	11.8	163.0	11.8
Lloyd's trust deposits	137.4	9.2	113.8	8.3
ILS funds	49.3	3.3	51.9	3.8
Private debt instruments	9.6	0.6	14.1	1.0
Other	21.0	1.4	12.3	0.8
Total other long-term investments	\$ 1,488.0	100.0 %	\$ 1,377.8	100.0 %

Foreign Currency Exposure

As of December 31, 2022, White Mountains had foreign currency exposure on \$202 million of net assets primarily related to Ark's non-U.S. business, Kudu's non-U.S. Participation Contracts, and certain other foreign consolidated and unconsolidated entities.

The following table presents the fair value of White Mountains's foreign denominated net assets (liabilities) by segment as of December 31, 2022:

\$ in Millions				Total Fair Value	% of Total Shareholders' Equity
Currency	Ark	Kudu	Other Operations		
CAD	\$ 61.1	\$ 74.8	\$ —	\$ 135.9	3.5 %
GBP	51.3	—	—	51.3	1.3
AUD	7.6	36.8	—	44.4	1.1
EUR	(43.0)	—	12.4	(30.6)	(.8)
All other	—	—	1.4	1.4	—
Total	\$ 77.0	\$ 111.6	\$ 13.8	\$ 202.4	5.1 %

III. Income Taxes

The Company and its Bermuda domiciled subsidiaries are not subject to Bermuda income tax under current Bermuda law. In the event there is a change in the current law and taxes are imposed, the Bermuda Exempted Undertakings Tax Protection Act of 1966 states that the Company and its Bermuda domiciled subsidiaries would be exempt from such tax until March 31, 2035. The Company has subsidiaries and branches that operate in various other jurisdictions around the world that are subject to tax in the jurisdictions in which they operate. As of December 31, 2022, the primary jurisdictions in which the Company's subsidiaries and branches were subject to tax are Ireland, Israel, Luxembourg, the United Kingdom and the United States.

The OECD has proposed a global minimum tax of 15% of reported profits ("Pillar 2") that has been agreed upon by over 140 countries including the United States. On December 15, 2022, European Union Member States voted to adopt the European Union Minimum Tax Directive (the "Directive") in conformity with Pillar 2. The Directive requires European Union Member States to enact conforming rules into domestic law by December 31, 2023. The main rule of the Directive, the Income Inclusion Rule, will become effective on or after December 31, 2023 with the backstop rule, the Undertaxed Profits Rule, becoming effective on or after December 31, 2024. Other countries, including the United Kingdom, have also stated their intention to enact Pillar 2 legislation in 2023. The timing and impact of these rules on the Company remain uncertain.

On August 16, 2022, the U.S. enacted the Inflation Reduction Act (the "IRA"). White Mountains has evaluated the tax provisions of the IRA, the most significant of which relate to the corporate alternative minimum tax and the tax on share repurchases, and does not expect the legislation to have a material impact on its results of operations.

White Mountains reported income tax expense of \$41 million in 2022 on pre-tax loss from continuing operations of \$149 million. The difference between White Mountains's effective tax rate and the current U.S. statutory rate of 21% was driven primarily by losses generated in jurisdictions with lower tax rates than the United States, a full valuation allowance on net deferred tax assets in certain U.S. operations (consisting of Other Operations and BAM), withholding taxes and state income taxes.

White Mountains reported income tax expense of \$44 million in 2021 on pre-tax loss from continuing operations of \$274 million. The difference between White Mountains's effective tax rate and the current U.S. statutory rate of 21% was driven primarily by losses generated in jurisdictions with lower tax rates than the United States, a full valuation allowance on net deferred tax assets in certain U.S. operations (consisting of Other Operations and BAM), and state income taxes. The effective rate was also different from the U.S. statutory rate of 21% due to additional tax expense related to the revaluation of U.K. deferred tax assets and liabilities. On June 10, 2021, the U.K. enacted an increase in its corporate tax rate from 19% to 25% for periods after April 1, 2023. During 2021, White Mountains increased its net U.K. deferred tax liability to reflect the higher tax rate.

White Mountains reported income tax benefit of \$15 million in 2020 on pre-tax income from continuing operations of \$660 million. The difference between White Mountains's effective tax rate and the current U.S. federal statutory rate of 21% was driven primarily by a \$131 million release of a deferred tax liability as a result of an internal reorganization in connection with the MediaAlpha IPO and income generated in jurisdictions with lower tax rates than the United States. Also in 2020, \$40 million of tax expense was recorded for state income taxes, withholding taxes and the establishment of a partial valuation allowance on deferred tax assets of various companies, entities and investments that are included in Other Operations.

IV. Discontinued Operations

NSM

On August 1, 2022, White Mountains closed the NSM Transaction. White Mountains received \$1.4 billion in net cash proceeds at closing and recognized a net gain of \$876 million in the third quarter of 2022, which was comprised of \$887 million of net gain from sale of discontinued operations and \$3 million of comprehensive income related to the recognition of foreign currency translation gain (loss) from the sale, partially offset by \$14 million of compensation and other costs related to the transaction recorded in Other Operations. See **Note 2 — "Significant Transactions"** on page F-17.

White Mountains reported net income from discontinued operations, net of tax, for NSM Group of \$16 million for the period from January 1, 2022 to August 1, 2022. White Mountains reported net loss from discontinued operations, net of tax, for NSM Group of \$23 million and \$10 million for the years ended December 31, 2021 and 2020. The net loss from discontinued operations, net of tax, for NSM Group for the year ended December 31, 2021 included a loss of \$29 million related to the sale of a subsidiary. See **Note 21 — "Held for Sale and Discontinued Operations"** on page F-68.

Sirius Group

On April 18, 2016, White Mountains completed the sale of Sirius International Insurance Group, Ltd. (“Sirius Group”) to CM International Pte. Ltd. and CM Bermuda Limited (collectively “CMI”). In connection with the sale, White Mountains indemnified Sirius Group against the loss of certain interest deductions claimed by Sirius Group related to periods prior to the sale of Sirius Group to CMI that had been disputed by the Swedish Tax Agency (STA). In late October 2018, the Swedish Administrative Court ruled against Sirius Group on its appeal of the STA’s denial of these interest deductions. As a result, in 2018 White Mountains recorded a loss of \$17 million in discontinued operations reflecting the value of these interest deductions.

In April 2021, the STA informed the Swedish Administrative Court of Appeal that Sirius Group should prevail in its appeal and that the interest deductions should not be disallowed. In June 2021, the Swedish Administrative Court of Appeal ruled in Sirius Group’s favor. As a result, in 2021 White Mountains recorded a gain of \$19 million in discontinued operations to reverse the accrued liability, including foreign currency translation. See **Note 21 — “Held for Sale and Discontinued Operations”** on page F-68.

LIQUIDITY AND CAPITAL RESOURCES

Operating Cash and Short-term Investments

Holding Company Level

The primary sources of cash for the Company and certain of its intermediate holding companies are expected to be distributions from its insurance, reinsurance and other operating subsidiaries, net investment income, proceeds from sales, repayments and maturities of investments, capital raising activities and, from time to time, proceeds from sales of operating subsidiaries. The primary uses of cash are expected to be general and administrative expenses, purchases of investments, payments to tax authorities, payments on and repurchases/retirements of debt obligations, dividend payments to holders of the Company’s common shares, distributions to non-controlling interest holders of consolidated subsidiaries, contributions to operating subsidiaries and, from time to time, purchases of operating subsidiaries and repurchases of the Company’s common shares.

Operating Subsidiary Level

The primary sources of cash for White Mountains’s insurance, reinsurance and other operating subsidiaries are expected to be premium and fee collections, commissions, net investment income, proceeds from sales, repayments and maturities of investments, contributions from holding companies and capital raising activities. The primary uses of cash are expected to be claim payments, policy acquisition costs, general and administrative expenses, broker commission expenses, cost of sales, purchases of investments, payments to tax authorities, payments on and repurchases/retirements of debt obligations, distributions to holding companies, distributions to non-controlling interest holders and, from time to time, purchases of operating subsidiaries.

Both internal and external forces influence White Mountains’s financial condition, results of operations and cash flows. Premium and fee collections, investment returns, claim payments and cost of sales may be impacted by changing rates of inflation and other economic conditions. Some time may lapse between the occurrence of an insured loss, the reporting of the loss to White Mountains’s insurance and reinsurance operating subsidiaries and the settlement of the liability for that loss. The exact timing of the payment of losses and benefits cannot be predicted with certainty. White Mountains’s insurance and reinsurance operating subsidiaries maintain portfolios of invested assets with varying maturities and a substantial amount of cash and short-term investments to provide adequate liquidity for the payment of claims.

Management believes that White Mountains’s cash balances, cash flows from operations and routine sales and maturities of investments are adequate to meet expected cash requirements for the foreseeable future at both a holding company and insurance, reinsurance and other operating subsidiary level.

Dividend Capacity

Following is a description of the dividend capacity of White Mountains’s insurance and reinsurance and other operating subsidiaries:

HG Global/BAM

As of December 31, 2022, HG Global had \$619 million face value of preferred shares outstanding, of which White Mountains owned 96.9%. Holders of the HG Global preferred shares receive cumulative dividends at a fixed annual rate of 6.0% on a quarterly basis, when and if declared by HG Global. As of December 31, 2022, HG Global had accrued \$354 million of dividends payable to holders of its preferred shares, \$341 million of which is payable to White Mountains and eliminated in consolidation.

On April 29, 2022, HG Global received the proceeds of its new \$150 million, 10-year term loan credit facility. In turn, on May 2, 2022, HG Global paid a \$120 million cash dividend to shareholders, of which \$116 million was paid to White Mountains.

As of December 31, 2022, HG Global and its subsidiaries had \$3 million of net unrestricted cash outside of HG Re.

HG Re is a special purpose insurer subject to regulation and supervision by the BMA but does not require regulatory approval to pay dividends. However, HG Re's dividend capacity is limited to amounts held outside of the Collateral Trusts pursuant to the FLRT with BAM. As of December 31, 2022, HG Re had \$9 million of net unrestricted cash and investments and \$112 million of accrued interest on the BAM Surplus Notes held outside the Collateral Trusts. As of December 31, 2022, HG Re had \$731 million of statutory capital and surplus and \$857 million of assets held in the Collateral Trusts.

On a monthly basis, BAM deposits cash equal to ceded premiums, net of ceding commissions, due to HG Re under the FLRT into the Regulation 114 Trust. The Regulation 114 Trust target balance is equal to HG Re's unearned premiums and unpaid loss and LAE reserves, if any. If, at the end of any quarter, the Regulation 114 Trust balance is below the target balance, funds will be withdrawn from the Supplemental Trust and deposited into the Regulation 114 Trust in an amount equal to the shortfall. If, at the end of any quarter, the Regulation 114 Trust balance is above 102% of the target balance, funds will be withdrawn from the Regulation 114 Trust and deposited into the Supplemental Trust.

The Supplemental Trust Target Balance is \$603 million, less the amount of cash and securities in the Regulation 114 Trust in excess of its target balance. If, at the end of any quarter, the Supplemental Trust balance exceeds the Supplemental Trust Target Balance, such excess may be distributed to HG Re. The distribution will be made first as an assignment of accrued interest on the BAM Surplus Notes and second in cash and/or fixed income securities. As the BAM Surplus Notes are repaid over time, the BAM Surplus Notes will be replaced in the Supplemental Trust by cash and fixed income securities. The Supplemental Trust balance as of December 31, 2022 and 2021 was \$568 million and \$602 million.

As of December 31, 2022, the Collateral Trusts held assets of \$857 million, which included \$503 million of cash and investments, \$340 million of BAM Surplus Notes and \$14 million of interest receivable on the BAM Surplus Notes.

Through 2024, the interest rate on the BAM Surplus Notes is a variable rate equal to the one-year U.S. Treasury rate plus 300 basis points, set annually. During 2023, the interest rate on the BAM Surplus Notes will be 7.7%. Beginning in 2025, the interest rate will be fixed at the higher of the then current variable rate or 8.0%. Under its agreements with HG Global, BAM is required to seek regulatory approval to pay principal and interest on the BAM Surplus Notes only to the extent that its remaining qualified statutory capital and other capital resources continue to support its outstanding obligations, its business plan and its "AA/stable" rating from Standard & Poor's. No payment of principal or interest on the BAM Surplus Notes may be made without the approval of the NYDFS.

In December 2022, BAM made a \$36 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global. Of this payment, \$25 million was a repayment of principal held in the Supplemental Trust, \$1 million was a payment of accrued interest held in the Supplemental Trust and \$10 million was a payment of accrued interest held outside the Supplemental Trust.

Ark

During any 12-month period, GAIL, a class 4 licensed Bermuda insurer, has the ability to (i) make capital distributions of up to 15% of its total statutory capital per the previous year's statutory financial statements, or (ii) make dividend payments of up to 25% of its total statutory capital and surplus per the previous year's statutory financial statements, without prior approval of Bermuda regulatory authorities. Accordingly, GAIL will have the ability to make capital distributions of up to \$113 million during 2023, which is equal to 15% of its December 31, 2022 statutory capital of \$755 million, subject to meeting all appropriate liquidity and solvency requirements and the filing of its December 31, 2022 statutory financial statements. During 2022, GAIL did not pay a dividend to its immediate parent.

During 2022, Ark paid \$21 million of dividends to shareholders, \$15 million of which was paid to White Mountains. As of December 31, 2022, Ark and its intermediate holding companies had \$11 million of net unrestricted cash, short-term investments and fixed maturity investments outside of its regulated and unregulated insurance and reinsurance operating subsidiaries.

Kudu

During 2022, Kudu distributed \$110 million to unitholders, \$100 million of which was paid to White Mountains. As of December 31, 2022, Kudu had \$89 million of net unrestricted cash.

Other Operations

During 2022, White Mountains paid a \$3 million common share dividend.

As of December 31, 2022, the Company and its intermediate holding companies had \$706 million of net unrestricted cash, short-term investments and fixed maturity investments, \$169 million of MediaAlpha common stock, \$334 million of common equity securities and \$244 million of private equity and hedge funds, ILS funds and unconsolidated entities.

Financing

The following table summarizes White Mountains's capital structure as of December 31, 2022 and 2021:

\$ in Millions	December 31,	
	2022	2021
HG Global Senior Notes ⁽¹⁾	\$ 146.5	\$ —
Ark 2007 Subordinated Notes ⁽¹⁾	30.0	30.0
Ark 2021 Subordinated Notes ⁽¹⁾⁽²⁾	153.7	155.9
Kudu Credit Facility ⁽¹⁾⁽²⁾	208.3	218.2
Other Operations debt ⁽¹⁾⁽²⁾	36.7	16.8
Total debt from continuing operations	575.2	420.9
Debt from discontinued operations ⁽²⁾⁽³⁾	—	272.1
Total debt	575.2	693.0
Non-controlling interests — excluding BAM	342.8	280.6
Total White Mountains's common shareholders' equity	3,746.9	3,548.1
Total capital	4,664.9	4,521.7
Time-value discount on expected future payments on the BAM Surplus Notes ⁽⁴⁾	(95.1)	(125.9)
HG Global's unearned premium reserve ⁽⁴⁾	242.1	214.6
HG Global's net deferred acquisition costs ⁽⁴⁾	(69.0)	(60.8)
Total adjusted capital	\$ 4,742.9	\$ 4,549.6
Total debt to total adjusted capital	12.1 %	15.2 %

⁽¹⁾ See **Note 7 — "Debt"** for details of debt arrangements.

⁽²⁾ Net of unamortized issuance costs.

⁽³⁾ The NSM bank facility with Ares Capital Corporation and the other NSM debt was settled in conjunction with the closing of the NSM Transaction and was classified as held for sale as of December 31, 2021.

⁽⁴⁾ Amount reflects White Mountains's preferred share ownership in HG Global of 96.9%.

Management believes that White Mountains has the flexibility and capacity to obtain funds externally through debt or equity financing on both a short-term and long-term basis. However, White Mountains can provide no assurance that, if needed, it would be able to obtain additional debt or equity financing on satisfactory terms, if at all.

It is possible that, in the future, one or more of the rating agencies may lower White Mountains's and its subsidiaries' existing ratings. If one or more of its ratings were lowered, White Mountains could incur higher borrowing costs on future borrowings and its ability to access the capital markets could be impacted.

Covenant Compliance

As of December 31, 2022, White Mountains was in compliance, in all material respects, with all of the covenants under its debt instruments.

Contractual Obligations and Commitments

The following table presents White Mountains's material contractual obligations and commitments as of December 31, 2022:

Millions	Due in Less Than One Year	Due in Two to Three Years	Due in Four to Five Years	Due After Five Years	Total
Loss and LAE reserves ⁽¹⁾	\$ 334.0	\$ 624.8	\$ 207.4	\$ 130.3	\$ 1,296.5
Debt	5.4	12.6	30.7	542.2	590.9
Interest on debt	46.0	91.2	89.0	215.5	441.7
Long-term incentive compensation	38.7	70.0	—	—	108.7
Contingent consideration ⁽²⁾	45.3	1.6	—	—	46.9
Operating leases ⁽³⁾	8.7	12.7	4.4	3.9	29.7
Total contractual obligations and commitments	\$ 478.1	\$ 812.9	\$ 331.5	\$ 891.9	\$ 2,514.4

⁽¹⁾ Represents expected future cash outflows resulting from loss and LAE payments. The amounts presented are gross of reinsurance recoverables on unpaid losses of \$505.0 as of December 31, 2022.

⁽²⁾ The contingent consideration liabilities are primarily related to White Mountains's acquisition of Ark. See Note 2 — "Significant Transactions" on page F-17.

⁽³⁾ Includes amounts related to BAM's operating leases of \$2.2, \$3.6 and \$0.6 that are due in less than one year, two to three years, and four to five years, which are attributed to non-controlling interests.

The long-term incentive compensation balances included in the table above include amounts payable for performance shares. Exact amounts to be paid for performance shares cannot be predicted with certainty, as the ultimate amounts of these liabilities are based on the future performance of White Mountains and the market price of the Company's common shares at the time the payments are made.

The estimated payments reflected in the table are based on current accrual factors (including performance relative to targets and common share price) and assume that all outstanding balances were 100% vested as of December 31, 2022.

There are no provisions within White Mountains's operating lease agreements that would trigger acceleration of future lease payments.

White Mountains does not finance its operations through the securitization of its trade receivables, through special purpose entities or through synthetic leases. Further, White Mountains has not entered into any material arrangements requiring it to guarantee payment of third-party debt or lease payments or to fund losses of an unconsolidated special purpose entity.

White Mountains also has future binding commitments to fund certain other long-term investments. These commitments, which totaled approximately \$102 million as of December 31, 2022, do not have fixed funding dates and, are therefore, excluded from the table above.

Share Repurchase Programs

White Mountains's board of directors has authorized the Company to repurchase its common shares from time to time, subject to market conditions. The repurchase authorizations do not have a stated expiration date. As of December 31, 2022, White Mountains may repurchase an additional 320,550 shares under these board authorizations. In addition, from time to time White Mountains has also repurchased its common shares through tender offers that were separately approved by its board of directors.

The following table presents common shares repurchased by the Company as well as the average price per share as a percent of December 31, 2022 GAAP book value per share, adjusted book value per share and market value per share.

Year Ended	Shares Repurchased	Cost (Millions)	Average Price Per Share	Average Price Per Share as % of December 31, 2022 GAAP Book Value Per Share	Average Price Per Share as % of December 31, 2022 Adjusted Book Value Per Share	Average Price Per Share as % of December 31, 2022 Market Value Per Share
December 31, 2022	461,256	\$ 615.8	\$1,335.11	92%	89%	94%
December 31, 2021	98,511	\$ 107.5	\$1,091.29	75%	73%	77%
December 31, 2020	99,087	\$ 85.1	\$ 858.81	59%	57%	61%

Cash Flows

Detailed information concerning White Mountains's cash flows from continuing operations during 2022, 2021 and 2020 follows:

Cash flows from operations for the years ended 2022, 2021 and 2020

Net cash flows provided from (used for) operations was \$326 million, \$(4) million and \$(96) million for the years ended December 31, 2022, 2021 and 2020. Cash provided from (used for) operations was higher in 2022 compared to 2021, driven primarily by the cash inflow from Ark's operations and the proceeds from Kudu's Participation Contracts sold. Cash used for operations was lower in 2021 compared to 2020, driven primarily by the cash inflow from Ark's operations, partially offset by the contributions to Kudu's Participation Contracts and Ark's transaction expenses. White Mountains does not believe these trends will have a meaningful impact on its future liquidity or its ability to meet its future cash requirements. As of December 31, 2022, the Company and its intermediate holding companies had \$706 million of net unrestricted cash, short-term investments and fixed maturity investments, \$169 million of MediaAlpha common stock, \$334 million of common equity securities and \$244 million of private equity funds and hedge funds, ILS funds and unconsolidated entities.

Cash flows from investing and financing activities for the year ended December 31, 2022

Financing and Other Capital Activities

During 2022, the Company declared and paid a \$3 million cash dividend to its common shareholders.

During 2022, White Mountains repurchased and retired 461,256 of its common shares for \$616 million. The majority of these shares were repurchased through a self-tender offer that White Mountains completed on September 26, 2022, through which it repurchased 327,795 of its common shares at a purchase price of \$1,400 per share for a total cost of approximately \$461 million, including expenses. Of the shares White Mountains repurchased in 2022, 4,011 were to satisfy employee income tax withholding pursuant to employee benefit plans.

During 2022, HG Global received net proceeds of \$147 million from the issuance of the HG Global Senior Notes.

During 2022, BAM received \$81 million in MSC.

During 2022, BAM repaid \$25 million of principal and paid \$11 million of accrued interest on the BAM Surplus Notes.

During 2022, Kudu borrowed \$35 million and repaid \$45 million in term loans under the Kudu Credit Facility.

Acquisitions and Dispositions

On May 26, 2022, Kudu raised \$115 million of equity capital from the Kudu Transaction. Mass Mutual, White Mountains and Kudu management contributed \$64 million, \$50 million and \$1 million in the Kudu Transaction, respectively.

On August 1, 2022, White Mountains closed the previously announced NSM Transaction. White Mountains received \$1.4 billion in net cash proceeds at closing.

On December 20, 2022, Outrigger Re Ltd. issued non-voting redeemable preference shares on behalf of four segregated accounts to White Mountains and other unrelated third party investors. White Mountains purchased 100% of the preference shares issued by its segregated account, WM Outrigger Re, for \$205 million.

Cash flows from investing and financing activities for the year ended December 31, 2021

Financing and Other Capital Activities

During 2021, the Company declared and paid a \$3 million cash dividend to its common shareholders.

During 2021, White Mountains repurchased and retired 98,511 of its common shares for \$108 million, 7,218 of which were repurchased under employee benefit plans for statutory withholding tax payments.

During 2021, BAM received \$62 million in MSC.

During 2021, BAM repaid \$24 million of principal and paid \$10 million of accrued interest on the BAM Surplus Notes.

During 2021, Ark issued \$163 million face value floating rate unsecured subordinated notes at par in three transactions for proceeds of \$158 million, net of debt issuance costs, and repaid €12 million (\$14 million based upon the foreign exchange spot rate at the date of repayment) of the outstanding principal balance on the subordinated note to Dekania Europe CDO II plc (“Ark 2007 Notes Tranche 2”).

During 2021, Kudu borrowed \$3 million in term loans under the Kudu Bank Facility.

On March 23, 2021, Kudu entered into the Kudu Credit Facility with an initial draw of \$102 million, of which \$92 million was used to repay the outstanding principal balance on its term loans under the Kudu Bank Facility. During 2021, Kudu borrowed an additional \$130 million and repaid \$7 million in term loans under the Kudu Credit Facility.

During 2021, White Mountains’s Other Operations borrowed \$3 million and repaid \$8 million under its three secured credit facilities.

Acquisitions and Dispositions

On January 1, 2021 White Mountains completed the Ark Transaction, which included contributing \$605 million of equity capital to Ark, at a pre-money valuation of \$300 million, and purchasing \$41 million of shares from certain selling shareholders. In the fourth quarter of 2020, White Mountains prefunded/placed in escrow a total of \$646 million in preparation for closing the Ark Transaction.

On March 23, 2021, MediaAlpha completed a secondary offering of 8.05 million shares. In the secondary offering, White Mountains sold 3.6 million shares at \$46.00 per share (\$44.62 per share net of underwriting fees) for net proceeds of \$160 million.

Cash flows from investing and financing activities for the year ended December 31, 2020

Financing and Other Capital Activities

During 2020, the Company declared and paid a \$3 million cash dividend to its common shareholders.

During 2020, White Mountains repurchased and retired 99,087 of its common shares for \$85 million, 5,899 of which were repurchased under employee benefit plans for statutory withholding tax payments.

During 2020, BAM received \$69 million in MSC.

During 2020, BAM repaid \$70 million of principal and paid \$25 million of accrued interest on the BAM Surplus Notes.

During 2020, HG Global declared and paid \$23 million of preferred dividends, of which \$22 million was paid to White Mountains.

During 2020, Kudu borrowed \$32 million in term loans under the Kudu Bank Facility.

During 2020, White Mountains’s Other Operations made no borrowings and repaid \$2 million in term loans under its credit facilities.

Acquisitions and Dispositions

On May 7, 2020, White Mountains made an additional \$15 million investment in PassportCard/DavidShield.

On October 30, 2020, MediaAlpha completed its initial public offering. In the offering, White Mountains sold 3,609,894 shares and received total proceeds of \$64 million. White Mountains also received \$55 million of net proceeds related to a dividend recapitalization at MediaAlpha, which was recorded as net investment income.

In the fourth quarter of 2020, White Mountains pre-funded/placed in escrow a total of \$646 million in preparation for closing the Ark Transaction.

TRANSACTIONS WITH RELATED PERSONS

White Mountains does not have any related party transactions to report as of December 31, 2022.

NON-GAAP FINANCIAL MEASURES

This report includes ten non-GAAP financial measures that have been reconciled with their most comparable GAAP financial measures.

Adjusted book value per share

Adjusted book value per share is a non-GAAP financial measure which is derived by adjusting (i) the GAAP book value per share numerator and (ii) the common shares outstanding denominator, as described below.

The GAAP book value per share numerator is adjusted (i) to include a discount for the time value of money arising from the modeled timing of cash payments of principal and interest on the BAM Surplus Notes and (ii) to add back the unearned premium reserve, net of deferred acquisition costs, at HG Global.

Under GAAP, White Mountains is required to carry the BAM Surplus Notes, including accrued interest, at nominal value with no consideration for time value of money. Based on a debt service model that forecasts operating results for BAM through maturity of the BAM Surplus Notes, the present value of the BAM Surplus Notes, including accrued interest and using an 8.0% discount rate, was estimated to be \$98 million, \$130 million and \$147 million less than the nominal GAAP carrying values as of December 31, 2022, 2021 and 2020, respectively.

The value of HG Global's unearned premium reserve, net of deferred acquisition costs, was \$179 million, \$159 million and \$142 million as of December 31, 2022, 2021 and 2020, respectively.

White Mountains believes these adjustments are useful to management and investors in analyzing the intrinsic value of HG Global, including the value of the BAM Surplus Notes and the value of the in-force business at HG Re, HG Global's reinsurance subsidiary.

The denominator used in the calculation of adjusted book value per share equals the number of common shares outstanding adjusted to exclude unearned restricted common shares, the compensation cost of which, at the date of calculation, has yet to be amortized. Restricted common shares are earned on a straight-line basis over their vesting periods. The reconciliation of GAAP book value per share to adjusted book value per share is included on page 41.

Growth in adjusted book value per share excluding MediaAlpha

The growth in adjusted book value per share excluding net realized and unrealized investment losses from White Mountains's investment in MediaAlpha on page 41 is a non-GAAP financial measure. White Mountains believes this measure to be useful to management and investors by showing the underlying performance of White Mountains in 2021 without regard to the impact of changes in MediaAlpha's share price. A reconciliation from GAAP to the reported percentages is as follows:

	Year Ended December 31, 2021
Growth in GAAP book value per share	(6.5)%
Adjustments to book value per share (see reconciliation on page 41)	0.8%
Remove net realized and unrealized investment losses from White Mountains's investment in MediaAlpha	10.0%
Growth in adjusted book value per share excluding net realized and unrealized investment losses from White Mountains's investment in MediaAlpha	4.3%

Ark's adjusted loss and loss adjustment expense ratio, adjusted insurance acquisition expense ratio, adjusted other underwriting expense ratio and adjusted combined ratio

Ark's adjusted loss and loss adjustment expense ratio, adjusted insurance acquisition expense ratio, adjusted other underwriting expense ratio and adjusted combined ratio are non-GAAP financial measures, which are derived by adjusting the GAAP ratios to add back the impact of whole-account quota-share reinsurance arrangements related to TPC Providers for the Syndicates. The impact of these reinsurance arrangements relates to years of account prior to the Ark Transaction. White Mountains believes these adjustments are useful to management and investors in evaluating Ark's results on a fully aligned basis (i.e., 100% of the Syndicates' results). The reconciliation from the GAAP ratios to the adjusted ratios is included on page 52.

Kudu's EBITDA and Kudu's adjusted EBITDA

Kudu's EBITDA and adjusted EBITDA are non-GAAP financial measures. EBITDA is a non-GAAP financial measure that excludes interest expense on debt, income tax (expense) benefit, depreciation and amortization of other intangible assets from GAAP net income (loss). Adjusted EBITDA is a non-GAAP financial measure that excludes certain other items in GAAP net income (loss) in addition to those excluded from EBITDA. The adjustments relate to (i) net realized and unrealized investment gains (losses) on Kudu's Participation Contracts, (ii) non-cash equity-based compensation expense and (iii) transaction expenses. A description of each adjustment follows:

- *Net realized and unrealized investment gains (losses)* - Represents net unrealized investment gains and losses on Kudu's Participation Contracts, which are recorded at fair value under GAAP, and net realized investment gains and losses on Kudu's Participation Contracts sold during the period.
- *Non-cash equity-based compensation expense* - Represents non-cash expenses related to Kudu's management compensation that are settled with equity units in Kudu.
- *Transaction expenses* - Represents costs directly related to Kudu's mergers and acquisitions activity, such as external lawyer, banker, consulting and placement agent fees, which are not capitalized and are expensed under GAAP.

White Mountains believes that these non-GAAP financial measures are useful to management and investors in evaluating Kudu's performance. The reconciliation of Kudu's GAAP net income (loss) to EBITDA and adjusted EBITDA is included on page 54.

Total consolidated portfolio return excluding MediaAlpha

Total consolidated portfolio return excluding MediaAlpha is a non-GAAP financial measure that removes the net investment income and net realized and unrealized investment gains (losses) from White Mountains's investment in MediaAlpha. White Mountains believes this measure to be useful to management and investors by showing the underlying performance of White Mountains's investment portfolio without regard to MediaAlpha.

The following table presents return reconciliations from GAAP to the reported percentages:

	For the Year Ended December 31, 2022			For the Year Ended December 31, 2021		
	GAAP Returns	Remove MediaAlpha	Returns - Excluding MediaAlpha	GAAP Returns	Remove MediaAlpha	Returns - Excluding MediaAlpha
Total consolidated portfolio return	(1.6)%	1.9 %	0.3 %	(3.4)%	9.8 %	6.4 %

Total adjusted capital

Total capital at White Mountains is comprised of White Mountains's common shareholders' equity, debt and non-controlling interests other than non-controlling interests attributable to BAM. Total adjusted capital is a non-GAAP financial measure, which is derived by adjusting total capital (i) to include a discount for the time value of money arising from the expected timing of cash payments of principal and interest on the BAM Surplus Notes and (ii) to add back the unearned premium reserve, net of deferred acquisition costs, at HG Global. The reconciliation of total capital to total adjusted capital is included on page 65.

CRITICAL ACCOUNTING ESTIMATES

Management's Discussion and Analysis of Financial Condition and Results of Operations discuss the Company's consolidated financial statements, which have been prepared in accordance with GAAP. The financial statements presented herein include all adjustments considered necessary by management to fairly present the financial condition, results of operations and cash flows of White Mountains.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities as of the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Certain of these estimates are considered critical in that they involve a higher degree of judgment and are subject to a significant degree of variability. On an ongoing basis, management evaluates its estimates and bases its estimates on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources.

1. Fair Value Measurements

General

White Mountains records certain assets and liabilities at fair value in its consolidated financial statements, with changes therein recognized in current period earnings. In addition, White Mountains discloses estimated fair value for certain liabilities measured at historical or amortized cost. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants (an exit price) at a particular measurement date. Fair value measurements are categorized into a hierarchy that distinguishes between inputs based on market data from independent sources (observable inputs) and a reporting entity's internal assumptions based upon the best information available when external market data is limited or unavailable (unobservable inputs). Quoted prices in active markets for identical assets have the highest priority ("Level 1"), followed by observable inputs other than quoted prices including prices for similar but not identical assets or liabilities ("Level 2"), and unobservable inputs, including the reporting entity's estimates of the assumptions that market participants would use, having the lowest priority ("Level 3").

Assets and liabilities carried at fair value include all of White Mountains's investment portfolio and derivative instruments. Valuation of assets and liabilities measured at fair value require management to make estimates and apply judgment to matters that may carry a significant degree of uncertainty. In determining its estimates of fair value, White Mountains uses a variety of valuation approaches and inputs. Whenever possible, White Mountains estimates fair value using valuation methods that maximize the use of quoted market prices or other observable inputs. Where appropriate, assets and liabilities measured at fair value have been adjusted for the effect of counterparty credit risk.

Invested Assets

White Mountains uses outside pricing services and brokers to assist in determining fair values. The outside pricing services White Mountains uses have indicated that they will only provide prices where observable inputs are available. As of December 31, 2022, approximately 72% of the investment portfolio recorded at fair value was priced based upon quoted market prices or other observable inputs.

Level 1 Measurements

Investments valued using Level 1 inputs include White Mountains's fixed maturity investments, primarily investments in U.S. Treasuries and short-term investments, which include U.S. Treasury Bills, common equity securities, and its investment in MediaAlpha following the MediaAlpha IPO. For investments in active markets, White Mountains uses the quoted market prices provided by outside pricing services to determine fair value.

Level 2 Measurements

Investments valued using Level 2 inputs include fixed maturity investments which have been disaggregated into classes, including debt securities issued by corporations, municipal obligations, mortgage and asset-backed securities and collateralized loan obligations. Investments valued using Level 2 inputs also include certain international listed common equity funds, which White Mountains values using the fund manager's published net asset value ("NAV") to account for the difference in market close times.

In circumstances where quoted market prices are unavailable or are not considered reasonable, White Mountains estimates the fair value using industry standard pricing methodologies and observable inputs such as benchmark yields, reported trades, broker-dealer quotes, issuer spreads, benchmark securities, bids, offers, credit ratings, prepayment speeds, reference data including research publications and other relevant inputs. Given that many fixed maturity investments do not trade on a daily basis, the outside pricing services evaluate a wide range of fixed maturity investments by regularly drawing parallels from recent trades and quotes of comparable securities with similar features. The characteristics used to identify comparable fixed maturity investments vary by asset type and take into account market convention.

White Mountains's process to assess the reasonableness of the market prices obtained from the outside pricing sources covers substantially all of its fixed maturity investments and includes, but is not limited to, the evaluation of pricing methodologies and a review of the pricing services' quality control procedures on at least an annual basis, a comparison of its invested asset prices obtained from alternate independent pricing vendors on at least a semi-annual basis, monthly analytical reviews of certain prices and a review of the underlying assumptions utilized by the pricing services for select measurements on an ad hoc basis throughout the year. White Mountains also performs back-testing of selected investment sales activity to determine whether there are any significant differences between the market price used to value the security prior to sale and the actual sale price of the security on an ad hoc basis throughout the year. Prices provided by the pricing services that vary by more than \$0.5 million and 5% from the expected price based on these assessment procedures are considered outliers, as are prices that have not changed from period to period and prices that have trended unusually compared to market conditions. In circumstances where the results of White Mountains's review process does not appear to support the market price provided by the pricing services, White Mountains challenges the vendor provided price. If White Mountains cannot gain satisfactory evidence to support the challenged price, White Mountains will rely upon its own internal pricing methodologies to estimate the fair value of the security in question.

The valuation process described above is generally applicable to all of White Mountains's fixed maturity investments. The techniques and inputs specific to asset classes within White Mountains's fixed maturity investments for Level 2 securities that use observable inputs are as follows:

Debt Securities Issued by Corporations:

The fair value of debt securities issued by corporations is determined from a pricing evaluation technique that uses information from market sources and integrates relative credit information, observed market movements, and sector news. Key inputs include benchmark yields, reported trades, broker-dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, and reference data including sector, coupon, credit quality ratings, duration, credit enhancements, early redemption features and market research publications.

Municipal Obligations:

The fair value of municipal obligations is determined from a pricing evaluation technique that uses information from market makers, brokers-dealers, buy-side firms, and analysts along with general market information. Key inputs include benchmark yields, reported trades, issuer financial statements, material event notices and new issue data, as well as broker-dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, and reference data including type, coupon, credit quality ratings, duration, credit enhancements, geographic location and market research publications.

Mortgage and Asset-Backed Securities and Collateralized Loan Obligations:

The fair value of mortgage and asset-backed securities and collateralized loan obligations is determined from a pricing evaluation technique that uses information from market sources and leveraging similar securities. Key inputs include benchmark yields, reported trades, underlying tranche cash flow data, collateral performance, plus new issue data, as well as broker-dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, and reference data including issuer, vintage, loan type, collateral attributes, prepayment speeds, default rates, recovery rates, cash flow stress testing, credit quality ratings and market research publications.

Level 3 Measurements

Fair value estimates for investments that trade infrequently and have few or no quoted market prices or other observable inputs are classified as Level 3 measurements. Investments valued using Level 3 fair value estimates are based upon unobservable inputs and include investments in certain fixed maturity investments, common equity securities and other long-term investments where quoted market prices or other observable inputs are unavailable or are not considered reliable or reasonable.

Level 3 valuations are generated from techniques that use assumptions not observable in the market. These unobservable inputs reflect White Mountains's assumptions of what market participants would use in valuing the investment. In certain circumstances, investment securities may start out as Level 3 when they are originally issued, but as observable inputs become available in the market, they may be reclassified to Level 2. Transfers of securities between levels are based on investments held as of the beginning of the period.

Other Long-Term Investments

As of December 31, 2022, \$912 million of White Mountains's other long-term investments, which consisted primarily of unconsolidated entities including Kudu's Participation Contracts and PassportCard/DavidShield, were classified as Level 3 investments in the GAAP fair value hierarchy. The determination of the fair value of these securities involves significant management judgment, and the use of valuation models and assumptions that are inherently subjective and uncertain. See Item 1A. Risk Factors, "***Our investment portfolio includes securities that do not have readily observable market prices. We use valuation methodologies that are inherently subjective and uncertain to value these securities. The values of securities established using these methodologies may never be realized, which could materially adversely affect our results of operations and financial condition.***" on page 32.

White Mountains may use a variety of valuation techniques to determine fair value depending on the nature of the investment, including a discounted cash flow analysis, market multiple approach, cost approach and/or liquidation analysis. On an ongoing basis, White Mountains also considers qualitative changes in facts and circumstances, which may impact the valuation of its unconsolidated entities, including economic and market changes in relevant industries, changes to the entity's capital structure, business strategy and key personnel, and any recent transactions relating to the unconsolidated entity. On a quarterly basis, White Mountains evaluates the most recent qualitative and quantitative information of the business and completes a fair valuation analysis for all other long-term investments classified as Level 3 investments. Periodically, and at least on an annual basis, White Mountains uses a third-party valuation firm to complete an independent valuation analysis of significant unconsolidated entities.

As of December 31, 2022, White Mountains's most significant other long-term investments that are valued using Level 3 measurements include Kudu's Participation Contracts and PassportCard/DavidShield.

Valuation of Kudu's Participation Contracts

Kudu's Participation Contracts comprise non-controlling equity interests in the form of revenue and earnings participation contracts. As of December 31, 2022, the combined fair value of Kudu's Participation Contracts was \$696 million. On a quarterly basis, White Mountains values each of Kudu's Participation Contracts, typically using discounted cash flow models. As of December 31, 2022, two of Kudu's Participation Contracts with a total fair value of \$189 million were valued using a probability weighted expected return method, which takes into account factors such as a discounted cash flow analysis, the expected value to be received in a pending sales transaction and the likelihood that a sales transaction will take place.

The discounted cash flow valuation models include key inputs such as projections of future revenues and earnings of Kudu's clients, a discount rate and a terminal cash flow exit multiple. The expected future cash flows are based on management judgment, considering current performance, budgets and projected future results. The discount rates reflect the weighted average cost of capital, considering comparable public company data, adjusted for risks specific to the business and industry. The terminal exit multiple is generally based on expectations of annual cash flow to Kudu from each of its clients in the terminal year of the cash flow model. In determining fair value, White Mountains considers factors such as performance of underlying products and vehicles, expected client growth rates, new fund launches, fee rates by products, capacity constraints, operating cash flow of underlying manager and other qualitative factors, including the assessment of key personnel. The inputs to each discounted cash flow analysis vary depending on the nature of each client. As of December 31, 2022, White Mountains concluded that pre-tax discount rates in the range of 18% to 25%, and terminal cash flow exit multiples in the range of 7 to 16 times were appropriate for the valuations of Kudu's Participation Contracts.

With a discounted cash flow analysis, small changes to inputs in a valuation model may result in significant changes to fair value. The following table presents the estimated effect on the fair value of Kudu's Participation Contracts as of December 31, 2022, resulting from changes in key inputs to the discounted cash flow analysis, including the discount rates and terminal cash flow exit multiples:

Millions	Discount Rate ⁽¹⁾					
	Terminal Exit Multiple	-2%	-1%	18% - 25%	+1%	+2%
	+2	\$ 788	\$ 756	\$ 725	\$ 698	\$ 672
	+1	\$ 771	\$ 740	\$ 711	\$ 684	\$ 660
	7x to 16x	\$ 753	\$ 724	\$ 696	\$ 671	\$ 647
	-1	\$ 736	\$ 708	\$ 681	\$ 657	\$ 635
	-2	\$ 718	\$ 691	\$ 666	\$ 646	\$ 625

⁽¹⁾ Since Kudu's Participation Contracts are not subject to corporate taxes within Kudu Investment Management, LLC, pre-tax discount rates are applied to pre-tax cash flows in determining fair values.

Valuation of PassportCard/DavidShield

On a quarterly basis, White Mountains values its investment in PassportCard/DavidShield using a discounted cash flow model. The discounted cash flow valuation model includes key inputs such as projections of future revenues and earnings, a discount rate and a terminal revenue growth rate. The expected future cash flows are based on management judgment, considering current performance, budgets and projected future results. The discount rate reflects the weighted average cost of capital, considering comparable public company data, adjusted for risks specific to the business and industry. The terminal revenue growth rate is based on company, industry and macroeconomic expectations of perpetual revenue growth subsequent to the end of the discrete period in the discounted cash flow analysis.

When making its fair value selection, which is within a range of reasonable values derived from the discounted cash flow model, White Mountains considers all available information, including any relevant market multiples and multiples implied by recent transactions, facts and circumstances specific to PassportCard/DavidShield's businesses and industries, and any infrequent or unusual results for the period.

White Mountains concluded that an after-tax discount rate of 24% and a terminal revenue growth rate of 4% was appropriate for the valuation of its investment in PassportCard/DavidShield as of December 31, 2022. Utilizing these assumptions, White Mountains determined that the fair value of its investment in PassportCard/DavidShield was \$135 million as of December 31, 2022.

Premiums and commission revenues from international private medical insurance placed by DavidShield grew in 2021 and have remained strong through 2022. In 2022, PassportCard's written premiums exceeded pre-pandemic premium levels.

With a discounted cash flow analysis, small changes to inputs in a valuation model may result in significant changes to fair value. The following table presents the estimated effect on the fair value of White Mountains's investment in PassportCard/DavidShield as of December 31, 2022, resulting from changes in key inputs to the discounted cash flow analysis, including the discount rate and terminal revenue growth rate:

Millions	Terminal Revenue Growth Rate	Discount Rate				
		22%	23%	24%	25%	26%
	4.5%	\$ 158	\$ 147	\$ 136	\$ 127	\$ 118
	4.0%	\$ 156	\$ 145	\$ 135	\$ 126	\$ 117
	3.5%	\$ 155	\$ 143	\$ 133	\$ 125	\$ 116

Other Long-term Investments - NAV

As of December 31, 2022, \$562 million of White Mountains's other long-term investments, which consisted of a private equity funds and hedge funds, a bank loan fund, Lloyd's trust deposits and ILS funds, were valued at fair value using NAV as a practical expedient. Investments for which fair value is measured using NAV as a practical expedient are not classified within the fair value hierarchy.

White Mountains employs a number of procedures to assess the reasonableness of the fair value measurements for other long-term investments measured at NAV, including obtaining and reviewing interim unaudited and annual audited financial statements as well as periodically discussing each fund's pricing with the fund manager. However, since the fund managers do not provide sufficient information to evaluate the pricing methods and inputs for each underlying investment, White Mountains considers the valuation inputs to be unobservable. The fair value of White Mountains's other long-term investments measured at NAV are generally determined using the fund manager's NAV. In the event that White Mountains believes the fair value differs from the NAV reported by the fund manager due to illiquidity or other factors, White Mountains will adjust the reported NAV to more appropriately represent the fair value of its investment.

Sensitivity Analysis on Other Long-term Investments - NAV

The underlying investments of White Mountains's private equity funds and hedge funds typically consist of publicly-traded and private securities whose exit strategies often depend on equity market conditions. These investments are based on quoted market prices or management's estimates of fair value, which could cause the amount realized upon sale to differ from current reported fair values. The fluctuations in fair value may result from a variety of risks, such as changes in the economic characteristics, the relative price of alternative investments, supply and demand, and other equity market factors.

The underlying investments of White Mountains's bank loan fund consist primarily of U.S. dollar-denominated, non-investment grade, floating-rate senior secured loans and may consist of other financial instruments, such as secured and unsecured corporate debt, credit default swaps, reverse repurchase agreements, and synthetic indices. These investments are subject to credit spread risk and interest rate risk, and may be affected by the creditworthiness of the issuer, prepayment options, relative values of alternative investments, the liquidity of the instrument and various other market factors.

The underlying investments of White Mountains's multi-investor ILS funds consist primarily of catastrophe bonds, collateralized reinsurance investments and industry loss warranties. In addition to catastrophe event risk, the underlying investments are also subject to a variety of other risks including modeling, liquidity, market, collateral credit quality, counterparty financial strength, interest rate and currency risks.

See **Note 3 — "Investment Securities"** on page F-19 for tables that summarize the changes in White Mountains's fair value measurements by level as of December 31, 2022 and 2021 and, for investments held at the end of the period, the total net unrealized gains (losses) attributable to Level 3 investments for the years ended December 31, 2022, 2021 and 2020.

2. Surplus Note Valuation

BAM Surplus Notes

As of December 31, 2022, White Mountains owned \$340 million of BAM Surplus Notes and has accrued \$158 million in interest due thereon. In December 2022, BAM made a \$36 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global. In December 2021, BAM made a \$34 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global. In December 2020, BAM made a \$30 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global. In January 2020, BAM made a one-time \$65 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global.

Because BAM is consolidated in White Mountains's financial statements, the BAM Surplus Notes and accrued interest are classified as intercompany notes, carried at face value and eliminated in consolidation. However, the BAM Surplus Notes and accrued interest are carried as assets at HG Global, of which White Mountains owns 96.9% of the preferred equity and 88.4% of the common equity, while the BAM Surplus Notes are carried as liabilities at BAM, which White Mountains has no ownership interest in and is completely attributed to non-controlling interests.

Any write-down of the carried amount of the BAM Surplus Notes and/or the accrued interest thereon could adversely impact White Mountains's results of operations and financial condition. See Item 1A., Risk Factors, "***If BAM does not pay some or all of the principal and interest due on the BAM Surplus Notes, it could materially adversely affect our results of operations and financial condition.***" on page 27.

Periodically, White Mountains's management reviews the recoverability of amounts recorded from the BAM Surplus Notes. As of December 31, 2022, White Mountains believes such notes and interest thereon to be fully recoverable. White Mountains's review is based on a debt service model that forecasts operating results for BAM and related payments on the BAM Surplus Notes through maturity of the BAM Surplus Notes in 2042. The model depends on assumptions regarding future trends for the issuance of municipal bonds, interest rates, credit spreads, insured market penetration, competitive activity in the market for municipal bond insurance and other factors affecting the demand for and price of BAM's municipal bond insurance.

As of December 31, 2022, White Mountains debt service model indicated that the BAM Surplus Notes would be fully repaid approximately six years prior to final maturity, which is generally consistent with the results of the update of the debt service model as of December 31, 2021. The debt service model assumes both par insured and total pricing gradually increase from 2023 to 2026, and flatten thereafter. Assumptions regarding future trends for these factors are a matter of significant judgment, and whether actual results will follow the model is subject to a number of risks and uncertainties.

Under its agreements with HG Global, BAM is required to seek regulatory approval to pay principal and interest on the BAM Surplus Notes only to the extent that its remaining qualified statutory capital and other capital resources continue to support its outstanding obligations, its business plan and its "AA/stable" rating from Standard & Poor's. No payment of principal or interest on the BAM Surplus Notes may be made without the approval of the NYDFS.

Interest payments on the BAM Surplus Notes are due quarterly but are subject to deferral, without penalty or default and without compounding, for payment in the future. Payments made to the BAM Surplus Notes are applied pro rata between outstanding principal and interest. Deferred interest is due on the stated maturity date in 2042.

3. Loss and LAE Reserves

General

Ark establishes loss and LAE reserves that are estimates of amounts needed to pay claims and related expenses in the future for insured events that have already occurred. The process of estimating loss and LAE reserves involves a considerable degree of judgment by management and, as of any given date, is inherently uncertain. See **Note 5 — "Losses and Loss Adjustment Expense Reserves"** on page F-32 for a description of Ark's loss and LAE reserves and actuarial methods.

Ark performs an actuarial review of its recorded loss and LAE reserves each quarter, using several generally accepted actuarial methods to evaluate its loss reserves, each of which has its own strengths and weaknesses. Management bases its level of reliance on a particular method based on the facts and circumstances at the time the reserve estimates are made.

As part of Ark's quarterly actuarial review, Ark compares the previous quarter's projections of incurred, paid and case reserve activity, including amounts incurred but not reported, to actual amounts experienced in the quarter. Differences between previous estimates and actual experience are evaluated to determine whether a given actuarial method for estimating loss and LAE reserves should be relied upon to a greater or lesser extent than it had been in the past. While some variance is expected each quarter due to the inherent uncertainty in estimating loss and LAE reserves, persistent or large variances would indicate that prior assumptions and/or reliance on certain actuarial methods may need to be revised going forward.

Upon completion of each quarterly review, Ark selects indicated loss and LAE reserve levels based on the results of the relevant actuarial methods, which are the primary consideration in determining management’s best estimate of required loss and LAE reserves. However, in making its best estimate, management also considers other qualitative factors that may lead to a difference between held reserves and actuarially indicated reserve levels. Typically, these qualitative factors are considered when management and Ark’s actuaries conclude that there is insufficient historical incurred and paid loss information or that there is particular uncertainty about whether trends included in the historical incurred and paid loss information are likely to repeat in the future. Such qualitative factors include, among others, recent entry into new markets or new products, improvements in the claims department that are expected to lessen future ultimate loss costs, legal and regulatory developments, inflation, climate change, or other uncertainties that may arise.

The process of establishing loss and LAE reserves, including amounts incurred but not reported, is complex and imprecise as it must consider many variables that are subject to the outcome of future events. As a result, informed subjective estimates and judgments as to Ark’s ultimate exposure to losses are an integral component of the loss and LAE reserving process. Ark categorizes and tracks insurance and reinsurance reserves by “reserving class of business” for each underwriting office, London and Bermuda, and then aggregates the reserving classes by line of business, which are summarized herein as property and accident & health, specialty, marine & energy, casualty - active and casualty - runoff.

Ark regularly reviews the appropriateness of its loss and LAE reserves at the reserving class of business level, considering a variety of trends that impact the ultimate settlement of claims for the subsets of claims in each particular reserving class. Losses and LAE are categorized by the year in which the policy is underwritten (the year of account, or underwriting year) for purposes of Ark’s claims management and estimation of the ultimate loss and LAE reserves. For purposes of Ark’s reporting under GAAP, losses and LAE are categorized by the accident year.

Impact of Third-Party Capital

For the years of account prior to the Ark Transaction, a significant proportion of the Syndicates’ underwriting capital was provided by TPC Providers using whole account reinsurance contracts with Ark’s corporate member. The TPC Providers’ participation in the Syndicates for the 2020 open year of account is 42.8% of the total net result of the Syndicates. For the years of account subsequent to the Ark Transaction, Ark is no longer using TPC Providers to provide underwriting capital for the Syndicates.

A Reinsurance to Close (“RITC”) agreement is generally put in place after the third year of operations for a year of account such that the outstanding loss and LAE reserves, including future development thereon, are reinsured into the next year of account. As a result, and in combination with the changing participation provided by TPC Providers, Ark’s participation on outstanding loss and LAE reserves reinsured into the next year of account may change, perhaps significantly. For example, during 2022, an RITC was executed such that the outstanding loss and LAE reserves for claims arising out of the 2019 year of account, for which the TPC Providers’ participation in the total net results of the Syndicates was 58.3%, were reinsured into the 2020 year of account, for which the TPC Providers’ participation in the total net results of the Syndicates is 42.8%.

Loss and LAE Reserves by Line of Business

The following table summarizes Ark’s loss and LAE reserves, net of reinsurance recoverables on unpaid losses, as of December 31, 2022:

Millions	December 31, 2022		
	Case	IBNR	Total
Property and Accident & Health	\$ 141.9	\$ 116.3	\$ 258.2
Specialty	40.4	163.9	204.3
Marine & Energy	69.4	127.0	196.4
Casualty – Active	16.7	54.8	71.5
Casualty – Runoff	33.6	27.2	60.8
Other	.1	.2	.3
Total loss and LAE reserves, net of reinsurance recoverables ⁽¹⁾	\$ 302.1	\$ 489.4	\$ 791.5

⁽¹⁾ The loss and LAE reserves, net of reinsurance, are net of amounts attributable to TPC Providers of \$145.4, including \$73.8 of case reserves and \$71.6 of IBNR reserves.

For loss and LAE reserves as of December 31, 2022, Ark considers that the impact of the various reserving factors, as described in **Note 5 — “Losses and Loss Adjustment Expense Reserves”** on page F-32, on future paid losses would be similar to the impact of those factors on historical paid losses.

The major causes of material uncertainty (i.e., reserving factors) generally will vary for each line of business, as well as for each separately analyzed reserving class of business within the line of business. Also, reserving factors can have offsetting or compounding effects on estimated loss and LAE reserves. In most cases, it is not possible to measure the effect of a single reserving factor and construct a meaningful sensitivity expectation. Actual results will likely vary from expectations for each of these assumptions, resulting in an ultimate claim liability that is different from that being estimated currently.

Additional causes of material uncertainty exist in most product lines and may impact the types of claims that could occur within a particular line of business or reserving class of business. Examples where reserving factors, within a line of business or reserving class of business, are subject to change include changing types of insured (e.g., size of account, industry insured, jurisdiction), changing underwriting standards, or changing policy provisions (e.g., deductibles, policy limits, endorsements).

Ark Loss and LAE Development

See **Note 5 — “Losses and Loss Adjustment Expense Reserves”** on page F-32 for prior year loss and LAE development discussions for the year ended December 31, 2022.

Range of Reserves

The following table shows the recorded loss and LAE reserves and the high and low ends of Ark’s range of reasonable loss and LAE reserve estimates, net of reinsurance recoverables on unpaid losses, as of December 31, 2022. See **Note 5 — “Losses and Loss Adjustment Expense Reserves”** on page F-32 for a description of Ark’s loss and LAE reserves and actuarial methods.

Millions	December 31, 2022		
	Low	Recorded	High
Total loss and LAE reserves, net of reinsurance recoverables ⁽¹⁾	\$675.7	\$791.5	\$851.6

⁽¹⁾ The recorded loss and LAE reserves and the high and low ends of the range of loss and LAE reserve estimates, net of reinsurance recoverables on unpaid losses, are net of amounts attributable to TPC Providers of \$145.4.

The recorded reserves represent management’s best estimate of unpaid loss and LAE reserves. Management’s best estimate of reserves is in the upper portion of the actuarial range of estimates in response to potential volatility in the actuarial indications and estimates for large claims. Ark uses the results of several different standard actuarial methods to develop its best estimate of ultimate loss and LAE reserves. While it has not determined the statistical probability of actual ultimate paid losses falling within the range, Ark believes that it is reasonably likely that actual ultimate paid losses will fall within the ranges noted above.

On an annual basis, Ark uses an independent external actuary to provide actuarial opinions on the reasonableness of loss and LAE reserves for its operating subsidiaries. Ark uses the independent actuarial review solely to corroborate Ark’s recorded loss and LAE reserves. The result of the independent actuarial review indicated that Ark’s net recorded loss and LAE reserves fall within the ranges noted above.

Although Ark believes its loss and LAE reserves are reasonably stated, ultimate losses may deviate, perhaps materially, from the recorded reserve amounts and could be above the high end of the range of actuarial projections. This is because ranges are developed based on known events as of the valuation date, whereas the ultimate disposition of losses is subject to the outcome of events and circumstances that may be unknown as of the valuation date.

Sensitivity Analysis

Below is a discussion of possible variations from current estimates of loss and LAE reserves due to changes in certain key assumptions. Each of the impacts described below is estimated individually, without consideration for any correlation among key assumptions. Further, there is uncertainty around other assumptions not explicitly quantified in the discussion below. Therefore, it would be inappropriate to take each of the amounts described below and add them together in an attempt to estimate volatility for Ark's reserves in total. It is important to note that the volatilities and variations discussed below are not meant to be worst-case scenarios or an all-inclusive list, and therefore it is possible that future volatilities and variations may be more than amounts discussed below.

- *Sustained elevated levels of inflation:* Elevated levels of inflation have been observed during 2022, and recent economic forecasts suggest this trend will continue at least in the short term. This has been particularly observed in the casualty lines of business with key social inflation drivers being court awards, changes in technology, and the legal environment. For example, a hypothetical increase in inflation rates by 4% per annum would increase the recorded loss and LAE reserves, net of reinsurance recoverables on unpaid losses, for the casualty lines of business by approximately \$7 million, or approximately 5% of the recorded casualty loss and LAE reserves of \$132 million. The property line of business has also been impacted by elevated levels of inflation in relation to many elements of construction costs. While the impact on construction costs could be viewed as a short-term measure, there is uncertainty over how long it will take for the current elevated level of costs to reduce back to historic norms given COVID-19 disruption and worldwide supply chain issues.
- *Catastrophe losses:* The years 2017 through 2022 have been active for major loss events, including natural catastrophes. As time has passed, the emerging claims information for major loss events has been better than expected. As of December 31, 2022, Ark has recorded \$131 million of loss and LAE reserves, net of reinsurance recoverables on unpaid losses, for major loss events, of which \$67 million is held as IBNR reserves. Some, but perhaps not all, of the IBNR reserves may be needed to handle adverse reporting from clients.
- *Ark new business:* In January 2021, in response to an improved underwriting environment, Ark converted GAIL into a Class 4 Bermuda-based insurance and reinsurance company and began to underwrite third-party business. GAIL now underwrites a range of third-party business including property, specialty, marine & energy and casualty lines from Bermuda. GAIL's initial expected loss ratios selected for reserving purposes were based on market benchmarks, supplemented based on discussions with underwriters, policy details, views at time of pricing the risk and emerging experience during 2021 and 2022. As actual losses develop, Ark will revise its initial expectations with its actual experience. However, it could be a few years before Ark has sufficient internal data to rely on and possibly longer for the longer-tailed lines of business, such as casualty. In 2022, GAIL reported gross written premiums of \$619 million. A 10% error in Ark's initial loss ratio estimates could result in approximately \$62 million of adverse variance in loss and LAE reserves.

Loss and LAE Reserve Summary

The following table summarizes the loss and LAE reserve activity of Ark's insurance and reinsurance subsidiaries for the year ended December 31, 2022:

Millions	Year Ended December 31, 2022
Gross beginning balance	\$ 894.7
Less: beginning reinsurance recoverable on unpaid losses ⁽¹⁾	(428.9)
Net loss and LAE reserves	465.8
Losses and LAE incurred relating to:	
Current year losses gross of amounts attributable to TPC Providers	607.1
Less: Current year losses attributable to TPC Providers	(19.0)
Net current year losses	588.1
Prior year losses gross of amounts attributable to TPC Providers	(77.6)
Less: Prior year losses attributable to TPC Providers	25.9
Net prior year losses	(51.7)
Net incurred losses and LAE	536.4
Loss and LAE paid relating to:	
Current year losses gross of amounts attributable to TPC Providers	(100.0)
Less: Current year losses attributable to TPC Providers	1.1
Net current year losses	(98.9)
Prior year losses gross of amounts attributable to TPC Providers	(220.2)
Less: Prior year losses attributable to TPC Providers	61.6
Net prior year losses	(158.6)
Net paid losses and LAE	(257.5)
Change in TPC Providers' participation ⁽²⁾	57.5
Foreign currency translation and other adjustments to loss and LAE reserves	(10.7)
Net ending balance	791.5
Plus: ending reinsurance recoverable on unpaid losses ⁽³⁾	505.0
Gross ending balance	\$ 1,296.5

⁽¹⁾ The beginning reinsurance recoverable on unpaid losses includes amounts attributable to TPC Providers of \$276.8 as of December 31, 2021.

⁽²⁾ Amount represents the impact to net loss and LAE reserves due to a change in the TPC Providers' participation related to the annual RITC process.

⁽³⁾ The ending reinsurance recoverable on unpaid losses includes amounts attributable to TPC Providers of \$145.4 as of December 31, 2022.

During the year ended December 31, 2022, Ark experienced \$52 million of net favorable prior year loss reserve development. Ark's net favorable prior year loss reserve development was driven primarily by the property and accident & health (\$21 million), marine & energy (\$19 million) and specialty (\$13 million) reserving lines of business. The favorable prior year loss reserve development in the property and accident & health, marine & energy and specialty reserving lines of business was driven primarily by positive claims experience within the 2021 accident year.

The following table summarizes the unpaid loss and LAE reserves, net of reinsurance recoverables on unpaid losses, for each of Ark's major reserving lines of business as of December 31, 2022:

<u>Millions</u>	<u>As of December 31, 2022</u>
Property and Accident & Health	\$ 258.2
Specialty	204.3
Marine & Energy	196.4
Casualty - Active	71.5
Casualty - Runoff	60.8
Other	.3
Unpaid loss and LAE reserves, net of reinsurance recoverables on unpaid losses	<u>791.5</u>
Plus: Reinsurance recoverables on unpaid losses ⁽¹⁾	
Property and Accident & Health	224.6
Specialty	97.2
Marine & Energy	79.8
Casualty - Active	49.9
Casualty - Runoff	53.5
Total Reinsurance recoverables on unpaid losses ⁽¹⁾	<u>505.0</u>
Total unpaid loss and LAE reserves	\$ 1,296.5

⁽¹⁾ The reinsurance recoverables on unpaid losses include amounts attributable to TPC Providers of \$145.4 as of December 31, 2022.

The following ten tables include two tables each for the property and accident & health, specialty, marine & energy, casualty-active and casualty-runoff reserving lines of business. The first table for each reserving line of business is presented net of reinsurance, which includes the impact of whole-account quota-share reinsurance arrangements related to TPC Providers. Through the annual RITC process and in combination with the changing participation provided by TPC Providers, Ark's participation on outstanding loss and LAE reserves on prior years of account can fluctuate. Depending on the change in the TPC Providers' participation from one year of account to the next, the impact could be significant and is reflected in the tables on a retrospective basis by accident year. That is, for the RITC executed in the current year that changes Ark's participation for claims relating to prior accident years, the prior year columns are adjusted to include the impact of the RITC. The second table for each reserving line of business excludes the impact of amounts attributable to TPC Providers. White Mountains believes this information is useful to management and investors in evaluating Ark's loss and LAE reserves on a fully aligned basis (i.e., 100% of the Syndicates' results), by excluding the impact of changing levels of TPC Providers' participation from one year of account to the next. The following table summarizes the participation of Ark's TPC Providers by year of account:

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
TPC Providers' Participation	— %	66.2 %	70.0 %	59.6 %	60.0 %	57.6 %	58.3 %	42.8 %	— %	— %

Each of the ten tables includes three sections.

The top section of the table presents, for each of the previous 10 accident years (1) cumulative total undiscounted incurred loss and LAE as of each of the previous 10 year-end evaluations, (2) total IBNR plus expected development on reported claims as of December 31, 2022, and (3) the cumulative number of reported claims as of December 31, 2022.

The middle section of the table presents cumulative paid loss and LAE for each of the previous 10 accident years as of each of the previous 10 year-end evaluations. Also included in this section is a calculation of the loss and LAE reserves as of December 31, 2022 which is then included in the reconciliation to the consolidated balance sheet presented above. The total unpaid loss and LAE reserves as of December 31, 2022 is calculated as the cumulative incurred loss and LAE from the top section less the cumulative paid loss and LAE from the middle section, plus any outstanding liabilities from accident years prior to 2013.

The bottom section of the table is supplementary information about the average historical claims duration as of December 31, 2022. It shows the weighted average annual percentage payout of incurred loss and LAE by accident year as of each age. For example, the first column is calculated as the incremental paid loss and LAE in the first calendar year for each given accident year (e.g. calendar year 2020 for accident year 2020, calendar year 2021 for accident year 2021) divided by the cumulative incurred loss and LAE as of December 31, 2022 for that accident year. The resulting ratios are weighted together using cumulative incurred loss and LAE as of December 31, 2022.

Property and Accident & Health													
\$ in Millions													
Accident Year	Incurred Loss and LAE, Net of Reinsurance										As of December 31, 2022		
	For the Years Ended December 31,										Total IBNR plus expected development on reported claims	Cumulative number of reported claims	
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022			
2013	\$ 67.8	\$ 60.4	\$ 60.3	\$ 60.1	\$ 59.6	\$ 59.5	\$ 59.4	\$ 59.3	\$ 59.3	\$ 59.3	\$.1	2,530
2014		32.2	29.1	29.0	28.3	28.1	28.2	28.2	28.2	28.2		.1	2,919
2015			18.8	17.9	16.9	15.9	15.7	15.7	15.5	15.4		.1	2,826
2016				21.9	17.2	17.9	18.1	18.1	18.3	18.2		.1	3,419
2017					24.6	31.4	38.9	37.9	36.5	36.0		5.7	4,599
2018						38.1	44.5	46.4	44.1	44.2		1.3	4,254
2019							31.6	28.9	24.7	21.5		.7	3,999
2020								65.2	63.3	62.9		7.3	4,551
2021									163.0	146.8		10.6	3,318
2022										234.5		90.1	2,899
										Total	\$ 667.0		

Property and Accident & Health													
Millions													
Accident Year	Cumulative Paid Loss and LAE, Net of Reinsurance												
	For the Years Ended December 31,												
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022			
2013	\$ 15.4	\$ 39.1	\$ 58.1	\$ 59.1	\$ 59.1	\$ 59.4	\$ 59.3	\$ 59.3	\$ 59.2	\$ 59.2			
2014		13.6	24.9	27.1	27.5	27.6	27.8	27.9	27.8	27.9			
2015			6.9	12.2	13.4	14.6	14.6	14.8	15.0	15.0			
2016				8.5	13.1	16.4	16.8	16.9	17.2	17.8			
2017					16.8	25.8	31.6	32.8	29.6	27.3			
2018						15.6	32.2	40.1	40.0	40.8			
2019							6.8	16.7	18.3	18.5			
2020								11.2	34.1	47.0			
2021									30.8	86.7			
2022										70.0			
										Total		410.2	
												1.4	
												Loss and LAE reserves, net of reinsurance	\$ 258.2

Property and Accident & Health										
Average Annual Percentage Payout of Incurred Losses and LAE by Age, Net of Reinsurance										
Years	1	2	3	4	5	6	7	8	9	10
	31.4%	34.2%	19.3%	5.5%	1.2%	0.8%	0.8%	0.3%	—%	—%

Property and Accident & Health
\$ in Millions
**Incurred Loss and LAE, Gross of Amounts Attributable to TPC Providers
For the Years Ended December 31,**

Accident Year	For the Years Ended December 31,										As of December 31, 2022	
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total IBNR plus expected development on reported claims	Cumulative number of reported claims
2013	\$ 72.1	\$ 64.7	\$ 64.6	\$ 63.9	\$ 62.4	\$ 62.0	\$ 61.6	\$ 61.6	\$ 61.6	\$ 61.5	\$.1	2,530
2014		54.4	52.5	52.2	49.8	49.4	49.6	49.6	49.6	49.7	.2	2,919
2015			53.8	51.0	47.8	45.3	44.8	44.9	44.4	44.2	.2	2,826
2016				59.5	47.5	49.3	49.7	49.6	50.1	50.0	.2	3,419
2017					56.5	73.5	92.3	89.9	86.5	85.6	10.0	4,599
2018						88.5	103.7	108.1	102.7	102.9	2.4	4,254
2019							71.4	64.8	54.8	49.3	1.3	3,999
2020								122.8	119.4	118.6	12.7	4,551
2021									191.9	170.9	12.4	3,318
2022										242.8	97.7	2,899
										Total \$ 975.5		

Property and Accident & Health
Millions
**Cumulative Paid Loss and LAE, Gross of Amounts Attributable to TPC Providers
For the Years Ended December 31,**

Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
2013	\$ 15.4	\$ 39.1	\$ 58.1	\$ 61.2	\$ 61.1	\$ 61.7	\$ 61.6	\$ 61.6	\$ 61.4	\$ 61.4	
2014		18.7	40.5	47.0	48.2	48.4	48.9	49.1	49.0	49.1	
2015			18.6	35.7	39.7	42.6	42.5	43.1	43.5	43.5	
2016				24.3	38.1	46.3	47.2	47.4	48.1	49.2	
2017					42.5	65.0	79.3	82.2	74.5	70.4	
2018						37.5	77.2	95.6	95.5	96.9	
2019							16.1	39.8	43.7	43.9	
2020								24.1	68.2	90.9	
2021									38.9	103.2	
2022										70.4	
									Total	678.9	
										All outstanding liabilities before 2013, gross of amounts attributable to TPC Providers	2.0
										Loss and LAE reserves, gross of amounts attributable to TPC Providers	\$ 298.6

Property and Accident & Health
Average Annual Percentage Payout of Incurred Losses and LAE by Age, Gross of Amounts Attributable to TPC Providers

Years	1	2	3	4	5	6	7	8	9	10
	32.2%	34.7%	17.9%	4.7%	0.6%	0.9%	1.9%	0.5%	(0.1)%	0.1%

Specialty \$ in Millions													
Incurred Loss and LAE, Net of Reinsurance For the Years Ended December 31,											As of December 31, 2022		
Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total IBNR plus expected development on reported claims	Cumulative number of reported claims	
2013	\$ 47.0	\$ 28.5	\$ 17.6	\$ 16.2	\$ 15.9	\$ 15.8	\$ 15.5	\$ 15.7	\$ 15.7	\$ 15.8	\$.1	1,042	
2014		45.5	43.8	40.8	40.4	40.8	43.3	43.4	43.3	43.1	—	1,357	
2015			16.2	13.6	11.2	9.6	9.9	10.1	10.1	7.8	.1	1,840	
2016				18.1	14.1	10.8	11.1	11.7	11.6	8.8	.2	1,927	
2017					17.3	12.2	11.3	10.8	11.0	10.0	—	2,187	
2018						13.2	14.9	15.4	14.7	13.5	.7	2,110	
2019							18.5	16.3	15.4	22.4	1.1	2,347	
2020								21.4	20.5	16.3	2.5	1,985	
2021									67.6	59.4	33.9	1,644	
2022										172.8	125.3	985	
												Total	\$ 369.9

Specialty Millions												
Cumulative Paid Loss and LAE, Net of Reinsurance For the Years Ended December 31,												
Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
2013	\$ 17.0	\$ 13.2	\$ 14.9	\$ 15.4	\$ 15.5	\$ 15.7	\$ 15.7	\$ 15.7	\$ 15.6	\$ 15.6		
2014		26.3	38.9	39.7	40.1	40.7	42.0	42.8	42.7	43.0		
2015			4.0	7.0	7.6	8.0	8.1	8.1	8.1	6.4		
2016				3.2	7.9	9.1	9.9	10.3	10.3	8.5		
2017					3.1	6.6	8.4	8.5	8.5	9.2		
2018						2.7	8.2	10.0	10.4	11.8		
2019							4.8	6.9	7.4	18.2		
2020								5.2	10.6	13.0		
2021									5.1	24.1		
2022										16.0		
											Total	165.8
											All outstanding liabilities before 2013, net of reinsurance	.2
											Loss and LAE reserves, net of reinsurance	\$ 204.3

Specialty										
Average Annual Percentage Payout of Incurred Losses and LAE by Age, Net of Reinsurance										
Years	1	2	3	4	5	6	7	8	9	10
	25.8%	33.4%	7.8%	4.8%	5.9%	5.9%	1.4%	1.9%	(3.2)%	(0.8)%

Specialty \$ in Millions												
Incurred Loss and LAE, Gross of Amounts Attributable to TPC Providers For the Years Ended December 31,											As of December 31, 2022	
Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total IBNR plus expected development on reported claims	Cumulative number of reported claims
2013	\$ 52.0	\$ 33.5	\$ 22.6	\$ 18.6	\$ 17.6	\$ 17.5	\$ 16.6	\$ 17.1	\$ 17.2	\$ 17.4	\$.1	1,042
2014		65.2	63.2	54.4	53.1	54.1	60.4	60.5	60.2	59.9	—	1,357
2015			46.5	38.9	31.1	27.1	27.9	28.4	28.3	24.3	.3	1,840
2016				51.3	38.7	30.5	31.3	32.7	32.6	27.5	.3	1,927
2017					41.6	29.0	26.8	25.6	26.0	24.3	.1	2,187
2018						29.0	33.3	34.4	32.6	30.6	1.2	2,110
2019							38.9	33.7	31.7	43.9	1.9	2,347
2020								42.7	41.6	34.2	4.4	1,985
2021									80.4	66.1	36.6	1,644
2022										180.6	132.7	985
												Total \$ 508.8

Specialty Millions												
Cumulative Paid Loss and LAE, Gross of Amounts Attributable to TPC Providers For the Years Ended December 31,												
Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
2013	\$ 17.0	\$ 13.2	\$ 14.9	\$ 16.5	\$ 16.7	\$ 17.1	\$ 17.1	\$ 17.1	\$ 17.0	\$ 17.0		
2014		30.6	49.3	51.6	52.8	54.4	57.6	59.4	59.3	59.8		
2015			12.1	21.6	23.6	24.5	24.7	24.8	24.9	21.9		
2016				9.9	24.4	27.2	29.2	30.2	30.3	27.2		
2017					8.3	16.8	21.3	21.7	21.7	22.9		
2018						6.7	20.0	24.1	25.1	27.6		
2019							11.5	16.5	17.7	36.6		
2020								11.8	24.3	28.5		
2021									6.0	27.9		
2022										16.1		
											Total	285.5
											All outstanding liabilities before 2013, gross of amounts attributable to TPC Providers	.6
											Loss and LAE reserves, gross of amounts attributable to TPC Providers	\$ 223.9

Specialty										
Average Annual Percentage Payout of Incurred Losses and LAE by Age, Gross of Amounts Attributable to TPC Providers										
Years	1	2	3	4	5	6	7	8	9	10
	26.9%	34.4%	8.4%	6.8%	5.6%	6.0%	1.3%	1.0%	(4.2)%	(1.9)%

Marine & Energy
\$ in Millions
**Incurred Loss and LAE, Net of Reinsurance
For the Years Ended December 31,**
As of December 31, 2022

Accident Year	For the Years Ended December 31,										As of December 31, 2022	
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total IBNR plus expected development on reported claims	Cumulative number of reported claims
2013	\$ 55.4	\$ 41.7	\$ 32.3	\$ 31.0	\$ 30.8	\$ 29.6	\$ 29.5	\$ 29.3	\$ 29.4	\$ 29.3	\$ (.)	2,638
2014		34.1	19.9	17.0	16.1	14.0	13.6	13.9	13.6	13.7	(.)	2,572
2015			21.0	16.7	15.4	12.6	12.0	12.1	12.0	12.2	—	3,238
2016				23.1	19.2	15.4	14.3	14.0	14.5	13.8	—	3,764
2017					25.3	18.6	16.8	16.2	15.9	15.0	.2	4,117
2018						24.6	19.1	16.6	17.0	16.6	.2	3,205
2019							20.7	18.6	18.6	18.3	.6	2,331
2020								24.4	21.7	23.2	1.8	1,529
2021									83.0	66.1	24.8	1,356
2022										148.2	99.5	1,188
	Total										\$ 356.4	

Marine & Energy
Millions
**Cumulative Paid Loss and LAE, Net of Reinsurance
For the Years Ended December 31,**

Accident Year	For the Years Ended December 31,										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
2013	\$ 7.8	\$ 22.2	\$ 27.6	\$ 28.6	\$ 29.1	\$ 29.3	\$ 29.3	\$ 29.1	\$ 29.3	\$ 29.3	
2014		5.8	12.1	13.2	14.0	14.1	13.4	13.6	13.5	13.7	
2015			4.0	7.8	9.6	10.9	10.3	10.4	10.8	11.4	
2016				5.5	10.0	12.6	13.0	13.1	13.7	13.4	
2017					5.1	11.1	12.8	14.0	14.1	14.1	
2018						2.7	12.5	14.0	14.7	15.4	
2019							3.3	10.6	12.6	14.3	
2020								3.1	12.7	16.0	
2021									6.3	24.2	
2022										12.2	
	Total										164.0
	All outstanding liabilities before 2013, net of reinsurance										4.0
	Loss and LAE reserves, net of reinsurance										\$ 196.4

Marine & Energy
Average Annual Percentage Payout of Incurred Losses and LAE by Age, Net of Reinsurance

Years	1	2	3	4	5	6	7	8	9	10
	17.4%	35.8%	19.9%	5.9%	4.3%	6.9%	0.3%	0.3%	(0.3)%	0.1%

Marine & Energy

\$ in Millions

**Incurred Loss and LAE, Gross of Amounts Attributable to TPC Providers
For the Years Ended December 31,**

As of December 31, 2022

Accident Year	For the Years Ended December 31,										As of December 31, 2022	
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total IBNR plus expected development on reported claims	Cumulative number of reported claims
2013	\$ 64.0	\$ 50.3	\$ 40.9	\$ 36.9	\$ 36.2	\$ 33.2	\$ 33.1	\$ 32.5	\$ 32.8	\$ 32.7	\$ (.3)	2,638
2014		59.5	40.0	31.3	28.3	23.1	22.1	22.8	22.2	22.4	(.3)	2,572
2015			59.7	46.1	41.9	34.9	33.3	33.7	33.4	33.8	.1	3,238
2016				62.2	50.9	41.3	38.6	37.9	39.2	37.9	.1	3,764
2017					61.6	45.0	40.6	39.1	38.4	36.9	.4	4,117
2018						57.9	44.9	39.0	39.9	39.1	.4	3,205
2019							45.5	40.5	40.6	40.1	1.0	2,331
2020								46.5	41.8	44.3	3.1	1,529
2021									93.5	73.1	26.8	1,356
2022										149.8	100.8	1,188
	Total										\$ 510.1	

Marine & Energy

Millions

**Cumulative Paid Loss and LAE, Gross of Amounts Attributable to TPC Providers
For the Years Ended December 31,**

Accident Year	For the Years Ended December 31,										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
2013	\$ 7.8	\$ 22.2	\$ 27.6	\$ 30.5	\$ 32.1	\$ 32.6	\$ 32.7	\$ 32.2	\$ 32.6	\$ 32.6	
2014		7.8	17.4	20.7	23.4	23.6	21.8	22.3	21.9	22.4	
2015			10.1	22.4	28.3	31.7	30.2	30.3	31.3	32.4	
2016				16.5	28.7	35.0	36.1	36.4	37.8	37.2	
2017					13.1	27.9	32.1	35.1	35.2	35.2	
2018						6.5	30.5	34.3	36.0	37.1	
2019							8.0	25.4	30.1	33.0	
2020								6.7	26.0	31.9	
2021									7.5	28.2	
2022										12.4	
	Total										302.4
	All outstanding liabilities before 2013, gross of amounts attributable to TPC Providers										7.0
	Loss and LAE reserves, gross of amounts attributable to TPC Providers										\$ 214.7

Marine & Energy

Average Annual Percentage Payout of Incurred Losses and LAE by Age, Gross of Amounts Attributable to TPC Providers

Years	1	2	3	4	5	6	7	8	9	10
		19.0%	36.9%	17.9%	6.4%	3.7%	6.0%	0.8%	0.6%	(0.1)%

Casualty - Active
\$ in Millions
**Incurred Loss and LAE, Net of Reinsurance
For the Years Ended December 31,**
As of December 31, 2022

Accident Year	Incurred Loss and LAE, Net of Reinsurance For the Years Ended December 31,											As of December 31, 2022	
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total IBNR plus expected development on reported claims	Cumulative number of reported claims	
2013	\$ 18.2	\$ 13.0	\$ 8.5	\$ 8.0	\$ 8.0	\$ 8.1	\$ 7.7	\$ 7.8	\$ 7.8	\$ 7.8	\$.1	1,144	
2014		12.6	8.7	7.7	7.5	7.4	7.0	7.1	6.9	7.1	.2	1,385	
2015			8.8	9.0	7.4	7.3	6.6	6.4	6.3	6.5	.2	1,280	
2016				7.6	7.1	7.8	7.8	7.9	8.0	8.1	.3	1,528	
2017					9.5	9.6	8.7	7.3	7.0	8.4	.9	1,580	
2018						11.0	11.5	9.2	9.0	6.8	1.1	1,036	
2019							11.6	10.4	9.1	7.3	2.4	834	
2020								9.7	8.3	7.1	4.2	524	
2021									17.4	18.4	16.3	674	
2022										32.0	28.8	832	
	Total										\$ 109.5		

Casualty - Active
Millions
**Cumulative Paid Loss and LAE, Net of Reinsurance
For the Years Ended December 31,**

Accident Year	Cumulative Paid Loss and LAE, Net of Reinsurance For the Years Ended December 31,										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
2013	\$ 1.5	\$ 3.6	\$ 5.3	\$ 5.8	\$ 6.3	\$ 6.7	\$ 7.0	\$ 7.0	\$ 7.3	\$ 7.5	
2014		1.3	3.5	4.2	4.7	5.2	5.5	5.9	6.0	6.2	
2015			1.8	2.4	3.2	4.4	4.7	4.9	5.1	5.5	
2016				.2	1.0	2.3	4.0	4.6	5.3	6.5	
2017					.8	1.7	2.8	3.4	4.2	5.7	
2018						.3	1.4	3.5	4.3	4.3	
2019							.3	1.4	2.3	3.0	
2020								.5	1.0	2.0	
2021									.5	.9	
2022										.4	
	Total										42.0
	All outstanding liabilities before 2013, net of reinsurance										4.0
	Loss and LAE reserves, net of reinsurance										\$ 71.5

Casualty - Active
Average Annual Percentage Payout of Incurred Losses and LAE by Age, Net of Reinsurance

Years	1	2	3	4	5	6	7	8	9	10
	6.8%	11.7%	16.7%	12.7%	8.0%	10.8%	4.9%	3.1%	1.2%	2.9%

Casualty - Active

\$ in Millions

Incurred Loss and LAE, Gross of Amounts Attributable to TPC Providers
For the Years Ended December 31,

As of December 31, 2022

Accident Year	For the Years Ended December 31,											As of December 31, 2022	
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total IBNR plus expected development on reported claims	Cumulative number of reported claims	
2013	\$ 23.6	\$ 18.3	\$ 13.9	\$ 12.5	\$ 12.2	\$ 12.6	\$ 11.6	\$ 11.8	\$ 11.8	\$ 11.8	\$.3	1,144	
2014		20.9	17.3	14.6	13.7	13.5	12.4	12.7	12.2	12.7	.3	1,385	
2015			20.3	21.1	16.0	15.6	13.8	13.3	13.0	13.5	.3	1,280	
2016				17.7	16.2	17.8	18.0	18.2	18.4	18.5	.6	1,528	
2017					21.8	22.2	19.9	16.5	15.8	18.3	1.5	1,580	
2018						23.5	24.4	19.2	18.5	14.6	1.9	1,036	
2019							23.3	20.6	17.4	14.3	4.1	834	
2020								18.4	15.1	13.0	7.4	524	
2021									22.7	23.1	19.8	674	
2022										32.9	29.1	832	
	Total \$ 172.7												

Casualty - Active

Millions

Cumulative Paid Loss and LAE, Gross of Amounts Attributable to TPC Providers
For the Years Ended December 31,

Accident Year	For the Years Ended December 31,											
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
2013	\$ 1.5	\$ 3.6	\$ 5.3	\$ 6.7	\$ 8.5	\$ 9.5	\$ 10.2	\$ 10.3	\$ 10.8	\$ 11.3		
2014		1.3	3.7	5.9	7.6	8.7	9.5	10.5	10.7	11.0		
2015			2.0	3.6	6.3	9.2	10.0	10.5	11.1	11.6		
2016				0.7	3.2	6.4	10.6	11.9	13.7	15.8		
2017					2.6	4.8	7.5	9.1	10.9	13.5		
2018						0.8	3.5	8.5	10.3	10.3		
2019							.8	3.3	5.6	6.8		
2020								1.1	2.4	4.1		
2021									1.0	1.6		
2022										.5		
											Total	86.5
											All outstanding liabilities before 2013, gross of amounts attributable to TPC Providers	6.8
											Loss and LAE reserves, gross of amounts attributable to TPC Providers	\$ 93.0

Casualty - Active

Average Annual Percentage Payout of Incurred Losses and LAE by Age, Gross of Amounts Attributable to TPC Providers

Years	1	2	3	4	5	6	7	8	9	10
		6.4%	11.2%	16.3%	12.8%	8.7%	12.2%	6.4%	4.0%	1.9%

Casualty - Runoff

\$ in Millions

Incurred Loss and LAE, Net of Reinsurance

For the Years Ended December 31,

As of December 31, 2022

Accident Year	Incurred Loss and LAE, Net of Reinsurance For the Years Ended December 31,										As of December 31, 2022	
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total IBNR plus expected development on reported claims	Cumulative number of reported claims
2013	\$ 47.7	\$ 51.4	\$ 47.7	\$ 49.0	\$ 47.6	\$ 47.3	\$ 47.7	\$ 47.5	\$ 47.5	\$ 47.5	\$ 1.4	1,798
2014		45.8	45.3	47.8	50.9	54.5	56.0	56.0	55.8	55.6	1.3	1,941
2015			33.8	29.4	30.6	34.0	33.8	34.8	34.1	36.6	1.6	1,995
2016				28.6	28.3	36.5	34.7	34.9	34.6	33.8	1.7	2,150
2017					27.4	30.8	28.2	28.9	28.4	26.7	2.2	1,599
2018						29.4	23.9	23.0	22.3	21.9	3.3	1,267
2019							21.1	17.8	18.0	19.4	5.0	961
2020								11.3	7.6	9.3	3.9	558
2021									8.2	4.8	2.7	277
2022										.6	.1	76
	Total										\$ 256.2	

Casualty - Runoff

Millions

Cumulative Paid Loss and LAE, Net of Reinsurance

For the Years Ended December 31,

Accident Year	Cumulative Paid Loss and LAE, Net of Reinsurance For the Years Ended December 31,										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
2013	\$ 7.1	\$ 19.4	\$ 35.7	\$ 40.6	\$ 42.4	\$ 43.3	\$ 43.9	\$ 44.6	\$ 44.9	\$ 45.2	
2014		6.4	23.1	29.5	36.4	43.1	46.9	48.5	49.3	51.8	
2015			4.3	8.2	14.5	21.4	24.7	27.3	28.9	33.1	
2016				3.9	10.2	17.7	22.7	25.4	27.8	28.7	
2017					3.2	9.4	14.6	18.5	21.4	22.5	
2018						3.4	7.4	12.6	14.9	16.3	
2019							3.3	5.8	7.8	12.1	
2020								.8	1.3	3.1	
2021									.5	1.7	
2022										.3	
	Total										214.8
	All outstanding liabilities before 2013, net of reinsurance										19.4
	Loss and LAE reserves, net of reinsurance										\$ 60.8

Casualty - Runoff
Average Annual Percentage Payout of Incurred Losses and LAE by Age, Net of Reinsurance

Years	1	2	3	4	5	6	7	8	9	10
		9.4%	15.4%	17.2%	15.7%	9.0%	7.4%	6.3%	4.3%	2.8%

Casualty - Runoff
\$ in Millions
Incurred Loss and LAE, Gross of Amounts Attributable to TPC Providers
For the Years Ended December 31,
As of December 31, 2022

Accident Year	For the Years Ended December 31,										As of December 31, 2022	
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total IBNR plus expected development on reported claims	Cumulative number of reported claims
2013	\$ 67.7	\$ 71.4	\$ 67.7	\$ 71.5	\$ 66.8	\$ 66.2	\$ 67.3	\$ 66.7	\$ 66.8	\$ 66.7	\$ 2.4	1,798
2014		79.6	82.3	89.9	100.2	109.0	112.8	112.7	112.4	112.0	2.2	1,941
2015			85.0	72.3	76.3	84.9	84.2	86.6	85.1	89.3	2.8	1,995
2016				74.3	71.1	91.4	86.8	87.4	86.7	85.2	3.0	2,150
2017					63.7	72.1	65.7	67.3	66.0	63.1	3.9	1,599
2018						66.6	52.8	50.7	49.0	48.3	5.7	1,267
2019							43.9	36.2	36.5	39.1	8.8	961
2020								22.3	14.1	16.9	6.8	558
2021									14.7	8.6	4.8	277
2022										1.0	.2	76
Total \$ 530.2												

Casualty - Runoff
Millions
Cumulative Paid Loss and LAE, Gross of Amounts Attributable to TPC Providers
For the Years Ended December 31,

Accident Year	For the Years Ended December 31,										Total	
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
2013	\$ 7.1	\$ 19.4	\$ 35.7	\$ 50.1	\$ 56.1	\$ 58.4	\$ 60.0	\$ 61.4	\$ 62.2	\$ 62.8		
2014		7.3	27.3	46.2	69.3	85.8	95.4	99.2	100.9	105.4		
2015			7.5	19.6	40.7	57.7	65.9	72.1	76.0	83.2		
2016				11.9	31.4	50.0	62.6	68.8	74.7	76.3		
2017					9.4	24.8	37.8	46.8	53.8	55.8		
2018						8.4	18.3	30.5	36.1	38.4		
2019							8.1	14.0	18.8	26.4		
2020								1.8	3.0	6.1		
2021									1.3	3.4		
2022										.6		
Total											458.4	
All outstanding liabilities before 2013, gross of amounts attributable to TPC Providers												34.4
Loss and LAE reserves, gross of amounts attributable to TPC Providers											\$	106.2

Casualty - Runoff
Average Annual Percentage Payout of Incurred Losses and LAE by Age, Gross of Amounts Attributable to TPC Providers

Years	1	2	3	4	5	6	7	8	9	10
	9.2%	14.5%	17.2%	16.2%	9.1%	7.2%	5.5%	5.5%	4.6%	2.6%

The following tables provide a reconciliation from the first table grouping above presented net of reinsurance and the second table grouping above presented gross of amounts attributable to TPC Providers:

Millions	December 31, 2022		
	Cumulative Incurred Loss and LAE		
	Net of Reinsurance	Amounts Attributable to TPC Providers	Gross of Amounts Attributable to TPC Providers
Property and Accident & Health	\$ 667.0	\$ 308.5	\$ 975.5
Specialty	369.9	138.9	508.8
Marine & Energy	356.4	153.7	510.1
Casualty – Active	109.5	63.2	172.7
Casualty – Runoff	256.2	274.0	530.2
Total	\$ 1,759.0	\$ 938.3	\$ 2,697.3

Millions	December 31, 2022		
	Cumulative Paid Loss and LAE		
	Net of Reinsurance	Amounts Attributable to TPC Providers	Gross of Amounts Attributable to TPC Providers
Property and Accident & Health	\$ 410.2	\$ 268.7	\$ 678.9
Specialty	165.8	119.7	285.5
Marine & Energy	164.0	138.4	302.4
Casualty – Active	42.0	44.5	86.5
Casualty – Runoff	214.8	243.6	458.4
Total	\$ 996.8	\$ 814.9	\$ 1,811.7

Millions	December 31, 2022		
	Loss and LAE Reserves		
	Net of Reinsurance	Amounts Attributable to TPC Providers	Gross of Amounts Attributable to TPC Providers
Property and Accident & Health	\$ 258.2	\$ 40.4	\$ 298.6
Specialty	204.3	19.6	223.9
Marine & Energy	196.4	18.3	214.7
Casualty – Active	71.5	21.5	93.0
Casualty – Runoff	60.8	45.4	106.2
Total	\$ 791.2	\$ 145.2	\$ 936.4

4. Goodwill and Other Intangible Assets

As of December 31, 2022, goodwill and other intangible assets recognized in connection with business and asset acquisitions totaled \$392 million, of which \$290 million was attributable to White Mountains's common shareholders. See **Note 4 — "Goodwill and Other Intangible Assets."** Goodwill represents the excess of the amount paid to acquire subsidiaries over the fair value of identifiable net assets at the date of acquisition. Other intangible assets are recorded at their acquisition date fair values, which involves significant management judgment, the use of valuation models and assumptions that are inherently subjective. Goodwill and indefinite-lived intangible assets are not amortized but rather reviewed for potential impairment on an annual basis, or whenever indications of potential impairment exist. In the absence of any indications of potential impairment, the evaluation of goodwill and indefinite-lived intangible assets is performed no later than the interim period in which the anniversary of the acquisition date falls. Finite-lived intangible assets, which are amortized over their estimated economic lives, are reviewed for impairment only when events occur or there are changes in circumstances indicating that their carrying value may exceed fair value. Impairment exists when the carrying value of goodwill or other intangible assets exceeds fair value.

White Mountains's annual review first assesses whether qualitative factors indicate that the carrying value of goodwill or other intangible assets may be impaired. If White Mountains determines, based on this qualitative review, that it is more likely than not that an impairment may exist, then White Mountains performs a quantitative analysis to compare the fair value of a reporting unit with its carrying value. If the carrying value exceeds the estimated fair value, then an impairment charge is recognized through current period pre-tax income (loss). Both the annual qualitative assessment of potential impairment as well as the quantitative comparison of carrying value to estimated fair value involve management judgment, the use of discounted cash flow models, market comparisons and other valuation techniques and assumptions, including customer retention rates and revenue growth rates, that are inherently subjective.

As of December 31, 2022, White Mountains had total goodwill and other intangible assets of \$392 million, of which \$293 million related to the acquisition of Ark. During 2022 and 2021, White Mountains performed its periodic reviews for potential impairment and did not recognize any impairments of goodwill and other intangible assets.

See **Item 1A. Risk Factors**, "*If we are required to write down goodwill and other intangible assets, it could materially adversely affect our results of operations and financial condition.*" on page 26.

FORWARD-LOOKING STATEMENTS

This report may contain “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. All statements, other than statements of historical facts, included or referenced in this report which address activities, events or developments which White Mountains expects or anticipates will or may occur in the future are forward-looking statements. The words “could”, “will”, “believe”, “intend”, “expect”, “anticipate”, “project”, “estimate”, “predict” and similar expressions are also intended to identify forward-looking statements. These forward-looking statements include, among others, statements with respect to White Mountains’s:

- change in book value per share, adjusted book value per share or return on equity;
- business strategy;
- financial and operating targets or plans;
- incurred loss and LAE and the adequacy of its loss and LAE reserves and related reinsurance;
- projections of revenues, income (or loss), earnings (or loss) per share, EBITDA, adjusted EBITDA, dividends, market share or other financial forecasts of White Mountains or its businesses;
- expansion and growth of its business and operations; and
- future capital expenditures.

These statements are based on certain assumptions and analyses made by White Mountains in light of its experience and perception of historical trends, current conditions and expected future developments, as well as other factors believed to be appropriate in the circumstances. However, whether actual results and developments will conform to its expectations and predictions is subject to risks and uncertainties that could cause actual results to differ materially from expectations, including:

- the risks associated with Item 1A of this Report on Form 10-K;
- claims arising from catastrophic events, such as hurricanes, windstorms, earthquakes, floods, wildfires, tornadoes, tsunamis, severe winter weather, public health crises, terrorist attacks, war and war-like actions, explosions, infrastructure failures or cyber attacks;
- recorded loss reserves subsequently proving to have been inadequate;
- the market value of White Mountains’s investment in MediaAlpha;
- the trends and uncertainties from the COVID-19 pandemic, including judicial interpretations on the extent of insurance coverage provided by insurers for COVID-19 pandemic related claims;
- business opportunities (or lack thereof) that may be presented to it and pursued;
- actions taken by rating agencies, such as financial strength or credit ratings downgrades or placing ratings on negative watch;
- the continued availability of capital and financing;
- deterioration of general economic, market or business conditions, including due to outbreaks of contagious disease (including the COVID-19 pandemic) and corresponding mitigation efforts;
- competitive forces, including the conduct of other insurers;
- changes in domestic or foreign laws or regulations, or their interpretation, applicable to White Mountains, its competitors or its customers; and
- other factors, most of which are beyond White Mountains’s control.

Consequently, all of the forward-looking statements made in this report are qualified by these cautionary statements, and there can be no assurance that the actual results or developments anticipated by White Mountains will be realized or, even if substantially realized, that they will have the expected consequences to, or effects on, White Mountains or its business or operations. White Mountains assumes no obligation to publicly update any such forward-looking statements, whether as a result of new information, future events or otherwise.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

White Mountains's consolidated balance sheet includes a substantial amount of assets and liabilities whose fair values are subject to market risk. The term market risk refers to the risk of loss arising from adverse changes in interest rates, credit spreads, equity markets prices and other relevant market rates and prices. Due to the size of White Mountains's investment portfolio, market risk could have a significant effect on White Mountains's consolidated financial condition, results of operations and cash flows.

Interest Rate and Credit Spread Risk

White Mountains invests in interest rate sensitive securities. White Mountains generally manages the interest rate risk associated with its portfolio of fixed maturity investments by monitoring the average duration of the portfolio. As of December 31, 2022, White Mountains's fixed maturity investments are comprised primarily of debt securities issued by corporations, U.S. government and agency obligations, municipal obligations, mortgage and asset-backed securities and collateralized loan obligations.

Increases and decreases in prevailing interest rates generally translate into decreases and increases in fair values of fixed maturity investments, respectively. Additionally, fair values of interest rate sensitive instruments may be affected by the creditworthiness of the issuer, prepayment options, relative values of alternative investments, the liquidity of the instrument and various other market factors.

The following table presents the estimated effects of hypothetical increases and decreases in market interest rates on White Mountains's fixed maturity investments:

\$ in Millions	Fair Value at December 31, 2022	Assumed Change in Relevant Interest Rate	Estimated Fair Value After Change in Interest Rate	Pre-Tax Increase (Decrease) in Fair Value
Fixed maturity investments	\$ 1,920.9	100 bps decrease	\$ 1,984.2	\$ 63.3
		50 bps decrease	1,952.6	31.7
		50 bps increase	1,889.6	(31.3)
		100 bps increase	1,858.8	(62.1)

The magnitude of the fair value decrease in rising interest rate scenarios may be more significant than the fair value increase in comparable falling interest rate scenarios. This can occur because (i) the analysis floors interest rates at a de minimis level in falling interest rate scenarios, muting price increases, (ii) portions of the fixed maturity investment portfolio may be callable, muting price increases in falling interest rate scenarios and/or (iii) portions of the fixed maturity investment portfolio may experience cash flow extension in higher interest rate environments, which generally results in lower prices.

White Mountains's overall strategy for fixed maturity investments is to purchase securities that are attractively priced in relation to their investment risks. Widening and tightening of credit spreads translate into decreases and increases in fair values of fixed maturity investments, respectively.

The following table presents the estimated pre-tax effects of hypothetical widening and tightening of credit spreads on White Mountains's fixed maturity investments by asset class:

Millions	December 31, 2022				
	Fair Value	Tighten 50	Tighten 25	Widen 25	Widen 50
U.S. government and agency obligations	\$ 206.4	\$ —	\$ —	\$ —	\$ —
		Tighten 100	Tighten 50	Widen 50	Widen 100
Agency mortgage-backed securities	231.6	6.6	5.8	(6.7)	(13.1)
Other asset-backed securities	22.3	.2	.1	(.2)	(.3)
Non-agency: residential mortgage-backed securities	.3	—	—	—	—
		Tighten 200	Tighten 100	Widen 100	Widen 200
Debt securities issued by corporations	1,018.8	29.8	24.6	(32.6)	(65.2)
Municipal obligations	258.6	13.9	8.6	(13.1)	(26.2)
		Tighten 300	Tighten 200	Widen 200	Widen 300
Collateralized loan obligations	182.9	16.3	13.5	(16.4)	(24.7)

The magnitude of the fair value decrease in wider credit spread scenarios may be more significant than the fair value increase in comparable tighter credit spread scenarios. This can occur because the analysis limits the credit spread tightening in order to establish a floor for yields of non-government bonds above yields of government bonds, thereby muting price increases.

Common Equity Securities, Investment in MediaAlpha and Other Long-Term Investments Price Risk

The carrying values of White Mountains’s common equity securities, investment in MediaAlpha and other long-term investments are based on quoted market prices or management’s estimates of fair value as of the balance sheet date. Market prices of common equity securities, in general, are subject to fluctuations, which could cause the amount realized upon sale or exercise of these instruments to differ significantly from the current reported value. The fluctuations may result from perceived changes in the underlying economic characteristics of the investment, the relative price of alternative investments, supply and demand imbalances for a particular security or various other market factors. Assuming a hypothetical 10% and 30% increase or decrease in the value of White Mountains’s common equity securities, investment in MediaAlpha and other long-term investments as of December 31, 2022, the carrying value of White Mountains’s common equity securities, investment in MediaAlpha and other long-term investments would increase or decrease by \$233 million and \$698 million on a pre-tax basis, respectively.

Long-Term Obligations

White Mountains records its financial instruments at fair value with the exception of debt obligations which are recorded as debt at face value less unamortized original issue discount.

The following table presents the fair value and carrying value of these financial instruments as of December 31, 2022 and December 31, 2021:

Millions	December 31, 2022		December 31, 2021	
	Fair Value	Carrying Value ⁽¹⁾	Fair Value	Carrying Value ⁽¹⁾
HG Global Senior Notes	\$ 155.7	\$ 146.5	\$ —	\$ —
Ark 2007 Subordinated Notes	\$ 28.4	\$ 30.0	\$ 27.6	\$ 30.0
Ark 2021 Subordinated Notes	\$ 163.1	\$ 153.7	\$ 162.8	\$ 155.9
Kudu Credit Facility	\$ 223.9	\$ 208.3	\$ 246.8	\$ 218.2
Other Operations debt	\$ 38.2	\$ 36.7	\$ 17.7	\$ 16.8

⁽¹⁾ See Note 7 — “Debt” for details of debt arrangements.

The fair value estimates for the HG Global Senior Notes, Ark 2007 Subordinated Notes, Ark 2021 Subordinated Notes, Kudu Credit Facility, and Other Operations debt have been determined based on a discounted cash flow approach and are considered to be Level 3 measurements.

Foreign Currency Exposure

As of December 31, 2022, White Mountains had foreign currency exposure on \$202 million of net assets primarily related to Ark’s non-U.S. business, Kudu’s non-U.S. Participation Contracts, and certain other foreign consolidated and unconsolidated entities.

The following table presents the fair value of White Mountains’s foreign denominated net assets (net liabilities) by segment as of December 31, 2022:

\$ in Millions						
Currency	Ark	Kudu	Other Operations	Total Fair Value	% of Total Shareholders’ Equity	
CAD	\$ 61.1	\$ 74.8	\$ —	\$ 135.9	3.5 %	
GBP	51.3	—	—	51.3	1.3	
AUD	7.6	36.8	—	44.4	1.1	
EUR	(43.0)	—	12.4	(30.6)	(.8)	
All other	—	—	1.4	1.4	—	
Total	\$ 77.0	\$ 111.6	\$ 13.8	\$ 202.4	5.1 %	

The following table illustrates the pre-tax effect that a hypothetical 20% increase (i.e., U.S. dollar strengthening) or decrease (i.e., U.S. dollar weakening) in the rate of exchange from the foreign currencies to the U.S. dollar would have on the carrying value of White Mountains’s foreign denominated net assets as of December 31, 2022:

\$ in Millions				
Carrying Value of Foreign Denominated Net Assets	Hypothetical Change	Hypothetical Pre-Tax Increase (Decrease) in Carrying Value	Hypothetical Percentage Increase (Decrease) in Stockholders’ Equity	
\$ 202.4	20% increase	\$ (40.5)	(1.0)%	
	20% decrease	\$ 40.5	1.0 %	

Item 8. Financial Statements and Supplementary Data

The financial statements and supplementary data have been filed as a part of this Annual Report on Form 10-K as indicated in the Index to Consolidated Financial Statements and Financial Statement Schedules appearing on page 102 of this report.

The financial statements of MediaAlpha for the years ended December 31, 2022, 2021 and 2020 have been filed as a part of this Annual Report on Form 10-K (see Exhibit 99.1 on page 100 of this report).

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

The Principal Executive Officer (“PEO”) and the Principal Financial Officer (“PFO”) of White Mountains have evaluated the effectiveness of its disclosure controls and procedures (as defined in Rule 13a-15(e) of the Exchange Act) as of December 31, 2022. Based on that evaluation, the PEO and PFO have concluded that White Mountains’s disclosure controls and procedures are adequate and effective.

The PEO and the PFO of White Mountains have evaluated the effectiveness of its internal control over financial reporting as of December 31, 2022. Based on that evaluation, the PEO and PFO have concluded that White Mountains’s internal control over financial reporting is effective. Management’s annual report on internal control over financial reporting is included on page F-72 of this report. The attestation report on the effectiveness of our internal control over financial reporting by PricewaterhouseCoopers LLP is included on page F-73 of this report.

There has been no change in White Mountains’s internal controls over financial reporting that occurred during the fourth quarter of 2022 that has materially affected, or is reasonably likely to materially affect White Mountains’s internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Reported under the captions “The Board of Directors”, “Section 16(a) Beneficial Ownership Reporting Compliance” and “Corporate Governance—Committees of the Board—Audit Committee” in the Company’s 2023 Proxy Statement, herein incorporated by reference, and under the caption “Executive Officers of the Registrant” of this Annual Report on Form 10-K.

The Company’s Code of Business Conduct, which applies to all directors, officers and employees in carrying out their responsibilities to and on behalf of the Company, is available at www.whitemountains.com and is also included as Exhibit 14 on the Form 10-K. The Company’s Code of Business Conduct is also available in print free of charge to any shareholder upon request.

There have been no material changes to the procedures by which shareholders may recommend nominees to the Company’s Board of Directors. The procedures for shareholders to nominate directors are reported under the caption “Corporate Governance—Consideration of Director Nominees” in the Company’s 2023 Proxy Statement, herein incorporated by reference.

Item 11. Executive Compensation

Reported under the captions “Executive Compensation”, “CEO Pay Ratio” and “Corporate Governance—Committees of the Board—Compensation/Nominating & Governance Committee” in the Company’s 2023 Proxy Statement, herein incorporated by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Reported under the captions “Voting Securities and Principal Holders Thereof” and “Equity Compensation Plan Information” in the Company’s 2023 Proxy Statement, herein incorporated by reference.

Item 13. Certain Relationships, Related Transactions and Director Independence

Reported under the caption “Transactions with Related Persons, Promoters and Certain Control Persons” and “Corporate Governance—Director Independence” in the Company’s 2023 Proxy Statement, herein incorporated by reference.

Item 14. Principal Accountant Fees and Services

Reported under the caption “Principal Accountant Fees and Services” in the Company’s 2023 Proxy Statement, herein incorporated by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

a. Documents Filed as Part of the Report

The financial statements and financial statement schedules and reports of independent auditors have been filed as part of this Annual Report on Form 10-K as indicated in the Index to Consolidated Financial Statements and Financial Statement Schedules appearing on page 102 of this report. A listing of exhibits filed as part of the report appear below through page 100 of this report.

b. Exhibits

<u>Exhibit Number</u>	<u>Name</u>
2.1	Plan of Reorganization (incorporated by reference herein to the Company's Registration Statement on S-4 (No. 333-87649) dated September 23, 1999)
2.2	Securities Purchase Agreement dated May 9, 2022 by and among Riser Merger Sub, Inc., White Mountains Catskill Holdings (Luxembourg) S.à r. l., NSM Insurance HoldCo, LLC and the other parties thereto (incorporated by reference herein to Exhibit 2.1 of the Company's Current Report on Form 8-K dated May 9, 2022) (**)
3.1	Memorandum of Continuance of the Company (incorporated by reference herein to Exhibit (3)(i) of the Company's Current Report on Form 8-K dated November 1, 1999)
3.2	Amended and Restated Bye-Laws of the Company (incorporated by reference herein to Exhibit 3 of the Company's Report on Form 10-Q dated May 2, 2017)
4	Description of White Mountains Common Shares (*)
10.1	White Mountains Long-Term Incentive Plan, as amended (incorporated by reference herein to Appendix A of the Company's Notice of 2019 Annual General Meeting of Members and Proxy Statement dated April 8, 2019)
10.2	Regulation 114 Trust Agreement by and among Build America Mutual Assurance Company, HG Re Ltd. and The Bank of New York Mellon, dated as of July 20, 2012 (incorporated by reference herein to Exhibit 10.2 of the Company's Report on 10-Q dated October 30, 2012)
10.3	Second Amended and Restated Surplus Note Purchase Agreement between Build America Mutual Assurance Company, as Issuer and HG Holdings Ltd. and HG Re Ltd. as Purchasers, dated August 14, 2017 (incorporated by reference herein and filed as Exhibit (d)(7) of the Company's Schedule TO dated April 10, 2018)
10.4	Second Amended and Restated Supplemental Trust Agreement by and among Build America Mutual Assurance Company, HG Re Ltd. and The Bank of New York Mellon, dated December 4, 2018 (incorporated by reference herein to Exhibit 10.7 of the Company's 2018 Annual Report on Form 10-K)
10.5	White Mountains Bonus Plan (incorporated by reference herein to Exhibit 10.1 of the Company's Report on Form 10-Q dated May 6, 2022)

Exhibit Number	Name
10.6	Loan and Servicing Agreement dated as of March 23, 2021 among Kudu Investment Management, LLC, Kudu Investment Holdings, LLC, Kudu Investments US, LLC, KFO Holdings, Ltd., KWCP Holdings UK, Ltd., Massachusetts Mutual Life Insurance Company and Alter Domus (incorporated by reference herein to Exhibit 10.1 of the Company's Report on Form 10-Q dated November 8, 2021) (**)
10.7	Paying Agency Agreement dated 13 July 2021 between Group Ark Insurance Limited, The Bank of New York Mellon, London Branch and The Bank of New York Mellon SA/NV, Dublin Branch (incorporated by reference herein to Exhibit 10.2 of the Company's Report on Form 10-Q dated November 8, 2021) (**)
10.8	Paying Agency Agreement dated 11 August 2021 between Group Ark Insurance Limited, The Bank of New York Mellon, London Branch and The Bank of New York Mellon SA/NV, Dublin Branch (incorporated by reference herein to Exhibit 10.3 of the Company's Report on Form 10-Q dated November 8, 2021) (**)
10.9	Paying Agency Agreement dated 8 September 2021 between Group Ark Insurance Limited, The Bank of New York Mellon, London Branch and The Bank of New York Mellon SA/NV, Dublin Branch (incorporated by reference herein to Exhibit 10.4 of the Company's Report on Form 10-Q dated November 8, 2021) (**)
10.10	Offer Letter, dated as of November 29, 2021, between the Company and Liam Caffrey (incorporated by reference herein to Exhibit 10.1 of the Company's Current Report on Form 8-K dated November 29, 2021)
10.11	Loan and Security Agreement, dated as of March 31, 2022 among HG Global Ltd., Hudson Structured Capital Management Ltd. and the lenders from time to time party thereto (incorporated by reference herein to Exhibit 10.2 of the Company's Report on Form 10-Q dated May 6, 2022) (**)
14	The Company's Code of Business Conduct, which applies to all directors, officers and employees in carrying out their responsibilities to and on behalf of the Company (incorporated by reference herein to Exhibit 14 of the Company's 2015 Annual Report on Form 10-K)
21	Subsidiaries of the Registrant (*)
23.1	Consent of PricewaterhouseCoopers, LLP (*)
23.2	Consent of PricewaterhouseCoopers, LLP for MediaAlpha, Inc. (*)
24	Powers of Attorney (*)
31.1	Principal Executive Officer Certification Pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934 (*)
31.2	Principal Financial Officer Certification Pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934 (*)
32.1	Principal Executive Officer Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (*)
32.2	Principal Financial Officer Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (*)
99.1	MediaAlpha, Inc.'s Consolidated Financial Statements as of December 31, 2022 and 2021 and for the three years in the period ended December 31, 2022 (incorporated by reference herein from Item 8 of MediaAlpha, Inc.'s 2022 Annual Report on Form 10-K dated February 27, 2023, Commission file number: 001-39671) (***)
101	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.

(*) Included herein.

(**) Portions of this exhibit are redacted pursuant to Item 601(b)(10)(iv) of Regulation S-K.

(***) Exhibit 99.1 to this Annual Report on Form 10-K is being filed to provide audited financial statements and the related footnotes as of December 31, 2022 and 2021 and for the three years in the period ended December 31, 2022. The management of MediaAlpha is solely responsible for the form and content of the MediaAlpha financial statements. White Mountains has no responsibility for the form or content of the MediaAlpha financial statements since it does not control MediaAlpha.

c. Financial Statement Schedules and Separate Financial Statements of Subsidiaries Not Consolidated and Fifty Percent or Less Owned Persons

The financial statement schedules and report of independent registered public accounting firm have been filed as part of this Annual Report on Form 10-K as indicated in the Index to Consolidated Financial Statements and Financial Statement Schedules appearing on page 102 of this report.

White Mountains is required to file the financial statements and the related footnotes of MediaAlpha in accordance with SEC Rule 3-09 of Regulation S-X.

Item 16. Form 10-K Summary.

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Company has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

WHITE MOUNTAINS INSURANCE GROUP, LTD.

Date: February 27, 2023

By: /s/ MICHAELA J. HILDRETH

Michaela J. Hildreth

Managing Director and Chief Accounting Officer

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 Company and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ LIAM P. CAFFREY</u> Liam P. Caffrey	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 27, 2023
<u>PETER M. CARLSON*</u> Peter M. Carlson	Director	February 27, 2023
<u>MARY C. CHOKSI*</u> Mary C. Choksi	Director	February 27, 2023
<u>MORGAN W. DAVIS*</u> Morgan W. Davis	Chairman	February 27, 2023
<u>MARGARET DILLON*</u> Margaret Dillon	Director	February 27, 2023
<u>PHILIP A. GELSTON*</u> Philip A. Gelston	Director	February 27, 2023
<u>WESTON M. HICKS*</u> Weston M. Hicks	Director	February 27, 2023
<u>/s/ MICHAELA J. HILDRETH</u> Michaela J. Hildreth	Managing Director and Chief Accounting Officer (Principal Accounting Officer)	February 27, 2023
<u>/s/ G. MANNING ROUNTREE</u> G. Manning Rountree	Chief Executive Officer (Principal Executive Officer)	February 27, 2023
<u>SUZANNE F. SHANK*</u> Suzanne F. Shank	Director	February 27, 2023
<u>DAVID A. TANNER*</u> David A. Tanner	Director	February 27, 2023

* By: /s/ G. MANNING ROUNTREE

G. Manning Rountree, *Attorney-in-Fact*

WHITE MOUNTAINS INSURANCE GROUP, LTD.
Index to Consolidated Financial Statements and Financial Statement Schedules

	Form 10-K Page(s)
Consolidated financial statements:	
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CONSOLIDATED BALANCE SHEETS

Millions, Except Share and Per Share Amounts	December 31,	
	2022	2021
Assets		
<i>Financial Guarantee (HG Global/BAM)</i>		
Fixed maturity investments, at fair value	\$ 909.9	\$ 934.1
Short-term investments, at fair value	65.9	32.4
Total investments	975.8	966.5
Cash	18.2	19.8
Insurance premiums receivable	6.6	6.9
Deferred acquisition costs	36.0	33.1
Other assets	21.9	18.5
Total Financial Guarantee assets	1,058.5	1,044.8
<i>P&C Insurance and Reinsurance (Ark)</i>		
Fixed maturity investments, at fair value	772.8	688.6
Common equity securities, at fair value	334.6	251.1
Short-term investments, at fair value	280.9	296.2
Other long-term investments	373.6	326.2
Total investments	1,761.9	1,562.1
Cash	100.0	67.8
Reinsurance recoverables	536.1	448.4
Insurance premiums receivable	544.1	416.0
Ceded unearned premiums	59.2	67.1
Deferred acquisition costs and value of in-force business acquired	127.2	108.2
Goodwill and other intangible assets	292.5	292.5
Other assets	65.2	64.9
Total P&C Insurance and Reinsurance assets	3,486.2	3,027.0
<i>Asset Management (Kudu)</i>		
Other long-term investments	695.9	669.5
Cash (restricted \$12.2, \$4.5)	101.4	21.4
Accrued investment income	12.4	16.9
Goodwill and other intangible assets	8.6	8.9
Other assets	7.6	10.4
Total Asset Management assets	825.9	727.1
<i>Other Operations</i>		
Fixed maturity investments, at fair value	238.2	286.2
Short-term investments, at fair value	577.3	129.5
Common equity securities, at fair value	333.8	—
Investment in MediaAlpha, at fair value	168.6	261.6
Other long-term investments	418.5	382.1
Total investments	1,736.4	1,059.4
Cash	35.4	38.7
Goodwill and other intangible assets	91.3	39.1
Other assets	155.6	59.5
Assets held for sale - NSM Group	—	989.0
Assets held for sale - Other	—	16.1
Total Other Operations assets	2,018.7	2,201.8
Total assets	\$ 7,389.3	\$ 7,000.7

See Notes to Consolidated Financial Statements.

CONSOLIDATED BALANCE SHEETS (CONTINUED)

Millions, Except Share and Per Share Amounts	December 31,	
	2022	2021
Liabilities		
<i>Financial Guarantee (HG Global/BAM)</i>		
Unearned insurance premiums	\$ 298.3	\$ 266.3
Debt	146.5	—
Accrued incentive compensation	28.0	24.7
Other liabilities	29.0	30.9
Total Financial Guarantee liabilities	501.8	321.9
<i>P&C Insurance and Reinsurance (Ark)</i>		
Loss and loss adjustment expense reserves	1,296.5	894.7
Unearned insurance premiums	623.2	495.9
Debt	183.7	185.9
Reinsurance payable	251.1	424.1
Contingent consideration	45.3	28.0
Other liabilities	121.1	93.8
Total P&C Insurance and Reinsurance liabilities	2,520.9	2,122.4
<i>Asset Management (Kudu)</i>		
Debt	208.3	218.2
Other liabilities	65.0	42.8
Total Asset Management liabilities	273.3	261.0
<i>Other Operations</i>		
Debt	36.7	16.8
Accrued incentive compensation	86.1	48.5
Other liabilities	35.5	30.1
Liabilities held for sale - NSM Group	—	495.3
Total Other Operations liabilities	158.3	590.7
Total liabilities	3,454.3	3,296.0
Equity		
<i>White Mountains's common shareholders' equity</i>		
White Mountains's common shares at \$1 par value per share—authorized 50,000,000 shares; issued and outstanding 2,572,156 and 3,017,772 shares	2.6	3.0
Paid-in surplus	536.0	585.9
Retained earnings	3,211.8	2,957.5
Accumulated other comprehensive gain (loss), after-tax:		
Net unrealized gains (losses) from foreign currency translation and interest rate swap	(3.5)	1.7
Total White Mountains's common shareholders' equity	3,746.9	3,548.1
Non-controlling interests	188.1	156.6
Total equity	3,935.0	3,704.7
Total liabilities and equity	\$ 7,389.3	\$ 7,000.7

See Notes to Consolidated Financial Statements including **Note 14** Common Shareholders' Equity and Non-controlling Interests and **Note 20** for Commitments and Contingencies.

CONSOLIDATED STATEMENTS OF OPERATIONS

Millions	Year Ended December 31,		
	2022	2021	2020
Revenues:			
<i>Financial Guarantee (HG Global/BAM)</i>			
Earned insurance premiums	\$ 33.3	\$ 26.9	\$ 22.8
Net investment income	21.5	17.5	19.5
Net realized and unrealized investment gains (losses)	(105.8)	(22.9)	23.7
Other revenues	4.6	1.5	2.5
Total Financial Guarantee revenues	<u>(46.4)</u>	<u>23.0</u>	<u>68.5</u>
<i>P&C Insurance and Reinsurance (Ark)</i>			
Earned insurance premiums	\$ 1,043.4	\$ 637.3	\$ —
Net investment income	16.3	2.9	—
Net realized and unrealized investment gains (losses)	(55.2)	16.5	—
Other revenues	5.0	11.8	—
Total P&C Insurance and Reinsurance revenues	<u>1,009.5</u>	<u>668.5</u>	<u>—</u>
<i>Asset Management (Kudu)</i>			
Net investment income	54.4	43.9	29.5
Net realized and unrealized investment gains (losses)	64.1	89.9	15.9
Other revenues	—	.2	.3
Total Asset Management revenues	<u>118.5</u>	<u>134.0</u>	<u>45.7</u>
<i>Other Operations</i>			
Net investment income	32.2	18.2	82.0
Net realized and unrealized investment gains (losses)	(1.6)	50.7	(8.8)
Net realized and unrealized investment gains (losses) from investment in MediaAlpha	(93.0)	(380.3)	686.0
Commission revenues	11.5	9.6	8.3
Other revenues	127.2	90.7	13.9
Total Other Operations revenues	<u>76.3</u>	<u>(211.1)</u>	<u>781.4</u>
Total revenues	\$ 1,157.9	\$ 614.4	\$ 895.6

See Notes to Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF OPERATIONS (CONTINUED)

Millions	Year Ended December 31,		
	2022	2021	2020
Expenses:			
<i>Financial Guarantee (HG Global/BAM)</i>			
Insurance acquisition expenses	\$ 11.2	\$ 8.3	\$ 7.0
General and administrative expenses	69.1	57.1	56.8
Interest expense	8.3	—	—
Total Financial Guarantee expenses	88.6	65.4	63.8
<i>P&C Insurance and Reinsurance (Ark)</i>			
Loss and loss adjustment expenses	536.4	314.8	—
Insurance and reinsurance acquisition expenses	239.4	178.0	—
General and administrative expenses	123.5	115.5	—
Interest expense	15.1	7.3	—
Total P&C Insurance and Reinsurance expenses	914.4	615.6	—
<i>Asset Management (Kudu)</i>			
General and administrative expenses	14.4	14.5	11.8
Amortization of other intangible assets	.3	.3	.3
Interest expense	15.0	11.7	6.0
Total Asset Management expenses	29.7	26.5	18.1
<i>Other Operations</i>			
Cost of sales	98.6	69.3	11.3
General and administrative expenses	169.2	105.4	139.3
Amortization of other intangible assets	4.9	4.3	1.3
Interest expense	1.9	1.5	1.4
Total Other Operations expenses	274.6	180.5	153.3
Total expenses	1,307.3	888.0	235.2
Pre-tax income (loss) from continuing operations	(149.4)	(273.6)	660.4
Income tax (expense) benefit	(41.4)	(44.4)	14.8
Net income (loss) from continuing operations	(190.8)	(318.0)	675.2
Net income (loss) from discontinued operations, net of tax - NSM Group	16.4	(22.6)	(9.5)
Net gain (loss) from sale of discontinued operations, net of tax - NSM Group	886.8	—	—
Net gain (loss) from sale of discontinued operations, net of tax - Sirius Group	—	18.7	(2.3)
Net income (loss)	712.4	(321.9)	663.4
Net (income) loss attributable to non-controlling interests	80.4	46.5	45.3
Net income (loss) attributable to White Mountains's common shareholders	\$ 792.8	\$ (275.4)	\$ 708.7

See Notes to Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

Millions, except for per share amounts	Year Ended December 31,		
	2022	2021	2020
Net income (loss) attributable to White Mountains's common shareholders	\$ 792.8	\$ (275.4)	\$ 708.7
Other comprehensive income (loss), net of tax	(3.8)	1.7	1.4
Other comprehensive income (loss) from discontinued operations, net of tax - NSM Group	(5.2)	.2	5.9
Net gain (loss) from foreign currency translation from sale of discontinued operations, net of tax - NSM Group	2.9	—	—
Comprehensive income (loss)	786.7	(273.5)	716.0
Comprehensive (income) loss attributable to non-controlling interests	.9	.2	(.5)
Comprehensive income (loss) attributable to White Mountains's common shareholders	\$ 787.6	\$ (273.3)	\$ 715.5
 Earnings (loss) per share attributable to White Mountains's common shareholders:			
Basic earnings (loss) per share			
Continuing operations	\$ (38.34)	\$ (88.52)	\$ 230.69
Discontinued operations	315.30	(.94)	(3.72)
Total consolidated operations	\$ 276.96	\$ (89.46)	\$ 226.97
Diluted earnings (loss) per share			
Continuing operations	\$ (38.34)	\$ (88.52)	\$ 230.69
Discontinued operations	315.30	(.94)	(3.72)
Total consolidated operations	\$ 276.96	\$ (89.46)	\$ 226.97
Dividends declared and paid per White Mountains's common share	\$ 1.00	\$ 1.00	\$ 1.00

See Notes to Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

Millions	White Mountains's Common Shareholders' Equity					
	Common Shares and Paid-in Surplus	Retained Earnings	AOCL, After-tax	Total	Non-controlling Interests	Total Equity
Balances at December 31, 2019	\$ 596.3	\$ 2,672.4	\$ (7.2)	\$ 3,261.5	\$ (116.8)	\$ 3,144.7
Net income (loss)	—	708.7	—	708.7	(45.3)	663.4
Other comprehensive income (loss), net of tax	—	—	6.8	6.8	.5	7.3
Comprehensive income (loss)	—	708.7	6.8	715.5	(44.8)	670.7
Dividends declared on common shares	—	(3.2)	—	(3.2)	—	(3.2)
Dividends to non-controlling interests	—	—	—	—	(2.1)	(2.1)
Issuances of common shares	1.5	—	—	1.5	—	1.5
Repurchases and retirements of common shares	(18.5)	(66.7)	—	(85.2)	—	(85.2)
BAM member surplus contribution, net of tax	—	—	—	—	68.9	68.9
Amortization of restricted share awards	16.6	—	—	16.6	—	16.6
Recognition of equity-based compensation expense of subsidiaries	2.3	—	—	2.3	.1	2.4
Net contributions (distributions) and dilution from other non-controlling interests	(3.0)	—	—	(3.0)	5.3	2.3
Acquisition of non-controlling interests	—	—	—	—	1.3	1.3
Balances at December 31, 2020	595.2	3,311.2	(4)	3,906.0	(88.1)	3,817.9
Net income (loss)	—	(275.4)	—	(275.4)	(46.5)	(321.9)
Other comprehensive income (loss), net of tax	—	—	2.1	2.1	—	2.1
Comprehensive income (loss)	—	(275.4)	2.1	(273.3)	(46.5)	(319.8)
Dividends declared on common shares	—	(3.1)	—	(3.1)	—	(3.1)
Dividends to non-controlling interests	—	—	—	—	(2.3)	(2.3)
Issuances of common shares	1.9	—	—	1.9	—	1.9
Issuance of shares of non-controlling interest	—	—	—	—	6.5	6.5
Repurchases and retirements of common shares	(18.9)	(88.6)	—	(107.5)	—	(107.5)
BAM member surplus contribution, net of tax	—	—	—	—	62.2	62.2
Amortization of restricted share awards	14.7	—	—	14.7	—	14.7
Recognition of equity-based compensation expense of subsidiaries	3.0	—	—	3.0	.5	3.5
Net contributions (distributions) and dilution from other non-controlling interests	(7.0)	13.4	—	6.4	(6.0)	.4
Acquisition of non-controlling interests	—	—	—	—	230.3	230.3
Balances at December 31, 2021	588.9	2,957.5	1.7	3,548.1	156.6	3,704.7
Net income (loss)	—	792.8	—	792.8	(80.4)	712.4
Other comprehensive income (loss), net of tax	—	—	(8.1)	(8.1)	(9)	(9.0)
Net gain (loss) from foreign currency translation from sale of discontinued operations, net of tax - NSM Group	—	—	2.9	2.9	—	2.9
Total comprehensive income (loss)	—	792.8	(5.2)	787.6	(81.3)	706.3
Dividends declared on common shares	—	(3.0)	—	(3.0)	—	(3.0)
Dividends to non-controlling interests	—	—	—	—	(8.0)	(8.0)
Issuances of common shares	3.0	—	—	3.0	—	3.0
Issuances of shares to non-controlling interests	—	—	—	—	74.6	74.6
Repurchases and retirements of common shares	(90.0)	(525.8)	—	(615.8)	—	(615.8)
BAM member surplus contribution, net of tax	—	—	—	—	81.4	81.4
Amortization of restricted share awards	14.0	—	—	14.0	—	14.0
Recognition of equity-based compensation expense of subsidiaries	8.6	—	—	8.6	.9	9.5
Net contributions (distributions) and dilution from other non-controlling interests	14.1	(9.7)	—	4.4	(18.6)	(14.2)
Acquisition of non-controlling interests	—	—	—	—	(17.5)	(17.5)
Balances at December 31, 2022	\$ 538.6	\$ 3,211.8	\$ (3.5)	\$ 3,746.9	\$ 188.1	\$ 3,935.0

See Notes to Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

Millions	Year Ended December 31,		
	2022	2021	2020
Cash flows from operations:			
Net income (loss)	\$ 712.4	\$ (321.9)	\$ 663.4
Adjustments to reconcile net income to net cash provided from (used for) operations:			
Net realized and unrealized investment (gains) losses	98.5	(134.2)	(30.8)
Net realized and unrealized investment (gains) losses from investment in MediaAlpha	93.0	380.3	(686.0)
Amortization of restricted share awards	14.0	14.7	16.6
Amortization and depreciation	4.3	21.6	9.6
Deferred income tax expense (benefit)	12.9	34.7	(30.5)
Net (income) loss from discontinued operation, net of tax - NSM Group	(16.4)	22.6	9.5
Net (gain) loss from sale of discontinued operations, net of tax - NSM Group	(886.8)	—	—
Net (gain) loss from sale of discontinued operations, net of tax - Sirius Group	—	(18.7)	2.3
Other operating items:			
Net change in reinsurance recoverables	(87.7)	(15.1)	—
Net change in insurance premiums receivable	(127.8)	(179.3)	—
Net change in ceded unearned premiums	7.9	103.1	—
Net change in loss and loss adjustment expense reserves	401.8	198.7	—
Net change in unearned insurance premiums	159.3	198.6	39.1
Net change in deferred acquisition costs and value of in-force business acquired	(21.9)	(41.8)	(5.8)
Net change in reinsurance payable	(173.0)	(104.2)	—
Net change in restricted cash	7.7	4.5	—
Proceeds from Kudu Participation Contracts sold	137.5	44.4	—
Contributions to Kudu Participation Contracts	(99.8)	(223.4)	(118.3)
Net change in other assets and liabilities	90.4	11.7	34.8
Net cash provided from (used for) operations - continuing operations	326.3	(3.7)	(96.1)
Net cash provided from (used for) operations - NSM Group discontinued operations (Note 21)	38.7	42.3	35.5
Net cash provided from (used for) operations	365.0	38.6	(60.6)
Cash flows from investing activities:			
Net change in short-term investments	(455.1)	59.8	60.9
Sales of fixed maturity investments	188.7	286.3	390.0
Maturities, calls and paydowns of fixed maturity investments	198.5	199.0	180.4
Sales of common equity securities and investment in MediaAlpha	—	176.8	787.9
Distributions and redemptions of other long-term investments	115.4	106.4	69.9
Proceeds from the sale of NSM Group, net of cash sold of \$143.9, \$0.0 and \$0.0	1,372.5	—	—
Proceeds from the sale of Other Operating Businesses, net of cash sold of \$0.5 \$0.0 and \$0.0	19.5	—	—
Release of cash pre-funded/placed in escrow for Ark Transaction	—	646.3	(646.3)
Cash pre-funded for ILS funds managed by Elementum	(70.0)	—	—
Purchases of fixed maturity investments	(585.5)	(1,219.4)	(537.7)
Purchases of common equity securities	(424.5)	(203.4)	(33.8)
Purchases of other long-term investments	(178.8)	(218.0)	(76.8)
Purchases of consolidated subsidiaries, net of cash acquired of \$0.3, \$52.2, and \$1.5	(67.9)	10.6	(9.1)
Net other investing activities	(4.4)	3.8	4.1
Net cash provided from (used for) investing activities - continuing operations	108.4	(151.8)	189.5
Net cash provided from (used for) investing activities - NSM Group discontinued operations (Note 21)	7.1	(56.5)	(124.9)
Net cash provided from (used for) investing activities	115.5	(208.3)	64.6
Cash flows from financing activities:			
Draw down of debt and revolving lines of credit	213.8	401.7	32.2
Repayment of debt and revolving lines of credit	(56.7)	(120.1)	(1.9)
Cash dividends paid to common shareholders	(3.0)	(3.1)	(3.2)
Issuances of shares to non-controlling interests	74.6	6.5	—
Net (contributions to) distributions from discontinued operations	11.6	—	(85.0)
Repurchases and retirements of common shares	(615.8)	(107.5)	(85.2)
BAM member surplus contribution	81.4	62.2	68.9
Net contributions from (distributions to) other non-controlling interests	(21.6)	.7	(2.5)
Fidus Re premium payments	(10.1)	(8.8)	(3.0)
Other financing activities, net	(1.6)	(13.0)	(1.1)
Net cash provided from (used for) financing activities - continuing operations	(327.4)	218.6	(79.8)
Net cash provided from (used for) financing activities - NSM Group discontinued operations (Note 21)	(17.5)	(1.0)	128.8
Net cash provided from (used for) financing activities - continuing operations	(344.9)	217.6	49.0
Net change in cash during the period - continuing operations	107.3	63.1	13.6
Cash balance at beginning of year (includes restricted cash balances of \$4.5, \$0.0 and \$0.0 and excludes discontinued operations cash balances \$111.6, \$126.6 and \$90.0)	147.7	84.6	71.0
Cash balance at end of year (includes restricted cash balances of \$12.2, \$4.5 and \$0.0 and excludes discontinued operations cash balances of \$0.0, \$111.6 and \$126.6)	\$ 255.0	\$ 147.7	\$ 84.6

See Notes to Consolidated Financial Statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1. Basis of Presentation and Significant Accounting Policies

Basis of Presentation

White Mountains Insurance Group, Ltd. (the “Company” or the “Registrant”) is an exempted Bermuda limited liability company whose principal businesses are conducted through its subsidiaries and other affiliates. The Company’s headquarters is located at 26 Reid Street, Hamilton, Bermuda HM 11, its principal executive office is located at 23 South Main Street, Suite 3B, Hanover, New Hampshire 03755-2053 and its registered office is located at Clarendon House, 2 Church Street, Hamilton, Bermuda HM 11. The Company’s website is located at www.whitemountains.com. The information contained on White Mountains’s website is not incorporated by reference into, and is not a part of, this report.

The accompanying consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States (“GAAP”) and include the accounts of the Company, its subsidiaries (collectively with the Company, “White Mountains”) and other entities required to be consolidated under GAAP.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Consolidation Principles

Under GAAP, the Company is required to consolidate any entity in which it holds a controlling financial interest. A controlling financial interest is usually in the form of an investment representing the majority of the subsidiary’s voting interests. However, a controlling financial interest may also arise from a financial interest in a variable interest entity (“VIE”) through arrangements that do not involve ownership of voting interests. The Company consolidates a VIE if it determines that it is the primary beneficiary. The primary beneficiary is defined as the entity who holds a variable interest that gives it both the power to direct the VIE’s activities that most significantly impact its economic performance and the obligation to absorb losses of, or the right to receive returns from, the VIE that could potentially be significant to the VIE. See **Note 18 — “Variable Interest Entities”**.

Intercompany transactions have been eliminated in consolidation. Certain amounts in the prior period financial statements have been reclassified to conform to the current presentation.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Reportable Segments

As of December 31, 2022, White Mountains conducted its operations through three reportable segments: (1) HG Global/BAM, (2) Ark, and (3) Kudu, with our remaining operating businesses, holding companies and other assets included in Other Operations. White Mountains has made its segment determination based on consideration of the following criteria: (i) the nature of the business activities of each of the Company’s subsidiaries and affiliates; (ii) the manner in which the Company’s subsidiaries and affiliates are organized; (iii) the existence of primary managers responsible for specific subsidiaries and affiliates; and (iv) the organization of information provided to the chief operating decision makers and the Board of Directors. See **Note 16 — “Segment Information”**.

The HG Global/BAM segment consists of HG Global Ltd. and its wholly-owned subsidiaries (“HG Global”) and the consolidated results of Build America Mutual Assurance Company (“BAM”) (collectively, “HG Global/BAM”). BAM is the first and only mutual municipal bond insurance company in the United States. By insuring the timely payment of principal and interest, BAM provides market access to, and lowers interest expense for, issuers of municipal bonds used to finance essential public purpose projects, such as schools, utilities and transportation facilities. BAM is owned by and operated for the benefit of its members, the municipalities that purchase BAM’s insurance for their debt issuances. HG Global was established to fund the startup of BAM and, through its reinsurance subsidiary HG Re Ltd. (“HG Re”), to provide up to 15%-of-par, first loss reinsurance protection for policies underwritten by BAM. HG Global, together with its subsidiaries, funded the initial capitalization of BAM through the purchase of \$503.0 million of surplus notes issued by BAM (the “BAM Surplus Notes”). As of December 31, 2022 and 2021, White Mountains owned 96.9% of HG Global's preferred equity and 88.4% of its common equity. White Mountains does not have an ownership interest in BAM. However, White Mountains is required to consolidate BAM’s results in its financial statements because BAM is a VIE for which White Mountains is the primary beneficiary. BAM’s results are attributed to non-controlling interests.

The Ark segment consists of Ark Insurance Holdings Limited and its subsidiaries (collectively, “Ark”). Ark is a specialty property and casualty insurance and reinsurance company that offers a wide range of niche insurance and reinsurance products, including property, specialty, marine & energy, casualty and accident & health. Ark underwrites select coverages through its two major subsidiaries in the United Kingdom and Bermuda. On January 1, 2021, White Mountains acquired a controlling ownership interest in Ark (the “Ark Transaction”). See **Note 2 — “Significant Transactions”**. As of December 31, 2022 and 2021, White Mountains owned 72.0% of Ark on a basic shares outstanding basis (63.0% after taking account of management’s equity incentives). The remaining shares are owned by current and former employees. In the future, management rollover shareholders could earn additional shares in Ark if and to the extent that White Mountains achieves certain multiple of invested capital return thresholds. If fully earned, these additional shares would represent 12.5% of the shares outstanding at closing. For the years of account prior to the Ark Transaction, a significant proportion of the Syndicates’ underwriting capital was provided by third-party insurance and reinsurance groups (“TPC Providers”) using whole account reinsurance contracts with Ark’s corporate member. For the years of account subsequent to the Ark Transaction, Ark is no longer using TPC Providers to provide underwriting capital for the Syndicates. Captions within results of operations and other comprehensive income are shown net of amounts relating to the TPC Providers’ share of the Syndicates’ results, including investment results.

The Kudu segment consists of Kudu Investment Management, LLC and its subsidiaries (collectively, “Kudu”). Kudu provides capital solutions for boutique asset and wealth managers for a variety of purposes including generational ownership transfers, management buyouts, acquisition and growth finance and legacy partner liquidity. Kudu also provides strategic assistance to investees from time to time. Kudu’s capital solutions generally are structured as minority preferred equity stakes with distribution rights, typically tied to gross revenues and designed to generate immediate cash yields. As of December 31, 2022 and 2021, White Mountains owned 89.3% and 99.3% of the basic units outstanding of Kudu (76.1% and 84.7% on a fully diluted, fully converted basis).

White Mountains’s Other Operations consists of the Company and its wholly-owned subsidiary, White Mountains Capital, LLC (“WM Capital”), its other intermediate holding companies, its wholly-owned investment management subsidiary, White Mountains Advisors LLC (“WM Advisors”), investment assets managed by WM Advisors, its interests in MediaAlpha, Inc. (“MediaAlpha”), PassportCard Limited (“PassportCard”) and DavidShield Life Insurance Agency (2000) Ltd. (“DavidShield”) (collectively, “PassportCard/ DavidShield”), Elementum Holdings LP (“Elementum”), Outrigger Re Ltd. Segregated Account 2023-1 (“WM Outrigger Re”), certain other consolidated and unconsolidated entities (“Other Operating Businesses”) and certain other assets.

Held for Sale and Discontinued Operations

White Mountains recognizes assets and liabilities classified as held for sale at the lower of carrying value on the date the asset is initially classified as held for sale or fair value less costs to sell. At the time of reclassification to held for sale, White Mountains ceases recognizing depreciation and amortization on assets held for sale. The results of operations of a business that has either been disposed of or are classified as held for sale are reported in discontinued operations if the disposal of business represents a strategic shift that has (or will have) a major effect on White Mountains’s operations and financial results. See **Note 21 — “Held for Sale and Discontinued Operations.”**

On August 1, 2022, White Mountains Holdings (Luxembourg) S.à r.l. (“WTM Holdings Seller”), an indirect wholly owned subsidiary of White Mountains, completed the previously announced sale of White Mountains Catskill Holdings, Inc. and NSM Insurance HoldCo, LLC (“NSM” and, collectively with White Mountains Catskill Holdings, Inc., the “NSM Group”) to Riser Merger Sub, Inc., an affiliate of The Carlyle Group Inc. (the “NSM Transaction”), pursuant to the terms of the securities purchase agreement, dated as of May 9, 2022. See **Note 2 — “Significant Transactions.”** NSM is a full-service managing general agent (“MGA”) and program administrator with delegated binding authorities for specialty property and casualty insurance. As of December 31, 2021, White Mountains owned 96.5% of the basic units outstanding of NSM (87.3% on a fully diluted, fully converted basis).

As a result of the NSM Transaction, the assets and liabilities of NSM Group have been presented in the balance sheet as held for sale for periods prior to the closing of the transaction, and the results of operations for NSM Group have been classified as discontinued operations in the statements of operations and comprehensive income through the closing of the transaction. Prior period amounts have been reclassified to conform to the current period’s presentation. See **Note 21 — “Held for Sale and Discontinued Operations.”**

Significant Accounting Policies

Investment Securities

As of December 31, 2022 and 2021, White Mountains's invested assets consisted of securities and other investments held for general investment purposes. White Mountains's portfolio of fixed maturity investments, common equity securities, its investment in MediaAlpha, and other long-term investments held for general investment purposes are generally classified as trading securities and are reported at fair value as of the balance sheet date. Changes in net unrealized investment gains (losses) are reported pre-tax in revenues. Realized investment gains (losses) are accounted for using the specific identification method and are reported pre-tax in revenues. Premiums and discounts on all fixed maturity investments are amortized and accreted to income over the anticipated life of the investment.

Short-term investments consist of interest-bearing money market funds, certificates of deposit and other securities, which at the time of purchase, mature or become available for use within one year. Short-term investments are carried at fair value, which approximated amortized or accreted cost as of December 31, 2022 and 2021.

White Mountains's invested assets that are measured at fair value include fixed maturity investments, common equity securities, its investment in MediaAlpha, and other long-term investments, that consists primarily of unconsolidated entities, including non-controlling equity interests in the form of revenue and earnings participation contracts ("Kudu's Participation Contracts"), private equity funds and hedge funds, a bank loan fund, Lloyd's of London ("Lloyd's") trust deposits, insurance-linked securities ("ILS") funds and private debt instruments. Whenever possible, White Mountains estimates fair value using valuation methods that maximize the use of quoted prices and other observable inputs.

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants (an exit price) at a particular measurement date. Fair value measurements are categorized into a hierarchy that distinguishes between inputs based on market data from independent sources (observable inputs) and a reporting entity's internal assumptions based upon the best information available when external market data is limited or unavailable (unobservable inputs). Quoted prices in active markets for identical assets have the highest priority ("Level 1"), followed by observable inputs other than quoted prices including prices for similar but not identical assets or liabilities ("Level 2"), and unobservable inputs, including the reporting entity's estimates of the assumptions that market participants would use, having the lowest priority ("Level 3").

Assets and liabilities carried at fair value include all of White Mountains's investment portfolio and derivative instruments. Valuation of assets and liabilities measured at fair value require management to make estimates and apply judgment to matters that may carry a significant degree of uncertainty. In determining its estimates of fair value, White Mountains uses a variety of valuation approaches and inputs. Whenever possible, White Mountains estimates fair value using valuation methods that maximize the use of quoted market prices or other observable inputs. Where appropriate, assets and liabilities measured at fair value have been adjusted for the effect of counterparty credit risk.

White Mountains uses outside pricing services and brokers to assist in determining fair values. The outside pricing services White Mountains uses have indicated that they will only provide prices where observable inputs are available. As of December 31, 2022, approximately 72% of the investment portfolio recorded at fair value was priced based upon quoted market prices or other observable inputs.

Level 1 Measurements

Investments valued using Level 1 inputs include White Mountains's fixed maturity investments, primarily investments in U.S. Treasuries and short-term investments, which include U.S. Treasury Bills, common equity securities, and its investment in MediaAlpha following the initial public offering of MediaAlpha on October 30, 2020 (the "MediaAlpha IPO"). For investments in active markets, White Mountains uses the quoted market prices provided by outside pricing services to determine fair value.

Level 2 Measurements

Investments valued using Level 2 inputs include fixed maturity investments which have been disaggregated into classes, including debt securities issued by corporations, municipal obligations, mortgage and asset-backed securities and collateralized loan obligations. Investments valued using Level 2 inputs also include certain international listed common equity funds, which White Mountains values using the fund manager's published net asset value ("NAV") to account for the difference in market close times.

In circumstances where quoted market prices are unavailable or are not considered reasonable, White Mountains estimates the fair value using industry standard pricing methodologies and observable inputs such as benchmark yields, reported trades, broker-dealer quotes, issuer spreads, benchmark securities, bids, offers, credit ratings, prepayment speeds, reference data including research publications and other relevant inputs. Given that many fixed maturity investments do not trade on a daily basis, the outside pricing services evaluate a wide range of fixed maturity investments by regularly drawing parallels from recent trades and quotes of comparable securities with similar features. The characteristics used to identify comparable fixed maturity investments vary by asset type and take into account market convention.

White Mountains's process to assess the reasonableness of the market prices obtained from the outside pricing sources covers substantially all of its fixed maturity investments and includes, but is not limited to, the evaluation of pricing methodologies and a review of the pricing services' quality control procedures on at least an annual basis, a comparison of its invested asset prices obtained from alternate independent pricing vendors on at least a semi-annual basis, monthly analytical reviews of certain prices and a review of the underlying assumptions utilized by the pricing services for select measurements on an ad hoc basis throughout the year. White Mountains also performs back-testing of selected investment sales activity to determine whether there are any significant differences between the market price used to value the security prior to sale and the actual sale price of the security on an ad-hoc basis throughout the year. Prices provided by the pricing services that vary by more than \$0.5 million and 5% from the expected price based on these assessment procedures are considered outliers, as are prices that have not changed from period to period and prices that have trended unusually compared to market conditions. In circumstances where the results of White Mountains's review process does not appear to support the market price provided by the pricing services, White Mountains challenges the vendor provided price. If White Mountains cannot gain satisfactory evidence to support the challenged price, White Mountains will rely upon its own internal pricing methodologies to estimate the fair value of the security in question.

The valuation process described above is generally applicable to all of White Mountains's fixed maturity investments. The techniques and inputs specific to asset classes within White Mountains's fixed maturity investments for Level 2 securities that use observable inputs are as follows:

Debt Securities Issued by Corporations

The fair value of debt securities issued by corporations is determined from a pricing evaluation technique that uses information from market sources and integrates relative credit information, observed market movements, and sector news. Key inputs include benchmark yields, reported trades, broker-dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, and reference data including sector, coupon, credit quality ratings, duration, credit enhancements, early redemption features and market research publications.

Municipal Obligations

The fair value of municipal obligations is determined from a pricing evaluation technique that uses information from market makers, brokers-dealers, buy-side firms, and analysts along with general market information. Key inputs include benchmark yields, reported trades, issuer financial statements, material event notices and new issue data, as well as broker-dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, and reference data including type, coupon, credit quality ratings, duration, credit enhancements, geographic location and market research publications.

Mortgage and Asset-Backed Securities and Collateralized Loan Obligations

The fair value of mortgage and asset-backed securities and collateralized loan obligations is determined from a pricing evaluation technique that uses information from market sources and leveraging similar securities. Key inputs include benchmark yields, reported trades, underlying tranche cash flow data, collateral performance, plus new issue data, as well as broker-dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, and reference data including issuer, vintage, loan type, collateral attributes, prepayment speeds, default rates, recovery rates, cash flow stress testing, credit quality ratings and market research publications.

Level 3 Measurements

Fair value estimates for investments that trade infrequently and have few or no quoted market prices or other observable inputs are classified as Level 3 measurements. Investments valued using Level 3 fair value estimates are based upon unobservable inputs and include investments in certain fixed maturity investments, common equity securities and other long-term investments where quoted market prices or other observable inputs are unavailable or are not considered reliable or reasonable.

Level 3 valuations are generated from techniques that use assumptions not observable in the market. These unobservable inputs reflect White Mountains's assumptions of what market participants would use in valuing the investment. In certain circumstances, investment securities may start out as Level 3 when they are originally issued, but as observable inputs become available in the market, they may be reclassified to Level 2. Transfers of securities between levels are based on investments held as of the beginning of the period.

Other Long-Term Investments

As of December 31, 2022, \$911.6 million of White Mountains's other long-term investments, which consisted primarily of unconsolidated entities, including Kudu's Participation Contracts and PassportCard/DavidShield were classified as Level 3 investments in the GAAP fair value hierarchy. The determination of the fair value of these securities involves significant management judgment, and the use of valuation models and assumptions that are inherently subjective and uncertain.

White Mountains may use a variety of valuation techniques to determine fair value depending on the nature of the investment, including a discounted cash flow analysis, market multiple approach, cost approach and/or liquidation analysis. On an ongoing basis, White Mountains also considers qualitative changes in facts and circumstances, which may impact the valuation of its unconsolidated entities, including economic and market changes in relevant industries, changes to the entity's capital structure, business strategy and key personnel, and any recent transactions relating to the unconsolidated entity. On a quarterly basis, White Mountains evaluates the most recent qualitative and quantitative information of the business and completes a fair valuation analysis for all other long-term investments classified as Level 3 investments. Periodically, and at least on an annual basis, White Mountains uses a third-party valuation firm to complete an independent valuation analysis of significant unconsolidated entities.

Other Long-term Investments - NAV

As of December 31, 2022, \$561.6 million of White Mountains's other long-term investments, which consisted of private equity funds and hedge funds, a bank loan fund, Lloyd's trust deposits and ILS funds, were valued at fair value using NAV as a practical expedient. Investments for which fair value is measured using NAV as a practical expedient are not classified within the fair value hierarchy.

White Mountains employs a number of procedures to assess the reasonableness of the fair value measurements for other long-term investments measured at NAV, including obtaining and reviewing interim unaudited and annual audited financial statements as well as periodically discussing each fund's pricing with the fund manager. However, since the fund managers do not provide sufficient information to evaluate the pricing methods and inputs for each underlying investment, White Mountains considers the valuation inputs to be unobservable. The fair value of White Mountains's other long-term investments measured at NAV are generally determined using the fund manager's NAV. In the event that White Mountains believes the fair value differs from the NAV reported by the fund manager due to illiquidity or other factors, White Mountains will adjust the reported NAV to more appropriately represent the fair value of its investment.

Cash and Restricted Cash

Cash includes amounts on hand and demand deposits with banks and other financial institutions. Amounts presented in the statement of cash flows are shown net of balances acquired and sold in the purchase or sale of the Company's consolidated subsidiaries.

Cash balances that are not immediately available for general corporate purposes, including the interest reserve account that Kudu maintains under its credit facility, is classified as restricted.

Derivatives

From time to time, White Mountains holds derivative financial instruments for risk management purposes. White Mountains recognizes all derivatives as either assets or liabilities, measured at fair value, on its consolidated balance sheet. Changes in the fair value of derivative instruments that meet the criteria for hedge accounting are recognized in other comprehensive income (loss) and reclassified into current period pre-tax income (loss) when the hedged items are recognized therein. Changes in the fair value of derivative instruments that do not meet the criteria for hedge accounting are recognized in current period pre-tax income (loss).

As of December 31, 2022, White Mountains holds an interest rate cap derivative instrument that does not meet the criteria for hedge accounting. See **Note 9 — “Derivatives”**.

Municipal Bond Guarantee Insurance

All of the contracts issued by BAM are accounted for as insurance contracts under ASC 944-605, *Financial Guarantee Insurance Contracts*. For capital appreciation bonds, par is adjusted to the estimated equivalent par value for current interest paying bonds. See **Note 10 — “Municipal Bond Guarantee Insurance”**.

Premiums are generally received upfront and an unearned premium revenue liability, equal to the amount of the premium received, is established at contract inception. Premium revenues are recognized in revenue over the period of the contracts in proportion to the amount of insurance protection provided using a constant rate. The constant rate is calculated based on the relationship between the par outstanding in a given reporting period compared with the sum of each of the par amounts outstanding for all periods.

Insurance premiums receivable represents amounts due from customers for municipal bond insurance policies. Installment premiums are measured at the present value of contractual premiums, discounted at the risk-free rate, which is set at the inception of the insurance contract.

Deferred acquisition costs represent commissions, premium taxes, excise taxes and other costs which are directly attributable to and vary with the production of business. These costs are deferred and amortized to the extent they relate to successful contract acquisitions over the applicable premium recognition period as acquisition expenses. Deferred acquisition costs are limited to the amount expected to be recovered from future earned premiums and anticipated investment income. A premium deficiency is recognized if the sum of expected loss and loss adjustment expenses (“LAE”), expected dividends to policyholders, unamortized acquisition costs, and maintenance costs exceeds related unearned premiums and anticipated investment income. A premium deficiency is recognized by charging any unamortized acquisition costs to expense to the extent required in order to eliminate the deficiency. If the premium deficiency exceeds unamortized acquisition costs then a liability is accrued for the excess deficiency.

Loss reserves are recorded only to the extent that the present value of any payments projected to be made by BAM, net of any expected recoveries, exceeds the associated unearned premium reserve. As of December 31, 2022 and 2021, BAM did not have any loss or loss adjustment expense reserves.

Property and Casualty Insurance and Reinsurance

Ark writes a diversified portfolio of reinsurance and insurance, including property, specialty, marine & energy, casualty and accident & health, through its Lloyd’s Syndicates 4020 and 3902 (the “Syndicates”) and its wholly-owned subsidiary Group Ark Insurance Limited (“GAIL”).

Ark accounts for insurance and reinsurance policies that it writes in accordance with ASC 944, *Financial Services - Insurance*. Ark’s premiums written comprise premiums on insurance contracts incepted during the year as well as premium adjustments related to prior underwriting years. Insurance premiums are recognized as revenues over the loss exposure or coverage period. In most cases, premiums are earned ratably over the term of the contract with unearned premiums calculated on a monthly pro-rata basis. Catastrophe premiums are earned in proportion to the insurance protection provided. Premiums earned are presented net of amounts ceded to reinsurers. Insurance premiums receivable, representing amounts due from insureds, are presented net of an allowance for uncollectible premiums, including expected credit losses. The allowance is based upon Ark’s ongoing review of amounts outstanding, historical loss data, including delinquencies and write-offs, current and forecasted economic conditions and other relevant factors. Credit risk is partially mitigated by Ark’s ability to cancel the policy if the policyholder does not pay the premium.

Deferred acquisition costs comprise commission and brokerage fees and taxes which are directly attributable to and vary with the production of business. These costs are deferred and amortized to the extent they relate to successful contract acquisitions over the applicable premium recognition period as insurance and reinsurance acquisition expenses. Deferred acquisition costs are limited to the amount expected to be recovered from future earned premiums and anticipated investment income. A premium deficiency is recognized if the sum of expected loss and LAE, expected dividends to policyholders, unamortized acquisition costs, and maintenance costs exceeds related unearned premiums and anticipated investment income. A premium deficiency is recognized by charging any unamortized acquisition costs to expense to the extent required in order to eliminate the deficiency. If the premium deficiency exceeds unamortized acquisition costs then a liability is accrued for the excess deficiency.

Losses and LAE are charged against income as incurred. Unpaid losses and LAE, including estimates for amounts incurred but not reported (“IBNR”) are based on estimates of the ultimate costs of settling claims, including the effects of inflation and other societal and economic factors. Unpaid loss and LAE reserves represent management’s best estimate of ultimate losses and LAE, net of estimated salvage and subrogation recoveries, if applicable. Such estimates are regularly reviewed and updated and any resulting adjustments are reflected in current results of operations. The process of estimating loss and LAE involves a considerable degree of judgment by management and the ultimate amount of expense to be incurred could be considerably greater than or less than the amounts currently reflected in the financial statements. See **Note 5 – “Loss and Loss Adjustment Expense Reserves”**.

As part of its enterprise risk management function, Ark purchases reinsurance for risk mitigation purposes. Ark utilizes reinsurance and retrocession agreements to reduce earnings volatility, protect capital, limit its exposure to risk concentration and accumulation of loss and to manage within its overall internal risk tolerances or those set and agreed by regulators, ratings agencies, and Lloyd’s. Ark also enters into reinsurance and retrocession agreements to reduce its liability on individual risks and enable it to underwrite policies with higher limits where Ark believes this has a broader business benefit. Ark seeks to protect its downside risk from catastrophes and large loss events by purchasing reinsurance, including excess of loss protections, aggregate covers, and industry loss warranties. Ark also considers alternative structures such as collateralized reinsurance, retrocessional reinsurance and catastrophe bonds. The purchase of reinsurance does not discharge Ark from its primary liability for the full value of its policies, and thus the collectability of balances due from Ark’s reinsurers is critical to its financial strength. Ark monitors the financial strength and ratings of its reinsurers on an ongoing basis. See **Note 6 – “Third-Party Reinsurance”**.

For the years of account prior to the Ark Transaction, a significant proportion of the Syndicates’ underwriting capital was provided by third-party insurance and reinsurance groups (“TPC Providers”) using whole account reinsurance contracts with Ark’s corporate member. The TPC Providers’ participation in the Syndicates for the 2020 open year of account is 42.8% of the total net result of the Syndicates. For the years of account subsequent to the Ark Transaction, Ark is no longer using TPC Providers to provide underwriting capital for the Syndicates. Captions within results of operations and other comprehensive income are shown net of amounts relating to the TPC Providers share of the Syndicates’ results, including investment results.

Reinsurance recoverables represent paid losses and LAE, case reserves and IBNR reserves ceded to reinsurers under reinsurance treaties. Amounts recoverable from reinsurers are estimated in a manner consistent with the associated claim liability. Ark reports its reinsurance recoverables net of an allowance for estimated uncollectible reinsurance, including expected credit losses and coverage disputes. The allowance is based upon Ark’s ongoing review of amounts outstanding, length of collection periods, changes in reinsurer credit standing, disputes, applicable coverage defenses and other relevant factors.

Reinsurance Contracts Accounted for as Deposits

Reinsurance contracts that do not meet the risk transfer requirements necessary to be accounted for as reinsurance are accounted for using the deposit method. Under the deposit method, ceded premiums paid are not recognized through income but rather treated as a deposit.

BAM entered into three ceded reinsurance agreements with Fidus Re Ltd. (“Fidus Re”), a Bermuda-based special purpose insurer created in 2018 solely to provide reinsurance protection to BAM. BAM also entered into an excess of loss reinsurance agreement (the “XOLT”) with HG Re. The financing expenses paid by BAM under these reinsurance agreements are recorded in general and administrative expenses. See **Note 10 — “Municipal Bond Guarantee Insurance”**.

Ark has an aggregate excess of loss contract with SiriusPoint Ltd. (“SiriusPoint”), formerly Third Point Reinsurance Ltd., which is accounted for using the deposit method and recorded within other assets. Ark earns an annual crediting rate of 3.0%, which is recorded within other revenue. See **Note 6 — “Third-Party Reinsurance”**.

Revenue Recognition

Kudu’s revenues are primarily generated from non-controlling equity interests in revenue and earnings participation contracts with asset and wealth management firms. Kudu’s Participation Contracts are measured at fair value with the change therein recognized within net realized and unrealized investment gains (losses). Distributions from Kudu’s clients are recognized through investment income when Kudu’s right to receive payment has been established and can be reliably measured, which generally occurs on a quarterly basis in accordance with the terms of the underlying participation contracts.

White Mountains’s Other Operations recognizes agent commissions and other revenues when it has satisfied its performance obligations. Deferred revenues associated with unsatisfied performance obligations are recognized within other liabilities.

Cost of Sales

White Mountains’s Other Operations’s cost of sales consists of salaries and related expenses, professional services and marketing and advertising expenses directly related to sales generation. These expenses are recognized as incurred.

Goodwill and Other Intangible Assets

Goodwill represents the excess of the amount paid to acquire subsidiaries over the fair value of identifiable net assets at the date of acquisition. Other intangible assets consist primarily of underwriting capacity, customer relationships and trade names.

Goodwill and other intangible assets with indefinite lives are not amortized, but rather are evaluated for impairment on an annual basis, or whenever indications of potential impairment exist. In the absence of any indications of potential impairment, the evaluation of goodwill and indefinite-lived intangible assets is performed no later than the interim period in which the anniversary of the acquisition date falls. White Mountains initially evaluates goodwill using a qualitative approach (step zero) to determine whether it is more likely than not that the implied fair value of goodwill is greater than its carrying value. If White Mountains determines, based on this qualitative review, that it is more likely than not that an impairment may exist, then White Mountains performs a quantitative analysis to compare the fair value of a reporting unit with its carrying value. If the carrying value exceeds the estimated fair value, then an impairment charge is recognized through current period pre-tax income (loss).

Other intangible assets with finite lives are initially measured at their acquisition date fair values and subsequently amortized over their economic lives. Other intangible assets with finite lives are presented net of accumulated amortization on the balance sheet. Other intangible assets with finite lives are reviewed for impairment when events occur or there are changes in circumstances indicating that their carrying value may exceed fair value. Impairment exists when the carrying value of other intangible assets exceeds fair value. See **Note 4 – “Goodwill and Other Intangible Assets”**.

Incentive Compensation

White Mountains’s Long-Term Incentive Plan (the “WTM Incentive Plan”) provides for grants of various types of share-based and non-share-based incentive awards to key employees of White Mountains. Non-share-based awards are recognized over the related service periods based on management’s best estimate of the amounts at which the awards are expected to be paid. Share-based compensation which is typically settled in cash, such as performance shares, is classified as a liability-type award. The compensation cost for liability-classified awards is measured initially at the grant date fair value and remeasured each reporting period until settlement. The compensation cost for equity-classified awards expected to be settled in shares, such as options and restricted shares, is measured at the original grant date fair value of the award. The compensation cost for all awards is recognized for the vested portion of the awards over the related service periods. See **Note 12 — “Employee Share-Based Incentive Compensation Plans”**.

Income Taxes

White Mountains has subsidiaries and branches that operate in various jurisdictions around the world and are subject to tax in the jurisdictions in which they operate. As of December 31, 2022, the primary jurisdictions in which White Mountains’s subsidiaries and branches were subject to tax were Ireland, Israel, Luxembourg, the United Kingdom and the United States. Income earned or losses generated by companies outside the United States are generally subject to an overall effective tax rate lower than that imposed by the United States.

Deferred tax assets and liabilities are recorded when a difference between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts for tax purposes exists, and for other temporary differences. The deferred tax asset or liability is recorded based on tax rates expected to be in effect when the difference reverses. Deferred tax assets represent amounts available to reduce income taxes payable in future periods. White Mountains records a valuation allowance against deferred tax assets if it becomes more likely than not that all or a portion of a deferred tax asset will not be realized. Changes in valuation allowances from period to period are included in income tax expense in the period of change. See **Note 8 – “Income Taxes”**.

Leases

Leases consist primarily of operating leases for office space and equipment. Lease assets and liabilities are recognized at the lease commencement date based on the present value of future minimum lease payments over the lease term. Lease assets and liabilities are not recorded for leases with a term at inception of one year or less. Lease expense is included in operating expenses. See **Note 13 – “Leases”**.

Non-controlling Interests

Non-controlling interests consist of the ownership interests of non-controlling shareholders in consolidated subsidiaries, and are presented separately on the balance sheet. The portion of comprehensive income (loss) attributable to non-controlling interests is presented net of related income taxes in the statement of operations and comprehensive income (loss). See **Note 14 — “Common Shareholders’ Equity and Non-controlling Interests”**.

Foreign Currency Exchange

The functional currency for White Mountains's non-U.S. based subsidiaries are measured, in most instances, using functional currencies other than the U.S. dollar. Net foreign exchange gains and losses arising from the translation of functional currencies are generally reported in shareholders' equity, in accumulated other comprehensive income or loss.

White Mountains also invests in securities denominated in foreign currencies. Assets and liabilities recorded in these foreign currencies are translated into U.S. dollars at exchange rates in effect at the balance sheet date, and revenues and expenses are converted using the weighted average exchange rates for the period.

As of December 31, 2022 and 2021, White Mountains had unrealized foreign currency translation gains (losses) of \$(3.5) million and \$5.1 million recorded in accumulated other comprehensive income (loss) on its consolidated balance sheet.

Fair Value Measurements

Fair value measurements are categorized into a hierarchy that distinguishes between inputs based on market data from independent sources (observable inputs) and a reporting entity's internal assumptions based upon the best information available when external market data is limited or unavailable (unobservable inputs). Quoted prices in active markets for identical assets or liabilities have the highest priority (Level 1), followed by observable inputs other than quoted prices, including prices for similar but not identical assets or liabilities (Level 2) and unobservable inputs, including the reporting entity's estimates of the assumptions that market participants would use, having the lowest priority (Level 3). See **Note 19 — "Fair Value of Financial Instruments"**.

Business Combinations

White Mountains accounts for purchases of businesses using the acquisition method, which requires the measurement of assets acquired, including other intangible assets, and liabilities assumed, including contingent liabilities, at their estimated fair values as of the acquisition date. The acquisition date fair values represent management's best estimates and are based upon established valuation techniques, reasonable assumptions and, where appropriate, valuations performed by independent third parties. In circumstances where additional information is required in order to determine the acquisition date fair value of balance sheet amounts, provisional amounts may be recorded as of the acquisition date and may be subject to subsequent adjustment throughout the measurement period, which is up to one year from the acquisition date. Measurement period adjustments are recognized in the period in which they are determined. The results of operations and cash flows of businesses acquired are included in the consolidated financial statements from the date of acquisition. White Mountains accounts for purchases of other intangible assets that do not meet the definition of a business as asset acquisitions. Asset acquisitions are recognized at the amount of consideration paid, which is deemed to equal fair value.

Note 2. Significant Transactions

NSM

On August 1, 2022, the NSM Transaction closed. White Mountains received \$1.4 billion in net cash proceeds at closing and recognized a net transaction gain of \$875.7 million, which was comprised of \$886.8 million of net gain from sale of discontinued operations and \$2.9 million of comprehensive income related to the recognition of foreign currency translation gains (losses) from the sale, partially offset by \$14.0 million of compensation and other costs related to the transaction recorded in Other Operations.

Ark

On October 1, 2020, White Mountains entered into a subscription and purchase agreement (the “Ark SPA”) with Ark and certain selling shareholders (collectively with Ark, the “Ark Sellers”). Under the terms of the Ark SPA, White Mountains agreed to contribute \$605.4 million of equity capital to Ark, at a pre-money valuation of \$300.0 million, and to purchase \$40.9 million of shares from the Ark Sellers. White Mountains also agreed to contribute up to an additional \$200.0 million of equity capital to Ark in 2021. In accordance with the Ark SPA, in the fourth quarter of 2020 White Mountains pre-funded/ placed in escrow a total of \$646.3 million in preparation for closing the transaction, including \$280.0 million funded directly to Lloyd’s on behalf of Ark under the terms of a credit facility agreement and \$366.3 million placed in escrow, which is reflected on the balance sheet within Other Operations as of December 31, 2020.

On January 1, 2021, White Mountains completed the Ark Transaction in accordance with the terms of the Ark SPA. As of December 31, 2021, White Mountains owned 72.0% of Ark on a basic shares outstanding basis (63.0% after taking account of management’s equity incentives). The remaining shares are owned by employees. In the future, management rollover shareholders could earn additional shares in Ark if and to the extent that White Mountains achieves certain multiple of invested capital return threshold. If fully earned, these additional shares would represent 12.5% of the shares outstanding at closing.

White Mountains recognized total assets acquired related to the Ark Transaction of \$2.5 billion, including goodwill and other intangible assets of \$292.5 million, and total liabilities of \$1.7 billion, including contingent consideration of \$22.5 million and non-controlling interest of \$220.2 million. Ark incurred transaction costs of \$25.3 million in the first quarter of 2021.

In the third quarter of 2021, Ark issued \$163.3 million of floating rate unsecured subordinated notes (the “Ark 2021 Subordinated Notes”) in three separate transactions. See **Note 7 — “Debt”**. In connection with the issuance of the Ark 2021 Subordinated Notes, White Mountains and Ark terminated White Mountains’s commitment to provide up to \$200.0 million of additional equity capital to Ark in 2021.

The following presents additional details of the assets acquired and liabilities assumed as of the January 1, 2021 acquisition date:

Millions	As of January 1, 2021	
Investments	\$	594.3
Cash		52.0 ⁽¹⁾
Reinsurance recoverables		433.4
Insurance premiums receivable		236.7
Ceded unearned premiums		170.2
Value of in-force business acquired		71.7
Other assets		88.9
Loss and loss adjustment expense reserves		(696.0)
Unearned insurance premiums		(326.1)
Debt		(46.4)
Ceded reinsurance payable		(528.3)
Other liabilities		(25.9)
Net tangible assets acquired		24.5
Goodwill		116.8
Other intangible assets - syndicate underwriting capacity		175.7
Deferred tax liability on other intangible assets		(33.4)
Net assets acquired	\$	283.6

⁽¹⁾ Cash excludes the White Mountains cash contribution of \$605.4 as part of the Ark Transaction.

The values of net tangible assets acquired and the resulting goodwill, other intangible assets and contingent consideration were recorded at fair value using Level 3 inputs. The majority of the tangible assets acquired and liabilities assumed were recorded at their carrying values, as their carrying values approximated their fair values due to their short-term nature. The fair values of other intangible assets and the contingent consideration liability were estimated primarily based on the income approach. The income approach estimates fair value based on the present value of the cash flows that the assets are expected to generate in the future. White Mountains developed internal estimates for the expected future cash flows and discount rates used in the present value calculations.

The value of in-force business acquired represents the estimated profits relating to the unexpired contracts, net of related prepaid reinsurance, at the acquisition date through the expiration date of the contracts. During 2022 and 2021, Ark recognized \$7.5 million and \$64.2 million of amortization expense on the value of in-force business acquired. The value of the syndicate underwriting capacity intangible asset was estimated using net cash flows attributable to Ark's rights to write business in the Lloyd's market. The value of the in-force business acquired and the syndicate underwriting capacity were estimated using a discounted cash flow method. Significant inputs to the valuation models include estimates of growth in premium revenues, investment returns, claim costs, expenses and discount rates based on a weighted average cost of capital.

In evaluating the fair value of Ark's loss and loss adjustment expense reserves, White Mountains determined that the risk-free rate of interest was approximately equal to the risk factor reflecting the uncertainty within the reserves and that no adjustment was necessary. For the year ended December 31, 2022 and 2021, Ark recognized pre-tax expense of \$17.3 million and \$5.5 million for the change in the fair value of its contingent consideration liabilities. Any future adjustments to contingent consideration liabilities will be recognized through pre-tax income (loss). As of December 31, 2022 and 2021, Ark recognized total contingent consideration liabilities of \$45.3 million and \$28.0 million.

Ark's segment income and expenses for 2022 and 2021 are presented in **Note 16 — "Segment Information."**

WM Outrigger Re

During the fourth quarter of 2022, Ark sponsored the formation of Outrigger Re Ltd., a Bermuda company registered as a special purpose insurer and segregated accounts company, to provide reinsurance capacity to Ark. On December 20, 2022, Outrigger Re Ltd. issued \$250 million of non-voting redeemable preference shares on behalf of four segregated accounts to White Mountains and unrelated third party investors. Upon issuance of the preference shares, Outrigger Re Ltd. entered into collateralized quota share agreements with GAIL to provide reinsurance protection on Ark's Bermuda global property catastrophe excess of loss portfolio written in calendar year 2023. The proceeds from the issuance of the preference shares were deposited into collateral trust accounts to fund any potential obligations under the reinsurance agreements with GAIL. Outrigger Re Ltd.'s obligations under the reinsurance agreements with GAIL are subject to an aggregate limit equal to the assets in the collateral trusts at any point in time. The terms of the reinsurance agreements are renewable upon the mutual agreement of Ark and the applicable preference shareholder.

White Mountains purchased 100% of the preference shares issued by its segregated account, WM Outrigger Re, for \$205.0 million. White Mountains consolidates WM Outrigger Re's results in its financial statements. WM Outrigger Re's quota share reinsurance agreement with GAIL will eliminate in White Mountains's consolidated financial statements. As of December 31, 2022, short-term investments of \$203.7 million were held in a collateral trust, after expenses of \$1.3 million.

MediaAlpha

On October 30, 2020, MediaAlpha completed the MediaAlpha IPO. In the offering, White Mountains sold 3.6 million shares at \$19.00 per share (\$17.67 per share net of underwriting fees) and received total proceeds of \$63.8 million. White Mountains also received \$55.0 million of net proceeds related to a dividend recapitalization at MediaAlpha.

Subsequent to the MediaAlpha IPO, White Mountains's investment in MediaAlpha is accounted for at fair value based on the publicly traded share price of MediaAlpha's common stock, and White Mountains presents its investment in MediaAlpha as a separate line item on the balance sheet.

On March 23, 2021, MediaAlpha completed a secondary offering of 8.05 million shares. In the secondary offering, White Mountains sold 3.6 million shares at \$46.00 per share (\$44.62 per share net of underwriting fees) for net proceeds of \$160.3 million.

As of December 31, 2022, White Mountains owned 16.9 million shares, representing a 27.1% basic ownership interest (25.1% fully-diluted/fully-converted basis). At this current level of ownership, each \$1.00 per share increase or decrease in the share price of MediaAlpha will result in an approximate \$6.60 per share increase or decrease in White Mountains's book value per share. At the December 31, 2022 closing price of \$9.95 per share, the fair value of White Mountains's investment in MediaAlpha was \$168.6 million. **See Note 17 — "Equity-Method Eligible Investments".**

Kudu

On May 26, 2022, Kudu raised \$114.5 million of equity capital (the “Kudu Transaction”) from Massachusetts Mutual Life Insurance Company (“Mass Mutual”), White Mountains and Kudu management. Mass Mutual, White Mountains and Kudu management contributed \$64.1 million, \$50.0 million and \$0.4 million at a pre-money valuation of 1.3x, or \$114.0 million, above the December 31, 2021 equity value of Kudu’s go-forward portfolio of participation contracts. Kudu’s go-forward portfolio of participation contracts excluded \$54.3 million of enterprise value as of December 31, 2021 relating to two portfolio companies that had announced sales transactions prior to the capital raise. As a result of the Kudu Transaction, White Mountains’s basic ownership of Kudu decreased from 99.1% to 89.3%.

Note 3. Investment Securities

White Mountains’s portfolio of investment securities held for general investment purposes consists of fixed maturity investments, short-term investments, common equity securities, its investment in MediaAlpha and other long-term investments, which are classified as trading securities. Trading securities are reported at fair value as of the balance sheet date. Net realized and unrealized investment gains (losses) on trading securities are reported in pre-tax revenues.

White Mountains’s fixed maturity investments are generally valued using industry standard pricing methodologies. Key inputs include benchmark yields, benchmark securities, reported trades, issuer spreads, bids, offers, credit ratings and prepayment speeds. Income on mortgage and asset-backed securities is recognized using an effective yield based on anticipated prepayments and the estimated economic life of the securities. When actual prepayments differ significantly from anticipated prepayments, the estimated economic life is recalculated and the remaining unamortized premium or discount is amortized prospectively over the remaining economic life.

Realized investment gains (losses) resulting from sales of investment securities are accounted for using the specific identification method. Premiums and discounts on all fixed maturity investments are amortized or accreted to income over the anticipated life of the investment. Short-term investments consist of interest-bearing money market funds, certificates of deposit and other securities, which at the time of purchase, mature or become available for use within one year. Short-term investments are carried at fair value, which approximated amortized cost, as of December 31, 2022 and 2021.

Other long-term investments consist primarily of unconsolidated entities, including Kudu’s Participation Contracts, private equity funds and hedge funds, a bank loan fund, Lloyd’s trust deposits, ILS funds and private debt instruments.

Net Investment Income

White Mountains’s net investment income is comprised primarily of interest income associated with White Mountains’s fixed maturity investments and short-term investments, dividend income from common equity securities, distributions from its investment in MediaAlpha and distributions from other long-term investments.

The following table presents pre-tax net investment income for the years ended December 31, 2022, 2021 and 2020:

Millions	Year Ended December 31,		
	2022	2021	2020
Fixed maturity investments	\$ 41.4	\$ 28.8	\$ 29.0
Short-term investments	16.4	.6	1.1
Common equity securities	1.6	.1	6.6
Investment in MediaAlpha	—	—	59.9
Other long-term investments	68.1	56.3	35.6
Amount attributable to TPC Providers	(1.0)	(1.0)	—
Total investment income	126.5	84.8	132.2
Third-party investment expenses	(2.1)	(2.3)	(1.2)
Net investment income, pre-tax	\$ 124.4	\$ 82.5	\$ 131.0

Net Realized and Unrealized Investment Gains (Losses)

The following table presents net realized and unrealized investment gains (losses) for the years ended December 31, 2022, 2021 and 2020:

Millions	Year Ended December 31,		
	2022	2021	2020
Realized investment gains (losses)			
Fixed maturity investments	\$ (11.9)	\$ 3.9	\$ 10.9
Short-term investments	(1.4)	(.1)	.4
Common equity securities	—	.4	137.2
Investment in MediaAlpha	—	160.3	63.8
Other long-term investments	128.4	(7.7)	(25.2)
Net realized investment gains (losses)	115.1	156.8	187.1
Unrealized investment gains (losses)			
Fixed maturity investments	(168.4)	(42.2)	27.5
Short-term investments	(1.1)	—	—
Common equity securities	(7.1)	14.9	(130.6)
Investment in MediaAlpha	(93.0)	(540.6)	622.2
Other long-term investments	(43.8)	172.7	10.6
Net unrealized investment gains (losses)	(313.4)	(395.2)	529.7
Net realized and unrealized investment gains (losses), before amount attributable to TPC providers ⁽¹⁾	(198.3)	(238.4)	716.8
Amount attributable to TPC Providers	6.8	(7.7)	—
Net realized and unrealized investment gains (losses)	\$ (191.5)	\$ (246.1)	\$ 716.8
Fixed maturity and short-term investments			
Net realized and unrealized investment gains (losses)	\$ (182.8)	\$ (38.4)	\$ 38.8
Less: net realized and unrealized gains (losses) on investment securities sold during the period	(2.9)	(8.4)	(8.7)
Net unrealized investment gains (losses) recognized during the period on investment securities held at the end of the period	\$ (179.9)	\$ (30.0)	\$ 47.5
Common equity securities and investment in MediaAlpha			
Net realized and unrealized investment gains (losses) on common equity securities	\$ (7.1)	\$ 15.3	\$ 6.6
Net realized and unrealized investment gains (losses) from investment in MediaAlpha	(93.0)	(380.3)	686.0
Total net realized and unrealized investment gains (losses)	(100.1)	(365.0)	692.6
Less: net realized and unrealized gains (losses) on investment securities sold during the period	—	20.3	38.3
Net unrealized investment gains (losses) recognized during the period on investment securities held at the end of the period	\$ (100.1)	\$ (385.3)	\$ 654.3

⁽¹⁾ For 2022, 2021 and 2020, includes \$(29.3), \$(7.7) and \$4.0 of net realized and unrealized investment gains (losses) related to foreign currency exchange.

For the years ended December 31, 2022, 2021 and 2020, all of White Mountains's net realized and unrealized investment gains (losses) were recorded in the consolidated statements of operations. There were no investment gains (losses) recorded in other comprehensive income.

White Mountains recognized gross realized investment gains of \$129.9 million, \$212.3 million and \$214.4 million and gross realized investment losses of \$14.8 million, \$55.5 million and \$27.3 million on sales of investment securities for the years ending December 31, 2022, 2021 and 2020.

The following table presents the total net unrealized gains (losses) attributable to Level 3 investments for the years ended December 31, 2022, 2021 and 2020 for investments held at the end of the period.

Millions	Year Ended December 31,		
	2022	2021	2020
Total net unrealized investment gains on other long-term investments held at the end of period, pre-tax ⁽¹⁾	\$ 56.5	\$ 98.9	\$ 276.0

⁽¹⁾ For 2020, includes \$278.7 of unrealized investment gains from White Mountains's investment in MediaAlpha.

Proceeds from the sales and maturities of investments, excluding short-term investments, totaled \$0.5 billion, \$0.8 billion and \$1.4 billion for the years ended December 31, 2022, 2021 and 2020.

Investment Holdings

The following tables present the cost or amortized cost, gross unrealized investment gains (losses), net foreign currency gains (losses) and carrying values of White Mountains's fixed maturity investments as of December 31, 2022 and 2021.

Millions	December 31, 2022				
	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Net Foreign Currency Gains (Losses)	Carrying Value
U.S. Government and agency obligations	\$ 216.6	\$ —	\$ (10.2)	\$ —	\$ 206.4
Debt securities issued by corporations	1,098.3	.6	(78.3)	(1.8)	1,018.8
Municipal obligations	281.6	.4	(23.4)	—	258.6
Mortgage and asset-backed securities	288.7	—	(34.5)	—	254.2
Collateralized loan obligations	190.8	.1	(6.0)	(2.0)	182.9
Total fixed maturity investments	\$ 2,076.0	\$ 1.1	\$ (152.4)	\$ (3.8)	\$ 1,920.9

Millions	December 31, 2021				
	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Net Foreign Currency Gains (Losses)	Carrying Value
U.S. Government and agency obligations	\$ 212.1	\$.5	\$ (1.1)	\$ —	\$ 211.5
Debt securities issued by corporations	993.3	8.7	(8.7)	(.4)	992.9
Municipal obligations	276.4	16.8	(1.3)	—	291.9
Mortgage and asset-backed securities	277.2	2.9	(2.5)	—	277.6
Collateralized loan obligations	136.5	—	(.4)	(1.1)	135.0
Total fixed maturity investments	\$ 1,895.5	\$ 28.9	\$ (14.0)	\$ (1.5)	\$ 1,908.9

The weighted average duration of White Mountains's fixed income portfolio was 2.3 years, including short-term investments, and 3.4 years, excluding short-term investments, as of December 31, 2022.

The following table presents the cost or amortized cost and carrying value of White Mountains's fixed maturity investments by contractual maturity as of December 31, 2022. Actual maturities could differ from contractual maturities because borrowers may have the right to call or prepay certain obligations with or without call or prepayment penalties.

Millions	December 31, 2022	
	Cost or Amortized Cost	Carrying Value
Due in one year or less	\$ 204.8	\$ 201.2
Due after one year through five years	914.0	853.2
Due after five years through ten years	374.4	337.4
Due after ten years	103.3	92.0
Mortgage and asset-backed securities and collateralized loan obligations	479.5	437.1
Total fixed maturity investments	\$ 2,076.0	\$ 1,920.9

The following tables present the cost or amortized cost, gross unrealized investment gains (losses), net foreign currency gains (losses), and carrying values of common equity securities, White Mountains's investment in MediaAlpha and other long-term investments as of December 31, 2022 and 2021:

Millions	December 31, 2022				
	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Net Foreign Currency Gains (Losses)	Carrying Value
Common equity securities	\$ 660.6	\$ 26.7	\$ (8.4)	\$ (10.5)	\$ 668.4
Investment in MediaAlpha	\$ —	\$ 168.6	\$ —	\$ —	\$ 168.6
Other long-term investments	\$ 1,340.8	\$ 271.1	\$ (107.1)	\$ (16.8)	\$ 1,488.0

Millions	December 31, 2021				
	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Net Foreign Currency Gains (Losses)	Carrying Value
Common equity securities	\$ 236.3	\$ 16.1	\$ —	\$ (1.3)	\$ 251.1
Investment in MediaAlpha	\$ —	\$ 261.6	\$ —	\$ —	\$ 261.6
Other long-term investments	\$ 1,186.7	\$ 239.0	\$ (44.1)	\$ (3.8)	\$ 1,377.8

Fair Value Measurements

As of December 31, 2022 and 2021, White Mountains used quoted market prices or other observable inputs to determine fair value for approximately 72% and 68% of the investment portfolio. See **Note 1 — “Basis of Presentation and Significant Accounting Policies”**.

Fair Value Measurements by Level

The following tables present White Mountains's fair value measurements for investments as of December 31, 2022 and 2021 by level. The major security types were based on the legal form of the securities. White Mountains has disaggregated its fixed maturity investments based on the issuing entity type, which impacts credit quality, with debt securities issued by U.S. government entities carrying minimal credit risk, while the credit and other risks associated with other issuers, such as corporations, municipalities or entities issuing mortgage and asset-backed securities vary depending on the nature of the issuing entity type. White Mountains further disaggregates debt securities issued by corporations by industry sector because investors often reference commonly used benchmarks and their subsectors to monitor risk and performance. Accordingly, White Mountains has further disaggregated this asset class into subclasses based on the similar sectors and industry classifications it uses to evaluate investment risk and performance against commonly used benchmarks, such as the Bloomberg Barclays U.S. Intermediate Aggregate.

Millions	December 31, 2022			
	Fair Value	Level 1	Level 2	Level 3
Fixed maturity investments:				
U.S. Government and agency obligations	\$ 206.4	\$ 206.4	\$ —	\$ —
Debt securities issued by corporations:				
Financials	291.2	—	291.2	—
Consumer	191.9	—	191.9	—
Technology	123.7	—	123.7	—
Healthcare	121.3	—	121.3	—
Industrial	115.4	—	115.4	—
Utilities	73.8	—	73.8	—
Communications	47.9	—	47.9	—
Energy	33.9	—	33.9	—
Materials	19.7	—	19.7	—
Total debt securities issued by corporations	1,018.8	—	1,018.8	—
Municipal obligations	258.6	—	258.6	—
Mortgage and asset-backed securities	254.2	—	254.2	—
Collateralized loan obligations	182.9	—	182.9	—
Total fixed maturity investments	1,920.9	206.4	1,714.5	—
Short-term investments	924.1	924.1	—	—
Common equity securities				
Exchange-trade funds	333.8	333.8	—	—
Other ⁽¹⁾	334.6	—	334.6	—
Total common equity securities	668.4	333.8	334.6	—
Investment in MediaAlpha	168.6	168.6	—	—
Other long-term investments	926.4	—	14.8	911.6
Other long-term investments — NAV ⁽²⁾	561.6	—	—	—
Total other long-term investments	1,488.0	—	14.8	911.6
Total investments	\$ 5,170.0	\$ 1,632.9	\$ 2,063.9	\$ 911.6

⁽¹⁾ Consist of investments in listed funds that predominantly invest in international equities.

⁽²⁾ Consists of private equity funds and hedge funds, a bank loan fund, Lloyd's trust deposits and ILS funds for which fair value is measured using NAV as a practical expedient. Investments for which fair value is measured at NAV are not classified within the fair value hierarchy.

Millions	December 31, 2021			
	Fair Value	Level 1	Level 2	Level 3
Fixed maturity investments:				
U.S. Government and agency obligations	\$ 211.5	\$ 211.5	\$ —	\$ —
Debt securities issued by corporations:				
Financials	264.2	—	264.2	—
Consumer	178.1	—	178.1	—
Technology	117.9	—	117.9	—
Industrial	112.9	—	112.9	—
Healthcare	112.8	—	112.8	—
Utilities	70.9	—	70.9	—
Communications	56.0	—	56.0	—
Energy	48.0	—	48.0	—
Materials	32.1	—	32.1	—
Total debt securities issued by corporations	992.9	—	992.9	—
Municipal obligations	291.9	—	291.9	—
Mortgage and asset-backed securities	277.6	—	277.6	—
Collateralized loan obligations	135.0	—	135.0	—
Total fixed maturity investments	1,908.9	211.5	1,697.4	—
Short-term investments	465.9	465.9	—	—
Common equity securities ⁽¹⁾	251.1	—	251.1	—
Investment in MediaAlpha	261.6	261.6	—	—
Other long-term investments	895.3	—	4.7	890.6
Other long-term investments — NAV ⁽²⁾	482.5	—	—	—
Total other long-term investments	1,377.8	—	4.7	890.6
Total investments	\$ 4,265.3	\$ 939.0	\$ 1,953.2	\$ 890.6

⁽¹⁾ Consists of investments in listed funds that predominantly invest in international equities.

⁽²⁾ Consists of private equity funds and hedge funds, a bank loan fund, Lloyd's trust deposits and ILS funds for which fair value is measured using NAV as a practical expedient. Investments for which fair value is measured at NAV are not classified within the fair value hierarchy.

Investments Held on Deposit or as Collateral

As of December 31, 2022 and 2021, investments of \$500.5 million and \$479.5 million, were held in trusts required to be maintained in relation to HG Global's reinsurance agreements with BAM.

HG Global is required to maintain an interest reserve account in connection with its senior notes issued in 2022. As of December 31, 2022, the interest reserve account, which is included in short-term investments, is \$31.2 million. See **Note 7 — "Debt"**.

BAM is required to maintain deposits with certain insurance regulatory agencies in order to maintain their insurance licenses. The fair value of such deposits, which represent state deposits and are included within the investment portfolio, totaled \$4.6 million and \$4.8 million as of December 31, 2022 and 2021.

Lloyd's trust deposits are generally required of Lloyd's syndicates to protect policyholders in non-U.K. markets and are pledged into Lloyd's trust accounts to provide a portion of the capital needed to support obligations at Lloyd's. As of December 31, 2022 and 2021, Ark held Lloyd's trust deposits with a fair value of \$137.4 million and \$113.8 million.

The underwriting capacity of a member of Lloyd's must be supported by providing a deposit ("Funds at Lloyd's") in the form of cash, securities or letters of credit in an amount determined by Lloyd's. The amount of such deposit is calculated for each member through the completion of an annual capital adequacy exercise. These requirements allow Lloyd's to evaluate that each member has sufficient assets to meet its underwriting liabilities plus a required solvency margin. As of December 31, 2022 and 2021, the fair value of Ark's Funds at Lloyd's investment deposits totaled \$319.2 million and \$342.8 million.

As at December 31, 2022 and 2021, Ark has \$90.3 million and \$50.0 million of short-term investments pledged as collateral under uncommitted stand by letters of credit. See **Note 7 — "Debt"**.

As of December 31, 2022, short-term investments of \$203.7 million were held in a collateral trust account required to be maintained in relation to WM Outrigger Re's reinsurance agreement with GAIL.

Debt Securities Issued by Corporations

The following table presents the credit ratings of debt securities issued by corporations held in White Mountains's investment portfolio as of December 31, 2022 and 2021:

Millions	Fair Value at December 31,	
	2022	2021
AAA	\$ 11.3	\$ 12.0
AA	96.0	85.0
A	567.9	490.4
BBB	337.7	396.8
Other	5.9	8.7
Debt securities issued by corporations ⁽¹⁾	\$ 1,018.8	\$ 992.9

⁽¹⁾ Credit ratings are based upon issuer credit ratings provided by Standard & Poor's Financial Services LLC ("Standard & Poor's"), or if unrated by Standard & Poor's, long-term obligation ratings provided by Moody's Investor Service, Inc.

Mortgage and Asset-backed Securities and Collateralized Loan Obligations

The following table presents the fair value of White Mountains's mortgage and asset-backed securities and collateralized loan obligations as of December 31, 2022 and 2021:

Millions	December 31, 2022			December 31, 2021		
	Fair Value	Level 2	Level 3	Fair Value	Level 2	Level 3
Mortgage-backed securities:						
Agency:						
FNMA	\$ 124.5	\$ 124.5	\$ —	\$ 125.4	\$ 125.4	\$ —
FHLMC	78.8	78.8	—	90.5	90.5	—
GNMA	28.3	28.3	—	40.1	40.1	—
Total agency ⁽¹⁾	231.6	231.6	—	256.0	256.0	—
Non-agency: Residential	.3	.3	—	.5	.5	—
Total non-agency	.3	.3	—	.5	.5	—
Total mortgage-backed securities	231.9	231.9	—	256.5	256.5	—
Other asset-backed securities:						
Credit card receivables	11.9	11.9	—	12.3	12.3	—
Vehicle receivables	10.4	10.4	—	8.8	8.8	—
Total other asset-backed securities	22.3	22.3	—	21.1	21.1	—
Total mortgage and asset-backed securities	254.2	254.2	—	277.6	277.6	—
Collateralized loan obligations:	182.9	182.9	—	135.0	135.0	—
Total mortgage and asset-backed securities and collateralized loan obligations	\$ 437.1	\$ 437.1	\$ —	\$ 412.6	\$ 412.6	\$ —

⁽¹⁾ Represents publicly traded mortgage-backed securities which carry the full faith and credit guaranty of the U.S. Government (i.e., GNMA) or are guaranteed by a government sponsored entity (i.e., FNMA, FHLMC).

As of December 31, 2022, White Mountains's investment portfolio included \$182.9 million of collateralized loan obligations that are within the senior tranches of their respective fund securitization structures. All of White Mountains's collateral loan obligations were rated AAA or AA as of December 31, 2022.

Investment in MediaAlpha

Following the MediaAlpha IPO, White Mountains's investment in MediaAlpha is accounted for at fair value based on the publicly traded share price of MediaAlpha's common stock and is presented as a separate line item on the balance sheet.

At the December 31, 2022 closing price of \$9.95 per share, the fair value of White Mountains's investment in MediaAlpha was \$168.6 million. See **Note 2 — "Significant Transactions"**.

Other Long-Term Investments

The following table presents the carrying values of White Mountains's other long-term investments as of December 31, 2022 and 2021:

Millions	Fair Value at December 31,	
	2022	2021
Kudu's Participation Contracts	\$ 695.9	\$ 669.5
PassportCard/DavidShield	135.0	120.0
Elementum Holdings L.P.	30.0	45.0
Other unconsolidated entities ⁽¹⁾	37.2	34.4
Total unconsolidated entities	898.1	868.9
Private equity funds and hedge funds	197.8	153.8
Bank loan fund	174.8	163.0
Lloyd's trust deposits	137.4	113.8
ILS funds	49.3	51.9
Private debt instruments	9.6	14.1
Other	21.0	12.3
Total other long-term investments	\$ 1,488.0	\$ 1,377.8

⁽¹⁾ Includes White Mountains's non-controlling equity interests in certain private common equity securities, convertible preferred securities, limited liability company units and Simple Agreement for Future Equity ("SAFE") investments.

Private Equity Funds and Hedge Funds

White Mountains invests in private equity funds and hedge funds, which are included in other long-term investments. The fair value of these investments is generally estimated using the NAV of the funds. As of December 31, 2022, White Mountains held investments in 16 private equity funds and two hedge funds. The largest investment in a single private equity fund or hedge fund was \$49.0 million as of December 31, 2022 and \$31.3 million as of December 31, 2021.

The following table presents the fair value of investments and unfunded commitments in private equity funds and hedge funds by investment objective and sector as of December 31, 2022 and 2021:

Millions	December 31, 2022		December 31, 2021	
	Fair Value	Unfunded Commitments	Fair Value	Unfunded Commitments
Private equity funds				
Aerospace/Defense/Government	\$ 59.4	\$ 37.5	\$ 69.8	\$ 11.8
Financial services	77.1	54.3	67.7	29.3
Real estate	4.1	2.5	4.3	2.9
Total private equity funds	140.6	94.3	141.8	44.0
Hedge funds				
Long/short equity financials and business services	49.0	—	—	—
European small/mid cap	8.2	—	12.0	—
Total hedge funds	57.2	—	12.0	—
Total private equity funds and hedge funds included in other long-term investments	\$ 197.8	\$ 94.3	\$ 153.8	\$ 44.0

Investments in private equity funds are generally subject to a lock-up period during which investors may not request a redemption. Distributions prior to the expected termination date of the fund may be limited to dividends or proceeds arising from the liquidation of the fund's underlying investments. In addition, certain private equity funds have the option to extend the lock-up period.

The following table presents investments in private equity funds that were subject to lock-up periods as of December 31, 2022:

Millions	1 – 3 years	3 – 5 years	5 – 10 years	>10 years	Total
Private equity funds — expected lock-up period remaining	\$ 4.2	\$ 18.8	\$ 113.9	\$ 3.7	\$ 140.6

Investors in private equity funds are generally subject to indemnification obligations outside of the capital commitment period and prior to the winding up of the fund. As of December 31, 2022 and 2021, White Mountains is not aware of any indemnification claims relating to its investments in private equity funds.

Redemption of investments in most hedge funds is subject to restrictions, including lock-up periods where no redemptions or withdrawals are allowed, restrictions on redemption frequency and advance notice periods for redemptions. Amounts requested for redemptions remain subject to market fluctuations until the redemption effective date, which generally falls at the end of the defined redemption period. Advance notice requirements for redemptions from White Mountains's hedge fund investments range from 45 to 90 days. One of White Mountains's hedge fund investments also limits redemptions to every second anniversary following the date of the initial investment.

Bank Loan Fund

White Mountains's other long-term investments include a bank loan fund with a fair value of \$174.8 million as of December 31, 2022. The fair value of this investment is estimated using the NAV of the fund. The bank loan fund's investment objective is to provide, on an unleveraged basis, high current income consistent with preservation of capital and low duration. The bank loan fund primarily invests in a broad portfolio of U.S. dollar-denominated, non-investment grade, floating-rate senior secured loans and may invest in other financial instruments, such as secured and unsecured corporate debt, credit default swaps, reverse repurchase agreements, synthetic indices and cash and cash equivalents.

The investment in the bank loan fund is subject to restrictions on redemption frequency and advance notice periods for redemptions. Amounts requested for redemptions remain subject to market fluctuations until the redemption effective date, which generally falls at the end of the defined redemption period. White Mountains may redeem all or a portion of its bank loan fund investment as of any calendar month-end upon 15 calendar days advanced written notice.

Lloyd's Trust Deposits

White Mountains's other long-term investments include Lloyd's trust deposits, which consist of non-U.K. deposits and Canadian comingled pooled funds. The Lloyd's trust deposits invest primarily in short-term government securities, agency securities and corporate bonds held in trusts that are managed by Lloyd's of London. These investments are generally required of Lloyd's syndicates to protect policyholders in non-U.K. markets and are pledged into Lloyd's trust accounts to provide a portion of the capital needed to support obligations at Lloyd's. The fair value of the Lloyd's trust deposits is generally estimated using the NAV of the funds. As of December 31, 2022, White Mountains held Lloyd's trust deposits with a fair value of \$137.4 million.

Insurance-Linked Securities Funds

White Mountains's other long-term investments include ILS fund investments. The fair value of these investments is generally estimated using the NAV of the funds. As of December 31, 2022, White Mountains held investments in ILS funds with a fair value of \$49.3 million. During the fourth quarter of 2022, White Mountains agreed to invest an additional \$100.0 million into ILS funds beginning in 2023. White Mountains pre-funded \$70.0 million of this investment as of December 31, 2022, which has been recorded as a receivable within other assets.

Investments in ILS funds are generally subject to restrictions, including lock-up periods where no redemptions or withdrawals are allowed, non-renewal clauses, restrictions on redemption frequency and advance notice periods for redemptions. From time to time, natural catastrophe, liquidity, market or other events will occur that make the determination of fair value for underlying investments in ILS funds less certain due to the potential for loss development. In such circumstances, the impacted investments may be subject to additional lock-up provisions.

ILS funds are typically subject to monthly and annual restrictions on redemptions and advance redemption notice period requirements that range between 30 and 90 days. Amounts requested for redemption remain subject to market fluctuations until the redemption effective date, which generally falls at the end of the defined redemption period.

Rollforward of Level 3 Investments

Level 3 measurements as of December 31, 2022 and 2021 consist of securities for which the estimated fair value has not been determined based upon quoted market price inputs for identical or similar securities. The following table presents the changes in White Mountains's fair value measurements for Level 3 investments for the years ended December 31, 2022 and 2021:

Level 3 Investments			
Millions	Other Long-term Investments		Other Long-term Investments
Balance at December 31, 2021	\$ 890.6	Balance at December 31, 2020	\$ 614.2
Net realized and unrealized gains	60.4	Net realized and unrealized gains	117.3
Amortization/accretion	—	Amortization/accretion	—
Purchases	129.8	Purchases	225.4
Sales	(169.2)	Sales	(75.9)
Effect of Ark Transaction	—	Effect of Ark Transaction	9.6
Transfers in	—	Transfers in	—
Transfers out	—	Transfers out	—
Balance at December 31, 2022	\$ 911.6	Balance at December 31, 2021	\$ 890.6

Fair Value Measurements — Transfers Between Levels - For Years Ended December 31, 2022 and 2021

Transfers between levels are recorded using the fair value measurement as of the end of the quarterly period in which the event or change in circumstance giving rise to the transfer occurred.

During 2022 and 2021, there were no fixed maturity investments or other long-term investments classified as Level 3 measurements in the prior period that were transferred to Level 2 measurements.

During 2022 and 2021, there were no fixed maturity investments or other long-term investments classified as Level 2 measurements in the prior period that were transferred to Level 3 measurements.

Significant Unobservable Inputs

The following tables present significant unobservable inputs used in estimating the fair value of White Mountains's other long-term investments classified within Level 3 as of December 31, 2022 and 2021. The tables below exclude \$41.1 million and \$46.7 million of Level 3 other long-term investments generally valued based on recent or expected transaction prices. The fair value of investments in private equity funds and hedge funds, bank loan funds, Lloyd's trust deposits and ILS funds are generally estimated using the NAV of the funds.

\$ in Millions Description	December 31, 2022			
	Valuation Technique(s) ⁽¹⁾	Fair Value ⁽²⁾	Unobservable Inputs	
			Discount Rate ⁽⁶⁾	Terminal Cash Flow Exit Multiple (x) or Terminal Revenue Growth Rate (%) ⁽⁶⁾
Kudu's Participation Contracts ⁽³⁾⁽⁴⁾⁽⁵⁾	Discounted cash flow	\$695.9	18% - 25%	7x - 16x
PassportCard/DavidShield	Discounted cash flow	\$135.0	24%	4%
Elementum Holdings, L.P.	Discounted cash flow	\$30.0	21%	4%
Private debt instruments	Discounted cash flow	\$9.6	11%	N/A

⁽¹⁾ Key inputs to the discounted cash flow analysis generally include projections of future revenue and earnings, discount rates and terminal exit multiples or growth rates.

⁽²⁾ Includes the net unrealized investment gains (losses) associated with foreign currency; foreign currency effects based on observable inputs.

⁽³⁾ Since Kudu's Participation Contracts are not subject to corporate taxes within Kudu Investment Management, LLC, pre-tax discount rates are applied to pre-tax cash flows in determining fair values. The weighted average discount rate and weighted average terminal cash flow exit multiple applied to Kudu's Participation Contracts is 21% and 11.8x.

⁽⁴⁾ In 2022, Kudu deployed a total of \$99.8 into new and existing Kudu Participation Contracts, including Gramercy Funds Management, GenTrust, EC Management Services, Pennybacker Capital Management and TK Partners.

⁽⁵⁾ As of December 31, 2022, two of Kudu's Participation Contracts with a total fair value of \$189.0 were valued using a probability weighted expected return method, which takes into account factors such as a discounted cash flow analysis, the expected value to be received in a pending sales transaction and the likelihood that a sales transaction will take place.

⁽⁶⁾ Increases (decreases) to the discount rates in isolation would result in lower (higher) fair value measurements, while increases (decreases) to the terminal cash flow exit multiples or terminal revenue growth rates in isolation would result in higher (lower) fair value measurements.

\$ in Millions Description	December 31, 2021			
	Valuation Technique(s) ⁽¹⁾	Fair Value ⁽²⁾	Unobservable Inputs	
			Discount Rate ⁽⁶⁾	Terminal Cash Flow Exit Multiple (x) or Terminal Revenue Growth Rate (%) ⁽⁶⁾
Kudu's Participation Contracts ⁽³⁾⁽⁴⁾⁽⁵⁾	Discounted cash flow	\$669.5	18% - 23%	7x - 13x
PassportCard/DavidShield	Discounted cash flow	\$120.0	23%	4%
Elementum Holdings, L.P.	Discounted cash flow	\$45.0	17%	4%
Private debt instruments	Discounted cash flow	\$9.4	8%	N/A

⁽¹⁾ Key inputs to the discounted cash flow analysis generally include projections of future revenue and earnings, discount rates and terminal exit multiples or growth rates.

⁽²⁾ Includes the net unrealized investment gains (losses) associated with foreign currency; foreign currency effects based on observable inputs.

⁽³⁾ Since Kudu's Participation Contracts are not subject to corporate taxes within Kudu Investment Management, LLC, pre-tax discount rates are applied to pre-tax cash flows in determining fair values. The weighted average discount rate and weighted average terminal cash flow exit multiple applied to Kudu's Participation Contracts is 20% and 10.0x.

⁽⁴⁾ In 2021, Kudu deployed a total of \$223.4 into new and existing Kudu Participation Contracts, including TIG Advisors, TK Partners, Third Eye Capital Management, Douglass Winthrop Advisors, Granahan Investment Management and Radcliffe Capital Management.

⁽⁵⁾ As of December 31, 2021, one of Kudu's Participation Contracts with a total fair value of \$78.8 was valued using a probability weighted expected return method, which takes into account factors such as a discounted cash flow analysis, the expected value to be received in a pending sales transaction and the likelihood that a sales transaction will take place.

⁽⁶⁾ Increases (decreases) to the discount rates in isolation would result in lower (higher) fair value measurements, while increases (decreases) to the terminal cash flow exit multiples or terminal revenue growth rates in isolation would result in higher (lower) fair value measurements.

Note 4. Goodwill and Other Intangible Assets

White Mountains accounts for business combinations using the acquisition method. Under the acquisition method, White Mountains recognizes and measures the assets acquired, liabilities assumed and any non-controlling interest in the acquired entities at their acquisition date fair values. Goodwill represents the excess of the amount paid to acquire subsidiaries over the fair value of identifiable net assets at the date of acquisition. The estimated acquisition date fair values, generally consisting of intangible assets and liabilities for contingent consideration, may be recorded at provisional amounts in circumstances where the information necessary to complete the acquisition accounting is not available at the reporting date. Any such provisional amounts are finalized as measurement period adjustments within one year of the acquisition date.

The following table presents the economic lives, acquisition date fair values, accumulated amortization and net carrying values for other intangible assets and goodwill, by company as of December 31, 2022 and 2021:

\$ in Millions	Weighted Average Economic Life (in years)	December 31, 2022			December 31, 2021		
		Acquisition Date Fair Value	Accumulated Amortization	Net Carrying Value	Acquisition Date Fair Value	Accumulated Amortization	Net Carrying Value
Goodwill:							
Ark	N/A	\$ 116.8	\$ —	\$ 116.8	\$ 116.8	\$ —	\$ 116.8
Kudu	N/A	7.6	—	7.6	7.6	—	7.6
Other Operations	N/A	52.1	—	52.1	17.9	—	17.9
Total goodwill		176.5	—	176.5	142.3	—	142.3
Other intangible assets:							
<i>Ark</i>							
Underwriting capacity	N/A	175.7	—	175.7	175.7	—	175.7
<i>Kudu</i>							
Trade names	7	2.2	1.2	1.0	2.2	.9	1.3
<i>Other Operations</i>							
Trade names	15.9	17.9	3.0	14.9	8.2	1.5	6.7
Customer relationships	12.4	29.5	7.5	22.0	18.8	4.5	14.3
Other	12.1	2.8	.5	2.3	.3	.1	.2
Subtotal		50.2	11.0	39.2	27.3	6.1	21.2
Total other intangible assets		228.1	12.2	215.9	205.2	7.0	198.2
Total goodwill and other intangible assets		\$ 404.6	\$ 12.2	392.4	\$ 347.5	7.0	340.5
Goodwill and other intangible assets attributed to non-controlling interests				(102.7)			(91.8)
Goodwill and other intangible assets included in White Mountains's common shareholders' equity				\$ 289.7			\$ 248.7

Intangible Assets Valuation Methods

The goodwill recognized for the entities shown above is attributed to expected future cash flows. The acquisition date fair values of other intangible assets with finite lives are estimated using income approach techniques, which use future expected cash flows to develop a discounted present value amount.

The multi-period-excess-earnings method estimates fair value using the present value of the incremental after-tax cash flows attributable solely to the other intangible asset over its remaining life. This approach was used to estimate the fair value of other intangible assets associated with the underwriting capacity, trade names, customer relationships and contracts.

The relief-from-royalty method was used to estimate fair value for other intangible assets that relate to rights that could be obtained via a license from a third-party owner. Under this method, the fair value is estimated using the present value of license fees avoided by owning rather than leasing the asset. This technique was used to estimate the fair value of domain names, certain trademarks and brand names.

The with-or-without method estimates the fair value of other intangible assets that provide an incremental benefit. Under this method, the fair value of the other intangible asset is calculated by comparing the value of the entity with and without the other intangible asset. This approach was used to estimate the fair value of favorable lease terms.

On at least an annual basis beginning no later than the interim period included in the one-year anniversary of an acquisition, White Mountains evaluates goodwill and other intangible assets for potential impairment. Between annual evaluations, White Mountains considers changes in circumstances or events subsequent to the most recent evaluation that may indicate that an impairment may exist and, if necessary will perform an interim review for potential impairment.

Goodwill and Other Intangible Asset Rollforward

The following table presents the change in goodwill and other intangible assets:

Millions	December 31, 2022			December 31, 2021		
	Goodwill	Other Intangible Assets	Total Goodwill and Other Intangible Assets	Goodwill	Other Intangible Assets	Total Goodwill and Other Intangible Assets
Beginning balance	\$ 142.3	\$ 198.2	\$ 340.5	\$ 19.2	\$ 26.4	\$ 45.6
Acquisition of businesses ⁽¹⁾	59.5	—	59.5	15.8	—	15.8
Ark Transaction	—	—	—	116.8	175.7	292.5
Attribution of acquisition date fair value estimates between goodwill and other intangible assets	(22.9)	22.9	—	(9.3)	9.3	—
Measurement period adjustments ⁽²⁾	(2.4)	—	(2.4)	(.2)	—	(.2)
Assets held for sale ⁽³⁾	—	—	—	—	(8.6)	(8.6)
Amortization	—	(5.2)	(5.2)	—	(4.6)	(4.6)
Ending balance	\$ 176.5	\$ 215.9	\$ 392.4	\$ 142.3	\$ 198.2	\$ 340.5

⁽¹⁾ Relates to acquisitions within Other Operations.

⁽²⁾ Measurement period adjustments relate to updated information about acquisition date fair values of assets acquired and liabilities assumed. During 2022 and 2021, adjustments relate to acquisitions within Other Operations.

⁽³⁾ As of December 31, 2021, White Mountains has classified one of its Other Operating Businesses as held for sale, which includes of \$8.6 of insurance licenses. See Note 21 — “Held for Sale and Discontinued Operations.”

During the years ended December 31, 2022 and 2021, White Mountains did not recognize any impairments to goodwill and other intangible assets.

Amortization of Other Intangible Assets

Amortization expense was \$5.2 million, \$4.6 million and \$1.6 million for the years ended December 31, 2022, 2021 and 2020.

White Mountains expects to recognize amortization expense in each of the next five years as the following table presents:

Millions	Amortization Expense
2023	\$ 7.1
2024	6.6
2025	5.7
2026	4.8
2027 and years after	16.0
Total ⁽¹⁾	\$ 40.2

⁽¹⁾ Excludes Ark’s indefinite-lived intangible assets of \$175.7.

Note 5. Loss and Loss Adjustment Expense Reserves

Ark establishes loss and LAE reserves that are estimates of amounts needed to pay claims and related expenses in the future for insured events that have already occurred. The process of estimating reserves involves a considerable degree of judgment by management and, as of any given date, is inherently uncertain.

HG Re and BAM do not have any outstanding loss and LAE reserves related to BAM's municipal bond guarantee business.

Loss and LAE reserves are typically comprised of case reserves for claims reported and reserves for losses that have occurred but for which claims have not yet been reported, referred to as IBNR reserves. IBNR reserves include a provision for expected future development on case reserves. Case reserves are estimated based on the experience and knowledge of claims staff regarding the nature and potential cost of each claim and are adjusted as additional information becomes known or payments are made. IBNR reserves are derived by subtracting paid loss and LAE and case reserves from estimates of ultimate loss and LAE. Actuaries estimate ultimate loss and LAE using various generally accepted actuarial methods applied to known losses and other relevant information. Like case reserves, IBNR reserves are adjusted as additional information becomes known or payments are made.

Losses and LAE are categorized by the year in which the policy is underwritten (the year of account, or underwriting year) for purposes of Ark's claims management and estimation of the ultimate loss and LAE reserves. For purposes of Ark's reporting under GAAP, losses and LAE are categorized by the year in which the claim is incurred (the accident year).

Ultimate loss and LAE are generally determined by extrapolation of claim emergence and settlement patterns observed in the past that can reasonably be expected to persist into the future. In forecasting ultimate loss and LAE with respect to any line of business, past experience with respect to that line of business is the primary resource, but cannot be relied upon in isolation. Ark's own experience, particularly claims development experience, such as trends in case reserves, payments on and closings of claims, as well as changes in business mix and coverage limits, is the most important information for estimating its reserves. External data, available from organizations such as the Lloyd's Market Association, consulting firms and other insurance and reinsurance companies, is used to supplement or corroborate Ark's own experience. External data can be especially useful for estimating costs on newer lines of business. Ultimate loss and LAE for major losses and catastrophes are estimated based on the known and expected exposures to the loss event, rather than simply relying on the extrapolation of reported and settled claims.

For some lines of business, such as long-tail coverages discussed below, claims data reported in the most recent years of account are often too limited to provide a meaningful basis for analysis due to the typical delay in reporting and settling of claims. For this type of business, Ark uses an expected loss ratio method for the initial years of account. This is a standard and accepted actuarial reserve estimation method in these circumstances in which the loss ratio is selected based upon information used in pricing policies for that line of business, as well as any publicly available industry data, such as industry pricing, experience and trends, for that line of business.

Uncertainties in estimating ultimate loss and LAE are magnified by the time lag between when a claim actually occurs and when it is reported and eventually settled. This time lag is sometimes referred to as the "claim-tail". The claim-tail for reinsurance and insurance obtained through brokers, MGAs and reinsurance intermediaries (collectively the "insurance and reinsurance intermediaries") is further extended because claims are first reported to either the original primary insurance company or the insurance and reinsurance intermediaries. The claim-tail for most property coverages is typically short (usually a few days up to a few months). Settlements for casualty/liability coverages can extend for long periods of time as claims are often reported and ultimately paid or settled years after the related loss events occur. During the long claims reporting and settlement period, additional facts regarding coverages written in prior years of account, as well as about actual claims and trends, may become known and, as a result, Ark may adjust its reserves. The inherent uncertainties of estimating reserves are increased by the diversity of loss development patterns among different types of reinsurance treaties, facultative contracts or direct insurance contracts, the necessary reliance on the ceding companies and insurance and reinsurance intermediaries for information regarding reported claims and the differing reserving practices among ceding companies and insurance and reinsurance intermediaries.

If management determines that an adjustment is appropriate, the adjustment is booked in the accounting period in which such determination is made. Accordingly, should reserves need to be increased or decreased in the future from amounts currently established, future results of operations would be negatively or positively impacted.

In determining ultimate loss and LAE, the cost to indemnify claimants, provide needed legal defense and other services for insureds and administer the investigation and adjustment of claims are considered. These claim costs are influenced by many factors that change over time, such as expanded coverage definitions as a result of new court decisions, inflation in costs to repair or replace damaged property, inflation in the cost of medical services, and legislated changes in statutory benefits, as well as by the particular, unique facts that pertain to each claim. As a result, the rate at which claims arose in the past and the costs to settle them may not always be representative of what will occur in the future. The factors influencing changes in claim costs are often difficult to isolate or quantify and developments in paid and incurred losses from historical trends are frequently subject to multiple and conflicting interpretations. Changes in coverage terms or claims handling practices may also cause future experience and/or development patterns to vary from the past. A key objective of actuaries in developing estimates of ultimate loss and LAE and resulting IBNR reserves is to identify aberrations and systemic changes occurring within historical experience and accurately adjust for them so that the future can be projected more reliably. Because of the factors previously discussed, this process requires the use of informed judgment and is inherently uncertain.

Ark performs an actuarial review of its recorded loss and LAE reserves each quarter, using several generally accepted actuarial methods to evaluate its loss reserves, each of which has its own strengths and weaknesses. Management places more or less reliance on a particular method based on the facts and circumstances at the time the reserve estimates are made. These methods generally fall into one of the following categories or are hybrids of one or more of the following categories:

- *Historical paid loss development methods:* These methods use historical loss payments over discrete periods of time to estimate future losses. Historical paid loss development methods assume that the ratio of losses paid in one period to losses paid in an earlier period will remain constant. These methods necessarily assume that factors that have affected paid losses in the past, such as inflation or the effects of litigation, will remain constant in the future. Because historical paid loss development methods do not use case reserves to estimate ultimate losses, they can be more reliable than the other methods discussed below that look to case reserves (such as actuarial methods that use incurred losses) in situations where there are significant changes in how case reserves are established by a company's claims adjusters. However, historical paid loss development methods are more leveraged, meaning that small changes in payments have a larger impact on estimates of ultimate losses, than actuarial methods that use incurred losses because cumulative loss payments take much longer to approach the expected ultimate losses than cumulative incurred amounts. In addition, and for similar reasons, historical paid loss development methods are often slow to react to situations when new or different factors arise than those that have affected paid losses in the past.
- *Historical incurred loss development methods:* These methods, like historical paid loss development methods, assume that the ratio of losses in one period to losses in an earlier period will remain constant in the future. However, instead of using paid losses, these methods use incurred losses (i.e., the sum of cumulative historical loss payments plus outstanding case reserves) over discrete periods of time to estimate future losses. Historical incurred loss development methods can be preferable to historical paid loss development methods because they explicitly take into account open cases and the claims adjusters' evaluations of the cost to settle all known claims. However, historical incurred loss development methods necessarily assume that case reserving practices are consistently applied over time. Therefore, when there have been significant changes in how case reserves are established, using incurred loss data to project ultimate losses can be less reliable than other methods.
- *Expected loss ratio methods:* These methods are based on the assumption that ultimate losses vary proportionately with premiums. Expected loss ratios are typically developed based upon the information used in pricing, and are multiplied by the total amount of premiums earned to calculate ultimate losses. Expected loss ratio methods are useful for estimating ultimate losses in the early years of long-tailed lines of business, when little or no paid or incurred loss information is available.
- *Bornhuetter-Ferguson methods:* These methods are a blend of the expected loss ratio and loss development methods. The percent of incurred (or paid) loss to ultimate loss implied by the selected development pattern from the incurred (or paid) loss development method is used to determine the percentage of ultimate loss yet to be developed. Inception to date losses are added to losses yet to be developed, yielding an estimate of ultimate for each year of account.
- *Adjusted historical paid and incurred loss development methods:* These methods take traditional historical paid and incurred loss development methods and adjust them for the estimated impact of changes from the past in factors such as inflation, the speed of claim payments or the adequacy of case reserves. Adjusted historical paid and incurred loss development methods are often more reliable methods of predicting ultimate losses in periods of significant change, provided the actuaries can develop methods to reasonably quantify the impact of changes.

As part of Ark's quarterly actuarial review, Ark compares the previous quarter's projections of incurred, paid and case reserve activity, including amounts incurred but not reported, to actual amounts experienced in the quarter. Differences between previous estimates and actual experience are evaluated to determine whether a given actuarial method for estimating loss and LAE reserves should be relied upon to a greater or lesser extent than it had been in the past. While some variance is expected each quarter due to the inherent uncertainty in estimating loss and LAE reserves, persistent or large variances would indicate that prior assumptions and/or reliance on certain actuarial methods may need to be revised going forward.

Upon completion of each quarterly review, Ark selects indicated loss and LAE reserve levels based on the results of the actuarial methods described previously, which are the primary consideration in determining management's best estimate of required loss and LAE reserves. However, in making its best estimate, management also considers other qualitative factors that may lead to a difference between held reserves and the actuarial central estimate of reserves. Typically, these qualitative factors are considered when management and Ark's actuaries conclude that there is insufficient historical incurred and paid loss information or that trends included in the historical incurred and paid loss information are likely to repeat in the future. Such qualitative factors include, among others, recent entry into new markets or new products, improvements in the claims department that are expected to lessen future ultimate loss costs, legal and regulatory developments, or other uncertainties that may arise.

Ark Reserve Estimation by Line of Business

The process of establishing loss and LAE reserves, including amounts incurred but not reported, is complex and imprecise as it must consider many variables that are subject to the outcome of future events. As a result, informed subjective estimates and judgments as to the ultimate exposure to losses are an integral component of the loss and LAE reserving process. Ark categorizes and tracks insurance and reinsurance reserves by "reserving class of business" for each underwriting office, London and Bermuda, and then aggregates the reserving classes by line of business, which are summarized herein as property and accident & health, specialty, marine & energy, casualty - active and casualty - runoff.

Ark regularly reviews the appropriateness of its loss and LAE reserves at the reserving class of business level, considering a variety of trends that impact the ultimate settlement of claims for the subsets of claims in each particular reserving class.

For loss and LAE reserves as of December 31, 2022, Ark considers that the impact of the various reserving factors, as described below, on future paid losses would be similar to the impact of those factors on historical paid losses.

The major causes of material uncertainty (i.e., reserving factors) generally will vary for each line of business, as well as for each separately analyzed reserving class of business within the line of business. Also, reserving factors can have offsetting or compounding effects on estimated loss and LAE reserves. In most cases, it is not possible to measure the effect of a single reserving factor and construct a meaningful sensitivity expectation. Actual results will likely vary from expectations for each of these assumptions, resulting in an ultimate claim liability that is different from that being estimated currently.

Additional causes of material uncertainty exist in most product lines and may impact the types of claims that could occur within a particular line of business or reserving class of business. Examples where reserving factors, within a line of business or reserving class of business, are subject to change include changing types of insured (e.g., size of account, industry insured, jurisdiction), changing underwriting standards, or changing policy provisions (e.g., deductibles, policy limits, endorsements).

Following is a detailed description of the reserve factors and consideration for each of the major product lines.

Property and Accident & Health

Ark's property and accident & health reserving line of business contains short-tailed reserving classes. As such, reserving for these classes generally involves less uncertainty given the speed of settlement.

For property reserving classes, the reserve risk is driven primarily by occasional catastrophe events, though the financial effect of these is mitigated by reinsurance and retrocessional purchases. Ark writes property business on both an insurance and reinsurance basis. The insurance business primarily consists of direct and facultative contracts. However, some business is written through lineslips and MGA binding authorities, which could have a longer tail due to the increased exposure period caused by underlying policies attaching to the binder contract. The reinsurance business can also have a longer tail due to timing delays resulting from attachment points on excess of loss contracts.

For accident & health reserving classes, the losses emanate from a wide range of personal accident, sickness, travel and medical insurance risks. The underlying business is a mix of direct and facultative contracts, as well as some MGA and reinsurance contracts, which are typically shorter tail lines. Certain smaller components of the accident & health business can be longer-tailed. The accident & health business is also exposed to occasional catastrophic events though not to the same degree as the property business.

Specialty

Ark's specialty portfolio is comprised of a diverse portfolio of insurance and reinsurance subclasses of business including aviation, space, political and credit, cyber, terrorism and political violence, product defect and contamination, nuclear, fine art & specie, surety and mortgage. Certain subclasses of business are exposed to both catastrophe events and man-made loss events; for example, terrorism, war and war-like actions, political violence and space. Although these subclasses have different coverage and exposures, they are all short-tailed in nature and have similar reserving features.

Marine & Energy

Ark's marine & energy reserving line of business is underwritten on both an insurance and reinsurance basis and can be broken down into physical damage on marine risks, physical damage on upstream energy platforms, and marine & energy liabilities.

The marine reserving classes consist primarily of marine hull, cargo and specie risks. These all generally have some element of transportability, which mitigates the catastrophe risk exposure. For example, having the ability to move out of the path of a hurricane if provided with sufficient notice. The marine reserving classes are generally shorter-tailed.

The energy platform reserving classes cover risks that are less transportable and therefore are exposed to catastrophe events similar to property reserving classes. Other energy reserving classes cover construction contracts, which often have considerably protracted exposure periods with the bulk of the risk towards end of the coverage period. This can have the effect of increasing the tail on an otherwise short-tail reserving class.

The marine & energy liability reserving classes, which represent a smaller portion of the marine & energy business, are typically longer-tailed compared to physical damage reserving classes.

Casualty – Active and Casualty – Runoff

Ark's casualty reserving lines of business, which include casualty–active and casualty–runoff, are long-tailed classes of business. Consequently, the ultimate liability may not be known at the date of loss, which results in greater uncertainty when reserving for casualty lines.

The casualty–active line of business consists of U.S. reinsurance and insurance risks written on an excess of loss basis. The casualty–runoff line of business consists of international reinsurance risks and U.S. casualty insurance risks written through an MGA binding authority. The losses arising from these lines of business are primarily related to medical malpractice, professional liability and general liability coverages, which are long-tailed lines of business.

Casualty policies are generally written on either a claims made or occurrence basis. On a claims made basis, the trigger of loss is based on the date that the loss is reported. On an occurrence basis, the trigger of loss is the date that the loss occurred. Due to delays between loss occurrence and loss reporting, business written on an occurrence basis can be longer-tailed than business written on a claims made basis.

There are a number of common reserving factors for casualty lines that can affect the estimated casualty reserves, including:

- Changes in claim-handling practices, both in-house and through third-party claims administrators,
- Changes in court interpretations of policy provisions, and
- Trends in litigation or jury awards.

Cumulative Number of Reported Claims

Ark counts a claim for each unique combination of individual claimant, loss event and risk. A claim is still counted if the claim is closed with no payment. Bulk-coded losses are counted as one claim as underlying claim counts are not available.

Discounting

Ark does not discount loss and LAE reserves.

Impact of Third-Party Capital

For the years of account prior to the Ark Transaction, a significant proportion of the Syndicates' underwriting capital was provided by TPC Providers using whole account reinsurance contracts with Ark's corporate member. The TPC Providers' participation in the Syndicates for the 2020 open year of account is 42.8% of the total net result of the Syndicates. For the years of account subsequent to the Ark Transaction, Ark is no longer using TPC Providers to provide underwriting capital for the Syndicates.

A Reinsurance to Close ("RITC") agreement is generally put in place after the third year of operations for a year of account such that the outstanding loss and LAE reserves, including future development thereon, are reinsured into the next year of account. As a result, and in combination with the changing participation provided by TPC Providers, Ark's participation on outstanding loss and LAE reserves reinsured into the next year of account may change, perhaps significantly. For example, during 2022, an RITC was executed such that the outstanding loss and LAE reserves for claims arising out of the 2019 year of account, for which the TPC Providers' participation in the total net results of the Syndicates was 58.3%, were reinsured into the 2020 year of account, for which the TPC Providers' participation in the total net results of the Syndicates is 42.8%.

Loss and Loss Adjustment Expense Reserve Summary

The following table summarizes the loss and LAE reserve activity of Ark's insurance and reinsurance subsidiaries for the year ended December 31, 2022 and 2021:

Millions	Year Ended December 31,	
	2022	2021
Gross beginning balance	\$ 894.7	\$ 696.0
Less: beginning reinsurance recoverable on unpaid losses ⁽¹⁾	(428.9)	(433.4)
Net loss and LAE reserves	465.8	262.6
Losses and LAE incurred relating to:		
Current year losses	588.1	336.3
Prior year losses	(51.7)	(21.5)
Net incurred losses and LAE	536.4	314.8
Loss and LAE paid relating to:		
Current year losses	(98.9)	(43.9)
Prior year losses	(158.6)	(61.6)
Net paid losses and LAE	(257.5)	(105.5)
Change in TPC Providers' participation ⁽²⁾	57.5	(2.2)
Foreign currency translation and other adjustments to loss and LAE reserves	(10.7)	(3.9)
Net ending balance	791.5	465.8
Plus: ending reinsurance recoverable on unpaid losses ⁽³⁾	505.0	428.9
Gross ending balance	\$ 1,296.5	\$ 894.7

⁽¹⁾ The beginning reinsurance recoverable on unpaid losses includes amounts attributable to TPC Providers of \$276.8 and \$319.2 as of December 31, 2021 and 2020.

⁽²⁾ Amount represents the impact to net loss and LAE reserves due to a change in the TPC Providers' participation related to the annual RITC process.

⁽³⁾ The ending reinsurance recoverable on unpaid losses on unpaid losses includes amounts attributable to TPC Providers of \$145.4 and \$276.8 as of December 31, 2022 and 2021.

During the year ended December 31, 2022, Ark experienced \$51.7 million of net favorable prior year loss reserve development. Ark's net favorable prior year loss reserve development was driven primarily by the property and accident & health (\$20.8 million), marine & energy (\$18.8 million) and specialty (\$12.7 million) reserving lines of business. The favorable prior year loss reserve development in the property and accident & health, marine & energy and specialty reserving lines of business was driven primarily by positive claims experience within the 2021 accident year.

During the year ended December 31, 2021, Ark experienced \$21.5 million of net favorable prior year loss reserve development. Ark's net favorable prior year loss reserve development was driven primarily by the property and accident & health (\$8.9 million), casualty – ongoing (\$3.7 million), specialty (\$3.3 million) and casualty – runoff (\$3.3 million) reserving lines of business. The favorable prior year loss reserve development in the property and accident & health reserving line of business was driven primarily by positive claims experience within the 2018 and 2019 accident years.

The following table summarizes the unpaid loss and LAE reserves, net of reinsurance recoverables on unpaid losses, for each of Ark's major reserving lines of business as of December 31, 2022 and 2021:

Millions	Year Ended December 31,	
	2022	2021
Property and Accident & Health	\$ 258.2	\$ 175.0
Specialty	204.3	85.2
Marine & Energy	196.4	99.3
Casualty - Active	71.5	37.4
Casualty - Runoff	60.8	68.4
Other	.3	.5
Unpaid loss and LAE reserves, net of reinsurance recoverables on unpaid losses	<u>791.5</u>	<u>465.8</u>
Plus: Reinsurance recoverables on unpaid losses ⁽¹⁾		
Property and Accident & Health	224.6	145.2
Specialty	97.2	68.9
Marine & Energy	79.8	70.2
Casualty - Active	49.9	41.4
Casualty - Runoff	53.5	103.2
Total Reinsurance recoverables on unpaid losses ⁽¹⁾	<u>505.0</u>	<u>428.9</u>
Total unpaid loss and LAE reserves	<u>\$ 1,296.5</u>	<u>\$ 894.7</u>

⁽¹⁾ The reinsurance recoverables on unpaid losses include amounts attributable to TPC Providers of \$145.4 and \$276.8 as of December 31, 2022 and 2021.

The following five tables include one table each for the property and accident & health, specialty, marine & energy, casualty-active and casualty-runoff reserving lines of business, and are presented net of reinsurance, which includes the impact of whole-account quota-share reinsurance arrangements related to TPC Providers. Through the annual RITC process, and in combination with the changing participation provided by TPC Providers, Ark's participation on outstanding loss and LAE reserves on prior years of account can fluctuate. Depending on the change in the TPC Providers' participation from one year of account to the next, the impact could be significant and is reflected in the tables on a retrospective basis by accident year. That is, for the RITC executed in the current year that changes Ark's participation for claims relating to prior accident years, the prior year columns are adjusted to include the impact of the RITC. The following table summarizes the participation of Ark's TPC Providers by year of account:

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
TPC Providers' Participation	— %	66.2 %	70.0 %	59.6 %	60.0 %	57.6 %	58.3 %	42.8 %	— %	— %

Each of the five tables includes three sections.

The top section of the table presents, for each of the previous 10 accident years (1) cumulative total undiscounted incurred loss and LAE as of each of the previous 10 year-end evaluations, (2) total IBNR plus expected development on reported claims as of December 31, 2022, and (3) the cumulative number of reported claims as of December 31, 2022.

The middle section of the table presents cumulative paid loss and LAE for each of the previous 10 accident years as of each of the previous 10 year-end evaluations. Also included in this section is a calculation of the loss and LAE reserves as of December 31, 2022 which is then included in the reconciliation to the consolidated balance sheet presented above. The total unpaid loss and LAE reserves as of December 31, 2022 is calculated as the cumulative incurred loss and LAE from the top section less the cumulative paid loss and LAE from the middle section, plus any outstanding liabilities from accident years prior to 2013.

The bottom section of the table is supplementary information about the average historical claims duration as of December 31, 2022. It shows the weighted average annual percentage payout of incurred loss and LAE by accident year as of each age. For example, the first column is calculated as the incremental paid loss and LAE in the first calendar year for each given accident year (e.g. calendar year 2020 for accident year 2020, calendar year 2021 for accident year 2021) divided by the cumulative incurred loss and LAE as of December 31, 2022 for that accident year. The resulting ratios are weighted together using cumulative incurred loss and LAE as of December 31, 2022.

Property and Accident & Health
\$ in Millions
**Incurring Loss and LAE, Net of Reinsurance
For the Years Ended December 31,**
As of December 31, 2022

Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total IBNR plus expected development on reported claims	Cumulative number of reported claims	
	Unaudited												
2013	\$ 67.8	\$ 60.4	\$ 60.3	\$ 60.1	\$ 59.6	\$ 59.5	\$ 59.4	\$ 59.3	\$ 59.3	\$ 59.3	\$.1	2,530	
2014		32.2	29.1	29.0	28.3	28.1	28.2	28.2	28.2	28.2	.1	2,919	
2015			18.8	17.9	16.9	15.9	15.7	15.7	15.5	15.4	.1	2,826	
2016				21.9	17.2	17.9	18.1	18.1	18.3	18.2	.1	3,419	
2017					24.6	31.4	38.9	37.9	36.5	36.0	5.7	4,599	
2018						38.1	44.5	46.4	44.1	44.2	1.3	4,254	
2019							31.6	28.9	24.7	21.5	.7	3,999	
2020								65.2	63.3	62.9	7.3	4,551	
2021									163.0	146.8	10.6	3,318	
2022										234.5	90.1	2,899	
	Total										\$ 667.0		

Property and Accident & Health
Millions
**Cumulative Paid Loss and LAE, Net of Reinsurance
For the Years Ended December 31,**

Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	Unaudited									
2013	\$ 15.4	\$ 39.1	\$ 58.1	\$ 59.1	\$ 59.1	\$ 59.4	\$ 59.3	\$ 59.3	\$ 59.2	\$ 59.2
2014		13.6	24.9	27.1	27.5	27.6	27.8	27.9	27.8	27.9
2015			6.9	12.2	13.4	14.6	14.6	14.8	15.0	15.0
2016				8.5	13.1	16.4	16.8	16.9	17.2	17.8
2017					16.8	25.8	31.6	32.8	29.6	27.3
2018						15.6	32.2	40.1	40.0	40.8
2019							6.8	16.7	18.3	18.5
2020								11.2	34.1	47.0
2021									30.8	86.7
2022										70.0
	Total									410.2
	All outstanding liabilities before 2013, net of reinsurance									1.4
	Loss and LAE reserves, net of reinsurance									\$ 258.2

Property and Accident & Health
Average Annual Percentage Payout of Incurred Losses and LAE by Age, Net of Reinsurance

Years	Unaudited									
	1	2	3	4	5	6	7	8	9	10
	31.4%	34.2%	19.3%	5.5%	1.2%	0.8%	0.8%	0.3%	—%	—%

Specialty													
\$ in Millions													
Incurred Loss and LAE, Net of Reinsurance													
For the Years Ended December 31,											As of December 31, 2022		
Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total IBNR plus expected development on reported claims	Cumulative number of reported claims	
	Unaudited												
2013	\$ 47.0	\$ 28.5	\$ 17.6	\$ 16.2	\$ 15.9	\$ 15.8	\$ 15.5	\$ 15.7	\$ 15.7	\$ 15.8	\$.1	1,042	
2014		45.5	43.8	40.8	40.4	40.8	43.3	43.4	43.3	43.1	—	1,357	
2015			16.2	13.6	11.2	9.6	9.9	10.1	10.1	7.8	.1	1,840	
2016				18.1	14.1	10.8	11.1	11.7	11.6	8.8	.2	1,927	
2017					17.3	12.2	11.3	10.8	11.0	10.0	—	2,187	
2018						13.2	14.9	15.4	14.7	13.5	.7	2,110	
2019							18.5	16.3	15.4	22.4	1.1	2,347	
2020								21.4	20.5	16.3	2.5	1,985	
2021									67.6	59.4	33.9	1,644	
2022										172.8	125.3	985	
										Total \$ 369.9			

Specialty														
Millions														
Cumulative Paid Loss and LAE, Net of Reinsurance														
For the Years Ended December 31,														
Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022				
	Unaudited													
2013	\$ 17.0	\$ 13.2	\$ 14.9	\$ 15.4	\$ 15.5	\$ 15.7	\$ 15.7	\$ 15.7	\$ 15.6	\$ 15.6				
2014		26.3	38.9	39.7	40.1	40.7	42.0	42.8	42.7	43.0				
2015			4.0	7.0	7.6	8.0	8.1	8.1	8.1	6.4				
2016				3.2	7.9	9.1	9.9	10.3	10.3	8.5				
2017					3.1	6.6	8.4	8.5	8.5	9.2				
2018						2.7	8.2	10.0	10.4	11.8				
2019							4.8	6.9	7.4	18.2				
2020								5.2	10.6	13.0				
2021									5.1	24.1				
2022										16.0				
									Total	165.8				
													All outstanding liabilities before 2013, net of reinsurance	.2
													Loss and LAE reserves, net of reinsurance	\$ 204.3

Specialty										
Average Annual Percentage Payout of Incurred Losses and LAE by Age, Net of Reinsurance										
Years	Unaudited									
	1	2	3	4	5	6	7	8	9	10
	25.8%	33.4%	7.8%	4.8%	5.9%	5.9%	1.4%	1.9%	(3.2)%	(0.8)%

Marine & Energy
\$ in Millions
**Incurring Loss and LAE, Net of Reinsurance
For the Years Ended December 31,**
As of December 31, 2022

Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total IBNR plus expected development on reported claims	Cumulative number of reported claims
	Unaudited											
2013	\$ 55.4	\$ 41.7	\$ 32.3	\$ 31.0	\$ 30.8	\$ 29.6	\$ 29.5	\$ 29.3	\$ 29.4	\$ 29.3	\$ (2)	2,638
2014		34.1	19.9	17.0	16.1	14.0	13.6	13.9	13.6	13.7	(2)	2,572
2015			21.0	16.7	15.4	12.6	12.0	12.1	12.0	12.2	—	3,238
2016				23.1	19.2	15.4	14.3	14.0	14.5	13.8	—	3,764
2017					25.3	18.6	16.8	16.2	15.9	15.0	.2	4,117
2018						24.6	19.1	16.6	17.0	16.6	.2	3,205
2019							20.7	18.6	18.6	18.3	.6	2,331
2020								24.4	21.7	23.2	1.8	1,529
2021									83.0	66.1	24.8	1,356
2022										148.2	99.5	1,188
										Total	\$ 356.4	

Marine & Energy
Millions
**Cumulative Paid Loss and LAE, Net of Reinsurance
For the Years Ended December 31,**

Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	Unaudited									
2013	\$ 7.8	\$ 22.2	\$ 27.6	\$ 28.6	\$ 29.1	\$ 29.3	\$ 29.3	\$ 29.1	\$ 29.3	\$ 29.3
2014		5.8	12.1	13.2	14.0	14.1	13.4	13.6	13.5	13.7
2015			4.0	7.8	9.6	10.9	10.3	10.4	10.8	11.4
2016				5.5	10.0	12.6	13.0	13.1	13.7	13.4
2017					5.1	11.1	12.8	14.0	14.1	14.1
2018						2.7	12.5	14.0	14.7	15.4
2019							3.3	10.6	12.6	14.3
2020								3.1	12.7	16.0
2021									6.3	24.2
2022										12.2
									Total	164.0
									All outstanding liabilities before 2013, net of reinsurance	4.0
									Loss and LAE reserves, net of reinsurance	\$ 196.4

Marine & Energy
Average Annual Percentage Payout of Incurred Losses and LAE by Age, Net of Reinsurance

Years	Unaudited									
	1	2	3	4	5	6	7	8	9	10
	17.4%	35.8%	19.9%	5.9%	4.3%	6.9%	0.3%	0.3%	(0.3)%	0.1%

Casualty - Active

\$ in Millions

Accident Year	Incurred Loss and LAE, Net of Reinsurance											As of December 31, 2022			
	For the Years Ended December 31,											Total IBNR plus expected development on reported claims	Cumulative number of reported claims		
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022				
	Unaudited														
2013	\$ 18.2	\$ 13.0	\$ 8.5	\$ 8.0	\$ 8.0	\$ 8.1	\$ 7.7	\$ 7.8	\$ 7.8	\$ 7.8	\$ 7.8	\$.1	1,144		
2014		12.6	8.7	7.7	7.5	7.4	7.0	7.1	6.9	7.1		.2	1,385		
2015			8.8	9.0	7.4	7.3	6.6	6.4	6.3	6.5		.2	1,280		
2016				7.6	7.1	7.8	7.8	7.9	8.0	8.1		.3	1,528		
2017					9.5	9.6	8.7	7.3	7.0	8.4		.9	1,580		
2018						11.0	11.5	9.2	9.0	6.8		1.1	1,036		
2019							11.6	10.4	9.1	7.3		2.4	834		
2020								9.7	8.3	7.1		4.2	524		
2021									17.4	18.4		16.3	674		
2022										32.0		28.8	832		
														Total	\$ 109.5

Casualty - Active

Millions

Accident Year	Cumulative Paid Loss and LAE, Net of Reinsurance														
	For the Years Ended December 31,														
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022				
	Unaudited														
2013	\$ 1.5	\$ 3.6	\$ 5.3	\$ 5.8	\$ 6.3	\$ 6.7	\$ 7.0	\$ 7.0	\$ 7.3	\$ 7.5	\$ 7.5				
2014		1.3	3.5	4.2	4.7	5.2	5.5	5.9	6.0	6.2	6.2				
2015			1.8	2.4	3.2	4.4	4.7	4.9	5.1	5.5	5.5				
2016				.2	1.0	2.3	4.0	4.6	5.3	6.5	6.5				
2017					.8	1.7	2.8	3.4	4.2	5.7	5.7				
2018						.3	1.4	3.5	4.3	4.3	4.3				
2019							.3	1.4	2.3	3.0	3.0				
2020								.5	1.0	2.0	2.0				
2021									.5	.9	.9				
2022										.4	.4				
												Total	42.0		
														All outstanding liabilities before 2013, net of reinsurance	4.0
														Loss and LAE reserves, net of reinsurance	\$ 71.5

Casualty - Active

Years	Average Annual Percentage Payout of Incurred Losses and LAE by Age, Net of Reinsurance									
	Unaudited									
	1	2	3	4	5	6	7	8	9	10
	6.8%	11.7%	16.7%	12.7%	8.0%	10.8%	4.9%	3.1%	1.2%	2.9%

Casualty - Runoff
\$ in Millions

Accident Year	Incurred Loss and LAE, Net of Reinsurance										As of December 31, 2022		
	For the Years Ended December 31,										Total IBNR plus expected development on reported claims	Cumulative number of reported claims	
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022			
	Unaudited												
2013	\$ 47.7	\$ 51.4	\$ 47.7	\$ 49.0	\$ 47.6	\$ 47.3	\$ 47.7	\$ 47.5	\$ 47.5	\$ 47.5	\$	1.4	1,798
2014		45.8	45.3	47.8	50.9	54.5	56.0	56.0	55.8	55.6		1.3	1,941
2015			33.8	29.4	30.6	34.0	33.8	34.8	34.1	36.6		1.6	1,995
2016				28.6	28.3	36.5	34.7	34.9	34.6	33.8		1.7	2,150
2017					27.4	30.8	28.2	28.9	28.4	26.7		2.2	1,599
2018						29.4	23.9	23.0	22.3	21.9		3.3	1,267
2019							21.1	17.8	18.0	19.4		5.0	961
2020								11.3	7.6	9.3		3.9	558
2021									8.2	4.8		2.7	277
2022										.6		.1	76
	Total										\$ 256.2		

Casualty - Runoff
Millions

Accident Year	Cumulative Paid Loss and LAE, Net of Reinsurance										
	For the Years Ended December 31,										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
	Unaudited										
2013	\$ 7.1	\$ 19.4	\$ 35.7	\$ 40.6	\$ 42.4	\$ 43.3	\$ 43.9	\$ 44.6	\$ 44.9	\$ 45.2	
2014		6.4	23.1	29.5	36.4	43.1	46.9	48.5	49.3	51.8	
2015			4.3	8.2	14.5	21.4	24.7	27.3	28.9	33.1	
2016				3.9	10.2	17.7	22.7	25.4	27.8	28.7	
2017					3.2	9.4	14.6	18.5	21.4	22.5	
2018						3.4	7.4	12.6	14.9	16.3	
2019							3.3	5.8	7.8	12.1	
2020								.8	1.3	3.1	
2021									.5	1.7	
2022										.3	
	Total										214.8
	All outstanding liabilities before 2013, net of reinsurance										19.4
	Loss and LAE reserves, net of reinsurance										\$ 60.8

Casualty - Runoff

Years	Average Annual Percentage Payout of Incurred Losses and LAE by Age, Net of Reinsurance									
	Unaudited									
	1	2	3	4	5	6	7	8	9	10
	9.4%	15.4%	17.2%	15.7%	9.0%	7.4%	6.3%	4.3%	2.8%	1.4%

Note 6. Third-Party Reinsurance

In the normal course of business, Ark may seek to limit losses that may arise from catastrophes or other events by reinsuring certain risks with third-party reinsurers. Ark remains liable for risks reinsured in the event that the reinsurer does not honor its obligations under reinsurance contracts. The following table summarizes the effects of reinsurance on written and earned premiums and on losses and LAE for Ark.

Millions	Year Ended December 31,	
	2022	2021
Written premiums:		
Gross	\$ 1,452.0	\$ 1,058.7
Ceded	(256.8)	(199.6)
Net written premiums	\$ 1,195.2	\$ 859.1
Earned premiums:		
Gross	\$ 1,324.2	\$ 886.4
Ceded	(280.8)	(249.1)
Net earned premiums	\$ 1,043.4	\$ 637.3
Losses and LAE:		
Gross	\$ 814.9	\$ 442.9
Ceded	(278.5)	(128.1)
Net Losses and LAE	\$ 536.4	\$ 314.8

As of December 31, 2022, Ark had \$505.0 million and \$31.1 million of reinsurance recoverables on unpaid and paid losses. As of December 31, 2021, Ark had \$428.9 million and \$19.5 million of reinsurance recoverables on unpaid and paid losses. As reinsurance contracts do not relieve Ark of its obligation to its policyholders, Ark seeks to reduce the credit risk associated with reinsurance balances by avoiding over-reliance on specific reinsurers through the application of concentration limits and thresholds. Ark is selective with its reinsurers, placing reinsurance with only those reinsurers having a strong financial condition. Ark monitors the financial strength of its reinsurers on an ongoing basis.

As of December 31, 2022, Ark's reinsurance recoverables of \$536.1 million included \$145.4 million related to TPC Providers, which are collateralized. As of December 31, 2021, Ark's reinsurance recoverables of \$448.4 million included \$276.8 million related to TPC Providers, which are collateralized. The following table provides a listing of Ark's remaining gross and net reinsurance recoverables, excluding amounts related to TPC Providers, by the reinsurer's A.M. Best Company, Inc. ("A.M. Best") rating and the percentage of total recoverables.

\$ in Millions	As of December 31, 2022			
	Gross	Collateral	Net	% of Total
A.M. Best Rating ⁽¹⁾				
A+ or better	\$ 190.0	\$ —	\$ 190.0	67.4 %
A- to A	75.3	—	75.3	26.7
B++ or lower and not rated	125.4	108.9	16.5	5.9
Total	\$ 390.7	\$ 108.9	\$ 281.8	100.0 %

⁽¹⁾ A.M. Best ratings as detailed above are: "A+ or better" (Superior) "A- to A" (Excellent), "B++" (Good).

See Note 10 — "Municipal Bond Guarantee Insurance" for third-party reinsurance balances related to White Mountains's financial guarantee business.

Reinsurance Contracts Accounted for as Deposits

Ark has an aggregate excess of loss contract with SiriusPoint, which is accounted for using the deposit method and recorded within other assets. Ark earns an annual crediting rate of 3.0%, which is recorded within other revenue. During 2021, Ark negotiated a reduction of \$31.7 million, including accrued interest, to the aggregate excess of loss contract with SiriusPoint. As of December 31, 2022 and December 31, 2021, the carrying value of Ark's deposit in SiriusPoint, including accrued interest, was \$20.4 million.

See **Note 10 — “Municipal Bond Guarantee Insurance”** for reinsurance contracts accounted for as deposits related to White Mountains's financial guarantee business.

Note 7. Debt

The following table presents White Mountains's debt outstanding as of December 31, 2022 and 2021:

\$ in Millions	December 31, 2022	Effective Rate ⁽¹⁾	December 31, 2021	Effective Rate ⁽¹⁾
HG Global Senior Notes	\$ 150.0	8.9%	\$ —	
Unamortized discount and issuance cost	(3.5)		—	
HG Global Senior Notes, carrying value	<u>146.5</u>		<u>—</u>	
Ark 2007 Subordinated Notes, carrying value	<u>30.0</u>		<u>30.0</u>	
Ark 2021 Notes Tranche 1	41.3		44.2	
Ark 2021 Notes Tranche 2	47.0		47.0	
Ark 2021 Notes Tranche 3	70.0		70.0	
Unamortized issuance cost	(4.6)		(5.3)	
Ark 2021 Subordinated Notes, carrying value	<u>153.7</u>		<u>155.9</u>	
Total Ark Subordinated Notes, carrying value	<u>183.7</u>	7.6%	<u>185.9</u>	6.9%
Kudu Credit Facility	<u>215.2</u>	6.1%	<u>225.4</u>	4.3%
Unamortized issuance cost	(6.9)		(7.2)	
Kudu Credit Facility, carrying value	<u>208.3</u>		<u>218.2</u>	
Other Operations debt	37.4	6.6%	17.1	7.5%
Unamortized issuance cost	(.7)		(.3)	
Other Operations debt, carrying value	<u>36.7</u>		<u>16.8</u>	
Total debt	\$ 575.2		\$ 420.9	

⁽¹⁾ Effective rate includes the effect of the amortization of debt issuance costs and, where applicable, the original issue discount.

The following table presents a schedule of contractual repayments of White Mountains's debt as of December 31, 2022:

Millions	December 31, 2022
Due in one year or less	\$ 5.4
Due in two to three years	12.6
Due in four to five years	30.7
Due after five years	542.2
Total	\$ 590.9

HG Global Senior Notes

On April 29, 2022, HG Global received the proceeds of its \$150.0 million face value floating rate secured senior notes (the “HG Global Senior Notes”). The HG Global Senior Notes, which mature in April 2032, accrue interest at a floating rate equal to the three-month Secured Overnight Financing Rate (“SOFR”) plus 6.3% per annum. Subsequent to the five-year anniversary of the funding date, absent the occurrence of an early amortization trigger event, HG Global will make payments of principal on a quarterly basis totaling \$15.0 million annually. Upon the occurrence of an early amortization trigger event, HG Global is required to use all available cash flow to repay the notes. Early amortization trigger events include scenarios in which HG Re is effectively in run off. HG Global has the option to redeem, in whole or in part, the HG Global Senior Notes after the five-year anniversary of the funding date at the outstanding principal amounts plus accrued interest.

On June 16, 2022, HG entered into an interest rate cap agreement, effective on July 25, 2022, to limit its exposure to the risk of interest rate increases on the HG Global Senior Notes. The notional amount of the interest rate cap is \$150.0 million and the termination date is July 25, 2025. See **Note 9 — “Derivatives.”**

The HG Global Senior Notes require HG Global to maintain an interest reserve account of eight times the interest accrued for the most recent quarterly interest period. As of December 31, 2022, the interest reserve account, which is included in short-term investments, is \$31.2 million.

The HG Global Senior Notes are secured by the capital stock and other equity interests of HG Global’s subsidiaries, the interest reserve account, and all cash and non-cash proceeds from the foregoing collateral. The HG Global Senior Notes contain various affirmative and negative covenants that White Mountains considers to be customary for such borrowings.

If the payments of principal and interest under the HG Global Senior Notes become subject to tax withholding on behalf of a relevant governmental authority for certain indemnified taxes, the HG Global Senior Notes require the payment of additional amounts such that the amount received by the noteholders is the same as would have been received absent the tax withholding being imposed. The HG Global Senior Notes require the payment of additional interest of 1.0% per annum if the HG Global Senior Notes receive a non-investment grade rating or are no longer rated.

As of December 31, 2022, the HG Global Senior Notes had an outstanding principal balance of \$150.0 million.

Ark Subordinated Notes

In March 2007, GAIL issued \$30.0 million face value of floating rate unsecured junior subordinated deferrable interest notes to Alesco Preferred Funding XII Ltd., Alesco Preferred Funding XIII Ltd. and Alesco Preferred Funding XIV Ltd (the “Ark 2007 Notes Tranche 1”) and a €12.0 million floating rate subordinated note to Dekania Europe CDO II plc (the “Ark 2007 Notes Tranche 2”) (together, the “Ark 2007 Subordinated Notes”). The Ark 2007 Notes Tranche 1, which mature in June 2037, accrue interest at a floating rate equal to the three-month U.S. LIBOR plus 4.6%. The Ark 2007 Notes Tranche 2, which matures in June 2027, accrues interest at a floating rate equal to the three-month EURIBOR plus 4.6%. During 2021, Ark repaid €12.0 million (\$13.5 million based upon the foreign exchange spot rate at the date of repayment) of the outstanding principal balance on the Ark 2007 Notes Tranche 2. As of December 31, 2022, the Ark 2007 Notes Tranche 1 had an outstanding balance of \$30.0 million.

In the third quarter of 2021, GAIL issued \$163.3 million face value floating rate subordinated notes at par in three separate transactions for proceeds of \$157.8 million, net of debt issuance costs. The Ark 2021 Subordinated Notes were issued in private placement offerings that were exempt from the registration requirements of the Securities Act of 1933. On July 13, 2021, Ark issued €39.1 million (\$46.3 million based upon the foreign exchange spot rate as of the date of the transaction) face value floating rate unsecured subordinated notes (“Ark 2021 Notes Tranche 1”). The Ark 2021 Notes Tranche 1, which mature in July 2041, accrue interest at a floating rate equal to the three-month EURIBOR plus 5.75%. On August 11, 2021, Ark issued \$47.0 million face value floating rate unsecured subordinated notes (“Ark 2021 Notes Tranche 2”). The Ark 2021 Notes Tranche 2, which mature in August 2041, accrue interest at a floating rate equal to the three-month U.S. LIBOR plus 5.75%. On September 8, 2021, Ark issued \$70.0 million face value floating rate unsecured subordinated notes (“Ark 2021 Notes Tranche 3”). The Ark 2021 Notes Tranche 3, which mature in September 2041, accrue interest at a floating rate equal to the three-month U.S. LIBOR plus 6.1%. On the ten-year anniversary of the issue dates, the interest rate for the Ark 2021 Subordinated Notes will increase by 1.0% per annum. Ark has the option to redeem, in whole or in part, the Ark 2021 Subordinated Notes ahead of contractual maturity at the outstanding principal amounts plus accrued interest at the ten-year anniversary or any subsequent interest payment date.

All payments of principal and interest under the Ark 2021 Subordinated Notes are conditional upon GAIL's solvency and compliance with the enhanced capital requirements of the Bermuda Monetary Authority ("BMA"). The deferral of payments of principal and interest under these conditions does not constitute a default by Ark and does not give the noteholders any rights to accelerate repayment of the Ark 2021 Subordinated Notes or take any enforcement action under the Ark 2021 Subordinated Notes.

If the payments of principal and interest under the Ark 2021 Subordinated Notes become subject to tax withholding on behalf of Bermuda or any political subdivision there, the Ark 2021 Subordinated Notes require the payment of additional amounts such that the amount received by the noteholders is the same as would have been received absent the tax withholding being imposed. The Ark 2021 Notes Tranche 3 require the payment of additional interest of 1.0% per annum upon the occurrence of a Premium Load Event until such event is remedied. Premium Load Events include the failure to meet payment obligations of the Ark 2021 Notes Tranche 3 when due, failure of GAIL to maintain an investment grade credit rating, failure to maintain 120% of GAIL's Bermuda solvency capital requirement, failure of GAIL to maintain a debt to capital ratio below 40%, late filing of GAIL's or Ark's financial information, and making a restricted payment or distribution on GAIL's common stock or other securities that rank junior or pari passu with the Ark 2021 Notes Tranche 3 when a different Premium Load Event exists or will be caused by the restricted payment.

As of December 31, 2022, the Ark 2021 Notes Tranche 1 had an outstanding balance of €39.1 million (\$41.3 million based upon the foreign exchange spot rate as of December 31, 2022), the Ark 2021 Notes Tranche 2 had an outstanding balance of \$47.0 million, and the Ark 2021 Notes Tranche 3 had an outstanding balance of \$70.0 million.

Ark Stand By Letter of Credit Facilities

In December 2021, Ark entered into two uncommitted secured stand by letter of credit facility agreements to support the continued growth and expansion of its GAIL insurance and reinsurance operations. The stand by letter of credit facility agreements were executed with ING Bank N.V., London Branch (the "ING LOC Facility") with capacity of \$50.0 million on an uncollateralized basis and with Citibank Europe Plc (the "Citibank LOC Facility") with capacity of \$100.0 million on a collateralized basis. In September 2022, Ark entered an additional uncommitted standby letter of credit facility agreement with Lloyds Bank Corporate Markets PLC (the "Lloyds LOC Facility") with capacity of \$50.0 million on a collateralized basis.

As of December 31, 2022, the ING LOC Facility was undrawn. As of December 31, 2022, the Citibank LOC Facility and the Lloyds LOC Facility had outstanding principal balances of \$53.6 million and \$6.8 million and short-term investments pledged as collateral of \$80.3 million and \$10.0 million. Ark's uncommitted secured stand by letter of credit facility agreements contain various representations, warranties and covenants that White Mountains considers to be customary for such borrowings.

Kudu Credit Facility and Kudu Bank Facility

During 2019, Kudu entered into a secured credit facility with Monroe Capital Management Advisors, LLC (the "Kudu Bank Facility"). On March 23, 2021, Kudu replaced the Kudu Bank Facility and entered into a secured revolving credit facility (the "Kudu Credit Facility") with Mass Mutual to repay the Kudu Bank Facility and to fund new investments and related transaction expenses. The maximum borrowing capacity of the Kudu Credit Facility is \$300.0 million. The Kudu Credit Facility matures on March 23, 2036. In connection with the replacement of the Kudu Bank Facility, Kudu recognized a total loss of \$4.1 million, representing debt issuance costs and prepayment fees, which are included within interest expense for the period ended December 31, 2021.

Interest on the Kudu Credit Facility accrues at a floating interest rate equal to the greater of the three month LIBOR and 0.25%, plus in each case, the applicable spread of 4.30%. The Kudu Credit Facility requires Kudu to maintain an interest reserve account, which is included in restricted cash. As of December 31, 2022 and 2021, the interest reserve account is \$12.2 million and \$4.5 million. The Kudu Credit Facility requires Kudu to maintain a ratio of the outstanding balance to the sum of the fair market value of Kudu's Participation Contracts and cash held in certain accounts (the "LTV Percentage") of less than 50% in years 0-3, 40% in years 4-6, 25% in years 7-8, 15% in years 9-10, and 0% thereafter. As of December 31, 2022, Kudu has a 33% LTV Percentage.

Kudu may borrow undrawn balances within the initial three-year availability period, subject to customary terms and conditions, to the extent the amount borrowed under the Kudu Credit Facility does not exceed the borrowing base, which is equal to 35% of the fair value of qualifying Kudu Participation Contracts. When considering the fair value of qualifying Kudu Participation Contracts as of December 31, 2022, the available undrawn balance was \$45.9 million.

The following table presents the change in debt under the Kudu Bank Facility and Kudu Credit Facility for the years ended December 31, 2022, 2021 and 2020:

Millions	Year Ended December 31,		
	2022	2021	2020
Kudu Bank Facility			
Beginning balance	\$ —	\$ 89.2	\$ 57.0
Term loans			
Borrowings	—	3.0	32.2
Repayments	—	(92.2)	—
Ending balance	\$ —	\$ —	\$ 89.2
Kudu Credit Facility			
Beginning balance	\$ 225.4	\$ —	\$ —
Term loans			
Borrowings	35.0	232.0	—
Repayments	(45.2)	(6.6)	—
Ending balance	\$ 215.2	\$ 225.4	\$ —

The Kudu Credit Facility is secured by all property of the loan parties and contains various affirmative and negative covenants that White Mountains considers to be customary for such borrowings.

Other Operations Debt

As of December 31, 2022, White Mountains's Other Operations had debt with an outstanding principal balance of \$36.7 million, which consisted of five secured credit facilities (collectively, "Other Operations debt").

Compliance

As of December 31, 2022, White Mountains was in compliance, in all material respects, with all of the covenants under its debt facilities.

Interest

Total interest expense incurred by White Mountains for its indebtedness was \$40.3 million, \$20.5 million and \$7.4 million for the years ended December 31, 2022, 2021 and 2020. Total interest paid by White Mountains for its indebtedness was \$30.5 million, \$13.9 million, and \$6.1 million for the years ended December 31, 2022, 2021 and 2020.

Note 8. Income Taxes

The Company and its Bermuda-domiciled subsidiaries are not subject to Bermuda income tax under current Bermuda law. In the event there is a change in the current law such that taxes are imposed, the Bermuda Exempted Undertakings Tax Protection Act of 1966 states that the Company and its Bermuda-domiciled subsidiaries would be exempt from such tax until March 31, 2035. The Company has subsidiaries and branches that operate in various other jurisdictions around the world and are subject to tax in the jurisdictions in which they operate. As of December 31, 2022, the primary jurisdictions in which the Company's subsidiaries and branches were subject to tax were Ireland, Israel, Luxembourg, the United Kingdom and the United States.

The following table presents the total income tax (expense) benefit for the years ended December 31, 2022, 2021 and 2020:

Millions	Year Ended December 31,		
	2022	2021	2020
Current income tax (expense) benefit:			
U.S. federal	\$ (16.9)	\$ (4.8)	\$ (10.7)
State	(4.5)	(2.1)	(4.2)
Non-U.S.	(7.1)	(2.8)	(.8)
Total current income tax (expense) benefit	(28.5)	(9.7)	(15.7)
Deferred income tax (expense) benefit:			
U.S. federal	(7.3)	(13.9)	21.0
State	(1.8)	(7.0)	10.1
Non-U.S.	(3.8)	(13.8)	(.6)
Total deferred income tax (expense) benefit	(12.9)	(34.7)	30.5
Total income tax (expense) benefit	\$ (41.4)	\$ (44.4)	\$ 14.8

Effective Rate Reconciliation

The following table presents a reconciliation of taxes calculated for 2022, 2021 and 2020 using the 21% U.S. federal statutory rate (the tax rate at which the majority of White Mountains's worldwide operations are taxed) to the income tax (expense) benefit on pre-tax income (loss):

Millions	Year Ended December 31,		
	2022	2021	2020
Tax (expense) benefit at the U.S. statutory rate	\$ 31.4	\$ 57.5	\$ (138.7)
Differences in taxes resulting from:			
Non-U.S. earnings, net of foreign taxes	(41.2)	(78.2)	74.3
Change in valuation allowance	(19.6)	(2.0)	(26.6)
Member's surplus contributions	(6.2)	(5.6)	(4.8)
Withholding tax	(3.1)	(.3)	(5.0)
State taxes	(2.8)	(7.3)	(8.9)
Officer compensation	(1.0)	(1.5)	(1.1)
Tax rate changes	(.4)	(10.9)	3.1
Tax exempt interest and dividends	.2	.2	.8
Reorganization	—	—	130.5
Tax reserve adjustments	—	—	1.9
Other, net	1.3	3.7	(10.7)
Total income tax (expense) benefit on pre-tax income (loss)	\$ (41.4)	\$ (44.4)	\$ 14.8

The non-U.S. component of pre-tax (loss) income was \$(94.4) million, \$(319.0) million and \$327.8 million for the years ended December 31, 2022, 2021 and 2020. On June 10, 2021, the U.K. enacted an increase in its corporate tax rate from 19% to 25% for periods after April 1, 2023. During 2021, White Mountains increased its net U.K. deferred tax liability to reflect the higher tax rate. The reorganization benefit in 2020 resulted from the release of a deferred tax liability following an internal reorganization completed in connection with the MediaAlpha IPO.

Tax Payments and Receipts

Net income tax (refunds) payments totaled \$10.3 million, \$(0.1) million, and \$15.9 million for the years ended December 31, 2022, 2021 and 2020.

Deferred Tax Assets and Liabilities

Deferred taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts for tax purposes.

The following table presents an outline of the significant components of White Mountains's U.S. federal, state and non-U.S. deferred tax assets and liabilities:

Millions	December 31,	
	2022	2021
Deferred tax assets related to:		
U.S. federal and state net operating and capital loss carryforwards	\$ 85.4	\$ 85.7
Non-U.S. net operating loss carryforwards	36.1	46.1
Incentive compensation	21.4	14.5
Accrued interest	8.8	7.8
Deferred acquisition costs	8.0	6.4
Net unrealized investment losses	4.7	—
Tax credit carryforwards	1.8	.2
Other items	.5	.4
Total gross deferred tax assets	166.7	161.1
Less: valuation allowances	94.3	85.6
Total net deferred tax assets	72.4	75.5
Deferred tax liabilities related to:		
Member's surplus contributions	71.3	60.4
Purchase accounting	43.9	43.9
Investment basis difference	33.9	26.8
Deferred underwriting	9.7	4.1
Net unrealized investment gains (losses)	—	10.7
Other items	1.4	1.8
Total deferred tax liabilities	160.2	147.7
Net deferred tax asset (liability)	\$ (87.8)	\$ (72.2)

White Mountains's deferred tax assets (liabilities) are net of U.S. federal, state and non-U.S. valuation allowances and, to the extent they relate to non-U.S. jurisdictions, they are shown at year-end exchange rates.

Valuation Allowance

White Mountains records a valuation allowance against deferred tax assets if it becomes more likely than not that all or a portion of a deferred tax asset will not be realized. Changes in valuation allowances from period to period are included in income tax expense in the period of change. In determining whether or not a valuation allowance, or change therein, is warranted, White Mountains considers factors such as prior earnings history, expected future earnings, carryback and carryforward periods and strategies that if executed would result in the realization of a deferred tax asset. It is possible that certain planning strategies or projected earnings in certain subsidiaries may not be sufficient to utilize the entire deferred tax asset, which could result in material changes to White Mountains's deferred tax assets and tax expense.

Of the \$94.3 million valuation allowance as of December 31, 2022, \$56.6 million related to deferred tax assets on net operating losses in U.S. subsidiaries and other federal and state deferred tax benefits, \$20.4 million related to net operating losses and other deferred tax benefits in Israeli subsidiaries, \$16.0 million related to deferred tax assets on net operating losses and net investment unrealized gains and losses in Luxembourg subsidiaries and \$1.3 million related to net operating losses in U.K. subsidiaries. Of the \$85.6 million valuation allowance as of December 31, 2021, \$38.2 million related to deferred tax assets on net operating losses in U.S. subsidiaries and other federal and state deferred tax benefits, \$25.2 million related to deferred tax assets on net operating losses and net investment unrealized gains and losses in Luxembourg subsidiaries, \$21.9 million related to net operating losses and other deferred tax benefits in Israeli subsidiaries and \$0.3 million related to net operating losses in U.K. subsidiaries.

United States

During 2022, White Mountains recorded income tax expense of \$7.8 million to reflect the increase in the valuation allowance on the net deferred tax assets for certain U.S. operations within Other Operations, as White Mountains management does not currently anticipate sufficient taxable income to utilize the remaining deferred tax assets. During 2021, White Mountains recorded income tax benefit of \$(3.6) million to reflect the decrease in the valuation allowance on the net deferred tax assets for certain U.S. operations within Other Operations, as White Mountains management did not currently anticipate sufficient taxable income to utilize the remaining deferred tax assets.

During 2022 and 2021, White Mountains recorded income tax expense of \$17.5 million and \$7.8 million to reflect the increase in the valuation allowance on net deferred tax assets of BAM. White Mountains records both the tax expense related to BAM's member surplus contributions ("MSC") and the related changes in valuation allowance on such taxes directly through non-controlling interest equity. During 2022 and 2021, BAM had income included in equity due to MSC that was available to offset its loss from continuing operations. In 2022 and 2021, BAM recorded both the income tax benefit on MSC of \$10.9 million and \$7.5 million and the offsetting expense in paid-in surplus. During 2022 and 2021, BAM continued to have a full valuation allowance recorded against its net deferred tax assets, as White Mountains management is unsure it will generate sufficient taxable income to utilize the deferred tax assets.

During 2022, White Mountains recorded income tax expense of \$4.0 million to reflect the establishment of a valuation allowance against the deferred tax assets relating to its investment in certain partnership portfolios, including Elementum Holdings LLC, and to reflect the change in the valuation allowance on deferred tax assets relating to net operating losses at the U.S. branches of the White Mountains U.K. holding companies. White Mountains management is unsure it will generate sufficient taxable income to utilize the deferred tax assets.

During 2021, White Mountains recorded income tax expense of \$0.6 million to reflect the establishment of a valuation allowance against deferred tax assets relating to net operating losses at the U.S. branches of the White Mountains U.K. holding companies.

Non-U.S. Jurisdictions

During 2022 and 2021, White Mountains recorded income tax benefit of \$9.2 million and \$1.6 million to reflect the decrease of the full valuation allowance against deferred tax assets which primarily relate to losses on the write-down of foreign subsidiaries and the unrealized losses on investments held in Luxembourg-domiciled subsidiaries.

During 2022, White Mountains recorded income tax benefit of \$1.5 million to reflect the decrease of the valuation allowance against the deferred tax assets at certain Israel-domiciled subsidiaries, as White Mountains management does not currently anticipate sufficient taxable income to utilize the deferred tax assets. During 2021, White Mountains recorded income tax expense of \$1.9 million to reflect the increase of the valuation allowance against deferred tax assets at certain Israel-domiciled subsidiaries, as White Mountains management does not currently anticipate sufficient taxable income to utilize the deferred tax assets.

During 2022, White Mountains recorded income tax expense of \$1.0 million to reflect the increase of the full valuation allowance against deferred tax assets at certain U.K. subsidiaries, as White Mountains management does not currently anticipate sufficient taxable income to utilize the deferred tax assets. During 2021, White Mountains recorded income tax benefit of \$3.1 million to reflect the decrease of the valuation allowance against certain deferred tax assets at U.K. subsidiaries, as White Mountains management does not currently anticipate sufficient taxable income to utilize the deferred tax assets.

Net Operating Loss and Capital Loss Carryforwards

The following table presents net operating loss and capital loss carryforwards as of December 31, 2022, the expiration dates and the deferred tax assets thereon:

Millions	December 31, 2022				
	United States	Luxembourg	United Kingdom	Israel	Total
2022-2026	\$ —	\$ —	\$ —	\$ —	\$ —
2027-2031	.2	—	—	—	.2
2032-2041	250.8	59.5	—	—	310.3
No expiration date	148.5	—	4.9	87.2	240.6
Total	<u>\$ 399.5</u>	<u>\$ 59.5</u>	<u>\$ 4.9</u>	<u>\$ 87.2</u>	<u>\$ 551.1</u>
Gross deferred tax asset	\$ 85.4	\$ 14.8	\$ 1.2	\$ 20.1	\$ 121.5
Valuation allowance	(85.4)	(14.8)	(1.2)	(20.1)	(121.5)
Net deferred tax asset	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

Included in the U.S. net operating loss carryforwards are losses of \$0.6 million subject to limitation on utilization under the separate-return-limitation-year (SRLY) rules in the Internal Revenue Code. These loss carryforwards will begin to expire in 2028. As of December 31, 2022, there are U.K. foreign tax credit carryforwards available of \$1.8 million, which do not have an expiration date.

Uncertain Tax Positions

Recognition of the benefit of a given tax position is based upon whether a company determines that it is more likely than not that a tax position will be sustained upon examination based upon the technical merits of the position. In evaluating the more-likely-than-not recognition threshold, White Mountains must presume that the tax position will be subject to examination by a taxing authority with full knowledge of all relevant information. If the recognition threshold is met, then the tax position is measured at the largest amount of benefit that is more than 50% likely of being realized upon ultimate settlement.

As of December 31, 2022 and 2021, White Mountains did not have any unrecognized tax benefits.

White Mountains classifies all interest and penalties on unrecognized tax benefits as part of income tax expense. During the years ended December 31, 2022, 2021 and 2020, White Mountains did not recognize any net interest (income) expense. There was no accrued interest as of December 31, 2022, 2021 and 2020.

Tax Examinations

With a few immaterial exceptions, White Mountains is no longer subject to U.S. federal, state, or non-U.S. income tax examinations by tax authorities for years before 2017.

Note 9. Derivatives

HG Global Interest Rate Cap

On June 16, 2022, HG entered into an interest rate cap agreement, effective on July 25, 2022, to limit its exposure to the risk of interest rate increases on the HG Global Senior Notes. The notional amount of the interest rate cap is \$150.0 million and the termination date is July 25, 2025.

HG paid initial premiums of \$3.3 million for the interest rate cap. Under the terms of the interest rate cap agreement, if the current three-month SOFR rate at the measurement date exceeds 3.5%, HG will receive payments from the counterparty equal to the difference between the three-month SOFR rate on the determination date and 3.5%, multiplied by the notional amount of the cap based on the number of days in the quarter and a year equal to 360 days. As of December 31, 2022, the three-month SOFR rate was 4.6%.

HG accounts for the interest rate cap as a derivative at fair value, with changes in fair value recognized in current period earnings within interest expense. For the year ended December 31, 2022, White Mountains recognized a gain of \$0.8 million related to the change in fair value on the interest rate cap within interest expense. As of December 31, 2022, the estimated fair value of the interest rate cap recorded in other assets was \$4.1 million. White Mountains classifies the interest rate cap as a Level 2 measurement.

Note 10. Municipal Bond Guarantee Insurance

HG Global was established to fund the startup of BAM, a mutual municipal bond insurer. HG Global, together with its subsidiaries, provided the initial capitalization of BAM through the purchase of \$503.0 million of BAM Surplus Notes.

Reinsurance Treaties

FLRT

BAM is a party to a first loss reinsurance treaty (“FLRT”) with HG Re under which HG Re provides first loss protection up to 15%-of-par outstanding on each municipal bond insured by BAM. For capital appreciation bonds, par is adjusted to the estimated equivalent par value for current interest paying bonds. In return, BAM cedes approximately 60% of the risk premium charged for insuring the municipal bond, which is net of a ceding commission. The FLRT is a perpetual agreement with terms that can be renegotiated after a specified period of time. During 2021, BAM and HG Re agreed that the terms may be renegotiated at the end of 2024, and each subsequent five-year period thereafter.

Fidus Re

BAM is party to a collateralized financial guarantee excess of loss reinsurance agreement that serves to increase BAM’s claims paying resources and is provided by Fidus Re.

In 2018, Fidus Re was initially capitalized by the issuance of \$100.0 million of insurance-linked securities (the “Fidus Re 2018 Agreement”). The proceeds from issuance were placed in a collateral trust supporting Fidus Re’s obligations to BAM. The insurance-linked securities were issued by Fidus Re with an initial term of 12 years and are callable five years after the date of issuance. Under the Fidus Re 2018 Agreement, Fidus Re reinsures 90% of aggregate losses exceeding \$165.0 million on a portion of BAM’s financial guarantee portfolio (the “2018 Covered Portfolio”) up to a total reimbursement of \$100.0 million. The Fidus Re 2018 Agreement does not provide coverage for losses in excess of \$276.1 million. The 2018 Covered Portfolio consists of approximately 27% of BAM’s gross par outstanding as of December 31, 2022.

In 2021, Fidus Re issued an additional \$150.0 million of insurance linked securities (the “Fidus Re 2021 Agreement”) which have an initial term of 12 years and are callable five years after the date of issuance. The proceeds from issuance were placed in a collateral trust supporting Fidus Re’s obligations to BAM. Under the Fidus Re 2021 Agreement, Fidus Re reinsures 90% of aggregate losses exceeding \$135.0 million on a portion of BAM’s financial guarantee portfolio (the “2021 Covered Portfolio”) up to a total reimbursement of \$150.0 million. The Fidus Re 2021 Agreement does not provide coverage for losses in excess of \$301.7 million. The 2021 Covered Portfolio consists of approximately 32% of BAM’s gross par outstanding as of December 31, 2022.

In the fourth quarter of 2022, Fidus Re issued an additional \$150.0 million of insurance linked securities (the “Fidus Re 2022 Agreement”) which have an initial term of 12 years and are callable seven years after the date of issuance. The proceeds from issuance were placed in a collateral trust supporting Fidus Re’s obligations to BAM. Under the Fidus Re 2022 Agreement, Fidus Re reinsures 90% of aggregate losses exceeding \$110.0 million on a portion of BAM’s financial guarantee portfolio (the “2022 Covered Portfolio”) up to a total reimbursement of \$150.0 million. The Fidus Re 2022 Agreement does not provide coverage for losses in excess of \$276.7 million. The 2022 Covered Portfolio consists of approximately 33% of BAM’s gross par outstanding as of December 31, 2022.

The Fidus Re agreements are accounted for using deposit accounting and any related financing expenses are recorded in general and administrative expenses as they do not meet the risk transfer requirements necessary to be accounted for as reinsurance.

XOLT

In January 2020, BAM entered into the XOLT with HG Re. Under the XOLT, HG Re provides last dollar protection for exposures on municipal bonds insured by BAM in excess of the New York State Department of Financial Services (“NYDFS”) single issuer limits. As of December 31, 2022, the XOLT is subject to an aggregate limit equal to the lesser of \$125.0 million or the assets held in the supplemental collateral trust (the “Supplemental Trust”) at any point in time. The agreement is accounted for using deposit accounting and any related financing expenses are recorded in general and administrative expenses as the agreement does not meet the risk transfer requirements necessary to be accounted for as reinsurance.

Collateral Trusts

HG Re's obligations under the FLRT are subject to an aggregate limit equal to the assets in two collateral trusts: the Supplemental Trust and the Regulation 114 Trust (together, the "Collateral Trusts") at any point in time.

On a monthly basis, BAM deposits cash equal to ceded premiums, net of ceding commissions, due to HG Re under the FLRT directly into the Regulation 114 Trust. The Regulation 114 Trust target balance is equal to HG Re's unearned premiums and unpaid loss and LAE reserves, if any. If, at the end of any quarter, the Regulation 114 Trust balance is below the target balance, funds will be withdrawn from the Supplemental Trust and deposited into the Regulation 114 Trust in an amount equal to the shortfall. If, at the end of any quarter, the Regulation 114 Trust balance is above 102% of the target balance, funds will be withdrawn from the Regulation 114 Trust and deposited into the Supplemental Trust. The Regulation 114 Trust balance as of December 31, 2022 and 2021 was \$288.6 million and \$250.2 million.

The Supplemental Trust target balance is \$603.0 million, less the amount of cash and securities in the Regulation 114 Trust in excess of its target balance (the "Supplemental Trust Target Balance"). If, at the end of any quarter, the Supplemental Trust balance exceeds the Supplemental Trust Target Balance, such excess may be distributed to HG Re. The distribution will be made first as an assignment of accrued interest on the BAM Surplus Notes and second in cash and/or fixed income securities.

As the BAM Surplus Notes are repaid over time, the BAM Surplus Notes will be replaced in the Supplemental Trust by cash and fixed income securities. The Supplemental Trust balance as of December 31, 2022 and 2021 was \$568.3 million and \$601.8 million.

As of December 31, 2022 and 2021, the Collateral Trusts held assets of \$856.9 million and \$852.0 million, which included \$503.3 million and \$481.7 million of cash and investments, \$340.0 million and \$364.6 million of BAM Surplus Notes and \$13.6 million and \$5.7 million of interest receivable on the BAM Surplus Notes.

BAM Surplus Notes

Through 2024, the interest rate on the BAM Surplus Notes is a variable rate equal to the one-year U.S. Treasury rate plus 300 basis points, set annually. During 2023, the interest rate on the BAM Surplus Notes will be 7.7%. Beginning in 2025, the interest rate will be fixed at the higher of the then current variable rate or 8.0%. Under its agreements with HG Global, BAM is required to seek regulatory approval to pay principal and interest on the BAM Surplus Notes only to the extent that its remaining qualified statutory capital and other capital resources continue to support its outstanding obligations, its business plan and its "AA/stable" rating from Standard & Poor's. No payment of principal or interest on the BAM Surplus Notes may be made without the approval of the NYDFS.

In December 2022, BAM made a \$36.0 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global. Of this payment, \$24.6 million was a repayment of principal held in the Supplemental Trust, \$1.0 million was a payment of accrued interest held in the Supplemental Trust and \$10.4 million was a payment of accrued interest held outside the Supplemental Trust.

In December 2021, BAM made a \$33.8 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global. Of this payment, \$23.6 million was a repayment of principal held in the Supplemental Trust, \$0.4 million was a payment of accrued interest held inside the Supplemental Trust and \$9.8 million was a payment of accrued interest held outside the Supplemental Trust.

As of December 31, 2022 and 2021, the principal balance on the BAM Surplus Notes was \$340.0 million and \$364.6 million, and total interest receivable on the BAM Surplus Notes was \$157.9 million and \$157.6 million.

Insured Obligations and Premiums

The following table presents a schedule of BAM's insured obligations as of December 31, 2022 and 2021:

	December 31,	
	2022	2021
Contracts outstanding	13,382	12,350
Remaining weighted average contract period (in years)	10.8	10.8
Contractual debt service outstanding (in millions):		
Principal	\$ 99,996.9	\$ 89,196.5
Interest	48,880.6	41,486.5
Total debt service outstanding	\$ 148,877.5	\$ 130,683.0
Gross unearned insurance premiums (in millions)	\$ 298.3	\$ 266.3

The following table presents a schedule of BAM's future premium revenues as of December 31, 2022:

Millions	December 31, 2022
January 1, 2023 - March 31, 2023	\$ 7.0
April 1, 2023 - June 30, 2023	7.0
July 1, 2023 - September 30, 2023	6.8
October 1, 2023 - December 31, 2023	6.7
	<u>27.5</u>
2024	25.9
2025	24.2
2026	22.6
2027	21.0
2028 and thereafter	177.1
Total gross unearned insurance premiums	\$ 298.3

The following table presents a schedule of written premiums and earned premiums included in White Mountains's HG Global/BAM segment for the years ended December 31, 2022, 2021 and 2020:

Millions	December 31,		
	2022	2021	2020
Written premiums:			
Direct	\$ 63.8	\$ 51.0	\$ 61.5
Assumed	1.3	4.6	.2
Gross written premiums ⁽¹⁾	<u>\$ 65.1</u>	<u>\$ 55.6</u>	<u>\$ 61.7</u>
Earned premiums:			
Direct	\$ 28.6	\$ 23.2	\$ 19.4
Assumed	4.7	3.7	3.4
Gross earned premiums ⁽¹⁾	<u>\$ 33.3</u>	<u>\$ 26.9</u>	<u>\$ 22.8</u>

⁽¹⁾ There are no ceded premium amounts in the periods presented and Gross earned premium are equivalent to net written premiums and net earned premiums.

In September 2022, BAM entered into a 100% facultative quota share reinsurance agreement under which it assumed a portfolio of municipal bond guarantee contracts with a par value of \$42.5 million.

In January 2021, BAM entered into a 100% facultative quota share reinsurance agreement under which it assumed a portfolio of municipal bond guarantee contracts with a par value of \$805.5 million.

In the second quarter of 2020, BAM assumed a municipal bond guarantee contract with a par value of \$36.9 million through an endorsement to the facultative quota share reinsurance agreement.

None of the contracts assumed under these reinsurance agreements were non-performing, and no loss reserves have been established for any of the contracts, either as of the transaction dates or as of December 31, 2022. The agreements, which cover future claims exposure only, meet the risk transfer criteria under ASC 944-20, *Insurance Activities* and accordingly have been accounted for as reinsurance.

Note 11. Earnings Per Share

White Mountains calculates earnings per share using the two-class method, which allocates earnings between common shares and unvested restricted common shares. Both classes of shares participate equally in dividends and earnings on a per share basis. Basic earnings per share amounts are based on the weighted average number of common shares outstanding adjusted for unvested restricted common shares.

The following table presents the Company's computation of earnings per share from continuing operations for the years ended December 31, 2022, 2021 and 2020. See Note 21 — "Held for Sale and Discontinued Operations".

	Year Ended December 31,		
	2022	2021	2020
Basic and diluted earnings per share numerators (in millions):			
Net income (loss) attributable to White Mountains's common shareholders	\$ 792.8	\$ (275.4)	\$ 708.7
Less: total income (loss) from discontinued operations, net of tax ⁽¹⁾	903.2	(3.9)	(11.8)
Less: net (income) loss from discontinued operations attributable to non-controlling interests	(.7)	1.0	.2
Net income (loss) from continuing operations attributable to White Mountains's common shareholders	(109.7)	(272.5)	720.3
Allocation of (earnings) losses to participating restricted common shares ⁽²⁾	1.3	3.2	(9.5)
Basic and diluted earnings (losses) per share numerators	\$ (108.4)	\$ (269.3)	\$ 710.8
Basic earnings per share denominators (in thousands):			
Total average common shares outstanding during the period	2,862.4	3,079.0	3,122.2
Average unvested restricted common shares ⁽³⁾	(36.2)	(36.5)	(40.8)
Basic earnings (losses) per share denominator	2,826.2	3,042.5	3,081.4
Diluted earnings per share denominator (in thousands):			
Total average common shares outstanding during the period	2,862.4	3,079.0	3,122.2
Average unvested restricted common shares ⁽³⁾	(36.2)	(36.5)	(40.8)
Diluted earnings (losses) per share denominator	2,826.2	3,042.5	3,081.4
Basic and diluted earnings per share (in dollars) - continuing operations:			
Distributed earnings - dividends declared and paid	\$ 1.00	\$ 1.00	\$ 1.00
Undistributed earnings (losses)	(39.34)	(89.52)	229.69
Basic and diluted earnings (losses) per share	\$ (38.34)	\$ (88.52)	\$ 230.69

⁽¹⁾ Includes net income (loss) from discontinued operations, net of tax - NSM Group, net gain (loss) from sale of discontinued operations, net of tax - NSM Group and net gain (loss) from sale of discontinued operations, net of tax - Sirius Group. See Note 21 — "Held for Sale and Discontinued Operations."

⁽²⁾ Restricted shares issued by White Mountains receive dividends, and therefore, are considered participating securities.

⁽³⁾ Restricted shares outstanding vest upon a stated date. See Note 12 — "Employee Share-Based Incentive Compensation Plans".

The following table presents the undistributed net earnings (losses) from continuing operations for the years ended December 31, 2022, 2021 and 2020. See Note 21 — "Held for Sale and Discontinued Operations".

Millions	Year Ended December 31,		
	2022	2021	2020
Undistributed net earnings - continuing operations:			
Net income (loss) attributable to White Mountains's common shareholders, net of restricted common share amounts	\$ (108.4)	\$ (269.3)	\$ 710.8
Dividends declared, net of restricted common share amounts ⁽¹⁾	(3.0)	(3.1)	(3.1)
Total undistributed net earnings (losses), net of restricted common share amounts	\$ (111.4)	\$ (272.4)	\$ 707.7

⁽¹⁾ Restricted shares issued by White Mountains receive dividends, and therefore, are considered participating securities.

Note 12. Employee Share-Based Incentive Compensation Plans

White Mountains's share-based incentive compensation plans are designed to incentivize key employees to maximize shareholder value over long periods of time. White Mountains believes that this is best pursued by utilizing a pay-for-performance program that closely aligns the financial interests of management with those of its shareholders. White Mountains accomplishes this by emphasizing highly variable long-term compensation that is contingent on performance over a number of years rather than entitlements. White Mountains expenses all its share-based compensation. As a result, White Mountains's calculation of its owners' returns includes the expense of all outstanding share-based compensation awards.

Incentive Compensation Plans

The WTM Incentive Plan provides for grants of various types of share-based and non-share-based incentive awards to key employees and directors of White Mountains. The WTM Incentive Plan was adopted by the Board, was approved by the Company's sole shareholder in 1985 and was subsequently amended by its shareholders in 1995, 2001, 2003, 2005, 2010, 2013 and 2019. Share-based incentive awards that may be granted under the plan include performance shares, restricted shares, incentive stock options and non-qualified stock options.

Performance Shares

Performance shares are designed to reward employees for meeting company-wide performance targets. Performance shares are conditional grants of a specified maximum number of common shares or an equivalent amount of cash. Awards generally vest at the end of a three-year service period, are subject to the attainment of pre-specified performance goals, and are valued based on the market value of common shares at the time awards are paid. Performance shares earned under the WTM Incentive Plan are typically paid in cash but may be paid in common shares. Compensation expense is recognized for the vested portion of the awards over the related service periods. The level of payout ranges from zero to two times the number of shares initially granted, depending on White Mountains's financial performance. Performance shares become payable at the conclusion of a performance cycle (typically three years) if pre-defined financial targets are met. The performance measures used for determining performance share payouts are growth in White Mountains's adjusted book value per share and intrinsic value per share. Intrinsic value per share is generally calculated by adjusting adjusted book value per share for differences between the adjusted book value of certain assets and liabilities and White Mountains's estimate of their underlying intrinsic values.

The following table presents performance share activity for the years ended December 31, 2022, 2021 and 2020 for performance shares granted under the WTM Incentive Plan:

\$ in Millions	Year Ended December 31,					
	2022		2021		2020	
	Target Performance Shares Outstanding	Accrued Expense	Target Performance Shares Outstanding	Accrued Expense	Target Performance Shares Outstanding	Accrued Expense
Beginning of period	40,828	\$ 42.2	42,458	\$ 56.3	42,473	\$ 43.7
Shares paid or expired ⁽¹⁾	(14,625)	(26.4)	(14,336)	(35.2)	(14,070)	(27.7)
New grants	13,225	—	13,475	—	14,055	—
Forfeitures and cancellations ⁽²⁾	21	(.4)	(769)	.4	—	(.4)
Expense recognized	—	52.1	—	20.7	—	40.7
End of period	39,449	\$ 67.5	40,828	\$ 42.2	42,458	\$ 56.3

⁽¹⁾ WTM performance share payments in 2022 for the 2019-2021 performance cycle, which were paid in March 2022 at 172% of target. WTM performance share payments in 2021 for the 2018-2020 performance cycle, which were paid in March 2021 at 200% of target. WTM performance share payments in 2020 for the 2017-2019 performance cycle, which were paid in March 2020, ranged from 174% to 180% of target.

⁽²⁾ Amounts include changes in assumed forfeitures, as required under GAAP.

During 2022, White Mountains granted 13,225 performance shares for the 2023-2025 performance cycle. During 2021, White Mountains granted 13,475 performance shares for the 2022-2024 performance cycle. During 2020, White Mountains granted 14,055 performance shares for the 2020-2022 performance cycle.

For the 2019-2021 performance cycle, the Company issued common shares for 750 performance shares earned and all other performance shares earned were settled in cash. For the 2018-2020 and 2017-2019 performance cycles, all performance shares earned were settled in cash. If the outstanding performance shares had vested on December 31, 2022, the total additional compensation cost to be recognized would have been \$36.7 million, based on accrual factors as of December 31, 2022 (common share price and payout assumptions).

The following table presents performance shares outstanding and accrued expense for performance shares awarded under the WTM Incentive Plan as of December 31, 2022 for each performance cycle:

\$ in Millions	December 31, 2022	
	Target Performance Shares Outstanding	Accrued Expense
Performance cycle:		
2022 – 2024	13,225	\$ 11.0
2021 – 2023	13,475	19.7
2020 – 2022	13,350	37.8
Sub-total	40,050	68.5
Assumed forfeitures	(601)	(1.0)
Total	39,449	\$ 67.5

For the 2022-2024 performance cycle, the targeted performance goal for full payment of outstanding performance shares granted under the WTM Incentive Plan is 9% average annual growth in adjusted book value per share and intrinsic value per share. Average annual growth of 4% or less would result in no payout and average annual growth of 14% or more would result in a payout of 200%.

For the 2021-2023 performance cycle, the targeted performance goal for full payment of outstanding performance shares granted under the WTM Incentive Plan is 8% average annual growth in adjusted book value per share and intrinsic value per share. Average annual growth of 3% or less would result in no payout and average annual growth of 13% or more would result in a payout of 200%.

For the 2020-2022 performance cycle, the targeted performance goal for full payment of outstanding performance shares granted under the WTM Incentive Plan is 7% average annual growth in adjusted book value per share and intrinsic value per share. Average annual growth of 2% or less would result in no payout and average annual growth of 12% or more would result in a payout of 200%.

Restricted Shares

Restricted shares are grants of a specified number of common shares that generally vest at the end of a 34-month service period. The following table presents the unrecognized compensation cost associated with the outstanding restricted share awards under the WTM Incentive Plan for the years ended December 31, 2022, 2021 and 2020:

\$ in Millions	Year Ended December 31,					
	2022		2021		2020	
	Restricted Shares	Unamortized Issue Date Fair Value	Restricted Shares	Unamortized Issue Date Fair Value	Restricted Shares	Unamortized Issue Date Fair Value
Non-vested:						
Beginning of period	37,850	\$ 15.9	43,105	\$ 15.2	43,395	\$ 16.7
Issued	13,225	13.8	13,475	16.1	14,055	15.1
Vested	(12,725)	—	(17,936)	—	(14,345)	—
Forfeited	—	—	(794)	(.8)	—	—
Expense recognized	—	(14.2)	—	(14.6)	—	(16.6)
End of period	38,350	\$ 15.5	37,850	\$ 15.9	43,105	\$ 15.2

During 2022, White Mountains issued 13,225 restricted shares that vest on January 1, 2025. During 2021, White Mountains issued 13,475 restricted shares that vest on January 1, 2024. During 2020, White Mountains issued 14,055 restricted shares that vest on January 1, 2023. The unamortized issue date fair value as of December 31, 2022 is expected to be recognized ratably over the remaining vesting periods.

Note 13. Leases

White Mountains has entered into lease agreements, primarily for office space. These leases are classified as operating leases, with lease expense recognized on a straight-line basis over the term of the lease. Lease incentives, such as free rent or landlord reimbursements for leasehold improvements, are recognized at lease inception and amortized on a straight-line basis over the term of the lease. Lease expense and the amortization of leasehold improvements are recognized within general and administrative expenses. Lease payments related to options to extend or renew the lease term are excluded from the calculation of lease liabilities unless White Mountains is reasonably certain of exercising those options.

As of December 31, 2022 and 2021, the right-of-use (“ROU”) asset was \$25.2 million and \$28.1 million and lease liabilities were \$27.1 million and \$30.0 million.

The following table summarizes net lease expense recognized in White Mountains’s consolidated statement of operations for the years ended December 31, 2022 and 2021:

Millions	December 31,	
	2022	2021
Lease cost	\$ 8.0	\$ 6.7
Less: sublease income	.7	.4
Net lease cost	\$ 7.3	\$ 6.3

The following table presents the contractual maturities of the lease liabilities associated with White Mountains’s operating lease agreements as of December 31, 2022:

Millions	December 31, 2022
2023	\$ 8.7
2024	7.6
2025	5.1
2026	2.8
2027	1.6
Thereafter	3.9
Total undiscounted lease payments	29.7
Less: present value adjustment	(2.6)
Operating lease liability	\$ 27.1

The following table presents lease related assets and liabilities by reportable segment as of December 31, 2022 and 2021:

\$ in Millions	As of December 31, 2022						Weighted Average Incremental Borrowing Rate ⁽¹⁾
	HG/BAM	Ark	Kudu	Other Operations	Total		
ROU lease asset	\$ 5.7	\$ 6.6	\$ 5.8	\$ 7.1	\$ 25.2		
Lease liability	\$ 6.2	\$ 6.6	\$ 6.5	\$ 7.8	\$ 27.1	4.1%	

⁽¹⁾ The present value of the remaining lease payments was determined by discounting the lease payments using the incremental borrowing rate.

\$ in Millions	As of December 31, 2021						Weighted Average Incremental Borrowing Rate ⁽¹⁾
	HG/BAM	Ark	Kudu	Other Operations	Total		
ROU lease asset	\$ 7.6	\$ 7.0	\$ 6.4	\$ 7.1	\$ 28.1		
Lease liability	\$ 8.1	\$ 7.0	\$ 7.1	\$ 7.8	\$ 30.0	4.0%	

⁽¹⁾ The present value of the remaining lease payments was determined by discounting the lease payments using the incremental borrowing rate.

Note 14. Common Shareholders' Equity and Non-controlling Interests

Common Shares Repurchased and Retired

During the past several years, White Mountains's board of directors authorized the Company to repurchase its common shares, from time to time, subject to market conditions. Shares may be repurchased on the open market or through privately negotiated transactions. The repurchase authorizations do not have a stated expiration date. As of December 31, 2022, White Mountains may repurchase an additional 320,550 shares under these board authorizations. In addition, from time to time White Mountains has also repurchased its common shares through tender offers that were separately authorized by its board of directors.

During 2022, the Company repurchased 461,256 common shares for \$615.8 million at an average share price of \$1,335.11, which included 129,450 common shares repurchased under the board authorizations for \$150.9 million at an average share price of \$1,165.84 and 4,011 to satisfy employee income tax withholding pursuant to employee benefit plans. In addition, on September 26, 2022, the Company completed a self-tender offer, through which it repurchased 327,795 of its common shares at a purchase price of \$1,400.00 per share for a total cost of approximately \$460.8 million, including expenses.

During 2021, the Company repurchased 98,511 common shares for \$107.5 million at an average share price of \$1,091.29, which was comprised of 91,293 common shares repurchased under the board authorizations for \$100.0 million at an average share price of \$1,095.37 and 7,218 common shares repurchased to satisfy employee income tax withholding pursuant to employee benefit plans.

During 2020, the Company repurchased 99,087 common shares for \$85.1 million at an average share price of \$858.81, which was comprised of 93,188 common shares repurchased under the board authorizations for \$78.5 million at an average share price of \$1,115.51 and 5,899 common shares repurchased to satisfy employee income tax withholding pursuant to employee benefit plans.

Common Shares Issued

During 2022, the Company issued a total of 15,640 common shares, which consisted of 13,225 restricted shares issued to key personnel and 2,415 shares issued to directors of the Company.

During 2021, the Company issued a total of 15,066 common shares, which consisted of 13,475 restricted shares issued to key personnel and 1,591 shares issued to directors of the Company.

During 2020, the Company issued a total of 15,745 common shares, which consisted of 14,055 restricted shares issued to key personnel, 1,440 shares issued to directors of the Company and 250 shares issued to MediaAlpha's management.

Dividends on Common Shares

For the years ended December 31, 2022, 2021 and 2020, the Company declared and paid cash dividends totaling \$3.0 million, \$3.1 million and \$3.2 million (or \$1.00 per common share).

Non-controlling Interests

Non-controlling interests consist of the ownership interests of non-controlling shareholders in consolidated entities and are presented separately on the balance sheet.

The following table presents the balance of non-controlling interests included in White Mountains's total equity and the related percentage of each consolidated entity's total equity owned by non-controlling shareholders as of December 31, 2022 and 2021:

\$ in Millions	December 31, 2022		December 31, 2021	
	Non-controlling Percentage ⁽¹⁾	Non-controlling Equity	Non-controlling Percentage ⁽¹⁾	Non-controlling Equity
Non-controlling interests, excluding BAM				
HG Global	3.1 %	\$ (0.6)	3.1 %	\$ 8.9
Ark	28.0 %	247.9	28.0 %	230.7
Kudu	10.8 %	75.1	2.5 %	12.4
NSM ⁽²⁾	— %	—	3.5 %	16.7
Other	various	20.4	various	11.9
Total, excluding BAM		342.8		280.6
BAM	100.0 %	(154.7)	100.0 %	(124.0)
Total non-controlling interests		\$ 188.1		\$ 156.6

⁽¹⁾ The non-controlling percentage represents the basic ownership interests held by non-controlling shareholders with the exception of HG Global, for which the non-controlling percentage represents the preferred share ownership held by non-controlling shareholders.

⁽²⁾ As a result of the NSM Transaction, NSM has been classified as discontinued operations through the closing of the transaction. See **Note 21 — “Held for Sale and Discontinued Operations.”**

Note 15. Statutory Capital and Surplus

White Mountains's insurance operations are subject to regulation and supervision in each of the jurisdictions where they are domiciled and licensed to conduct business. Generally, regulatory authorities have broad supervisory and administrative powers over such matters as licenses, standards of solvency, premium rates, policy forms, investments, security deposits, methods of accounting, form and content of financial statements, minimum capital and surplus requirements, dividends and other distributions to shareholders, periodic examinations and annual and other report filings. In general, such regulation is for the protection of policyholders rather than shareholders.

The Insurance Act 1978 of Bermuda and related regulations, as amended (“Insurance Act”), regulates the insurance business of Bermuda-domiciled insurers. Under the Insurance Act, insurers are required to maintain available statutory capital and surplus at a level equal to or in excess of its enhanced capital requirement which is established by reference to either a Bermuda Solvency Capital Requirement (“BSCR”) model or an approved internal capital model. Generally, the BMA has broad supervisory and administrative powers over such matters as licenses, standards of solvency, investments, methods of accounting, form and content of financial statements, minimum capital and surplus requirements, and annual and other report filings.

HG Global/BAM

HG Re is a special purpose insurer under Bermuda insurance regulations and is subject to regulation and supervision by the BMA. As of December 31, 2022, HG Re had statutory capital and surplus of \$730.8 million. As a special purpose insurer, HG Re has a nominal minimum regulatory capital requirement of \$1.

BAM is domiciled in New York and is subject to regulation by the NYDFS. New York financial guarantee insurance law establishes single risk and aggregate limits with respect to insured obligations insured by financial guarantee insurers. BAM's statutory net loss for the years ended December 31, 2022, 2021 and 2020 was \$55.0 million, \$49.3 million and \$59.3 million. BAM's statutory surplus, as reported to regulatory authorities as of December 31, 2022, was \$283.4 million, which exceeds the minimum statutory surplus necessary for BAM to maintain its New York State financial guarantee insurance license of \$66.0 million.

Ark

Syndicates 4020 and 3902 are subject to oversight by the Council of Lloyd's. Ark Syndicate Management Limited ("ASML") is authorized by the U.K.'s Prudential Regulation Authority and regulated by the Financial Conduct Authority under the Financial Services and Markets Act 2000. The underwriting capacity of a Member of Lloyd's must be supported by providing a deposit in the form of cash, securities or letters of credit in an amount determined under the capital adequacy regime of the U.K.'s Prudential Regulation Authority (the "PRA"). This amount is determined by Lloyd's and is based on each syndicate's solvency and capital requirement as calculated through its internal model. In addition, if the Funds at Lloyd's are not sufficient to cover all losses, the Lloyd's Central Fund provides an additional discretionary level of security for policyholders. As of December 31, 2022, Ark had provided Funds at Lloyd's of \$325.4 million.

GAIL is subject to regulation and supervision by the BMA. As of December 31, 2022, GAIL had statutory capital and surplus of \$877.6 million. GAIL's minimum statutory capital and surplus requirement established by the BMA was \$419.7 million as of December 31, 2022.

WM Outrigger Re

WM Outrigger Re is a special purpose insurer under Bermuda insurance regulations and is subject to regulation and supervision by the BMA. As of December 31, 2022, WM Outrigger Re had statutory capital and surplus of \$204.0 million. As a special purpose insurer, WM Outrigger Re has a nominal minimum regulatory capital requirement of \$1.

Dividend Capacity

There are no restrictions under Bermuda law or the law of any other jurisdiction on the payment of dividends from retained earnings by White Mountains, provided that after the payment of any dividend, the Company would continue to be able to pay its liabilities as they become due and the realizable value of the Company's assets would remain greater than its liabilities. Following is a description of the dividend capacity of White Mountains's insurance and reinsurance subsidiaries:

HG Global/BAM

HG Re is a special purpose insurer subject to regulation and supervision by the BMA, but does not require regulatory approval to pay dividends. However, HG Re's dividend capacity is limited to amounts held outside of the Collateral Trusts pursuant to the FLRT with BAM. As of December 31, 2022, HG Re had \$9.3 million of cash and investments and \$111.7 million of accrued interest on the BAM Surplus Notes held outside the Collateral Trusts. As of December 31, 2022, HG Re had \$730.8 million of statutory capital and surplus and \$856.9 million of assets held in the Collateral Trusts.

Under its agreements with HG Global, BAM is required to seek regulatory approval to pay principal and interest on the BAM Surplus Notes only to the extent that its remaining qualified statutory capital and other capital resources continue to support its outstanding obligations, its business plan and its "AA/stable" rating from Standard & Poor's. No payment of principal or interest on the BAM Surplus Notes may be made without the approval of the NYDFS.

In December 2022, BAM made a \$36.0 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global. Of this payment, \$24.6 million was a repayment of principal held in the Supplemental Trust, \$1.0 million was a payment of accrued interest held in the Supplemental Trust and \$10.4 million was a payment of accrued interest held outside the Supplemental Trust.

In December 2021, BAM made a \$33.8 million cash payment of principal and interest on the BAM Surplus Notes held by HG Global. Of this payment, \$23.6 million was a repayment of principal held in the Supplemental Trust, \$0.4 million was a payment of accrued interest held in the Supplemental Trust and \$9.8 million was a payment of accrued interest held outside the Supplemental Trust.

Ark

During any 12-month period, GAIL, a class 4 licensed Bermuda insurer, has the ability to (i) make capital distributions of up to 15% of its total statutory capital per the previous year's statutory financial statements, or (ii) make dividend payments of up to 25% of its total statutory capital and surplus per the previous year's statutory financial statements, without prior approval of Bermuda regulatory authorities. Accordingly, GAIL will have the ability to make capital distributions of up to \$113.2 million during 2023, which is equal to 15% of its December 31, 2022 statutory capital of \$754.7 million, subject to meeting all appropriate liquidity and solvency requirements and the filing of its December 31, 2022 statutory financial statements. During 2022, GAIL did not pay any dividends to its immediate parent.

Note 16. Segment Information

As of December 31, 2022, White Mountains conducted its operations through three reportable segments: (1) HG Global/BAM, (2) Ark, and (3) Kudu, with our remaining operating businesses, holding companies and other assets included in Other Operations. White Mountains has made its segment determination based on consideration of the following criteria: (i) the nature of the business activities of each of the Company’s subsidiaries and affiliates; (ii) the manner in which the Company’s subsidiaries and affiliates are organized; (iii) the existence of primary managers responsible for specific subsidiaries and affiliates; and (iv) the organization of information provided to the chief operating decision makers and the Board of Directors. Significant intercompany transactions among White Mountains’s segments have been eliminated herein.

As a result of the NSM Transaction, the results of operations for NSM, previously reported as a segment, have been classified as discontinued operations in the statements of operations and comprehensive income through the closing of the transaction. Prior period amounts have been reclassified to conform to the current period’s presentation. See **Note 21 — “Held for Sale and Discontinued Operations.”**

As a result of the Ark Transaction, White Mountains began consolidating Ark in its financial statements as of January 1, 2021. See **Note 2 — “Significant Transactions”**.

The following tables present the financial information for White Mountains’s segments:

Millions	HG Global/ BAM ⁽¹⁾	Ark	Kudu	Other Operations	Total
Year Ended December 31, 2022					
Earned insurance premiums ⁽²⁾	\$ 33.3	\$ 1,043.4	\$ —	\$ —	\$ 1,076.7
Net investment income	21.5	16.3	54.4	32.2	124.4
Net realized and unrealized investment gains (losses)	(105.8)	(55.2)	64.1	(1.6)	(98.5)
Net realized and unrealized investment gains (losses) from investment in MediaAlpha	—	—	—	(93.0)	(93.0)
Commission revenues	—	—	—	11.5	11.5
Other revenues	4.6	5.0	—	127.2	136.8
Total revenues	(46.4)	1,009.5	118.5	76.3	1,157.9
Loss and loss adjustment expenses	—	536.4	—	—	536.4
Insurance acquisition expenses	11.2	239.4	—	—	250.6
Cost of sales	—	—	—	98.6	98.6
General and administrative expenses	69.1	123.5	14.4	169.2	376.2
Amortization of other intangible assets	—	—	.3	4.9	5.2
Interest expense	8.3	15.1	15.0	1.9	40.3
Total expenses	88.6	914.4	29.7	274.6	1,307.3
Pre-tax income (loss)	\$ (135.0)	\$ 95.1	\$ 88.8	\$ (198.3)	\$ (149.4)

⁽¹⁾ BAM manages its affairs on a statutory accounting basis. BAM’s statutory surplus includes the BAM Surplus Notes and is not reduced by accruals of interest expense on the BAM Surplus Notes. BAM’s statutory surplus is reduced only after a payment of principal or interest has been approved by the NYDFS.

⁽²⁾ Ark’s earned insurance premiums based on the location of Ark’s underwriting offices in the United Kingdom and Bermuda are \$638.5 and \$404.9.

Millions	HG Global/ BAM ⁽¹⁾	Ark	Kudu	Other Operations	Total
Year Ended December 31, 2021					
Earned insurance premiums ⁽²⁾	\$ 26.9	\$ 637.3	\$ —	\$ —	\$ 664.2
Net investment income	17.5	2.9	43.9	18.2	82.5
Net realized and unrealized investment gains (losses)	(22.9)	16.5	89.9	50.7	134.2
Net realized and unrealized investment gains (losses) from investment in MediaAlpha	—	—	—	(380.3)	(380.3)
Commission revenues	—	—	—	9.6	9.6
Other revenues	1.5	11.8	.2	90.7	104.2
Total revenues	23.0	668.5	134.0	(211.1)	614.4
Losses and loss adjustment expenses	—	314.8	—	—	314.8
Insurance acquisition expenses	8.3	178.0	—	—	186.3
Cost of sales	—	—	—	69.3	69.3
General and administrative expenses	57.1	115.5	14.5	105.4	292.5
Amortization of other intangible assets	—	—	.3	4.3	4.6
Interest expense	—	7.3	11.7	1.5	20.5
Total expenses	65.4	615.6	26.5	180.5	888.0
Pre-tax income (loss)	\$ (42.4)	\$ 52.9	\$ 107.5	\$ (391.6)	\$ (273.6)

⁽¹⁾ BAM manages its affairs on a statutory accounting basis. BAM's statutory surplus includes the BAM Surplus Notes and is not reduced by accruals of interest expense on the BAM Surplus Notes. BAM's statutory surplus is reduced only after a payment of principal or interest has been approved by the NYDFS.

⁽²⁾ Ark's earned insurance premiums based on the location of Ark's underwriting offices in the United Kingdom and Bermuda are \$459.3 and \$178.0.

Millions	HG Global/ BAM ⁽¹⁾	Kudu	Other Operations	Total
Year Ended December 31, 2020				
Earned insurance premiums	\$ 22.8	\$ —	\$ —	\$ 22.8
Net investment income	19.5	29.5	82.0	131.0
Net realized and unrealized investment gains (losses)	23.7	15.9	(8.8)	30.8
Net realized and unrealized investment gains from investment in MediaAlpha	—	—	686.0	686.0
Commission revenues	—	—	8.3	8.3
Other revenues	2.5	.3	13.9	16.7
Total revenues	68.5	45.7	781.4	895.6
Insurance acquisition expenses	7.0	—	—	7.0
Cost of sales	—	—	11.3	11.3
General and administrative expenses	56.8	11.8	139.3	207.9
Amortization of other intangible assets	—	.3	1.3	1.6
Interest expense	—	6.0	1.4	7.4
Total expenses	63.8	18.1	153.3	235.2
Pre-tax income (loss)	\$ 4.7	\$ 27.6	\$ 628.1	\$ 660.4

⁽¹⁾ BAM manages its affairs on a statutory accounting basis. BAM's statutory surplus includes the BAM Surplus Notes and is not reduced by accruals of interest expense on the BAM Surplus Notes. BAM's statutory surplus is reduced only after a payment of principal or interest has been approved by the NYDFS.

Millions Selected Balance Sheet Data	HG Global/ BAM	Ark	Kudu	Other Operations	Held for Sale	Total
December 31, 2022:						
Total investments	\$ 975.8	\$ 1,761.9	\$ 695.9	\$ 1,736.4	\$ —	\$ 5,170.0
Total assets	\$ 1,058.5 ⁽¹⁾	\$ 3,486.2	\$ 825.9	\$ 2,018.7 ⁽²⁾	\$ —	\$ 7,389.3
Total liabilities	\$ 501.8 ⁽²⁾	\$ 2,520.9	\$ 273.3	\$ 158.3	\$ —	\$ 3,454.3
Total White Mountains's common shareholders' equity	\$ 712.0 ⁽²⁾	\$ 717.4	\$ 477.5	\$ 1,840.0 ⁽²⁾	\$ —	\$ 3,746.9
Non-controlling interest	\$ (155.3)	\$ 247.9	\$ 75.1	\$ 20.4	\$ —	\$ 188.1
December 31, 2021:						
Total investments	\$ 966.5	\$ 1,562.1	\$ 669.5	\$ 1,059.4	\$ —	\$ 4,257.5
Total assets	\$ 1,044.8 ⁽¹⁾	\$ 3,027.0	\$ 727.1	\$ 1,196.7 ⁽²⁾	\$ 1,005.1	\$ 7,000.7
Total liabilities	\$ 321.9 ⁽²⁾	\$ 2,122.4	\$ 261.0	\$ 95.4	\$ 495.3	\$ 3,296.0
Total White Mountains's common shareholders' equity	\$ 838.0 ⁽²⁾	\$ 673.9	\$ 453.7	\$ 1,089.4 ⁽²⁾	\$ 493.1	\$ 3,548.1
Non-controlling interest	\$ (115.1)	\$ 230.7	\$ 12.4	\$ 11.9	\$ 16.7	\$ 156.6

⁽¹⁾ As of December 2022 and 2021, total assets in the HG Global/BAM segment reflected the elimination of \$340.0 and \$364.6 of BAM Surplus Notes issued to HG Global and its subsidiaries, and \$157.9 and \$157.6 in accrued interest related to the BAM Surplus Notes.

⁽²⁾ HG Global preferred dividends payable to White Mountains's subsidiaries is eliminated in White Mountains's consolidated financial statements. For segment reporting, the HG Global preferred dividends payable to White Mountains's subsidiaries included within the HG Global/BAM segment are eliminated against the offsetting receivable included within Other Operations and therefore added back to White Mountains's common shareholders' equity within the HG Global/BAM segment. As of December 31, 2022 and 2021, the HG Global preferred dividends payable to White Mountains's subsidiaries was \$341.4 and \$400.5.

Note 17. Equity Method Eligible Investments

White Mountains's equity method eligible investments include Kudu's Participation Contracts, White Mountains's investment in MediaAlpha, PassportCard/DavidShield, Elementum Holdings, L.P. and certain other unconsolidated entities, private equity funds and hedge funds in which White Mountains has the ability to exert significant influence over the investee's operating and financial policies.

The following table presents the ownership interests and carrying values of equity method eligible investments as of December 31, 2022 and 2021:

\$ in Millions	December 31, 2022		December 31, 2021	
	Ownership Interest	Carrying Value	Ownership Interest	Carrying Value
Kudu Participation Contracts ⁽¹⁾	4.1 - 30.0%	\$ 695.9	3.2 - 32.0%	\$ 669.5
Investment in MediaAlpha	27.1 %	168.6	28.0 %	261.6
PassportCard/DavidShield	53.8 %	135.0	53.8 %	120.0
Elementum Holdings, L.P.	29.7 %	30.0	29.7 %	45.0
Other equity method eligible investments, at fair value	Under 50.0%	84.4	Under 50.0%	109.3
Other equity method eligible investments, at fair value	50.0% and over	—	50.0% and over	17.8

⁽¹⁾ Ownership interest generally references basic ownership interest with the exception of Kudu's Participation Contracts, which are non-controlling equity interests in the form of revenue and earnings participation contracts.

For the years ended December 31, 2022, 2021 and 2020, White Mountains received dividend and income distributions from equity method eligible investments of \$68.9 million, \$56.2 million and \$95.0 million, which were recorded within net investment income in the consolidated statement of operations.

Subsequent to the MediaAlpha IPO, White Mountains's investment in MediaAlpha is accounted for at fair value based on the publicly traded share price of MediaAlpha's common stock and White Mountains presents its investment in MediaAlpha as a separate line item on the balance sheet. See **Note 2 — "Significant Transactions."**

For the years ended December 31, 2021 and 2020, MediaAlpha was considered a significant subsidiary. The following tables present summarized financial information for MediaAlpha as of December 31, 2022 and 2021 for the years ended December 31, 2022, 2021, and 2020:

Millions	December 31,	
	2022	2021
Balance sheet data:		
Total assets	\$ 170.1	\$ 289.8
Total liabilities	\$ 256.2	\$ 351.4

Millions	Year Ended December 31,		
	2022	2021	2020
Income statement data:			
Total revenues	\$ 459.1	\$ 645.3	\$ 584.8
Total expenses	\$ 531.5	\$ 653.8	\$ 574.2
Net income (loss)	\$ (72.4)	\$ (8.5)	\$ 10.6

The following tables present aggregated summarized financial information for White Mountains's investments in equity method eligible unconsolidated entities, excluding MediaAlpha:

Millions	December 31,	
	2022	2021
Balance sheet data⁽¹⁾:		
Total assets	\$ 2,252.5	\$ 1,845.7
Total liabilities	\$ 526.9	\$ 373.4

⁽¹⁾ Financial data for White Mountains's equity method eligible investees is generally reported on a one-quarter lag.

Millions	Year Ended December 31,		
	2022	2021	2020
Income statement data⁽¹⁾:			
Total revenues	\$ 735.3	\$ 987.4	\$ 526.5
Total expenses	\$ 515.9	\$ 418.7	\$ 325.9
Net income (loss)	\$ 219.4	\$ 568.7	\$ 200.6

⁽¹⁾ Financial data for White Mountains's equity method eligible investees is generally reported on a one-quarter lag.

Note 18. Variable Interest Entities

BAM

As a mutual insurance company, BAM is owned by its members. BAM charges an insurance premium on each municipal bond insurance policy it writes. A portion of the premium is an MSC and the remainder is a risk premium. In the event of a municipal bond refunding, a portion of the MSC from the original issuance can be reutilized, in effect serving as a credit against the total insurance premium on the refunding of the municipal bond. Issuers of debt insured by BAM are members of BAM so long as any of their BAM-insured debt is outstanding. As members, they have certain interests in BAM, including the right to vote for BAM's directors and to receive dividends in the future, if declared.

The equity at risk funded by BAM's members is not sufficient to fund its operations without the additional financial support provided by the BAM Surplus Notes and accordingly, BAM is considered to be a VIE.

At inception, BAM and HG Re also entered into the FLRT. HG Re provides first loss protection up to 15%-of-par outstanding on each municipal bond insured by BAM. For capital appreciation bonds, par is adjusted to the estimated equivalent par value for current interest paying bonds. In return, BAM cedes approximately 60% of the risk premium charged for insuring the municipal bond, net of a ceding commission. HG Re's obligations under the FLRT are subject to an aggregate limit equal to the assets in the Regulation 114 Trust and the Supplemental Trust at any point in time. In addition, under the FLRT, HG Holdings Ltd, a subsidiary of HG Global, has the right to designate two directors for election to BAM's board of directors.

Since BAM is owned by its members, its equity and results of operations are included in non-controlling interests. However, White Mountains is required to consolidate BAM's results in its financial statements because BAM is a VIE for which White Mountains is the primary beneficiary.

Elementum

On May 31, 2019, White Mountains acquired a 30.0% limited partnership interest in Elementum for \$55.1 million. White Mountains has determined that Elementum is a VIE but that White Mountains is not the primary beneficiary and therefore does not consolidate Elementum. White Mountains's ownership interest gives White Mountains the ability to exert significant influence over the significant financial and operating activities of Elementum. Accordingly, Elementum meets the criteria to be accounted for under the equity method. White Mountains has taken the fair value option for its investment in Elementum. Changes in the fair value of Elementum are recorded in net realized and unrealized investment gains (losses). As of December 31, 2022, White Mountains's maximum exposure to loss on its limited partnership interest in Elementum is the carrying value of \$30.0 million.

PassportCard/DavidShield

On January 24, 2018, White Mountains acquired a 50.0% ownership interest in DavidShield, its joint venture partner in PassportCard. As part of the transaction, White Mountains reorganized its equity stake in PassportCard so that White Mountains and its partner in DavidShield would each own 50.0% of both businesses. To facilitate the transaction, White Mountains provided financing to its partner in the form of a non-interest-bearing loan that is secured by the partner's equity in PassportCard/DavidShield. The gross purchase price for the 50.0% interest in DavidShield was \$41.8 million, or \$28.3 million net of the financing provided for the restructuring.

On May 7, 2020, White Mountains made an additional \$15.0 million investment in PassportCard/DavidShield to support operations through the ongoing COVID-19 pandemic. The transaction increased White Mountains's ownership interest from 50.0% to 53.8%, but had no impact on the governance structure of the companies, including White Mountains's board representation or other investor rights. The governance structures for both PassportCard and DavidShield were designed to give White Mountains and its co-investor equal power to make the decisions that most significantly impact operations.

As a result of the transaction, White Mountains's re-evaluated its accounting treatment for its investment in PassportCard/DavidShield. Because White Mountains does not have the unilateral power to direct the operations of PassportCard or DavidShield, White Mountains does not hold a controlling financial interest and does not consolidate either entity. White Mountains's ownership interest gives White Mountains the ability to exert significant influence over the significant financial and operating activities of PassportCard/DavidShield. Accordingly, White Mountains's investment in PassportCard/DavidShield meets the criteria to be accounted for under the equity method. White Mountains has taken the fair value option for its investment in PassportCard/DavidShield. Changes in the fair value of PassportCard/DavidShield are recorded in net realized and unrealized investment gains (losses). As of December 31, 2022, White Mountains's maximum exposure to loss on its equity investment in PassportCard/DavidShield and the non-interest-bearing loan to its partner is the total carrying value of \$144.6 million.

WM Outrigger Re

During the fourth quarter of 2022, Ark sponsored the formation of Outrigger Re Ltd., a Bermuda company registered as a special purpose insurer and segregated accounts company, to provide collateralized reinsurance protection on Ark's Bermuda global property catastrophe excess of loss portfolio written in calendar year 2023. Within Outrigger Re Ltd., distinct segregated accounts are formed and capitalized in order to enter into reinsurance agreements with GAIL. On December 20, 2022, Outrigger Re Ltd. issued non-voting redeemable preference shares on behalf of four segregated accounts to White Mountains and unrelated third party investors. White Mountains purchased 100% of the preference shares issued by its segregated account, WM Outrigger Re, for \$205.0 million.

Outrigger Re Ltd. and WM Outrigger Re were determined to be VIEs. White Mountains is the primary beneficiary of WM Outrigger Re, as it has both the power to direct the activities that most significantly impact WM Outrigger Re's economic performance and the obligation to absorb losses, or the right to receive returns, that could potentially be significant to WM Outrigger Re. As a result, White Mountains consolidates WM Outrigger Re's results in its financial statements. The assets of WM Outrigger Re can only be used to settle the liabilities of WM Outrigger Re, and there is no recourse to the Company for any creditors of WM Outrigger Re.

White Mountains is not the primary beneficiary of Outrigger Re Ltd. or the other segregated accounts.

Limited Partnerships

White Mountains investments in limited partnerships are generally considered VIEs because the limited partnership interests do not have substantive kick-out rights or participating rights. White Mountains does not have the unilateral power to direct the operations of these limited partnerships, and therefore White Mountains is not the primary beneficiary and does not consolidate the limited partnerships. White Mountains has taken the fair value option for its investments in limited partnerships, which are generally measured at NAV as the practical expedient. As of December 31, 2022, White Mountains's maximum exposure to loss on its investments in limited partnerships is the carrying value of \$140.6 million.

Note 19. Fair Value of Financial Instruments

White Mountains records its financial instruments at fair value with the exception of debt obligations which are recorded as debt at face value less unamortized original issue discount. See Note 7 — "Debt".

The following table presents the fair value and carrying value of these financial instruments as of December 31, 2022 and 2021:

Millions	December 31, 2022		December 31, 2021	
	Fair Value	Carrying Value	Fair Value	Carrying Value
HG Global Senior Notes	\$ 155.7	\$ 146.5	\$ —	\$ —
Ark 2007 Subordinated Notes	\$ 28.4	\$ 30.0	\$ 27.6	\$ 30.0
Ark 2021 Subordinated Notes	\$ 163.1	\$ 153.7	\$ 162.8	\$ 155.9
Kudu Credit Facility	\$ 223.9	\$ 208.3	\$ 246.8	\$ 218.2
Other Operations debt	\$ 38.2	\$ 36.7	\$ 17.7	\$ 16.8

The fair value estimates for the HG Global Senior Notes, Ark 2007 Subordinated Notes, Ark 2021 Subordinated Notes, Kudu Credit Facility and Other Operations debt have been determined based on a discounted cash flow approach and are considered to be Level 3 measurements.

For the fair value level measurements associated with White Mountains's investment securities. See Note 3 — "Investment Securities." For the fair value level measurements associated with White Mountains's derivative instruments. See Note 9 — "Derivatives."

Note 20. Commitments and Contingencies

Legal Contingencies

White Mountains, and the insurance industry in general, is routinely subject to claims related litigation and arbitration in the normal course of business, as well as litigation and arbitration that do not arise from, nor are directly related to, claims activity. White Mountains's estimates of the costs of settling matters routinely encountered in claims activity are reflected in the reserves for unpaid loss and LAE. See **Note 5 — “Losses and Loss Adjustment Expense Reserves.”**

White Mountains considers the requirements of ASC 450 when evaluating its exposure to non-claims related litigation and arbitration. ASC 450 requires that accruals be established for litigation and arbitration if it is probable that a loss has been incurred and it can be reasonably estimated. ASC 450 also requires that litigation and arbitration be disclosed if it is probable that a loss has been incurred or if there is a reasonable possibility that a loss may have been incurred. White Mountains does not have any current non-claims related litigation that may have a material adverse effect on White Mountains's financial condition, results of operations or cash flows.

Note 21. Held for Sale and Discontinued Operations

NSM

On August 1, 2022, White Mountains closed the NSM Transaction. See **Note 2 — “Significant Transactions.”** As a result of the NSM Transaction, the assets and liabilities of NSM Group have been presented in the balance sheet as held for sale for periods prior to the closing of the transaction, and the results of operations for NSM Group have been classified as discontinued operations in the statements of operations and comprehensive income through the closing of the transaction. Prior period amounts have been reclassified to conform to the current period's presentation.

Sirius Group

On April 18, 2016, White Mountains completed the sale of Sirius International Insurance Group, Ltd. (“Sirius Group”) to CM International Pte. Ltd. and CM Bermuda Limited (collectively “CMI”). In connection with the sale, White Mountains indemnified Sirius Group against the loss of certain interest deductions claimed by Sirius Group related to periods prior to the sale of Sirius Group to CMI that had been disputed by the Swedish Tax Agency (STA). In late October 2018, the Swedish Administrative Court ruled against Sirius Group on its appeal of the STA's denial of these interest deductions. As a result, in 2018 White Mountains recorded a loss of \$17.3 million within net (loss) gain on sale of discontinued operations reflecting the value of these interest deductions.

As of December 31, 2020, White Mountains's liability related to the tax indemnification provided in connection with the sale of Sirius Group in 2016 was \$18.7 million. In April 2021, the Swedish Tax Agency informed the Swedish Administrative Court of Appeal that Sirius Group should prevail in its appeal and that the interest deductions should not be disallowed. In June 2021, the Swedish Administrative Court of Appeal ruled in Sirius Group's favor. For the year ended December 31, 2021, White Mountains recorded a gain of \$17.6 million in discontinued operations to reverse the liability accrued as of December 31, 2020 and \$1.1 million gain related to foreign currency translation.

Other

As of December 31, 2021, White Mountains classified one of the Other Operating Businesses, which included \$16.1 million of insurance licenses, investments and cash, as assets held for sale. On May 12, 2022, the Other Operating Business was sold for \$19.5 million and White Mountains recorded a \$3.7 million realized gain in other revenues within Other Operations.

Summary of Reclassified Balances and Related Items

Net Assets Held for Sale

The following summarizes the assets and liabilities associated with NSM Group classified as held for sale. As of December 31, 2021, the amounts presented exclude \$16.1 million of insurance licenses, investments and cash classified as assets held for sale related to one of the Other Operating Businesses.

Millions	December 31, 2021
Assets held for sale	
Short-term investments, at fair value	\$ 7.8
Cash (restricted \$89.2)	111.6
Premiums and commissions receivable	85.0
Goodwill and other intangible assets	725.4
Other assets	59.2
Total assets held for sale	\$ 989.0
Liabilities held for sale	
Debt	\$ 272.1
Premiums payable	135.9
Contingent consideration	6.8
Other liabilities	80.5
Total liabilities held for sale	495.3
Net assets held for sale	\$ 493.7

Net Income (Loss) from Discontinued Operations

The following summarizes the results of operations, including related income taxes associated with the businesses classified as discontinued operations for the year ended December 31, 2022, 2021 and 2020:

Millions	December 31,		
	2022 ⁽¹⁾	2021	2020
Revenues			
Commission revenues	\$ 176.9	\$ 258.0	\$ 232.5
Other revenues	48.1	72.4	52.6
Total revenues - NSM Group	225.0	330.4	285.1
Expenses			
General and administrative expenses	126.8	190.4	179.5
Broker commission expenses	52.9	80.2	75.3
Change in fair value of contingent consideration	.1	1.0	(3.3)
Amortization of other intangible assets	9.1	35.2	26.7
Loss on assets held for sale	—	28.7	—
Interest expense	12.1	23.3	22.1
Total expenses - NSM Group	201.0	358.8	300.3
Pre-tax income (loss) from discontinued operations - NSM Group	24.0	(28.4)	(15.2)
Income tax (expense) benefit	(7.6)	5.8	5.7
Net income (loss) from discontinued operations, net tax - NSM Group	16.4	(22.6)	(9.5)
Net gain (loss) from sale of discontinued operations, net of tax - NSM Group	886.8	—	—
Net gain (loss) from sale of discontinued operations, net of tax - Sirius Group	—	18.7	(2.3)
Total income (loss) from discontinued operations, net of tax	903.2	(3.9)	(11.8)
Net (income) loss from discontinued operations attributable to non-controlling interests	(.7)	1.0	.2
Total income (loss) from discontinued operations attributable to White Mountains's common shareholders	902.5	(2.9)	(11.6)
Other comprehensive income (loss) from discontinued operations, net of tax - NSM Group	(5.2)	.2	5.9
Net gain (loss) from foreign currency translation from sale of discontinued operations, net of tax - NSM Group	2.9	—	—
Comprehensive income (loss) from discontinued operations	900.2	(2.7)	(5.7)
Other comprehensive (income) loss from discontinued operations attributable to non-controlling interests	.2	(.1)	(.3)
Comprehensive income (loss) from discontinued operations attributable to White Mountains's common shareholders	\$ 900.4	\$ (2.8)	\$ (6.0)

⁽¹⁾ As a result of the NSM Transaction, the results of operations for NSM Group are presented for the period from January 1, 2022 to August 1, 2022.

Net Change in Cash from Discontinued Operations

The following summarizes the net change in cash associated with the businesses classified as discontinued operations for the year ended December 31, 2022, 2021 and 2020:

Millions	Year Ended December 31,		
	2022	2021	2020
Net cash provided from (used for) operations	\$ 38.7	\$ 42.3	\$ 35.5
Net cash provided from (used for) investing activities	7.1	(56.5)	(124.9)
Net cash used from (used for) financing activities	(17.5)	(1.0)	128.8
Effect of exchange rate changes on cash	4.0	.2	(2.8)
Net change in cash during the period	32.3	(15.0)	36.6
Cash balances at beginning of period (includes restricted cash of \$89.2, \$78.4 and \$56.3)	111.6	126.6	90.0
Cash sold as part of the sale of NSM Group (includes restricted cash of \$105.1, \$0.0 and \$0.0)	(143.9)	—	—
Cash balances at end of period (includes restricted cash of \$0.0, \$89.2 and \$78.4)	—	111.6	126.6
Supplemental cash flows information:			
Interest paid	\$ (12.0)	\$ (16.6)	\$ (20.9)
Net income tax payments	\$ —	\$ —	\$ —

Earnings Per Share from Discontinued Operations

White Mountains calculates earnings per share using the two-class method, which allocates earnings between common and unvested restricted common shares. Both classes of shares participate equally in earnings on a per share basis. Basic earnings per share amounts are based on the weighted average number of common shares outstanding adjusted for unvested restricted common shares. Diluted earnings per share amounts are also impacted by the net effect of potentially dilutive common shares outstanding. The following table presents the Company's computation of earnings per share for discontinued operations for the years ended December 31, 2022, 2021 and 2020:

	Year Ended December 31,		
	2022	2021	2020
Basic and diluted earnings per share numerators (in millions):			
Net income (loss) attributable to White Mountains's common shareholders	\$ 792.8	\$ (275.4)	\$ 708.7
Less: net income (loss) from continuing operations	(190.8)	(318.0)	675.2
Less: net (income) loss from continuing operations attributable to non-controlling interest	81.1	45.5	45.1
Total income (loss) from discontinued operations attributable to White Mountains's common shareholders ⁽¹⁾	902.5	(2.9)	(11.6)
Allocation of (earnings) losses to participating restricted common shares ⁽²⁾	(11.4)	—	.2
Basic and diluted (loss) earnings per share numerators	\$ 891.1	\$ (2.9)	\$ (11.4)
Basic earnings per share denominators (in thousands):			
Total average common shares outstanding during the period	2,862.4	3,079.0	3,122.2
Average unvested restricted common shares ⁽³⁾	(36.2)	(36.5)	(40.8)
Basic earnings (loss) per share denominator	2,826.2	3,042.5	3,081.4
Diluted earnings per share denominator (in thousands):			
Total average common shares outstanding during the period	2,862.4	3,079.0	3,122.2
Average unvested restricted common shares ⁽³⁾	(36.2)	(36.5)	(40.8)
Diluted earnings (loss) per share denominator	2,826.2	3,042.5	3,081.4
Basic (loss) earnings per share (in dollars) - discontinued operations:	\$ 315.30	\$ (.94)	\$ (3.72)
Diluted (loss) earnings per share (in dollars) - discontinued operations:	\$ 315.30	\$ (.94)	\$ (3.72)

⁽¹⁾ Includes net income (loss) from discontinued operations, net of tax - NSM Group, net gain (loss) from sale of discontinued operations, net of tax - NSM Group, net gain (loss) from sale of discontinued operations, net of tax - Sirius Group and net (income) loss from discontinued operations attributable to non-controlling interests.

⁽²⁾ Restricted shares issued by White Mountains contain dividend participation features, and therefore, are considered participating securities.

⁽³⁾ Restricted shares outstanding vest upon a stated date. See Note 12 — "Employee Share-Based Incentive Compensation Plans."

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL STATEMENTS

Management is responsible for the preparation and fair presentation of the financial statements included in this report. The financial statements have been prepared in conformity with GAAP in the United States. The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities as of the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

The Audit Committee of the Board, which is comprised entirely of independent, qualified directors, is responsible for the oversight of our accounting policies, financial reporting and internal control including the appointment and compensation of our independent registered public accounting firm. The Audit Committee meets periodically with management, our independent registered public accounting firm and our internal auditors to ensure they are carrying out their responsibilities. The Audit Committee is also responsible for performing an oversight role by reviewing our financial reports. Our independent registered public accounting firm and internal auditors have full and unlimited access to the Audit Committee, with or without management present, to discuss the adequacy of internal control over financial reporting and any other matters which they believe should be brought to their attention.

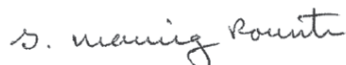
MANAGEMENT'S ANNUAL REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934. There are inherent limitations in the effectiveness of any internal control over financial reporting, including the possibility of human error and the circumvention or overriding of internal control. Accordingly, even effective internal control over financial reporting can provide only reasonable assurance with respect to financial statement preparation. Further, an effective internal control environment as of a point in time may become inadequate in the future because of changes in conditions, or deterioration in the degree of compliance with the policies and procedures.

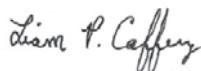
We assessed the effectiveness of White Mountains's internal control over financial reporting as of December 31, 2022. In making our assessment, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework (2013). Based on this assessment, we have concluded that White Mountains maintained effective internal control over financial reporting as of December 31, 2022.

PricewaterhouseCoopers LLP, the Company's independent registered public accounting firm, has audited the effectiveness of White Mountains's internal control over financial reporting as of December 31, 2022 as stated in their report which appears on page F - 73.

February 27, 2023



*Chief Executive Officer
(Principal Executive Officer)*



*Executive Vice President and Chief Financial Officer
(Principal Financial Officer)*

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of White Mountains Insurance Group, Ltd.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of White Mountains Insurance Group, Ltd. and its subsidiaries (the “Company”) as of December 31, 2022 and 2021, and the related consolidated statements of operations, of comprehensive income, of shareholders' equity and of cash flows for each of the three years in the period ended December 31, 2022, including the related notes and financial statement schedules listed in the index appearing after the signature page (collectively referred to as the “consolidated financial statements”). We also have audited the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, 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 Annual Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements 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. 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 audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters 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 matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Valuation of Certain Other Long-Term Investments

As described in Notes 1 and 3 to the consolidated financial statements, the Company maintains various other non-controlling equity interests in operating businesses accounted for at fair value within other long-term investments. The fair values of the most significant of these investments, classified within other long-term investments as of December 31, 2022, consist of PassportCard Limited and DavidShield Life Insurance Agency (2000) Ltd. (collectively, PassportCard/DavidShield") for \$135.0 million; Elementum Holdings L.P. ("Elementum") for \$30.0 million; and certain participation contracts of Kudu Investment Management, LLC and its subsidiaries (collectively, "Kudu") representing a portion of the total of Kudu's Participation Contracts of \$695.9 million. As disclosed by management, they applied significant judgment in determining the fair value of these other long-term investments using discounted cash flow models. These valuations involved the use of key inputs with respect to (i) projections of future revenues and earnings, discount rates, and terminal revenue growth rates for PassportCard/DavidShield and Elementum and (ii) projections of future revenues and earnings of Kudu's clients, discount rates and terminal cash flow exit multiples for certain of Kudu's Participation Contracts.

The principal considerations for our determination that performing procedures relating to the valuation of certain other long-term investments is a critical audit matter are (i) the significant judgment by management to determine the fair value of these other long-term investments, which in turn led to a high degree of auditor judgment and subjectivity in performing procedures relating to the fair value measurement; (ii) the significant audit effort in evaluating the audit evidence relating to the discounted cash flow models and the key inputs related to (a) projections of future revenues and earnings for PassportCard/DavidShield and Elementum, and (b) projections of future revenues and earnings of Kudu's clients for certain of Kudu's Participation Contracts; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the valuation of certain other long-term investments, including controls over the Company's discounted cash flow models and determination of key inputs. These procedures also included, among others, the involvement of professionals with specialized skill and knowledge to assist in developing an independent fair value range of each of the aforementioned investments and comparing management's estimate to the independently developed range. Developing the independent estimate involved (i) testing the completeness and accuracy of data provided by management and (ii) evaluating management's key inputs related to (a) projections of future revenues and earnings for PassportCard/DavidShield and Elementum, and (b) projections of future revenues and earnings of Kudu's clients for certain of Kudu's Participation Contracts.

Valuation of Loss and Loss Adjustment Expense Reserves - Ark Operating Segment

As described in Notes 1 and 5 to the consolidated financial statements, unpaid losses and loss adjustment expenses, including estimates for amounts incurred but not reported, are based on estimates of the ultimate costs of settling claims, including the effects of inflation and other societal and economic factors. Unpaid loss and loss adjustment expense reserves represent management's best estimate of ultimate losses and loss adjustment expenses, net of estimated salvage and subrogation recoveries, if applicable. The Company's loss and loss adjustment expense reserves as of December 31, 2022 for the Ark operating segment were \$1,296.5 million. Management estimates ultimate loss and loss adjustment expenses using various generally accepted actuarial methods applied to known losses and other relevant information. Ultimate loss and loss adjustment expenses are generally determined by extrapolation of claim emergence and settlement patterns observed in the past that can reasonably be expected to persist in the future. Management considers the Company's own experience, particularly claims development experience, such as trends in case reserves, payments on and closing of claims, as well as changes in business mix and coverage limits, and external market data, available from organizations such as the Lloyd's Market Association, consulting firms and other insurance and reinsurance companies, as the most important information for estimating its reserves. Ultimate loss and loss adjustment expenses for major losses and catastrophes are estimated based on the known and expected exposures to the loss event. Incurred but not reported reserves are adjusted as additional information becomes known or payments are made.

The principal considerations for our determination that performing procedures relating to the valuation of the loss and loss adjustment expense reserves for the Ark operating segment is a critical audit matter are (i) the significant judgment by management when developing their estimate, (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating audit evidence related to the actuarial methods and inputs related to trends in case reserves, payments on and closing of claims, and changes in business mix and coverage limits, and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included, among others, testing the completeness and accuracy of data provided by management and the relevance and reliability of the industry data, and the involvement of professionals with specialized skill and knowledge to assist in (i) evaluating the appropriateness of the actuarial methods used by management, (ii) evaluating the reasonableness of assumptions used by management to determine the Company's reserves for loss and loss adjustment expenses, and (iii) developing an independent estimate of the reserves on a sample basis using historical data and loss development patterns, as well as industry data and other benchmarks, to develop an independent estimate and comparing the independent estimate to management's actuarially determined reserves to evaluate the reasonableness of the reserves for loss and loss adjustment expenses.

PricewaterhouseCoopers LLP

Atlanta, Georgia

February 27, 2023

We have served as the Company's auditor since 1999.

SCHEDULE I

WHITE MOUNTAINS INSURANCE GROUP, LTD.
SUMMARY OF INVESTMENTS—OTHER THAN
INVESTMENTS IN RELATED PARTIES
At December 31, 2022

Millions	Cost	Carrying Value	Fair Value
Fixed maturity investments:			
U.S. Government and agency obligations	\$ 216.6	\$ 206.4	\$ 206.4
Debt securities issued by corporations	1,098.3	1,018.8	1,018.8
Municipal obligations	281.6	258.6	258.6
Mortgage and asset-backed securities	288.7	254.2	254.2
Collateralized loan obligations	190.8	182.9	182.9
Total fixed maturity investments	2,076.0	1,920.9	1,920.9
Short-term investments	925.2	924.1	924.1
Investment in MediaAlpha	—	168.6	168.6
Common equity securities:			
Common equity securities - Industrial, Miscellaneous, and Other	324.3	334.6	334.6
Common equity securities - Exchange traded funds	336.3	333.8	333.8
Total common equity securities	660.6	668.4	668.4
Other long-term investments	1,340.8	1,488.0	1,488.0
Total investments	\$ 5,002.6	\$ 5,170.0	\$ 5,170.0

Schedules of the Registrant should be read in conjunction with the Consolidated Financial Statements and Notes.

SCHEDULE II

CONDENSED FINANCIAL INFORMATION OF THE REGISTRANT

CONDENSED BALANCE SHEETS ⁽¹⁾

Millions	December 31,	
	2022	2021
Assets:		
Cash	\$.1	\$.6
Fixed maturity investments, at fair value	49.2	—
Common equity securities, at fair value	342.8	—
Other long-term investments	49.3	—
Short-term investments, at fair value	105.2	6.7
Other assets	75.3	3.0
Investments in consolidated subsidiaries	3,026.6	3,661.3
Total assets	\$ 3,648.5	\$ 3,671.6
Liabilities:		
Net Payable to subsidiary	\$ (125.2)	\$ 104.9
Other liabilities	27.4	9.6
Total liabilities	(97.8)	114.5
White Mountains's common shareholders' equity	3,746.9	3,548.1
Non-controlling interests	(.6)	9.0
Total liabilities and equity	\$ 3,648.5	\$ 3,671.6

⁽¹⁾ These condensed unconsolidated financial statements reflect the results of operations, financial condition and cash flows for the Company. Investments in which White Mountains holds a controlling financial interest are accounted for using the equity method. Under the equity method, investments in subsidiaries are recorded on the condensed balance sheets at the amount of the Company's ownership percentage of the subsidiary's GAAP book value. The income from subsidiaries is reported on a net of tax basis as equity in earnings from consolidated and unconsolidated subsidiaries on the condensed statements of operations and comprehensive income (loss). Capital contributions to and distributions from consolidated subsidiaries are presented within investing activities on the condensed statements of cash flows.

SCHEDULE II (continued)

CONDENSED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS) ⁽¹⁾

Millions	Year Ended December 31,		
	2022	2021	2020
Revenues (loss) (including realized and unrealized gains and losses)	\$ (.4)	\$ (.2)	\$ (8.7)
Expenses	67.1	39.0	61.0
Pre-tax income (loss) from continuing operations	(67.5)	(39.2)	(69.7)
Income tax (expense) benefit	(.9)	—	(.3)
Net income (loss) from continuing operations	(68.4)	(39.2)	(70.0)
Equity in earnings from consolidated subsidiaries, net of tax	853.8	(257.4)	782.0
Net gain (loss) from sale of discontinued operations, net of tax - Sirius Group ⁽²⁾	—	18.7	(2.3)
Net (income) loss attributable to non-controlling interests	7.4	2.5	(1.0)
Net income (loss) attributable to White Mountains's common shareholders	792.8	(275.4)	708.7
Other comprehensive income (loss), net of tax	(3.8)	1.7	1.4
Other comprehensive income (loss) from discontinued operations, net of tax - NSM Group	(5.2)	.2	5.9
Net gain (loss) from foreign currency translation from sale of discontinued operations, net of tax - NSM Group	2.9	—	—
Comprehensive income (loss)	786.7	\$ (273.5)	\$ 716.0
Comprehensive (income) loss attributable to non-controlling interests	.9	\$.2	\$.5)
Comprehensive income (loss) attributable to White Mountains's common shareholders	787.6	\$ (273.3)	\$ 715.5

⁽¹⁾ These condensed unconsolidated financial statements reflect the results of operations, financial condition and cash flows for the Company. Investments in which White Mountains holds a controlling financial interest are accounted for using the equity method. Under the equity method, investments in subsidiaries are recorded on the condensed balance sheets at the amount of the Company's ownership percentage of the subsidiary's GAAP book value. The income from subsidiaries is reported on a net of tax basis as equity in earnings of subsidiaries on the condensed statements of operations and comprehensive income (loss). Capital contributions to and distributions from subsidiaries are presented within investing activities on the condensed statements of cash flows.

⁽²⁾ During 2021 and 2020, net gain (loss) from sale of discontinued operations, net of tax includes \$18.7 and \$(2.3) arising from the tax contingency on the sale of Sirius Group. See Note 21 — "Held for Sale and Discontinued Operations".

SCHEDULE II (continued)

CONDENSED STATEMENTS OF CASH FLOWS ⁽¹⁾⁽²⁾

Millions	Year Ended December 31,		
	2022	2021	2020
Net income (loss) attributable to White Mountains's common shareholders	\$ 792.8	\$ (275.4)	\$ 708.7
Charges (credits) to reconcile net income to net cash from operations:			
Net realized and unrealized investment (gains) losses	5.6	.1	10.1
Undistributed earnings from consolidated subsidiaries	(853.8)	257.4	(782.0)
Net (gain) loss from sale of discontinued operations, net of tax - Sirius Group ⁽³⁾	—	(18.7)	2.3
Other non-cash reconciling items ⁽⁴⁾	(.4)	14.1	19.0
Accumulated earnings distributed from subsidiary in cash ⁽⁵⁾	7.0	—	—
Net change in other assets and liabilities ⁽²⁾⁽⁶⁾	17.2	(5.7)	(2.5)
Net cash (used for) provided from operations	(31.6)	(28.2)	(44.4)
Cash flows from investing activities:			
Net change in short-term investments ⁽²⁾⁽⁷⁾⁽⁸⁾⁽⁹⁾	1,165.6	17.7	(127.4)
Purchases of investment securities	(359.2)	—	(6.7)
Sales and maturities of investment securities	15.7	—	189.7
Purchases of investment securities from subsidiaries	(14.0)	(26.4)	—
Sales of investment securities to subsidiaries	—	36.4	—
Cash pre-funded for ILS funds managed by Elementum	(70.0)	—	—
Net issuance of debt (to) from subsidiaries ⁽¹⁰⁾	(142.0)	94.0	(44.5)
Net repayment of debt (to) from subsidiaries ⁽⁷⁾⁽¹¹⁾	(15.0)	—	92.6
Net distributions from (contributions to) subsidiaries ⁽⁷⁾⁽⁹⁾	49.3	17.0	29.1
Proceeds from the sale of Other Operating Businesses, net of cash sold of \$0.5 \$0.0 and \$0.0	19.5	—	—
Net cash provided from (used for) investing activities	649.9	138.7	132.8
Cash flows from financing activities:			
Repurchases and retirement of common shares	(615.8)	(107.5)	(85.2)
Dividends paid on common shares	(3.0)	(3.1)	(3.2)
Net cash used for financing activities	(618.8)	(110.6)	(88.4)
Net decrease in cash during the year	(.5)	(.1)	—
Cash balance at beginning of year	.6	.7	.7
Cash balance at end of year	\$.1	\$.6	\$.7

⁽¹⁾ These condensed unconsolidated financial statements reflect the results of operations, financial condition and cash flows for the Company. Investments in which White Mountains holds a controlling financial interest are accounted for using the equity method. Under the equity method, investments in consolidated subsidiaries are recorded on the condensed balance sheets at the amount of the Company's ownership percentage of the subsidiary's GAAP book value. The income from consolidated subsidiaries is reported on a net of tax basis as equity in earnings of subsidiaries on the condensed statements of operations and comprehensive income (loss). Capital contributions to and distributions from consolidated subsidiaries are presented within investing activities on the condensed statements of cash flows.

⁽²⁾ During 2022, Bridge Holdings, Ltd. ("Bridge"), a wholly-owned subsidiary of the Company, merged into the Company. The merger was treated as a liquidation for financial statement purposes. As part of the liquidation, significant non-cash balances were transferred from Bridge to the Company including ending net equity of \$3,540.6, intercompany note receivable of \$76.4, investments in its subsidiaries of \$2,003.6, fixed maturity investments of \$28.6, common equity securities of \$8.1, other long-term investments of \$52.2, short-term investments of \$1,358.7 and other assets of \$6.0.

⁽³⁾ During 2021 and 2020, amounts represent \$18.7 and \$(2.3) arising from the tax contingency on the sale of Sirius Group. See Note 21 — "Held for Sale and Discontinued Operations".

⁽⁴⁾ For the years ended December 31, 2022, 2021 and 2020, amortization of restricted share awards was \$14.0, \$14.7 and \$16.6 and net income (loss) attributable to non-controlling interests was \$(7.4), \$(2.5) and \$1.0.

⁽⁵⁾ During 2022, as part of the merger of Bridge into the Company, Bridge transferred \$7.0 of cash.

⁽⁶⁾ For 2022, 2021 and 2020, net change in other assets and liabilities also included \$3.3, \$6.5, and \$(4.8) of net changes in (receivables) payables to the Company's subsidiaries.

⁽⁷⁾ During 2021, Bridge repaid \$200.0 of outstanding intercompany debt to the Company by transferring shares of its wholly-owned subsidiary, White Mountains Lincoln Holdings, Inc., ("WM Lincoln"), which had carrying value of \$212.6. The \$12.6 in excess of the intercompany debt was a non-cash distribution to the Company. Also, as part of the transaction, the Company received a distribution of \$18.0 from Bridge, including \$17.9 of short-term investments and \$0.1 of cash. Subsequent to that transaction, the Company contributed the shares of WM Lincoln, which had a carrying value of \$212.6, to its wholly-owned subsidiary White Mountains Adams, Inc. ("WM Adams"). The Company also contributed an additional \$42.7 to WM Adams, including \$37.1 of short-term investments and \$5.6 of cash.

⁽⁸⁾ During 2020, the Company had non-cash purchases of short-term investments of \$169.6.

⁽⁹⁾ During 2022, the Company made cash contributions to its wholly-owned subsidiaries White Mountains Investments (Bermuda), Ltd. ("WMIB") of \$51.0 and WM Adams of \$25.0. Also, during 2022, the Company made non-cash contributions of \$100.0 in short term investments to WM Adams. During 2022, the Company received cash distributions of \$116.3 from HG Global, \$7.7 from Ark and \$1.3 from its wholly-owned subsidiary, PSC Holdings, Ltd ("PSC Holdings"). During 2021, the Company received a distribution of \$19.7, including \$19.1 of short-term investments and \$0.6 of cash, from WMIB. During 2020, the Company received distributions of \$6.8 and \$22.3 from PSC Holdings, Ltd. and HG Global.

⁽¹⁰⁾ During 2022, prior to the merger of Bridge into the Company, Bridge had an issuance of debt of \$69.0 to the Company. Also, during 2022, the Company had issuances of debt of \$205.0 to WM Hinson (Bermuda) Ltd, a wholly-owned subsidiaries of the Company, and \$6.0 to HG Global. During 2020, the Company had a non-cash issuance of debt of \$169.6 to Bridge. Proceeds of the debt, which were short-term investments, were transferred to Bridge.

⁽¹¹⁾ During 2022, prior to the merger of Bridge into the Company, the Company had a repayment of debt to Bridge of \$15.0.

Schedules of the Registrant should be read in conjunction with the Consolidated Financial Statements and Notes.

SCHEDULE III

**WHITE MOUNTAINS INSURANCE GROUP, LTD.
SUPPLEMENTARY INSURANCE INFORMATION**

Column A	Column B	Column C	Column D	Column E	Column F	Column G	Column H	Column I	Column J	Column K
Millions	Deferred Acquisition Costs	Future Policy Benefits, Losses, Claims and Loss Expenses	Unearned Premiums	Other Policy Claims and Benefits Payable	Premiums Earned	Net Investment Income	Benefits, Claims, Losses and Settlement Expenses	Amortization of Deferred Acquisition Costs	Other Operating Expenses	Premiums Written
Years ended:										
December 31, 2022										
HG Global/BAM	\$ 36.0	\$ —	\$ 298.3	\$ —	\$ 33.3	\$ 21.5	\$ —	\$ 11.2	\$.4	\$ 65.1
Ark	127.2	1,296.5	623.2	—	1,043.4	16.3	536.4	238.3	78.7	1,195.2
December 31, 2021										
HG Global/BAM	33.1	—	266.3	—	26.9	17.5	—	8.3	.4	55.8
Ark	100.8	894.7	495.9	—	637.3	2.9	314.8	111.3	64.6	859.1
December 31, 2020										
HG Global/BAM	27.8	—	237.5	—	22.8	19.5	—	7.0	.4	61.7

Schedules of the Registrant should be read in conjunction with the Consolidated Financial Statements and Notes.

SCHEDULE IV

WHITE MOUNTAINS INSURANCE GROUP, LTD.
REINSURANCE

Column A	Column B	Column C	Column D	Column E	Column F
\$ in Millions					
Premiums Earned	Gross Amount	Ceded to Other Companies	Assumed from Other Companies	Net Amount	Percentage of Amount Assumed to Net
Year ended:					
December 31, 2022					
HG Global/BAM	\$ 28.6	\$ —	\$ 4.7	\$ 33.3	14.1 %
Ark	655.5	(280.8)	668.7	1,043.4	64.1
December 31, 2021					
HG Global/BAM	23.2	—	3.7	26.9	13.8
Ark	556.0	(249.1)	330.4	637.3	51.8
December 31, 2020					
HG Global/BAM	19.4	—	3.4	22.8	14.9

Schedules of the Registrant should be read in conjunction with the Consolidated Financial Statements and Notes.

SCHEDULE V

WHITE MOUNTAINS INSURANCE GROUP, LTD.
VALUATION AND QUALIFYING ACCOUNTS

Column A	Column B	Column C		Column D	Column E
		Additions (subtractions)			
Millions	Balance at beginning of period	Charged to costs and expenses	Charged to other accounts	Deductions described ⁽¹⁾	Balance at end of period
Years ended:					
December 31, 2022					
Reinsurance recoverables:					
Allowance for uncollectible balances	\$ 3.6	\$ 4.6	\$ —	\$ (.4)	\$ 7.8
December 31, 2021					
Reinsurance recoverables:					
Allowance for uncollectible balances	2.3	1.3	—	—	3.6

⁽¹⁾ Represents net collections (charge-offs) of balances receivable and foreign currency translation.

SCHEDULE VI

WHITE MOUNTAINS INSURANCE GROUP, LTD.
SUPPLEMENTAL INFORMATION FOR PROPERTY AND CASUALTY INSURANCE UNDERWRITERS
(Millions)

Column A	Column B	Column C	Column D	Column E	Column F	Column G	Column H		Column I	Column J	Column K
Affiliation with registrant	Deferred acquisition costs	Reserves for Unpaid Claims and Claims Adjustment Expenses	Discount, if any, deducted in Column C	Unearned Premiums	Earned Premiums	Net investment income	Claims and Claims Adjustment Expenses Incurred Related to		Amortization of deferred policy acquisition costs	Paid Claims and Claims Adjustment Expenses	Premiums written
							Current Year	Prior Year			
Ark:											
2022	\$ 127.2	\$ 1,296.5	—	\$ 623.2	\$ 1,043.4	\$ 16.3	\$ 588.1	\$ (51.7)	\$ 238.3	\$ 257.5	\$ 1,195.2
2021	100.8	894.7	—	495.9	637.3	2.9	336.3	(21.5)	111.3	—	859.1

Schedules of the Registrant should be read in conjunction with the Consolidated Financial Statements and Notes.



**PRINCIPAL EXECUTIVE OFFICER CERTIFICATION PURSUANT TO RULE 13a-14(a)
OF THE SECURITIES EXCHANGE ACT OF 1934**

I, G. Manning Rountree, Chief Executive Officer of White Mountains Insurance Group, Ltd., certify that:

I have reviewed this Annual Report on Form 10-K for the fiscal year ended December 31, 2022 of White Mountains Insurance Group, Ltd.;

Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

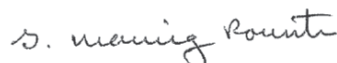
- (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
- (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
- (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
- (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors:

- (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
- (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

February 27, 2023

By:



Chief Executive Officer
(Principal Executive Officer)

**PRINCIPAL FINANCIAL OFFICER CERTIFICATION PURSUANT TO RULE 13a-14(a)
OF THE SECURITIES EXCHANGE ACT OF 1934**

I, Liam P. Caffrey, Executive Vice President & Chief Financial Officer of White Mountains Insurance Group, Ltd. certify that:

I have reviewed this Annual Report on Form 10-K for the fiscal year ended December 31, 2022 of White Mountains Insurance Group, Ltd.;

Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

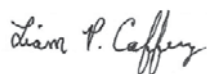
- (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
- (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
- (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
- (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors:

- (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
- (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

February 27, 2023

By:



Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

**PRINCIPAL EXECUTIVE OFFICER
CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of White Mountains Insurance Group, Ltd. (the “Company”), for the period ending December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, G. Manning Rountree, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (a) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and,
- (b) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of and for the periods presented in the Report.

G. Manning Rountree

Chief Executive Officer
(Principal Executive Officer)

February 27, 2023

**PRINCIPAL FINANCIAL OFFICER
CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of White Mountains Insurance Group, Ltd. (the “Company”), for the period ending December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Liam P. Caffrey, Executive Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (a) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and,
- (b) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of and for the periods presented in the Report.



Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

February 27, 2023





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