Principal®

Annual Report

2022

From our CEO

DAN HOUSTON

Chairman, President, and Chief Executive Officer
Principal Financial Group

Your decision to invest in Principal® is something I think about every day. It enables us to provide access to financial security for nearly 62 million customers.[1] We're helping them build a strong financial future while advancing the financial inclusion conversation around the globe. This is important work we are deeply passionate about.

In 2021, we outlined our strategic path forward—with a focus on higher growth businesses, a more capital efficient portfolio, and a commitment to return more capital to shareholders. This guided our successful execution in 2022. Amid a challenging macroeconomic environment, with rising inflation, foreign exchange headwinds, and market volatility, we made meaningful progress toward our goals. We continued to grow our market leadership in attractive segments, particularly small and midsize businesses (SMBs), delivering differentiated and often integrated solutions to meet their needs.

[1] As of Dec. 31, 2022

Relentless focus on our growth drivers

Our strategic review sharpened our focus on higher growth businesses where we have a competitive advantage and identified areas that were becoming commoditized and no longer meeting our financial targets. In May 2022, we closed on transactions to reinsure two blocks of business: U.S. retail fixed annuity and universal life insurance with secondary guarantees. With that important step completed, we were able to go all in on our growth drivers: global asset management, retirement, and benefits and protection.

Expanded asset management capabilities

In October, we launched Principal Asset Management℠. Leveraging the strong brand equity of Principal, we're highlighting our deep local knowledge and global investment capabilities in more than 80 markets serving institutional, retirement, retail, and wealth clients. The launch aligns with investments in our digital client experience and insights program as well as the development of new products and alternative investment capabilities, including model portfolios and direct lending.

In 2022, we continued to develop a broad array of products and solutions, including:

- **Strengthening our specialized investment capabilities.** The Principal Alternative Credit team doubled its direct lending committed capital in 2022, increasing its foothold in the middle market. Now in its third year of business, the direct lending team has closed transactions representing $1.6 billion of committed capital.
- **Adding innovative offerings in global markets.** In 2022, we debuted a new Real Estate Investment Trust fund in Mexico. In Malaysia, a multi-year effort led to the launch of Principal RetireEasy funds, a target date fund to aid investors in long-term savings. Both were first of their kind offerings in their respective markets.
- **Broadening our capabilities across U.S. product platforms.** We continue to expand our offerings across multiple product vehicles that appeal to investors' desire for more tax efficient and customizable solutions like exchange traded funds (ETFs), separately managed accounts (SMAs), model portfolios, and collective investment trusts (CITs).

This work helped Principal Asset Management deliver client growth and positive net cash flow in 2022. I'm excited about the formal integration of our asset management and Principal International businesses in 2023 as we expand the reach of our global and local investment capabilities and move closer to our clients.

Holistic retirement solutions

We continue as a top three retirement provider[2] in the U.S. and one of only a few to offer a comprehensive set of retirement solutions—from defined contribution to defined benefit, non-qualified deferred compensation, pension risk transfer, stock plans and equity compensation, trust and custody solutions, and investment management.

Looking ahead, market expansion will help drive growth:

- 401(k)s are incredibly effective at bringing more people into the retirement system. By automating key features like enrollment and deferral increases, we make it easier for people to save for retirement. Over the last year, employment growth and wage inflation—as well as increases in the number of participants deferring, their deferral rates, and company matches—drove a **26% increase in recurring deposits**. This increase was further supported by the completion of the Institutional Retirement and Trust acquisition.
- We ended the year with **positive net cash flow of $2.2 billion for SMBs in retirement** and participant growth of 4%.
- The passing of SECURE 2.0 helps to improve long-term savings and financial security for more Americans. As the legislation takes effect over the next few years, we're **well positioned to act on new opportunities,** particularly those with SMBs and startup plans.
- The current macro environment, with rising rates, has increased interest in bank and fixed income solutions. With improved funding levels in pension plans, we see robust opportunity in the pension risk transfer market.

[2] 2022 PLANSPONSOR Recordkeeping Survey, July 2022 – measured by DC participants

- In 2022, we helped 68 plan sponsors and nearly 31,000 participants through the **risk transfer of $1.9 billion in pension obligations.**

Targeted U.S. benefits and protection solutions

SMBs employ more than 46% of American workers,[3] yet they've historically been underserved by the industry. Our longstanding commitment to SMBs, expertise within the segment, and market leadership in workplace benefits are largely unmatched.

To weather the tight labor market throughout 2022, SMBs prioritized wages and maintained or expanded benefits to attract and retain employees—and it's shown in our results.

- **Over half of our 11% year-over-year growth in Specialty Benefits premium and fees was driven by net new business,** as we balanced winning market share from our competitors with deepening our existing customer relationships.
- After pivoting to focus on the business market with life insurance, **business market sales hit a record level, up 73% year over year.**
- Customer centricity remains a key focus. Educating and equipping employers with actionable resources helps them drive retention. We're headed in the right direction, as evidenced by our customer feedback and earning the 2022 DALBAR Communications Seal of Excellence, **ranking No. 1 for our employer web capabilities and experience**.

Mining additional value where our businesses intersect

One of the differentiators that drives our success is the synergistic value of our integrated business portfolio. We're capitalizing on the intersections of our businesses to drive additional growth and value.

- **New capabilities.** In 2022, our asset management and retirement businesses worked together to bring new and timely solutions to customers. For instance:
  - Pension management and de-risking is a pressing need for employers of all sizes. In 2022, we hired a head of liability-driven investing solutions to further build out our capabilities, driven by our industry-leading pension servicing abilities and deep investment and risk management expertise with pension clients.
  - Within variable annuities, we launched new buffer fund investment options to help investors accumulate retirement savings on the upside while buffering against market downturns.
- **Better experience.** For our SMB customers, we're in the middle of a multi-year digital transformation to create a combined, seamless digital account experience that reflects their full range of products with Principal. We'll continue adding new features, enabling customers with a constantly improving set of educational, budgeting, and planning resources.
- **Deepening relationships.** Competitive offerings are driving customers to place more business with Principal. For example, we saw an increase in the percentage of Principal managed assets within new retirement sales in 2022—with growth across all market segments. And business owners continue to tap into both our retirement and insurance expertise. We saw record non-qualified Company Owned Life Insurance sales in 2022 with approximately half from customers who also have a Principal retirement plan.

Successes like these strengthen and deepen our relationship with customers. Our investment in technology and data integration will further enhance the efficiency and relevance of our customer interactions.

> *"We're capitalizing on the intersections of our businesses to drive additional growth and value."*

[3] U.S. Small Business Administration, Office of Advocacy, 2022 Small Business Profile

Infusing sustainability throughout our business

Our strategy is grounded in our purpose. We are united and inspired by our belief that everyone deserves access to financial security.

- **We launched the Global Financial Inclusion Index** in 2022 to help us advance the conversation about barriers to greater financial inclusion and bring forward more solutions in the markets we serve.
- **We expanded our commitment to sustainable investing** through thematic offerings like our Global Sustainable Listed Infrastructure Fund and Global Sustainable Food Strategy.
- **We grew our support for SMBs owned by women and people of color.** By the end of 2025, we're working to double the number of diverse SMBs we support through product access, capital access programs, community development, and financial education.

Purpose-led actions helped Principal rise to No. 7 on *Barron's* 2022 list of Most Sustainable Companies. For a detailed look at how we weave sustainability throughout our organization to deliver on our public commitments, please see our sustainability report, updated annually at principal.com/sustainability.

A culture of growth

Our employees are key to executing our strategy. In 2022, we launched automation citizen developer programs to help employees across the organization improve customer experience and transform our business for the future. In a July 2022 employee survey, 86% of respondents said they continuously learn and try new things—a testament to our focus on learning and experimentation.

86% of respondents said they *continuously learn and try new things—* a testament to our focus on innovation and experimentation.

—July 2022 employee survey

In that same survey, employees gave consistently strong scores for inclusion, pride in Principal, and their belief that we do the right thing—all coming in at 82%. While employee satisfaction is the best measure of a healthy workplace, we're proud that our commitment to employees is continually recognized by third parties. See notable 2022 workplace recognitions on page 7 of this report.

Delivering results for you

Despite volatile markets and uncertain macro conditions, Principal continued to deliver consistently strong results, including:

- **Non-GAAP operating earnings for the year totaled $1.7 billion,** or $6.66 per diluted share.[4]
- **Total company net cash flow for the year was $3.9 billion,** including $4.4 billion of Principal Global Investors managed net cash flow. This was a very strong result during a period of outflows across the industry.
- We ended 2022 with **$635 billion of total company assets under management** (AUM). Our assets under administration (AUA) totaled $1.5 trillion at year-end.

Importantly, our three-year total shareholder return is 73%, higher than our peers in both insurance (33%) and asset management (21%).[5] And we returned $2.3 billion to shareholders during the year, delivering on our commitment to right-size and return excess capital.

[4] This is a non-GAAP financial measure; see reconciliation on pages 14-15.

[5] 3-year TSR for PFG stock as of 12/31/2022. Insurance peers include AMP, EQH, LNC, MET, PRU, UNM, VOYA. Asset Management peers include AMG, BK, BEN, IVZ, STT, TROW.

Maximizing your investment

I'm proud of the ways we've maximized your investment in Principal throughout 2022. We have demonstrated strong momentum in a challenging period, a direct result of aligning our core strengths with customer and market needs.

For 143 years, we've proven our resilience—meeting customers' needs and delivering long-term growth in all types of environments. Principal has a proven track record of powering through difficult times and seizing opportunities where we're uniquely positioned to win. We look forward to what's ahead.

I greatly value your confidence in Principal and your belief in our ability to deliver on our promises.

Dan Houston
Chairman, President, and CEO
Principal Financial Group

Notable recognition of our workplace in 2022

Our 11th consecutive year as one of Pensions & Investments'
Best Places to Work in Money Management,
one of only five firms to appear on the list each year since it began.

Our 21st year as one of the
Best Places to Work in IT,
according to Foundry's Computerworld, ranking an impressive **No. 18.**

Our 22nd year as one of Seramount's
Top Companies for Executive Women,
earning us a Seramount Hall of Fame designation.

Our highest ranking yet on Forbes' list of
America's Best Employers for Diversity,
appearing at **No. 56 of 500** companies.

From the Board of Directors

SCOTT MILLS
Lead Director
Principal Financial Group

Last year I shared details of the strategic review that charted a clear path forward for Principal. You'll recall that one of our key objectives was to drive even greater shareholder value. As you'll see in this report, 2022 was a year of heads down execution—delivering on the promises we made. The company and its executive team operated with focus and discipline. And I'm grateful to our directors for their leadership and oversight.

Coming out of the strategic review, Principal exited two lines of business that no longer met our financial targets and completed reinsurance transactions in May. Moving ahead, the focus is on the company's higher growth, more capital efficient lines of business: global asset management, retirement, and benefits and protection.

That work is paying off, as evidenced by our 2022 results, delivered in a challenging environment. It's paying off for our shareholders, too—increasing total shareholder return and excess capital returned via common stock dividends and share repurchases.

Board focus and strength

The Board provides strategic oversight for Principal, ensuring the company is delivering against its commitments and targets. The extensive time we spent together during the 2021 strategic review has served our Board well. The rapport we built and the rigor we employed continued to strengthen this past year. I appreciate the camaraderie, candor, and engagement within the Board. This is a team deeply committed to their work and to each of you.

One of my key responsibilities as lead director is to build and maintain a strong bench of talent for Board refreshment. Our Nominating and Governance Committee actively seeks complementary skills and perspectives, representing different backgrounds, industries, and expertise.

As of Dec. 31, 2022, 62% of the members on our board of directors are diverse in gender, race, or national origin. Three of our four committees are chaired by women, one of whom is a person of color. Additionally, 54% of our directors have joined the Board within the past five years. Our average tenure is 6.5 years.

In 2022, we added one new director—H. Elizabeth (Liz) Mitchell. Liz is the former president and chief executive officer of Renaissance Reinsurance U.S. Her background in managing diversified operations and driving excellence across a portfolio is a value-add to the Board and the executive team.

“2022 was a year of heads down execution—delivering on the promises we made.”

Good business done the right way

Sustainability continues to be a key area of focus for the company in serving its customers and investors. Through proprietary research, such as the Principal Global Financial Inclusion Index, Principal Financial Well-Being Index, and Principal Super Savers Survey, we are helping identify factors and behaviors that support or derail financial security and financial inclusion. The ensuing conversations can help those in positions of authority collaborate on solutions intended to provide more people with economic stability today and long into the future.

The company's continued commitment to sustainable investing includes releasing its first Sustainable Financing Report and adding sustainable investment options in markets around the world. These are great next steps in what is becoming an area of measured expertise for Principal.

Aligned to the company's purpose, Principal® Foundation continued to focus its philanthropic investments on removing barriers to and creating opportunities for people working toward financial security. Principal Foundation contributed more than $17 million this year to help meet basic needs, expand access to arts and culture, and support financial empowerment and development of entrepreneurs and small businesses.

Delivering for you

In looking at the 2022 year-end results, I want to compliment the Principal management team and employees across the organization. The results are indicative of what I've come to appreciate about the company—their unwavering pledge to deliver on commitments.

This includes creating long-term shareholder value, which was evident in 2022 through strong total shareholder return and returning $2.3 billion of capital to shareholders. Also notable: The PFG common stock price hit a record high in November and ended the year up 16% over year-end 2021.

As someone charged with maximizing your investment in Principal, I'm gratified that 2022 proved to be such a rewarding year for Principal and for our shareholders. These are strong results, the fruition of substantial work done over the last two years despite a challenging macro environment.

"I'm gratified that 2022 proved to be such a rewarding year for Principal and for our shareholders."

Looking ahead

We'll help ensure the company continues to pursue attractive growth opportunities and leverage its competitive advantages. Doing so will help generate returns in excess of cost of capital and enable Principal to return more of that excess capital to you.

I'll echo Dan in noting that Principal is now an even more resilient company, well positioned to withstand a variety of economic conditions and deliver long-term growth. This is good news for you and all company stakeholders.

Scott Mills
Lead Director
Principal Financial Group

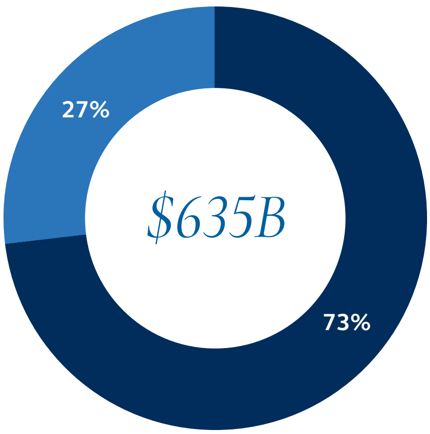
Financial highlights

2022 financial results

ASSETS UNDER MANAGEMENT[6]

(as of Dec. 31, 2022)

- Principal Global Investors
- Principal International and other entities of Principal Financial Group



NON-GAAP PRE-TAX OPERATING EARNINGS[7]

(as of Dec. 31, 2022)

Retirement and Income Solutions (42%)

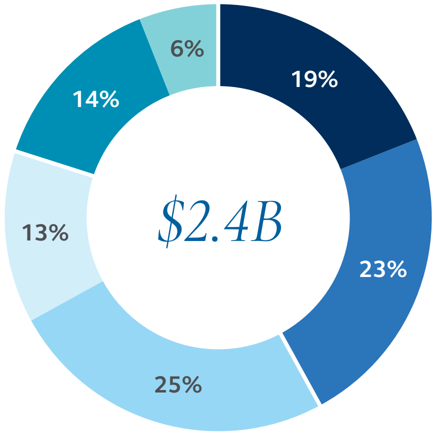
- RIS-Fee
- RIS-Spread

Principal Asset Management (38%)

- Principal Global Investors
- Principal International

Benefits and Protection (20%)

- Specialty Benefits
- Individual Life



[6] Assets under management by asset manager

[7] Trailing 12 months, excludes corporate and impacts from actuarial assumption review

[8] Non-GAAP operating earnings per diluted share

[9] Non-GAAP operating return on average equity, excluding cumulative change in fair value of funds withheld embedded derivative and AOCI, other than foreign currency translation adjustment

Long-term financial targets

ANNUAL GROWTH IN EARNINGS PER SHARE[8]

9-12%

RETURN ON EQUITY[9]

14-16%

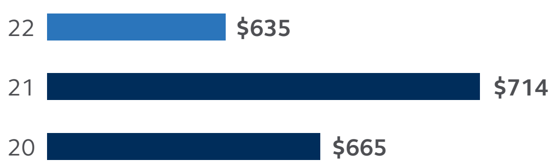
FREE CAPITAL FLOW CONVERSION

75-85%

In 2021, we outlined our strategic path forward with a focus on a higher growth, more capital efficient portfolio and a commitment to return more capital to shareholders. This guided our successful execution in 2022; despite a challenging macroeconomic environment, we made meaningful progress toward our goals. We delivered on our strengthened capital deployment strategy and our commitment to right-size and return the excess capital we had built up during the pandemic.

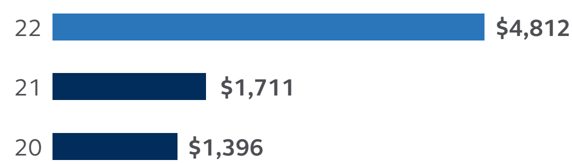
TOTAL ASSETS UNDER MANAGEMENT (AUM)

(in billions)



NET INCOME ATTRIBUTABLE TO PRINCIPAL FINANCIAL GROUP

(in millions)



NON-GAAP OPERATING EARNINGS[10]

(in millions)

TOTAL REVENUE

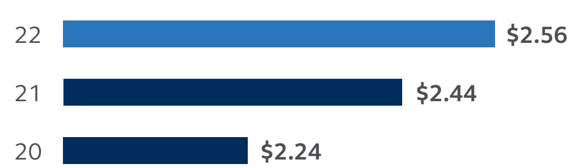
(in millions)

NON-GAAP OPERATING EARNINGS PER DILUTED COMMON SHARE[10]

(in dollars)

DIVIDENDS DECLARED PER COMMON SHARE

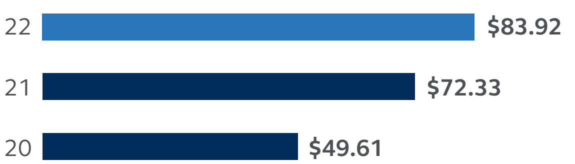
(in dollars)



[10]This is a non-GAAP financial measure. See non-GAAP financial measure reconciliations on pages 14-15.

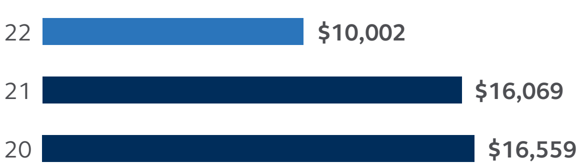
YEAR-END CLOSING PFG COMMON STOCK PRICE

(in dollars)



TOTAL STOCKHOLDERS' EQUITY ATTRIBUTABLE TO PRINCIPAL FINANCIAL GROUP

(in millions)

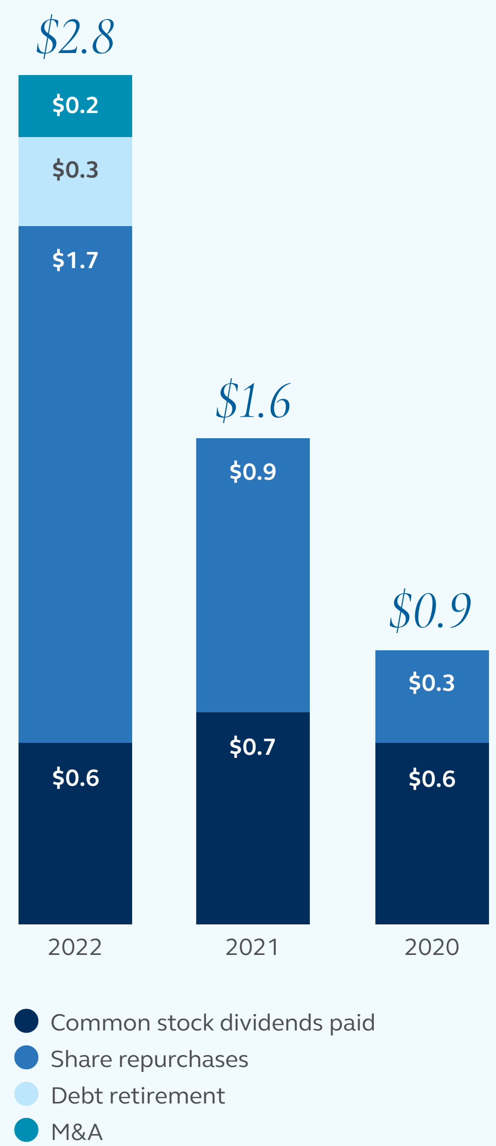


NON-GAAP OPERATING EARNINGS RETURN ON EQUITY (ROE)

(excluding cumulative change in fair value of funds withheld embedded derivative and AOCI, other than foreign currency translation adjustment)[10,11]

CAPITAL DEPLOYMENTS

(in billions)



[11]Non-GAAP operating earnings return on equity equals trailing 12 months non-GAAP operating earnings divided by average stockholders' equity available to common stockholders excluding cumulative change in fair value of funds withheld embedded derivative and AOCI, other than foreign currency translation adjustment.

Non-GAAP financial measure reconciliations

(in millions, except as indicated)

	For the year ended Dec. 31		
	2022	2021	2020
NET INCOME ATTRIBUTABLE TO PRINCIPAL FINANCIAL GROUP			
Net income attributable to Principal Financial Group	$4,811.6	$1,710.6	$1,395.8
Net realized capital (gains) losses, as adjusted[12]	$193.3	$ 137.0	$(29.4)
(Income) from exited business	(3,304.0)	-	-
Non-GAAP operating earnings	$1,700.9	$1,847.6	$1,366.4

[12] This is a non-GAAP financial measure. See reconciliation below.

NET REALIZED CAPITAL GAINS (LOSSES)	2022	2021	2020
GAAP net realized capital gains (losses)	$(258.4)	$2.5	$302.6
Recognition of front-end fee revenues	(4.7)	(2.9)	11.4
Market value adjustments to fee revenues	0.7	(0.6)	(1.6)
Net realized capital gains (losses) related to equity method investments	(15.0)	(24.0)	(1.5)
Derivative and hedging-related revenue adjustments	(126.3)	(160.3)	(132.9)
Sponsored investment fund adjustments	22.2	21.3	17.3
Amortization of deferred acquisition costs	6.5	(0.2)	(0.5)
Capital gains distributed—operating expenses	102.9	(69.4)	(41.7)
Amortization of other actuarial balances	(4.0)	11.3	(26.3)
Market value adjustments of embedded derivatives	(44.1)	79.8	(55.0)
Capital gains distributed—cost of interest credited	33.5	(37.3)	(8.2)
Net realized capital gains (losses) tax adjustments	64.2	56.2	(28.2)
Net realized capital gains (losses) attributable to noncontrolling interest, after-tax	29.2	(13.4)	(6.0)
Total net realized capital gains (losses) after-tax adjustments	65.1	(139.5)	(273.2)
Net realized capital gains (losses), as adjusted	$(193.3)	$(137.0)	$29.4

	For the year ended Dec. 31		
	2022	2021	2020
DILUTED EARNINGS PER COMMON SHARE			
Net income	$18.85	$6.27	$5.05
Net realized capital (gains) losses, as adjusted	0.76	0.50	(0.11)
(Income) from exited business	(12.95)	-	-
Non-GAAP operating earnings	$6.66	$6.77	$4.94
STOCKHOLDERS' EQUITY			
Stockholders' equity	$10,042.8	$16,125.8	$16,617.3
Noncontrolling interest	(41.1)	(56.4)	(58.4)
Stockholders' equity attributable to Principal Financial Group, Inc.	10,001.7	16,069.4	16,558.9
Net unrealized capital (gains) losses	5,357.6	(3,519.2)	(4,156.5)
Net unrecognized postretirement benefit obligation	254.1	344.7	460.5
Cumulative change in fair value of funds withheld embedded derivative	(2,885.7)	-	-
Stockholders' equity, excluding AOCI other than foreign currency translation adjustment, available to common stockholders	$12,727.7	$12,894.9	$12,862.9
NET INCOME ROE AVAILABLE TO COMMON STOCKHOLDERS (INCLUDING AOCI)			
Net income ROE available to common stockholders (including AOCI)	36.9%	10.5%	9.0%
Cumulative change in fair value of funds withheld embedded derivative and AOCI, other than foreign currency translation adjustment	0.7%	2.8%	2.1%
Net income ROE available to common stockholders (excluding cumulative change in fair value of funds withheld embedded derivative and AOCI, other than foreign currency translation adjustment)	37.6%	13.3%	11.1%
Net realized capital (gains) losses	1.5%	1.0%	-0.2%
(Income) loss from exited business	-25.8%	0.0%	0.0%
Non-GAAP operating earnings ROE (excluding cumulative change in fair value of funds withheld embedded derivative and AOCI, other than foreign currency translation adjustment)	13.3%	14.3%	10.9%

Forward-looking and cautionary statements:
Certain statements made by the company which are not historical facts may be considered forward-looking statements, including, without limitation, statements as to non-GAAP operating earnings, net income attributable to PFG, net cash flow, realized and unrealized gains and losses, capital and liquidity positions, sales and earnings trends, and management's beliefs, expectations, goals and opinions. The company does not undertake to update these statements, which are based on a number of assumptions concerning future conditions that may ultimately prove to be inaccurate. Future events and their effects on the company may not be those anticipated, and actual results may differ materially from the results anticipated in these forward-looking statements. The risks, uncertainties and factors that could cause or contribute to such material differences are discussed in the company's annual report on Form 10-K for the year ended Dec. 31, 2022, filed by the company with the U.S. Securities and Exchange Commission, as updated or supplemented from time to time in subsequent filings. These risks and uncertainties include, without limitation: adverse capital and credit market conditions may significantly affect the company's ability to meet liquidity needs, access to capital and cost of capital; conditions in the global capital markets and the economy generally; volatility or declines in the equity, bond or real estate markets; changes in interest rates or credit spreads or a prolonged low interest rate environment; the elimination of the London Inter-Bank Offered Rate ("LIBOR"); the company's investment portfolio is subject to several risks that may diminish the value of its invested assets and the investment returns credited to customers; the company's valuation of investments and the determination of the amount of allowances and impairments taken on such investments may include methodologies, estimations and assumptions that are subject to differing interpretations; any impairments of or valuation allowances against the company's deferred tax assets; the company's actual experience for insurance and annuity products could differ significantly from its pricing and reserving assumptions; the pattern of amortizing the company's DAC asset and other actuarial balances on its universal life-type insurance contracts, participating life insurance policies and certain investment contracts may change; changes in laws, regulations or accounting standards; the company may not be able to protect its intellectual property and may be subject to infringement claims; the company's ability to pay stockholder dividends, make share repurchases and meet its obligations may be constrained by the limitations on dividends or other distributions Iowa insurance laws impose on Principal Life; litigation and regulatory investigations; from time to time the company may become subject to tax audits, tax litigation or similar proceedings, and as a result it may owe additional taxes, interest and penalties in amounts that may be material; applicable laws and the company's certificate of incorporation and by-laws may discourage takeovers and business combinations that some stockholders might consider in their best interests; competition, including from companies that may have greater financial resources, broader arrays of products, higher ratings and stronger financial performance; technological and societal changes may disrupt the company's business model and impair its ability to retain existing customers, attract new customers and maintain its profitability; damage to the company's reputation; a downgrade in the company's financial strength or credit ratings; client terminations, withdrawals or changes in investor preferences; the company's hedging or risk management strategies prove ineffective or insufficient; inability to attract, develop and retain qualified employees and sales representatives and develop new distribution sources; an interruption in information technology, infrastructure or other internal or external systems used for business operations, or a failure to maintain the confidentiality, integrity or availability of data residing on such systems; international business risks including changes to mandatory pension schemes; risks arising from fraudulent activities; risks arising from participation in joint ventures; the company may need to fund deficiencies in its "Closed Block" assets; a pandemic, terrorist attack, military action or other catastrophic event; the company's reinsurers could default on their obligations or increase their rates; risks arising from acquisitions of businesses; risks related to existing reinsurance arrangements, including counterparty risk, yearly renewable term mortality reinsurance rate increases, and recapture risk; loss of key vendor relationships or failure of a vendor to protect information of our customers or employees; the company's enterprise risk management framework may not be fully effective in identifying or mitigating all of the risks to which the company is exposed; and global climate change.

Use of Non-GAAP financial measures:
The company uses a number of non-GAAP financial measures that management believes are useful to investors because they illustrate the performance of normal, ongoing operations, which is important in understanding and evaluating the company's financial condition and results of operations. They are not, however, a substitute for U.S. GAAP financial measures. Therefore, the company has provided reconciliations of the non-GAAP measures to the most directly comparable U.S. GAAP measure at the end of the release. The company adjusts U.S. GAAP measures for items not directly related to ongoing operations. However, it is possible these adjusting items have occurred in the past and could recur in future reporting periods. Management also uses non-GAAP measures for goal setting, as a basis for determining employee and senior management awards and compensation and evaluating performance on a basis comparable to that used by investors and securities analysts.

Integration of environmental, social and governance (ESG) factors is qualitative and subjective by nature. There is no guarantee that the criteria used, or judgment exercised, will reflect the beliefs or values of any particular investor. There is no assurance that any strategy or integration of ESG factors will be successful or profitable.

Global Financial Inclusion Index is a proprietary model output based upon certain assumptions that may change, are not guaranteed and should not be relied upon as a significant basis for an investment decision.

Insurance products issued by Principal National Life Insurance Co (except in NY) and Principal Life Insurance Company®. Plan administrative services offered by Principal Life. Principal Funds, Inc. is distributed by Principal Funds Distributor, Inc. Securities offered through Principal Securities, Inc., member SIPC and/or independent broker/dealers. Referenced companies are members of the Principal Financial Group®, Des Moines, IA 50392.

Principal Financial Group Foundation, Inc. ("Principal® Foundation") is a duly recognized 501(c)(3) entity focused on providing philanthropic support to programs that build financial security in the communities where Principal Financial Group, Inc. ("Principal") operates. While Principal Foundation receives funding from Principal, Principal Foundation is a distinct, independent, charitable entity. Principal Foundation does not practice any form of investment advisory services and is not authorized to do so.

Principal Asset Management℠ is a trade name of Principal Global Investors, LLC. Principal Global Investors leads global asset management and is a member of the Principal Financial Group®.

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 1-16725

PRINCIPAL FINANCIAL GROUP, INC.

(Exact name of Registrant as specified in its charter)

Delaware	**711 High Street,**	**42-1520346**
(State or other jurisdiction of incorporation or organization)	**Des Moines, Iowa 50392** (Address of principal executive offices)	(I.R.S. Employer Identification Number)

(515) 247-5111

(Registrant's telephone number, including area code)

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

Title of each class	Trading symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.01	PFG	Nasdaq Global Select Market

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes 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 Exchange 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, smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated file ☐ 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 Exchange Act.) Yes ☐ No ☒

As of January 30, 2023, there were outstanding 243,104,123 shares of Common Stock, $0.01 par value per share of the Registrant.

The aggregate market value of the shares of the Registrant's common equity held by non-affiliates of the Registrant was approximately $16.7 billion based on the closing price of $66.79 per share of Common Stock on June 30, 2022.

Documents Incorporated by Reference

The information required to be furnished pursuant to Part III of this Form 10-K is set forth in, and is hereby incorporated by reference herein from, the Registrant's definitive proxy statement for the annual meeting of stockholders to be held on May 16, 2023, to be filed by the Registrant with the United States Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after the year ended December 31, 2022.

PRINCIPAL FINANCIAL GROUP, INC.
TABLE OF CONTENTS

NOTE CONCERNING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, including the Management's Discussion and Analysis of Financial Condition and Results of Operations, contains statements that constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements relating to trends in operations and financial results and the business and the products of the Registrant and its subsidiaries, as well as other statements including words such as "anticipate," "believe," "plan," "estimate," "expect," "intend" and other similar expressions. Forward-looking statements are made based upon management's current expectations and beliefs concerning future developments and their potential effects on us. Such forward-looking statements are not guarantees of future performance.

Actual results may differ materially from those included in the forward-looking statements as a result of risks and uncertainties. Those risks and uncertainties include, but are not limited to, the risk factors listed in Item 1A. "Risk Factors."

PART I

Item 1. Business

Principal Financial Group, Inc. ("PFG") is a leader in global investment management offering businesses, individuals and institutional clients a wide range of financial products and services, including retirement, asset management and insurance through our diverse family of financial services companies. We had $1,455.8 billion in assets under administration ("AUA"), including $635.3 billion in assets under management ("AUM") as of December 31, 2022.

Our global asset management businesses serve a broad range of investors worldwide. We provide long-term investment strategies to institutional, retirement, high net worth and retail clients by offering a range of capabilities including equity, fixed income, real estate and other alternative investments, as well as fund offerings.

In the U.S.,we offer a broad array of retirement and employee benefit solutions and individual insurance solutions to meet the needs of the business owner and their employees. We are a leading provider of defined contribution plans. We are also a leading employee stock ownership plan ("ESOP") consultant. In addition, we are a leading provider of nonqualified plans, defined benefit plans and pension risk transfer services. We are also one of the largest providers of specialty benefits insurance product solutions. We believe small and medium-sized businesses are an underserved market, offering attractive growth opportunities in the retirement and employee benefit markets.

Additionally, we believe we have a significant opportunity to leverage our U.S. retirement expertise in select international markets that have adopted or are moving toward private sector defined contribution pension systems. Our international asset management and accumulation businesses focus on the opportunities created as aging populations around the world drive increased demand for retirement accumulation, retirement asset management and retirement income management solutions.

Our Reportable Segments

We organize our businesses into the following reportable segments:

- Retirement and Income Solutions;
- Principal Global Investors;
- Principal International and
- U.S. Insurance Solutions.

We also have a Corporate segment, which consists of the assets and activities that have not been allocated to any other segment.

See Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 17, Segment Information" for financial results of our segments.

Reinsurance Transaction

During the second quarter of 2022, we closed a coinsurance with funds withheld reinsurance transaction with Talcott Life &Annuity Re, Ltd. ("Talcott Life & Annuity Re"), a limited liability company organized under the laws of the Cayman Islands and an affiliate of Talcott Resolution Life, Inc., a subsidiary of Sixth Street, pursuant to which we ceded our in-force U.S. retail fixed annuity and universal life insurance with secondary guarantee ("ULSG") blocks of business (the "Reinsurance Transaction"). The economics of the Reinsurance Transaction were effective as of January 1, 2022. As such, we recorded impacts for January through June 2022 in our second quarter 2022 results. See Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 9, Reinsurance, for further details.

Retirement and Income Solutions Segment

Our asset accumulation activities in the U.S. date back to the 1940s when we first began providing pension plan products and services. We offer a comprehensive portfolio of products and services for retirement savings along with select products for retirement income:

- To businesses of all sizes, we offer products and services for defined contribution plans, including 401(k) and 403(b) plans; defined benefit plans; nonqualified executive benefit plans; stock services, including ESOPs and equity compensation; and pension risk transfer services;

- To large institutional clients, we also offer investment only products, including guaranteed investment contracts ("GICs");
- To employees of businesses and other individuals, we offer the ability to accumulate savings and provide an income stream for retirement and other purposes through mutual funds, individual variable annuities and bank products; and
- To non-retirement businesses, we offer trust and custody services.

We organize our Retirement and Income Solutions operations into two business groupings:

- Retirement and Income Solutions — Fee: includes workplace savings and retirement solutions ("WSRS", formerly known as "full service accumulation"), trust and custody services and individual variable annuities; and
- Retirement and Income Solutions — Spread: includes investment only, pension risk transfer, banking services and individual fixed annuities. As of September 30, 2021, we ceased sales of our individual fixed annuity products and the block of business existing as of January 1, 2022, was reinsured as part of the Reinsurance Transaction.

Retirement and Income Solutions — Fee

Workplace Savings and Retirement Solutions

We offer a wide variety of investment and administrative products and services for defined contribution plans, including 401(k) and 403(b) plans; defined benefit plans; nonqualified executive benefit plans and stock services, including ESOPs and equity compensation.

Products

WSRS products respond to the needs of plan sponsors seeking both administrative and investment services for defined contribution plans or defined benefit plans. The investment component of both the defined contribution and defined benefit plans may be in the form of a guaranteed account, separate account, a mutual fund offering or a collective investment trust. In addition, defined contribution plan sponsors may also offer their own employer securities as an investment option under the plan.

We deliver both administrative and investment services to our defined contribution plan and defined benefit plan customers through annuity contracts, collective investment trusts and mutual funds. Group annuity contracts and collective investment trusts used to fund qualified plans are not required to be registered with the United States Securities and Exchange Commission ("SEC"). Our mutual fund service platform is called Principal Advantage. It is a qualified plan service package based on our series mutual fund, Principal Funds, Inc. ("PFI"). We offer investments covering the full range of stable value, equity, fixed income, real estate and international investment options managed by our Principal Global Investors segment as well as third party asset managers. In addition, WSRS offers plan sponsors trust services through an affiliated trust company.

As of December 31, 2022, we provided WSRS products to (a) over 42,000 defined contribution plans including $401.4 billion in assets and covering over 10.8 million eligible plan participants, and (b) to over 1,900 defined benefit plans, including $18.3 billion in assets and covering over 430,000 eligible plan participants. As of December 31, 2022, approximately 31% of our WSRS account values were managed by our Principal Global Investors segment, 57% were managed entirely by the third party asset managers that were not under contract to sub-advise a PFG product, 3% were sub-advised and 9% represented employer securities.

Markets and Distribution

We offer our WSRS products and services to plans, including qualified and nonqualified defined contribution plans and defined benefit plans. These products and services are offered to businesses of all sizes including plans sponsored by small and mid-sized businesses, which we believe remains underpenetrated, and large institutional clients. We distribute our WSRS products and services nationally, primarily through a captive retirement services sales force. As of December 31, 2022, 88 retirement services sales representatives in 14 offices, operating as a wholesale distribution network, maintained relationships with over 11,000 independent advisors, consultants and agents. Retirement services sales representatives are an integral part of the sales process alongside the referring consultant or independent advisor. We compensate retirement services sales representatives through a blend of salary and production-based incentives. We administer, on behalf of the plan, commission or fee payments to independent advisors, consultants and agents.

As of December 31, 2022, we had a staff of over 350 service and education specialists located across the U.S. These specialists play a key role in the ongoing servicing of plans by providing local services to our customers, such as reviewing plan performance, investment options and plan design; communicating the customers' needs and feedback to us and helping employees understand the benefits of their plans. The following summarizes our distribution channels:

- We distribute our annuity-based products through intermediaries who are primarily state licensed individuals.
- Principal Advantage platform is targeted at defined contribution plans through broker-dealer distribution channels. Principal Advantage gives us access to Financial Industry Regulatory Authority ("FINRA") registered distributors who are not traditional sellers of annuity-based products and broadens opportunities for us in the investment advisor and broker-dealer distribution channels.
- Through our Retire Secure strategy we provide financial education and other assistance to individual investors who are participants/members of employer-based accumulation solutions to help them achieve financial security.

We believe our approach to WSRS plan services distribution, which gives us a targeted sales and service presence, along with our offering of Principal (R) Total Retirement Solutions differentiates us from many of our competitors. We have also established a number of marketing and distribution relationships to increase the sales of our products and services.

Individual Variable Annuities

Individual variable annuities, which are savings vehicles through which the customer makes one or more deposits of varying amounts and intervals, are offered to individuals.

Products

Our individual variable deferred annuities provide customers with the flexibility to allocate their deposits to mutual funds managed by the Principal Global Investors segment or unaffiliated third party asset managers, with variable and guaranteed options. Generally speaking, the customers bear the investment risk for the variable options and have the right to allocate their assets among various separate mutual funds. The value of the annuity fluctuates in accordance with the experience of the mutual funds chosen by the customer. Customers have the option to allocate all or a portion of their account to our guaranteed option, in which case we credit interest at rates we determine, subject to contractual minimums. As of December 31, 2022, 92% of our $9.0 billion in variable annuity account balances was allocated to mutual funds managed by the Principal Global Investors segment and our guaranteed option. The remaining 8% was allocated to mutual funds managed by unaffiliated third party asset managers.

Customers may elect a living benefit guarantee (commonly known in the industry as a guaranteed minimum withdrawal benefit, or "GMWB"). We bear the GMWB investment risk. Our goal is to hedge the GMWB investment risk through the use of sophisticated risk management techniques. As of December 31, 2022, $6.2 billion of the $8.7 billion of variable annuity separate account values had the GMWB rider. Our major source of revenue from individual variable annuities is mortality and expense fees we charge to the customer, generally determined as a percentage of the market value of the assets held in a separate investment sub-account. Account balances of variable annuity contracts with the GMWB rider were invested in separate account investment options as follows:

	December 31, 2022	December 31, 2021
	(in millions)	
Balanced funds	**$5,995.7**	$7,549.2
Equity funds	**123.7**	157.0
Bond funds	**61.0**	88.3
Money market funds	**12.0**	7.2
Specialty funds	**0.7**	0.9
Total	**$6,193.1**	$7,802.6
Percent of total variable annuity separate account values	**71%**	71%

Markets and Distribution

Our target markets for individual variable annuities include owners, executives and employees of small and medium-sized businesses and individuals seeking to accumulate and/or eventually receive distributions of assets for retirement. We market variable annuities to individuals for both qualified and nonqualified retirement savings.

We sell our individual variable annuity products primarily through our affiliated financial representatives, including Principal Connection, who collectively accounted for 87%, 86% and 93% of annuity sales for the years ended December 31, 2022, 2021 and 2020, respectively. The remaining sales were made primarily through unaffiliated broker-dealer firms. Principal Connection is our direct distribution channel for retail financial services products to individuals. Principal Connection's services are available by phone, email or mail.

Retirement and Income Solutions — Spread

Investment Only

Products

The two primary products for which we provide investment only services are GICs and funding agreements.

GICs and funding agreements pay a specified rate of return. The rate of return can be a floating rate based on an external market index or a fixed rate. Our investment only products contain provisions disallowing or limiting early surrenders, including penalties for early surrenders and minimum notice requirements.

Deposits to investment only products are predominantly in the form of single payments. As a result, the level of new deposits can fluctuate from one fiscal quarter to another. The amounts earned by us are derived in part from the difference between the investment income earned by us and the amount credited to the customer. The Principal Global Investors segment manages the assets supporting the contractual promises.

Markets and Distribution

Funding agreements are issued directly to non-qualified institutions, the Federal Home Loan Bank of Des Moines ("FHLB Des Moines") and unconsolidated special purpose entities. As part of our funding agreement-backed note programs, U.S. and foreign institutional investors purchase debt obligations from the special purpose entity which, in turn, purchases the funding agreement from us with terms similar to those of the debt obligations. The strength of this market is dependent on debt capital market conditions. As a result, our sales through this channel can vary widely from one quarter to another.

Pension Risk Transfer

Products

Pension risk transfer products respond primarily to the needs of pension plan sponsors in the form of single premium group annuities, which are immediate or deferred annuities that provide a current or future specific income amount, fully guaranteed by us. The majority of our business originates from defined benefit plans that are being terminated. In these situations, the plan sponsor transfers all its obligations under the plan to an insurer by paying a single premium. Generally, plan sponsors restrict their purchases to insurance companies with superior or excellent financial quality ratings because the Department of Labor ("DOL") has mandated that annuities be purchased only from the "safest available" insurers.

Since premium received from pension risk transfer products is generally in the form of single payments, the level of premiums can fluctuate depending on the number of large-scale annuity sales in a particular quarter. The Principal Global Investors segment manages the assets supporting pension risk transfer account values.

Markets and Distribution

Our primary distribution channel for pension risk transfer products is comprised of several specialized home office sales consultants working through consultants and brokers that specialize in this type of business. Our sales consultants also make sales directly to institutions. Our nationally dispersed retirement services sales representatives act as a secondary distribution channel for these products.

Banking Services

Principal Bank is a U.S. federal savings bank that was formed in February 1998. As of December 31, 2022, Principal Bank had nearly 601,000 customers and approximately $8.3 billion in assets. Principal Bank operates under a limited purpose charter and may only accept deposits held in a fiduciary capacity; however, it may not hold demand deposits. It also may not own commercial loans or originate loans.

Products

Individual retirement accounts ("IRAs") are provided by Principal Bank, primarily funded by retirement savings rolled over from qualified retirement plans. Principal Bank offers Federal Deposit Insurance Corporation ("FDIC") insured cash solutions for customers in the form of savings accounts, money market accounts and certificates of deposit. The deposit products provide a relatively stable source of funding and liquidity for Principal Bank and are backed by purchases of investment securities and residential mortgage loans.

Markets and Distribution

Principal Bank offers products and services primarily to participants rolling out of qualified retirement plans largely serviced by affiliates of PFG. Principal Bank services customers by telephone, mail and internet and offers digital advice services through its subsidiary, Principal Advised Services, LLC.

Individual Fixed Annuities

In 2021, we ceased sales of individual fixed annuity products, and in 2022, we reinsured the block of business existing as of January 1, 2022, with Talcott Life & Annuity Re as part of the Reinsurance Transaction. Annuitizations from existing products occurring after this date are not reinsured.

Principal Global Investors Segment

Our Principal Global Investors segment manages assets for sophisticated investors around the world using focused investment teams that provide diverse investment capabilities including equity, fixed income, real estate and other alternative investments. We also have experience in asset allocation, stable value management and other structured investment strategies. We focus on providing services to our other segments in addition to our retail mutual fund and third party institutional clients. We maintain offices in Australia, Brazil, China, France, Germany, Hong Kong, Ireland, Italy, Japan, South Korea, Luxembourg, the Netherlands, Portugal, Singapore, Spain, Sweden, Switzerland, the United Arab Emirates, the United Kingdom and the United States.

We deliver our products and services through our network of focused investment teams including Principal Global Equities; Principal Global Fixed Income (including Finisterre emerging market debt teams);

Aligned Investors; Principal Real Estate Investors, LLC; Principal Real Estate Europe Limited; Spectrum Asset Management, Inc.; Post Advisory Group, LLC; Principal Dynamic Growth; Edge Asset Management; Claritas Administração de Recursos Ltda. ("Claritas"); Origin Asset Management Limited Liability Partnership and Principal Global Asset Allocation. The Principal Global Investors focused investment teams managed $464.7 billion in assets as of December 31, 2022.

We have been providing mutual funds to customers since 1969. We offer mutual funds to individuals, businesses and institutional investors for use within variable life contracts, variable annuity contracts and employer-sponsored pension plans; as a rollover investment option and for general investment purposes. As of December 31, 2022, as reported by Morningstar, we ranked 19th in terms of U.S. mutual fund AUM and 40th in terms of exchange traded fund AUM.

We also maintain various other domestic and global fund platforms, separately managed accounts and segregated accounts for some larger institutional and retail investors.

Our products and services are provided for a fee as defined by client mandates. Our fees are generally driven by AUM.

Focused Investment Teams

Our focused investment team strategy is diversified across the following primary asset classes and service delivery options.

Equity Investments. As of December 31, 2022, Principal Global Equities, Aligned Investors and Principal Real Estate Investors, LLC along with Principal Dynamic Growth, Edge Asset Management, Origin Asset Management Limited Liability Partnership and Claritas managed $200.7 billion in global equity assets. Our equity capabilities encompass large-cap stocks, mid-cap stocks, small-cap stocks and real estate investment trusts in developed and emerging markets worldwide.

Fixed Income Investments. As of December 31, 2022, Principal Global Fixed Income and Principal Real Estate Investors, LLC along with Spectrum Asset Management, Inc. and Post Advisory Group, LLC managed $189.2 billion in global fixed income assets. Collectively, our experience in fixed income management spans multiple economic and credit market cycles and encompasses all major fixed income security types and sectors, including commercial mortgage-backed securities ("CMBS"). Our research and risk management capabilities in worldwide debt markets provide a strong foundation for broadly diversified "multi-sector" portfolios, tailored to specific client objectives.

Real Estate and Other Alternative Investments. We offer products and services through other alternative asset classes including managing private real estate equity through Principal Real Estate Investors, LLC and Principal Real Estate Europe Limited; managing commercial mortgages and bridge/mezzanine loans through Principal Real Estate Investors, LLC and managing real estate and timber investments through Claritas. As of December 31, 2022, we managed $74.8 billion in alternative asset classes.

Principal Global Asset Allocation. Principal Global Asset Allocation is a specialized asset allocation investment team offering multi-asset and/or multi-manager portfolio construction services that aim to deliver reliable, risk-adjusted investment outcomes to individual investors, institutional investors and participants in employer-sponsored plans.

Products and Services

Products offered by the Principal Global Investors segment include individually managed accounts, separately managed accounts for high net worth individuals and several fund platforms for retail and institutional investors, as described below.

Principal Funds, Inc. PFI is a series mutual fund that offers investment options for defined contribution plans, individuals, institutional investors, adviser fee-based programs and other retirement plan clients. We report the results for this fund in the Retirement and Income Solutions segment or Principal Global Investors segment based on the distribution channel associated with the AUM.

Principal Variable Contracts Funds, Inc. Principal Variable Contracts Funds, Inc. is a series mutual fund that provides investment options for variable annuity and variable life insurance contracts issued by the Principal Life Insurance Company ("Principal Life") and other insurance companies not affiliated with Principal Life. AUM backing our variable annuity contracts is reported in the Retirement and Income Solutions segment. AUM backing our variable life insurance contracts is reported in the U.S. Insurance Solutions segment.

Other Principal Global Investors Funds. Principal Global Investors maintains various fund platforms including Qualifying Investor Alternative Investment Fund and Undertaking for Collective Investment in Transferable Securities ("UCITS") funds domiciled in Dublin, collective investment trusts, exchange traded funds and other focused investment team sponsored funds. These funds are generally managed by our focused investment teams.

Markets and Distribution

Our products and services are distributed through various channels to reach and meet the needs of a broad investor base. We distribute our services through institutional and retail sales representatives, relationship management and client service professionals who work with consultants and directly with investors to acquire and retain institutional clients, retail clients and other investors. We also maintain relationships with independent broker-dealers to distribute our products and services, maintaining relationships with over 55,000 independent brokers, consultants and agents. As of December 31, 2022, Principal Global Investors and its focused investment teams had over 790 third party institutional clients in 40 countries with $124.0 billion of AUM.

Principal International Segment

Our Principal International segment has operations in Latin America and Asia. We focus on locations with growing middle classes and affluent segments, favorable demographics and increasing long-term savings, ideally with defined contribution retirement markets. We also focus on markets with relevant size where we have competitive advantages. We entered these locations through acquisitions, start-up operations and joint ventures.

The activities of our Principal International segment reflect our efforts to provide long-term savings and retirement solutions to individuals in the locations in which we operate as well as asset management services for institutional clients. We offer pension accumulation products and services, mutual funds, asset management, income annuities and life insurance accumulation products.

Markets, Products and Distribution

Latin America

Brazil. We offer pension accumulation, income annuity, and life insurance accumulation products through a co-managed joint venture, Brasilprev Seguros e Previdencia S.A. ("Brasilprev"). We owned 25.005% of the economic interest and 50.01% of the voting shares as of December 31, 2022. The partner is Banco do Brasil ("Banco"), which had 3,980 Brazilian branches as of September 30, 2022.

Brasilprev has the exclusive distribution rights of its pension accumulation and income annuity products through the Banco network until October 2032. Our joint venture provides products for the retirement needs of individuals and employers. Banco's employees sell these products directly to individual clients through its bank branches and digital channels. In addition, our joint venture reaches corporate clients through two wholesale distribution channels: (1) a network of independent brokers who sell to the public and (2) Banco's corporate account executives who sell to existing and prospective corporate clients. As of December 31, 2022, Brasilprev had $66.3 billion of AUM.

We also distribute pension and other protection products through a digital insurance brokerage company, Ciclic Corretora de Seguros S.A. ("Ciclic"). Our partner is BB Corretora De Seguros e Administradora De Bens S.A. (a subsidiary of Banco). We owned 25.005% of the economic and 50.01% of the voting shares of Ciclic as of December 31, 2022.

Chile. We offer a complete array of pension accumulation and income annuity solutions. We also offer mutual fund, asset management services and life insurance accumulation products. Our subsidiaries in Chile had $41.2 billion of AUM as of December 31, 2022.

We offer mandatory employee-funded pension and voluntary savings plans through Administradora de Fondos de Pensiones Cuprum S.A. (“Cuprum”). We owned 97.97% of Cuprum as of December 31, 2022, and the rest is publicly floated. Cuprum’s products are sold through digital means and via a proprietary sales network of approximately 700 sales employees as of December 31, 2022.

We offer income annuity and life insurance accumulation solutions through Principal Compañía de Seguros de Vida Chile S.A., our wholly owned life insurance company. The annuity products are distributed directly by our sales teams and through a network of brokers and independent agents. Life insurance accumulation products are offered to individuals through brokers and financial advisors and through digital means.

We offer voluntary savings plans, mutual funds, and asset management solutions through Principal Administradora General de Fondos S.A., our wholly owned mutual fund company. Products are distributed to retail and institutional clients through digital means (we launched an open architecture service platform that provides support to financial advisors) as well as through our proprietary sales force, financial advisors, brokerage houses and alliances with financial institutions.

Mexico. We offer pension accumulation, mutual funds and asset management services through our wholly owned companies with $17.5 billion of AUM as of December 31, 2022.

We offer mandatory and voluntary pension plans through Principal Afore, S.A. de C.V., Principal Grupo Financiero. We manage and administer individual retirement accounts under the mandatory privatized social security system for formal employees in Mexico. As of December 31, 2022, we had approximately 2.6 million individual retirement accounts. We distribute products and services through a proprietary sales force of approximately 445 sales representatives as of December 31, 2022, as well as independent brokers who sell directly to individuals.

We offer mutual funds and asset management services through Principal Fondos de Inversión, S.A. de C.V., Operadora de Fondos de Inversión, Principal Grupo Financiero. We distribute products and services through a sales force of approximately 40 employees as of December 31, 2022, and through distribution agreements with other financial entities. We offer both domestic and international products, typically sold directly to institutional and retail clients. We work in close collaboration with our Principal Global Investors segment for both international products and for the institutional segment.

Asia

China. We offer mutual funds and asset management services to individuals and institutions through a joint venture, CCB Principal Asset Management Co., Ltd. (“CCB PAM”). We owned 25% of CCB PAM as of December 31, 2022. China Construction Bank (“CCB”) is the majority partner with 65% ownership. China Huadian Capital Holdings owns 10%. CCB PAM distributes its mutual funds through CCB and third-party distributors such as banks, securities brokers and e-channels. CCB provides widespread distribution support for the joint venture via its extensive network of approximately 14,500 bank branches as of December 31, 2021, and brand awareness activities. Although not included in our reported AUM, the joint venture had $181.2 billion of AUM as of December 31, 2022.

On December 28, 2022, we finalized the acquisition of a minority ownership interest in CCB Pension Management Co., Ltd. (“CCBP”), China Construction Bank’s pension business with the Social Security Fund of China.

Hong Kong Special Administrative Region. We offer both pension saving and mutual fund products to corporate and individual clients through wholly owned companies with $10.6 billion in AUM as of December 31, 2022.

We offer two types of pension saving schemes, Mandatory Provident Fund and Occupational Retirement Schemes Ordinance, which we distribute through third party intermediaries such as insurance companies, independent financial advisors, brokers, and employee benefit consultants. Our most significant partnership is with AXA Hong Kong with whom we have a 15-year distribution partnership through 2030. We serviced approximately 655,000 accounts as of December 31, 2022. To help Hong Kong customers save for retirement beyond the mandatory pension schemes, Principal also offers mutual funds to retail customers through third party intermediaries, the most significant being banks.

Southeast Asia. We offer mutual funds, asset management services and retirement solutions through our joint ventures in Malaysia, Principal Asset Management Berhad ("PAM") and Principal Islamic Asset Management Sdn. Bhd. ("PIAM"). The partner is CIMB Group ("CIMB"), a leading ASEAN universal bank that has strong presence in the region. The joint ventures had $20.5 billion of AUM as of December 31, 2022.

PAM offers conventional and Islamic mutual funds, retirement solutions through the branches of CIMB (approximately 600 bank branches throughout ASEAN and beyond as of September 30, 2022) and through its agency sales force of 2,330 agents selling to retail customers as of December 31, 2022. PAM also distributes its mutual funds and retirement solutions through third party institutions including banks, security houses and digital platforms such as digital wallet and online marketplaces. PAM has subsidiaries in Singapore (Principal Asset Management (S) Pte. Ltd.), Indonesia (PT Principal Asset Management) and Thailand (Principal Asset Management Company Limited).

PIAM offers Islamic asset management services to clients across Southeast Asia and the Middle East. PIAM also offers Islamic mutual funds in Southeast Asia, the Middle East and Europe via Principal Global Investors' UCITS platform in Dublin.

U.S. Insurance Solutions Segment

Our U.S. Insurance Solutions segment activities date back to 1879 when we first began selling individual life insurance products. We expanded our offering to include group insurance products in the 1940s and have continued to expand our product portfolio over time. We are uniquely positioned to protect businesses through our broad set of solutions, our expertise and the experiences we offer.

- We protect their employees by offering a comprehensive set of employee benefits that helps recruit and retain talent including nonqualified deferred compensation, employer paid and voluntary group benefits, and guaranteed standard issue life and individual disability insurance.
- We protect their business in the event of a death, disability or resignation of a key employee or future change in management through business owner solutions and disability solutions.
- We protect business owners and their personal needs by helping maintain their lifestyle through life or disability insurance and building and protecting their retirement savings.

We organize our operations into two divisions: Specialty Benefits insurance and Individual Life insurance. However, we share key resources in our core areas such as strategic leadership, distribution, operations and marketing.

Specialty Benefits Insurance

Specialty Benefits insurance, which includes group dental, vision, life, critical illness, accident, paid family and medical leave ("PFML"),disability insurance and individual disability insurance, is an important component of the employee benefit offering at small and medium-sized businesses.

Products and Services

Group Dental and Vision Insurance. Our plans provide partial reimbursement for dental and vision expenses. As of December 31, 2022, we had over 108,000 group dental and vision insurance policies in force covering over 2.7 million employees. According to Life Insurance and Market Research Association ("LIMRA"), we were the 4th largest group dental insurer in terms of number of contracts/employer groups in force in 2021. In addition to indemnity and preferred provider organization dental offered on both an employer paid and voluntary basis, we offer a prepaid dental plan in Arizona through our Employers Dental Services, Inc. subsidiary. We also offer a discount dental product nationally. Our indemnity vision and our managed care vision products are offered on both an employer paid and voluntary basis.

Group Life and Other Insurance. Our group life insurance provides coverage to employees and their dependents for a specified period. As of December 31, 2022, we had over 89,000 group policies providing nearly $167.0 billion of group life insurance in force covering approximately 2.9 million employee lives. According to LIMRA, in 2021, we were ranked 1st in the U.S. in terms of the number of group life insurance contracts in force. We currently sell traditional group life insurance that does not provide for accumulation of cash values on both an employer paid and voluntary basis. Our group life insurance business remains focused on the traditional, annually renewable term product. Group term life and group universal life accounted for 99% and 1%, respectively, of our total group life insurance in force as of December 31, 2022. We no longer market group universal life insurance to new employer groups.

Group Disability Insurance. Our group disability insurance provides a benefit to insured employees who become disabled. In most instances, this benefit is in the form of a monthly income. Our group disability products include both short-term and long-term disability, offered on both an employer paid and voluntary basis. As of December 31, 2022, long-term disability represented 59% of total group disability premium, while short-term disability represented 41% of total group disability premium. We also provide disability management services, called rehabilitation services, to assist individuals in returning to work as quickly as possible following disability. We work with disability claimants to improve the approval rate of Social Security benefits, thereby reducing payment of benefits by the amount of Social Security payments received. As of December 31, 2022, we served approximately 2.1 million employee lives through over 63,000 contracts. According to LIMRA, our group short-term disability business was ranked 3rd and our group long-term disability business was ranked 3rd in the U.S. as of December 31, 2021, in terms of number of contracts/ employer groups in force. We also offer voluntary critical illness insurance, which provides a lump-sum cash benefit to pay for additional expenses associated with the five most common critical illnesses, and voluntary accident insurance, which pays a lump sum when covered injuries occur because of an accident. In 2021, we began selling PFML on a limited basis, which provides paid time off to care for specified family needs or an employee's own serious health condition. As of December 31, 2022, we have sold PFML in two states. We plan to expand to other states in the future.

Individual Disability Insurance. Individual disability insurance has been sold since the early 1950s. Our individual disability insurance products provide income protection to the insured member and/or business in the event of disability. In most instances, this benefit is in the form of a monthly income. In addition to income replacement, we offer products to pay business-related costs such as overhead expenses for a disabled business owner, buy-out costs for business owners purchasing a disabled owner's interest in the business, expenditures for replacement of a key person and business loan payments. We also offer a product to protect retirement savings in the event of disability. As of December 31, 2022, we served approximately 219,000 individual disability policyholders. According to LIMRA, our individual disability business was ranked 4th in the U.S. in terms of premium in force in the non-cancellable segment of the market and 4th overall, as of December 31, 2021.

Fee-for-Service. We offer administration of group dental, disability and vision benefits on a fee-for-service basis.

Individual Life Insurance

We specialize in providing solutions for small to medium-sized businesses to protect against risk and loss, assist with succession planning and wealth transfer and to build and protect wealth for retirement. We also provide solutions to meet the personal needs of business owners, executives and key employees. As of September 30, 2021, we narrowed our focus to the business market and ceased sales to the retail consumer market. In 2022, we reinsured our ULSG block of business with Talcott Life & Annuity Re as part of the Reinsurance Transaction. Our U.S. operations administered approximately 729,000 individual life insurance policies with over $524.0 billion of individual life insurance in force as of December 31, 2022.

Products and Services

Our Business Owner Solutions platform as well as our nonqualified deferred compensation offering combines administration and consulting to service our clients' needs. We focus on the business and personal insurance needs of owners, executives and key employees of small and medium-sized businesses with an emphasis on providing insurance solutions for nonqualified executive benefits. We no longer market our products to retail customers. We offer a variety of individual life insurance products, both interest sensitive (including universal life, variable universal life and indexed universal life insurance) and traditional.

Interest Sensitive. We offer universal life, variable universal life and indexed universal life insurance products. These products offer the policyholder the option of adjusting both the premium and the death benefit amounts of the insurance contract. Universal life insurance typically includes a cash value account that accumulates at a credited interest rate based on the investment returns of the block of business. Variable universal life insurance is credited with the investment returns of the various investment options selected by the policyholder. Indexed universal life is credited with investment returns tied to an external index, subject to a contractual minimum and maximum. For the year ended December 31, 2022, interest sensitive products represented 19% of individual life insurance in force and generated 83% of individual life insurance annualized first year premium sales.

After a deduction for policy level expenses, we credit net deposits to an account maintained for the policyholder. For universal life contracts, the entire account balance is invested in the general account. Interest is credited to the policyholder's account based on the earnings on general account investments, subject to contractual minimums. For variable universal life contracts, the policyholder may allocate the account balance among our general account and a variety of mutual funds underlying the contract. Interest is credited on amounts allocated to the general account in the same manner as for universal life. Net investment performance on mutual funds is allocated directly to the policyholder accounts; the policyholder bears the investment risk. For indexed universal life, the policyholder may allocate the account balance among our general account and two index accounts. Interest is credited on amounts allocated to the general account in the same manner as for universal life. Net investment performance on the index accounts is allocated directly to the policyholder accounts, subject to the contractual minimum and maximum. Some of our interest sensitive contracts contain what are commonly referred to as "secondary" or "no-lapse" guarantee provisions. These no-lapse guarantees keep the contract in force, even if the policyholder's account balance is insufficient to cover all of the contract charges, provided that the policyholder has continually paid a specified minimum premium. Starting in January 2021, we no longer market universal life insurance with lifetime secondary guarantee provisions.

Traditional Life Insurance. Traditional life insurance includes term, whole and adjustable life insurance products. Term insurance products provide a guaranteed death benefit for a specified period of time in return for the payment of a fixed premium. Term life insurance products represented 17% of our individual life insurance annualized first year premium sales for the year ended December 31, 2022, and 79% of individual life insurance in force as of December 31, 2022. Whole life policies provide a guaranteed death benefit and a cash surrender value in return for payment of fixed premiums. Adjustable life insurance products provide a guaranteed benefit in return for the payment of a fixed premium while allowing the policyholder to set the coverage period, premium and face amount combination.

U.S. Insurance Solutions Markets and Distribution

For each of our products, administration and distribution channels are customized to meet customer needs and expectations for that product.

We market our group insurance products to small and medium-sized businesses, through brokers and consultants. We sell our group insurance products in all 50 states and the District of Columbia. We continually adapt our products and pricing to meet local market conditions and to comply with state and federal legislation. We market our fee-for-service capabilities to employers that self-insure their employees' dental, disability and vision benefits. We market our fee-for-service businesses in all 50 states and the District of Columbia.

The group insurance market continues to see a shift to voluntary/worksite products due to various pressures on employers. In keeping with this market change, which shifts the funding of such products from the employer to the employee, we continue to place an enhanced focus on our voluntary benefits platform. We believe the voluntary/worksite market presents growth opportunities and we will continue to develop strategies to capitalize on this expanding market.

As of December 31, 2022, we had 145 sales representatives and 168 service representatives in 26 local markets. Our sales representatives accounted for 100% of our group insurance sales for the year ended December 31, 2022. The service representatives play a key role in servicing the case by providing local, responsive services to our customers and their brokers, such as renewing contracts, revising plans, solving administrative issues and communicating the customers' needs and feedback to us.

We sell our individual life and individual disability insurance products in all 50 states and the District of Columbia, primarily targeting owners, executives and key employees of small and medium-sized businesses. In 2022, small and medium-sized business sales represented 100% of individual life sales and 68% of individual disability sales for the year ended December 31, 2022. Our life insurance sales efforts focus on the Nonqualified Deferred Compensation and the Business Solutions market. This strategy offers solutions to address business owner financial challenges such as exiting the business, business transition, retaining key employees and retirement planning. Key employees also have needs to supplement retirement income, survivor income and business protection. We believe the Business Owner Solutions segment offers growth opportunities and we will continue to develop strategies to capitalize on this expanding market.

We distribute our individual life and individual disability insurance products through our affiliated financial representatives and independent brokers, as well as other marketing and distribution alliances. To meet the needs of the various marketing channels, particularly the independent brokers, we employ wholesale distributors — Regional Vice Presidents for nonqualified, business solutions and individual disability.

Corporate Segment

Our Corporate segment manages the assets representing capital that has not been allocated to any other segment. Financial results of the Corporate segment primarily reflect our financing activities (including financing costs), income on capital not allocated to other segments, inter-segment eliminations, income tax risks and certain income, expenses and other adjustments not allocated to the segments based on the nature of such items. Results of Principal Securities, Inc., our retail broker-dealer and registered investment advisor, and our exited group medical and long-term care insurance businesses are reported in this segment.

Competition

Competition is based on a number of factors including: customer segments, types of solutions, product features, service, go-to-market strategies, price, investment performance, commission structure, distribution capacity, financial strength ratings and name recognition. We compete with a large number of financial services companies such as banks, mutual funds, institutional trust companies, broker-dealers, insurers, retirement providers and asset managers. Some of these companies may offer a broader array of products, more competitive pricing, greater diversity of distribution sources, better brand recognition or, with respect to insurers, higher financial strength ratings. Some may also have greater financial resources with which to compete or may have better investment performance at various times. We believe we distinguish ourselves from our competitors through:

- the synergistic value of our diversified portfolio;
- our ability to integrate solutions and services;
- our focus on high growth markets;
- our global retirement expertise;
- our blended global and local asset management expertise;
- our expertise in targeted customer segments (i.e., small and medium-sized businesses) and
- the power of our joint venture and distribution relationships.

Ratings

Insurance companies are assigned financial strength ratings by rating agencies based upon factors relevant to policyholders. Financial strength ratings are generally defined as opinions as to an insurer's financial strength and ability to meet ongoing obligations to policyholders. Information about ratings provides both industry participants and insurance consumers meaningful insights on specific insurance companies. Higher ratings generally indicate financial stability and a stronger ability to pay claims.

Principal Life and Principal National Life Insurance Company ("PNLIC") have been assigned the following insurer financial strength ratings:

Rating Agency	Financial Strength Rating	Rating Structure
A.M. Best Company, Inc.	A+ ("Superior") with a stable outlook	Second highest of 13 rating levels
Fitch Ratings Ltd.	AA− ("Very Strong") with a stable outlook	Fourth highest of 19 rating levels
Moody's Investors Service.	A1 ("Good") with a stable outlook	Fifth highest of 21 rating levels
S&P Global Ratings.	A+ ("Strong") with a stable outlook	Fifth highest of 20 rating levels

A.M. Best Company, Inc. ("A.M. Best") ratings for insurance companies range from "A++" to "S". A.M. Best indicates that "A++" and "A+" ratings are assigned to those companies that in A.M. Best's opinion have superior ability to meet ongoing insurance obligations. Fitch Ratings Ltd. ("Fitch") ratings for insurance companies range from "AAA" to "C". Fitch "AA" ratings indicate very strong capacity to meet policyholder and contract obligations. Moody's Investors Service ("Moody's") ratings for insurance companies range from "Aaa" to "C". Moody's indicates that "A" ratings are assigned to those companies that offer good financial security. S&P Global Ratings ("S&P") has ratings that range from "AAA" to "D" for insurance companies. S&P indicates that "A" ratings are assigned to those companies that have strong financial security characteristics. In evaluating a company's financial and operating performance, these rating agencies review its profitability, leverage and liquidity, as well as its book of business, the adequacy and soundness of its reinsurance, the quality and estimated market value of its assets, the adequacy of its policy reserves, the soundness of its risk management programs, the experience and competency of its management and other factors.

We believe our strong ratings are an important factor in marketing our products to our distributors and customers, as ratings information is broadly disseminated and generally used throughout the industry. Our ratings reflect each rating agency's opinion of our financial strength, operating performance and ability to meet our obligations to policyholders and are not evaluations directed toward the protection of investors. Such ratings are neither a rating of securities nor a recommendation to buy, hold or sell any security, including our common stock. For more information on ratings, see Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources — Financial Strength and Credit Ratings."

Regulation

Our businesses are subject to regulation and supervision by U.S. federal and state regulatory authorities as well as non-U.S. regulatory authorities for our operations and customers outside the U.S., which can have a significant effect on our business. Our businesses are also affected by U.S. federal, state and local tax laws as well as tax laws for jurisdictions outside the U.S.

PFG, our parent holding company, is not licensed as an insurer, investment advisor, broker-dealer, bank or other regulated entity. However, because it is the holding company for all of our operations, it is subject to regulation in connection with our regulated entities, including as an insurance holding company. We are subject to legal and regulatory requirements applicable to public companies, including public reporting and disclosure, securities trading, accounting and financial reporting and corporate governance.

U.S. Insurance Laws and Regulations

We are subject to the insurance holding company laws in the states where our insurance companies are domiciled. Principal Life and PNLIC are domiciled in Iowa and their principal insurance regulatory authority is the Insurance Division of the Department of Commerce of the State of Iowa. Our other U.S. insurance companies are principally regulated by the insurance departments of the states in which they are domiciled. These laws generally require each insurance company directly or indirectly owned by the holding company to register with the insurance department in the insurance company's state of domicile and to furnish financial and other information about the operations of the companies within the holding company system. Transactions affecting the insurers in the holding company system must be fair and at arm's length. Most states have insurance laws that require regulatory approval of a direct or indirect change in control of an insurer or an insurer's holding company and laws that require prior notification to state insurance departments of a change in control of a non-domiciliary insurance company doing business in that state.

Annually, our U.S. insurance companies must submit an opinion from a board-appointed qualified actuary to state insurance regulators, where licensed, on whether the statutory assets held backing statutory reserves are sufficient to meet contractual obligations and related expenses of the insurer. If such an opinion cannot be rendered noting the sufficiency of assets, the insurance company must set up additional statutory reserves drawing from available statutory surplus until such an opinion can be given.

State insurance departments have broad administrative powers over the insurance business, including insurance company licensing and examination, agent licensing, establishment of reserve requirements and solvency standards, premium rate regulation, admittance of assets to statutory surplus, policy form approval, unfair trade and claims practices regulation and other matters. State insurance statutes also typically place restrictions and limitations on the amount of dividends or other distributions payable by insurance company subsidiaries to their parent companies. See Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources" for further details.

In order to enhance the regulation of insurer solvency, the National Association of Insurance Commissioners ("NAIC") has established risk-based capital ("RBC") standards. The standards require life insurers to submit a report to state regulators on an annual basis regarding their RBC based upon categories of risk including the following: asset risk, insurance risk, interest rate risk and business and operational risk. As of December 31, 2022, the statutory surplus of each of our U.S. life insurance companies exceeded the minimum RBC requirements.

The following authorities regularly make inquiries and conduct examinations or investigations regarding our compliance with applicable laws and regulations:

- state and federal insurance regulatory authorities;
- state and federal securities regulatory authorities;
- federal agencies, such as the DOL;
- state law enforcement agencies and
- state attorneys general.

Each state has insurance guaranty association laws under which insurers doing business in a state can be assessed, up to prescribed limits, in order to cover contractual benefit obligations of insolvent insurance companies. The guaranty associations levy assessments on each member insurer in a jurisdiction on the basis of the proportionate share of the premiums written by such insurer in the lines of business in which the insolvent insurer is engaged. Some jurisdictions permit the member insurers to recover the assessments paid through full or partial premium tax offsets.

U.S. Executive Orders

The President of the United States manages the operations of the Executive branch of Government through Executive orders. As a U.S.-based business, we are subject to certain Executive orders that could affect our business, operations, regional footprint, risk management strategies and investments and increase our costs of compliance.

Securities Regulation

Insurance and investment products that require registration with the SEC, such as variable annuities, variable life insurance and some funding agreements that constitute securities and mutual fund products are subject to securities laws and regulations, including U.S. state securities regulation as well as U.S. federal regulation under the SEC, FINRA and other regulatory authorities. These regulations affect investment advice, sales and related activities for these products and the compliance oversight construct.

We also have entities that are registered as investment advisers with the SEC under, and are therefore subject to, the Investment Advisers Act of 1940.

Employee Retirement Income Security Act

As we provide products and services for U.S. and Puerto Rico employee benefit plans, we are subject to regulation under the Employee Retirement Income Security Act ("ERISA"). ERISA provisions include reporting and disclosure requirements and standards of conduct.

Banking Regulation

Principal Bank, a wholly owned subsidiary, is a U.S. federal savings bank regulated by the Office of the Comptroller of the Currency. Principal Bank's depositors are insured by the FDIC up to specified limits, making Principal Bank subject to certain of the FDIC's regulations.

Trust Regulation

Delaware Charter Guarantee & Trust Company conducting business as Principal Trust Company, a wholly owned subsidiary, is a Delaware state chartered trust company regulated by the State of Delaware Office of the State Bank Commissioner. Principal Trust Company is subject to Delaware banking and trust law.

Principal Global Investors Trust Company, a wholly owned subsidiary, is an Oregon state registered banking corporation with trust powers regulated by the State of Oregon Division of Financial Regulations. Principal Global Investors Trust Company is subject to Oregon banking regulations.

Environmental Regulation

As we own and operate real property, we are subject to U.S. federal, state and local environmental laws, as well as international environmental laws and could be subject to environmental liabilities and costs associated with required remediation of our properties. We routinely have environmental assessments performed for real estate being acquired or used as collateral for commercial mortgages we use for investment.

Regulation of International Businesses

Our international businesses are supervised by regulatory authorities in the jurisdictions in which they operate, including regulation and supervision by insurance, securities, tax and privacy regulatory authorities. The purpose of these regulations is similar to the U.S., to protect our customers and the overall financial system. Regulations such as the revised Markets in Financial Instruments Directive and the General Data Protection Regulation ("GDPR") have a global impact on our businesses.

Risk Management

Like all financial services companies, we are exposed to a wide variety of financial, operational and other risks, as described in Item 1A. "Risk Factors." We have formalized our enterprise risk management approach to enable us to have the right people, culture, tools, knowledge, information, processes and controls in place to effectively identify, measure, monitor, communicate and manage risks within established limits and risk tolerances. Enterprise Risk Management is a key component of our business model at Principal. It helps us:

- Identify and successfully manage those risks that present profitable growth opportunities and avoid those that don't.
- Balance the sometimes-competing demands of our various constituencies; meet our customer obligations, satisfy regulatory requirements and optimize shareholder returns relative to the risks we take.

We utilize an integrated risk management framework to help us identify, assess, monitor, report, manage and aggregate our material risks within established risk appetites and risk tolerances. The framework delivers important perspective that is used in strategic and tactical decision making and is adaptable to changes in our businesses and in the external environments in which we operate. Our approach also requires a commitment to continuous improvement and ongoing validation.

Our governance structure includes Board of Directors oversight, internal risk committees, an enterprise risk management function and embedded risk professionals in our business units and functional areas. Our Board of Directors, Audit Committee, Finance Committee, Human Resource Committee and Nominating and Governance Committee provide oversight no less frequently than quarterly, addressing relevant aspects of our risk profile.

Our internal risk committees meet on a regular and frequent basis to discuss various issues and review profile status. Each business unit has its own committee that is responsible for oversight of the material risks within the unit or area. These committees may include corporate leaders. We also have internal committees that provide oversight around a certain risk or group of related risks across the organization. This matrix approach helps us maintain comprehensive risk coverage and preserve an integrated view of risks. The Enterprise Risk Management Committee, comprised of members from the Executive Management Group ("EMG"), exercises enterprise-wide oversight for our most significant risk profiles.

The business units and functional areas have primary responsibility for identifying, assessing, monitoring, reporting and managing their own risks. Chief Risk Officers dedicated to each business unit, and the enterprise Chief Risk Officer and supporting staff are independent of the business areas and work closely with the objective and dedicated risk professionals in the business areas to provide objective oversight, framework enablement and aggregated risk analysis. This results in a model where risk management can be closer to actual risks while also facilitating effective oversight and consolidation at the enterprise level.

Internal Audit provides independent, risk-based and objective assurance and advice designed to add value and improve our operations. It helps us accomplish our objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, internal control and governance processes; and by promoting continuous improvement. The Chief Internal Auditor reports functionally to the Board Audit Committee and administratively to the enterprise Senior Vice President and Chief Risk Officer.

Risk appetites, tolerances and limits have been established from an enterprise-wide and business unit perspective for specific risk categories, where appropriate. We monitor a variety of risk metrics on an ongoing basis and take the appropriate steps to manage our established risk appetites and tolerances. Quarterly risk reporting provides a feedback loop between business units, functional areas, our internal risk committees and the enterprise risk management function. This reporting also includes perspectives on emerging risk. To the extent potentially significant business activities or operational initiatives are considered, analysis of the possible impact on our risk profile takes place. This analysis includes, but is not limited to, the capital implications; the impact on near term and long-term earnings; the ability to meet our targets with respect to return on equity, liquidity, debt/capital, cash coverage, business risk and operational risk; and the impact to our reputation.

Human Capital

As of December 31, 2022, we employed approximately 19,300 people across the globe. Our employees work from many locations across multiple businesses and are united behind a common purpose: to help more people and businesses around the globe gain greater access to financial security. We start by listening to our customers to understand their needs, goals and barriers. From there, we leverage our global expertise to provide the guidance, products and experiences to create opportunities for more people to save, invest and protect their financial futures. Our purpose serves as a foundation for attracting, retaining and developing a workforce motivated by quality employment and purposeful work.

In 2022 we continued to acquire top talent amid a tight labor market. Our flexible work arrangements allowed leaders access to diverse, global talent. We have a long history of supporting employees' work arrangement needs; and, as we emerge from the COVID-19 pandemic, we continue to offer flexibility to our teams. We are clear that our top priorities remain the needs of our customers and our business, and we rely on our leadership community to manage the flexibility and work arrangements of our global workforce while effectively enabling these top priorities.

We invest in the growth and development of our employees in a variety of ways, including through experiential learning, relationships with colleagues, formal programming and just-in-time resources. We curate learning content that aligns with enterprise priorities to ensure employees have the skills necessary to contribute to our success now and into the future. These investments also make certain that our employees can develop the skills most critical to their current and future career aspirations. We continue to pilot new programs that help onboard new hires and enable all our employees to navigate their career. Additional targeted development opportunities exist for leaders and employees identified as high potential talent.

We know a diverse workforce and inclusive culture make us stronger, which is why we strive to provide a work environment where every employee feels welcomed, respected and has an opportunity to thrive. We are committed to providing our leaders across the globe with regular implicit bias and inclusive leadership training, with the goal of establishing better-connected teams and enabling thoughtful decision-making. As of December 31, 2022, we had 9 employee resource groups ("ERGs"), comprised of employees motivated to listen, reflect and provide cultural insights. Our ERGs play an integral role in creating an inclusive workplace. In 2022, our global mentoring program entered its third year, enabling colleagues from around the world to build relationships, encourage and educate each other. In addition, we held our first Global Inclusion Summit, at which senior executives and employees hosted sessions on a variety of inclusion-related topics.

Internally, we measure the progress of our diversity, equity and inclusion efforts in multiple ways, including through a Diversity Index comprised of predominantly objective metrics. We also survey employees about their sense of belonging and report the results through our Global People Inclusion Index. The results of our Diversity Index and Global People Inclusion Index help us to measure company-wide performance. In 2022, we continued to partner with an external consultant to conduct an annual, global pay equity study; we believe the results of this study place us in a best-in-class category as compared to financial services industry peers.

In 2022, we also continued to receive external recognition. We were included by Forbes in its lists of Best Employers for Women (July 2022) and Best Employers for Diversity (April 2022). We earned perfect scores on the Disability: IN Disability Equality Index (August 2022) and the Human Rights Campaign Foundation's 2022 Corporate Equality Index (January 2022), the latter of which resulted in the designation of a Best Place to Work for LGBTQ+ Equality. In addition, we participated in the Bloomberg Gender Equality Index, which resulted in recognition on the national Diversity MBA Media's list "50 Out Front; Best Places to Work for Women and Diverse Managers." On top of these inclusion-focused accolades, in 2022 we were recognized by IDG's Computerworld as one of its 100 Best Places to Work in IT (December 2022), and by Pensions & Investments as one of the Best Places to Work in Money Management (December 2022).

We continuously strive to evolve our human capital policies and processes. To better understand and improve upon talent trends, in 2022 we implemented a single, people scorecard, where we report employee data on retention, learning, hiring, engagement and productivity. We also piloted company-wide exit surveys for employees and leaders, enabling us to better understand turnover trends and rationale. Leaders conducted proactive employee stay conversations and quarterly performance check-ins. In addition, we actively monitored our Engagement Index, which is a clear indicator of employee engagement across the organization. These tools allowed us to gather insights and create actions to manage turnover, including through tailored development opportunities and compensation increases for roles in high demand. As of December 31, 2022, for our global employee population the average tenure was 9.3 years and the annual turnover rate was 20.9%. As of December 31, 2022, for our U.S. employees only, the average tenure was 12.1 years and the annual turnover rate was 13.0%. Our customer focus, commitment to ethical practices, continuous learning opportunities and inclusive environment drive a strong culture where employees can thrive.

Our competitive total rewards offerings are also critical components of our employee value proposition. The programs for the broader employee population include our employee stock purchase plan and our annual incentive program. For select roles, we offer a long-term incentive plan, which is a stock-based compensation plan. Critical talent and high performing employees are eligible to receive stock awards under our discretionary stock program. Retirement programming for U.S. employees includes eligibility for our 401(k) plan, with a robust company match. Additionally, employees outside our asset management business are eligible to participate in a cash balance defined benefit plan. Outside of the U.S., retirement programming varies by country but commonly exceeds statutory requirements. We also offer employees a comprehensive suite of health and welfare benefits, designed to support them through all stages of their career and life. We put a special emphasis on employee wellbeing by offering a wide range of programming aimed at improving overall health, including a state-of-the-art wellness center at our global headquarters and gym reimbursement at other locations.

In addition to providing competitive total rewards, we provide our global workforce a myriad of opportunities to support their communities and causes that are important to them. We encourage in-person and virtual volunteerism through our volunteer time off policy. As an example of this, in 2022, employees helped map areas most vulnerable to natural disasters to improve and increase humanitarian aid at times of crisis. In addition, our teams logged significant miles walking, running and rolling to raise money for global disaster relief organizations. At the Community Learning Center housed at our global headquarters in Des Moines, Iowa, employees have ready access to a variety of volunteer opportunities, including the ability to mentor students, provide professional development coaching and teach technology and coding skills. A generous Dollars for Doers program provides employees a microgrant credit based on annual volunteer hours recorded, enabling employees to contribute earned credits to any nonprofit they choose. We also offer a giving program through which the company provides a 50% match on employee monetary contributions, with the company match going directly to the organization to which an employee has donated.

The following tables provide demographic data for our employee workforce as of December 31, 2022. The Employees category represents our entire employee workforce, including Management, Senior Management and members of our EMG. The Management category includes all people leaders who have at least one direct report, excluding Senior Management and EMG members. The Senior Management category is comprised of Senior Vice Presidents and employees with equivalent titles, excluding EMG members. Our EMG includes the Chief Executive Officer and primarily the Chief Executive Officer's direct reports.

	Global			
	Employees	**Management**	**Senior Management**	**EMG**
Female	**54%**	**46%**	**45%**	**38%**
Male	**46**	**54**	**55**	**62**

	U.S. (1)			
	Employees	**Management**	**Senior Management**	**EMG**
Asian	**4%**	**3%**	**9%**	**9%**
Black	**5**	**2**	**—**	**9**
Latino	**4**	**2**	**—**	**—**
White	**85**	**92**	**82**	**82**
All other races	**2**	**1**	**9**	**—**

(1) Reporting on racial diversity is more nuanced, and in many cases, not disclosed outside the U.S. As of December 31, 2022, approximately 7,200 Employees, approximately 1,000 people in Management, no people in Senior Management and 2 EMG members were based outside the U.S.

The following table provides demographic data for the Directors on the PFG Board of Directors as of December 31, 2022.

	Board of Directors
Female	**38%**
Male	**62**
Black	**15%**
Latino	**15**
White	**70**

Internet Website

Our internet website can be found at www.principal.com. We make available free of charge, on or through our internet website, access to our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 as soon as reasonably practicable after such material is filed with or furnished to the SEC. These reports are also available on the SEC's website at www.sec.gov. Also available free of charge on our internet website is our code of business conduct and ethics, corporate governance guidelines and charters for the Audit, Finance, Human Resources and Nominating and Governance committees of our Board of Directors. Also see Item 10. “Directors, Executive Officers and Corporate Governance.”

Item 1A. Risk Factors

Summary of Risk Factors

This section provides a summary of the risks that may impact our performance in the future. For details of our various risk factors and their impacts, see “Risk Factors Discussion.”

Our risk factors are organized into the following categories: 1) Risks relating to economic conditions, market conditions and investments, 2) Risks relating to estimates, assumptions and valuations, 3) Risks relating to laws, regulations and taxation, 4) Risks relating to our business and 5) General risks.

Risks relating to economic conditions, market conditions and investments

In general, economic and market conditions can cause variability in the following factors: demand for our products and services, short-term and long-term interest rates, inflation and deflation, equity returns, credit spreads, liquidity of investments, level of premiums and deposits, level of delinquencies and defaults, level of claims, level of surrenders and withdrawals and foreign exchange rates. The net effect of this variability can include reductions in business volumes or AUM, reductions in revenues, additional operating expenses, reductions or volatility in net income, inability to meet liquidity needs, inability to access capital and increased cost of capital.

Risks relating to estimates, assumptions and valuations

We use financial models to price our products, calculate reserves and other actuarial balances, value our investments and determine the amount of allowances or impairments taken on our investments. These models include the use of methodologies, assumptions and estimates. If actual experience is different than our models, our financial results could be impacted. This could impact the timing of our net income or adversely affect our results of operations and financial condition.

On January 1, 2023, we will adopt authoritative guidance that will update certain requirements in the accounting for long-duration insurance and annuity contracts. This guidance will change the way we calculate the liability for future policy benefits on traditional and limited-payment contracts, will result in measuring market risk benefit (“MRB”) assets and liabilities at fair value and will change the amortization method used for deferred acquisition cost (“DAC”) asset and other actuarial balances. Applicable risks relating to estimates, assumptions and valuations have considered this guidance.

Risks relating to laws, regulations and taxation

Many different regulatory bodies govern our company. We are required to comply with securities laws; insurance regulations; employee benefit plan regulations; financial services regulations; U.S. and international tax regulations; environmental, social and governance (“ESG”) requirements; and cybersecurity and privacy regulations. Complying with the various regulations can increase our cost of doing business, limit our available capital or impact how we do business. We could also face potential fines or reputational risk if we do not comply. In addition, changes in tax laws can reduce sales of certain tax-advantaged products or increase our operating expenses. Changes in accounting standards may adversely impact reported results of operations and financial condition. Litigation and tax audits can increase costs and create adverse publicity.

Risks relating to our business

Business risks include risks associated with competition, products, fraud, external business partner relationships and acquisitions. In general, the risks related to our business can cause variability in the following factors: demand for our products and services, level of premiums and deposits, level of claims and level of surrenders and withdrawals. The net effect of this variability can include reductions in business volumes, disruptions in business operations, reductions in revenues, increased claims or operating expenses, reduced economic activity, reductions or volatility in net income or adverse effects on our results of operations and financial condition.

General risks

These risks are of a general nature and include the risk of catastrophic event; the risk of global climate change; the risk of technological and societal changes; reputational risk; intellectual property risk; risks associated with attracting, developing and retaining qualified employees; the risk of interruptions in information technology, infrastructure or other systems; loss of key vendor relationships and risks associated with our enterprise risk management framework. General risks can result in reductions in business volumes, reductions in revenues, additional operating expenses, reductions or volatility in net income, or adverse effects on our results of operations and financial condition.

Risk Factors Discussion

In the discussion below, we have risk factors in which we provide details related to our investment portfolio, excluding investments held as part of a coinsurance with funds withheld agreement. We believe the details of the composition of our investment portfolio excluding the funds withheld are most relevant to an understanding of our risks that are pertinent to investors because all funds withheld assets support obligations and liabilities relating to the Reinsurance Transaction.

Risks relating to economic conditions, market conditions and investments

Adverse capital and credit market conditions may significantly affect our ability to meet liquidity needs, as well as our access to capital and cost of capital.

Our results of operations, financial condition, cash flows and capital position could be materially adversely affected by volatility, uncertainty and disruption in the capital and credit markets.

We maintain a level of cash and securities which, combined with expected cash inflows from investments and operations, is believed adequate to meet anticipated short-term and long-term benefit and expense payment obligations. However, withdrawal and surrender levels may differ from anticipated levels for a variety of reasons, such as changes in economic conditions or changes in our claims paying ability and financial strength ratings. For additional information regarding our exposure to interest rate risk and the impact of a downgrade in our financial strength ratings, see "— Changes in interest rates or credit spreads or a prolonged low interest rate environment may adversely affect our results of operations, financial condition and liquidity, and our net income can vary from period to period" and "— A downgrade in our financial strength or credit ratings may increase policy surrenders and withdrawals, reduce new sales, terminate relationships with distributors, impact existing liabilities and increase our cost of capital, any of which could adversely affect our profitability and financial condition." In addition, mark-to-market adjustments on our investments and derivative instruments may lead to fluctuations in our reported capital. Volatility, uncertainty or disruptions in the capital or credit markets may result in the need for additional capital to maintain a targeted level of U.S. statutory capital relative to the NAIC's RBC requirements. In the event our current internal sources of liquidity do not satisfy our needs, we may have to seek additional financing and, in such case, we may not be able to successfully obtain additional financing on favorable terms or at all. The availability of additional financing will depend on a variety of factors such as market conditions, the general availability of credit, the volume of trading activities, the overall availability of credit to the financial services industry, our credit ratings and credit capacity, as well as customers' or lenders' perception of our long- or short-term financial prospects. Similarly, our access to funds may be impaired if regulatory authorities or rating agencies take negative actions against us.

Disruptions, uncertainty or volatility in the capital and credit markets may limit our access to capital required to operate our business, most significantly our insurance operations. Such market conditions may limit our ability to replace, in a timely manner, maturing liabilities; satisfy statutory capital requirements; fund redemption requests on insurance or other financial products; generate fee income and market-related revenue to meet liquidity needs and access the capital necessary to grow our business. As such, we may be forced to delay raising capital, issue shorter tenor securities than we prefer, utilize available internal resources or bear an unattractive cost of capital, which could decrease our profitability and significantly reduce our financial flexibility and liquidity.

In addition, we maintain credit facilities with various financial institutions as a potential source of excess liquidity. These facilities are in place to bridge timing in cash flows to minimize the cost of meeting our obligations, particularly during periods when alternative sources of liquidity are limited. Our ability to borrow funds under these facilities is conditioned on our satisfaction of covenants and other requirements contained in the facilities. Our failure to comply with these covenants, or the failure of lenders to fund their lending commitments, would restrict our ability to access these credit facilities and, consequently, could limit our flexibility in meeting our cash flow needs.

For further discussion on liquidity risk management, see Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources."

Conditions in the global capital markets and the economy generally may materially and adversely affect our business and results of operations.

Our results of operations are materially affected by conditions in the global capital markets and the economy generally, both in the U.S. and elsewhere around the world. Continued adverse economic conditions may result in a decline in our AUM, AUA and revenues and erosion of our profit margins. In addition, in the event of extreme prolonged market events and economic downturns, we could incur significant losses. Even in the absence of a market downturn, we are exposed to substantial risk of loss due to market volatility.

Factors such as consumer spending, business investment, government spending, the volatility and strength of the capital markets, investor and consumer confidence, foreign currency exchange rates, inflation levels and our ability to manage inflation risk effectively all affect the business and economic environment and, ultimately, the amount and profitability of our business. In an economic downturn characterized by higher unemployment, lower family income, lower corporate earnings, lower business investment, negative investor sentiment and lower consumer spending, the demand for our financial and insurance products could be adversely affected. In addition, we may experience an elevated incidence of claims and lapses or surrenders of policies. Our policyholders may choose to defer paying insurance premiums or stop paying insurance premiums altogether. In addition, reductions in employment levels of our existing employer customers may result in a reduction in membership levels and premium income for our specialty benefits products. Participants within the retirement plans for which we provide administrative services may elect to reduce or stop their payroll deferrals to these plans, which would reduce AUM, AUA and revenues. In addition, reductions in employment levels may result in a decline in employee deposits into retirement plans. Adverse changes in the economy could affect net income negatively and could have a material adverse effect on our business, results of operations and financial condition.

An economic downturn may also lead to weakening of foreign currencies against the U.S. dollar, which would adversely affect the translation of segment pre-tax operating earnings and equity of our international operations into our consolidated financial statements. For further discussion on foreign currency exchange risk, see Item 7A. "Quantitative and Qualitative Disclosures About Market Risk — Foreign Currency Risk."

Volatility or declines in the equity, bond or real estate markets could reduce our AUM and AUA and may result in investors withdrawing from the markets or decreasing their rates of investment, all of which could reduce our revenues and net income.

Because the revenues of our asset management and accumulation businesses are, to a large extent, based on the value of AUM and AUA, a decline in domestic and global equity, bond or real estate markets will decrease our revenues. Turmoil in these markets could lead investors to withdraw from these markets, decrease their rates of investment or refrain from making new investments, which may reduce our AUM, AUA, revenues and net income.

For further discussion on equity risk management, see Item 7A. "Quantitative and Qualitative Disclosures About Market Risk — Equity Risk."

Changes in interest rates or credit spreads or a prolonged low interest rate environment may adversely affect our results of operations, financial condition and liquidity, and our net income can vary from period to period.

During periods of declining interest rates or prolonged low interest rates, the interest rates we earn on our assets may be lower than the rates assumed in pricing our products, thereby reducing our profitability. For some of our products, such as GICs and funding agreements, we are unable to lower the rate we credit to customers in response to the lower return we will earn on our investments. In addition, guaranteed minimum interest rates on our life insurance and annuity products may constrain our ability to lower the rate we credit to customers. Declining interest rates may also lead to a reduction in revenues related to our trust and custody business. Declining interest rates may result in increases in our reserves and other actuarial balances, potentially reducing net income or other comprehensive income ("OCI"). During periods of declining interest rates, borrowers may prepay or redeem mortgages and bonds that we own, which would force us to reinvest the proceeds at lower interest rates. Furthermore, declining interest rates may reduce the rate of policyholder surrenders and withdrawals on our life insurance and annuity products, thus increasing the duration of the liabilities and creating asset and liability duration mismatches. Low interest rates may also increase the cost of hedging our GMWB rider. Declining interest rates or a prolonged low interest rate environment may also result in changes to the discount rate used for valuing our pension, and other postretirement employee benefit ("OPEB") obligations, which could negatively impact our results of operations and financial condition. In addition, certain statutory capital and reserve requirements are based on formulas or models that consider interest rates and a prolonged period of low interest rates may increase the statutory capital we are required to hold as well as the amount of assets we must maintain to support statutory reserves. Declining interest rates may cause a decrease in the value of MRB assets and an increase in the value of MRB liabilities and other liabilities held at fair value on our consolidated statements of financial position, potentially reducing net income or OCI.

Increases in market interest rates may also adversely affect our results of operations, financial condition and liquidity. During periods of increasing market interest rates, we may offer higher crediting rates on our insurance and annuity products in order to keep these products competitive. Because returns on our portfolio of invested assets may not increase as quickly as current interest rates, we may have to accept lower spreads, thus reducing our profitability. Rapidly rising interest rates may also result in an increase in policy surrenders, withdrawals and requests for policy loans as customers seek to achieve higher returns. In addition, rising interest rates may cause a decrease in the value of financial assets held at fair value on our consolidated statements of financial position. We may be required to sell assets to raise the cash necessary to respond to an increase in surrenders, withdrawals and loans, thereby realizing capital losses on the assets sold. An increase in policy surrenders and withdrawals may also require us to accelerate amortization of our DAC asset relating to these products. Rising interest rates may also cause a decline in the value of the fixed income assets we manage, resulting in a reduction in our fee revenue in the short term. In addition, a significant increase in interest rates may cause a reduction in the fair value of intangible assets in our reporting units, potentially leading to an impairment of goodwill or other intangible assets.

For further discussion about interest rate risk management, see Item 7A. "Quantitative and Qualitative Disclosures About Market Risk — Interest Rate Risk."

Our exposure to credit spreads primarily relates to market price variability and reinvestment risk associated with changes in credit spreads. A widening of credit spreads would cause unrealized losses in our investment portfolio, would increase losses associated with credit-based derivatives we have sold that do not qualify or have not been designated for hedge accounting where we assume credit exposure and, if issuer credit spreads increase as a result of fundamental credit deterioration, would likely result in higher allowances. Credit spread tightening will reduce net investment income associated with new purchases of fixed maturities. Credit spread tightening may also cause an increase in the reported value of certain liabilities that are valued using a discount rate that reflects our own credit spread. In addition, market volatility may make it difficult to value certain of our securities if trading becomes less frequent. As such, valuations may include assumptions or estimates that may have significant period-to-period changes from market volatility, which could have a material adverse effect on our results of operations or financial condition.

The elimination of the London Inter-Bank Offered Rate (“LIBOR”) may affect the value of certain derivatives and floating rate securities we hold or have issued and the profitability of certain real estate lending activity or businesses.

In March 2021, the United Kingdom’s Financial Conduct Authority announced that LIBOR will no longer be published on a representative basis after December 31, 2021, with the exception of the most commonly used tenors of U.S. dollar LIBOR, which will no longer be published on a representative basis after June 30, 2023. The transition to other reference rates may affect the value of certain derivatives and floating rate securities we hold, floating rate securities we have issued and the profitability of certain real estate lending activity. Additionally, pricing activities, models and the profitability of certain businesses may also be impacted.

The U.S. Federal Reserve, based on the recommendations of the New York Federal Reserve’s Alternative Reference Rate Committee (comprised of major derivative market participants and their regulators), began publishing in April 2018 a Secured Overnight Financing Rate (“SOFR”) as the replacement rate for U.S. dollar LIBOR. In March 2022, federal legislation was enacted to provide a statutory framework to replace LIBOR with a benchmark rate based on SOFR in many contracts that do not have fallback provisions or that have fallback provisions resulting in a replacement rate based on LIBOR.

The effect of any changes to LIBOR or discontinuation of LIBOR on new or existing financial instruments, liabilities or operational processes will vary depending on a number of factors. Examples of potential factors include, but are not limited to: fallback provisions in contracts; adoption of replacement language in contracts where such language is currently absent; legislative remedies that address fallback provisions; potential changes in spreads causing valuation changes; treatment of hedge effectiveness and impacts on models and systems. We have been and will continue to identify, assess and monitor market and regulatory developments; assessing agreement terms and continue to execute our operational readiness.

Our investment portfolio is subject to several risks that may diminish the value of our invested assets and the investment returns credited to customers, which could reduce our sales, revenues, AUM and net income.

An increase in defaults or write-downs on our fixed maturities portfolio may reduce our profitability.

We are subject to the risk that the issuers of the fixed maturities we own will default on principal and interest payments. As of December 31, 2022, our U.S. investment operations held $44.7 billion of fixed maturities, or 65% of total U.S. invested assets, of which approximately 7% were below investment grade, and $42.7 million, or 0.1% of our total fixed maturities, were classified as either “problem,” “potential problem” or “restructured.” See Item 7. “Management’s Discussion and Analysis of Financial Condition and Results of Operations — Investments — U.S. Investment Operations — Fixed Maturities.”

As of December 31, 2022, the international investment operations of our fully consolidated subsidiaries held $3.1 billion of fixed maturities, or 42%, of total international invested assets, of which 4% are government bonds. Some non-government bonds have been rated on the basis of the issuer’s country credit rating. However, the ratings relationship between national ratings and global ratings is not linear with the U.S. The starting point for national ratings differs by country, which makes the assessment of credit quality more difficult. See Item 7. “Management’s Discussion and Analysis of Financial Condition and Results of Operations — Investments — International Investment Operations.” An increase in defaults on our fixed maturities portfolio could harm our financial strength and reduce our profitability.

An increased rate of delinquency and defaults on our commercial mortgage loans, including balloon maturities with and without amortizing payments, may adversely affect our profitability.

Our commercial mortgage loan portfolio faces both delinquency and default risk. Commercial mortgage loans of $14.0 billion represented 18% of our total invested assets as of December 31, 2022. As of December 31, 2022, there were no loans in the process of foreclosure in our commercial mortgage loan portfolio. The performance of our commercial mortgage loan investments, however, may fluctuate in the future. An increase in the delinquency rate of, and defaults under, our commercial mortgage loan portfolio could harm our financial strength and decrease our profitability.

As of December 31, 2022, approximately $11.4 billion, or 84%, of our U.S. investment operations commercial mortgage loans before valuation allowance had balloon payment maturities. A balloon maturity is a loan with all or a meaningful portion of the loan amount due at the maturity of the loan. The default rate on commercial mortgage loans with balloon payment maturities has historically been higher than commercial mortgage loans with a fully amortizing loan structure. Since a significant portion of the principal is repaid at maturity, the amount of loss on a default is generally greater than fully amortizing commercial mortgage loans. An increase in defaults on balloon maturity loans as a result of the foregoing factors could harm our financial strength and decrease our profitability.

Mark-to-market adjustments on equity securities, trading securities and derivative instruments may reduce our profitability or cause volatility in our net income.

Our investment portfolio includes equity securities, trading securities and derivative instruments that are reported at fair value on the consolidated statements of financial position with changes in fair value reported in net income. Mark-to-market adjustments on these investments may reduce our profitability or cause our net income to vary from period to period. We anticipate that acquisition and investment activities may increase the number and magnitude of these investments in the future.

We may have difficulty selling our privately placed fixed maturities, mortgage loans and real estate investments because they are less liquid than our publicly traded fixed maturities.

We hold certain investments that may be less liquid than our publicly traded fixed maturities, such as privately placed fixed maturities, mortgage loans and real estate investments. These asset classes represented approximately 38% of the value of our total invested assets as of December 31, 2022.

If we require significant amounts of cash on short notice, we may have difficulty selling these investments in a timely manner, be forced to sell them for less than we otherwise would have been able to realize or both. The reported value of our relatively illiquid types of investments, our investments in the asset classes described above and, at times, our high quality, generally liquid asset classes, do not necessarily reflect the lowest possible price for the asset. If we were forced to sell certain of our assets in the current market, there can be no assurance we will be able to sell them for the prices at which we have recorded them, and we may be forced to sell them at significantly lower prices.

The impairment of derivative counterparties could adversely affect us.

We use derivative instruments to hedge various risks we face in our businesses. See Item 7A. “Quantitative and Qualitative Disclosures About Market Risk.” We enter into a variety of derivative instruments with a number of counterparties in the financial services industry, including brokers and dealers, commercial banks, investment banks, clearinghouses, exchanges and other institutions. For transactions where we are in-the-money, we are exposed to credit risk in the event of default of our counterparty. We establish collateral agreements with nominal thresholds for a large majority of our counterparties to limit our exposure. However, our credit risk may be exacerbated when the collateral held by us cannot be realized or is liquidated at prices not sufficient to recover the full amount of the derivative exposure. With regard to our derivative exposure, we have over-collateralization requirements on the portion of collateral we hold, based on the risk profile of the assets posted as collateral. We also have exposure to these financial institutions in the form of unsecured debt instruments and equity investments. Such losses or impairments to the carrying value of these assets may materially and adversely affect our business and results of operations.

Our requirements to post collateral or make payments related to declines in market value of specified assets may adversely affect our liquidity and expose us to counterparty credit risk.

Many of our derivative transactions with financial and other institutions specify the circumstances under which the parties are required to post collateral. We are also required to post collateral in connection with funding agreements with the FHLB Des Moines, reinsurance agreements, and various other transactions. The amount of collateral we may be required to post under these agreements may increase under certain circumstances, which could adversely affect our liquidity. In addition, under the terms of some of our transactions we may be required to make payment to our counterparties related to any decline in the market value of the specified assets. Such payments could have an adverse effect on our liquidity. Furthermore, with respect to any such payments, we will have unsecured risk to the counterparty as these amounts are not required to be segregated from the counterparty's other funds, are not held in a third party custodial account and are not required to be paid to us by the counterparty until the termination of the transaction.

Environmental liability exposure may result from our commercial mortgage loan portfolio and real estate investments.

Liability under environmental protection laws resulting from our commercial mortgage loan portfolio and real estate investments may harm our financial strength and reduce our profitability. Under the laws of several states and other jurisdictions, contamination of a property may give rise to a lien on the property to secure recovery of the costs of cleanup. In some states, this kind of lien has priority over the lien of an existing mortgage against the property, which would impair our ability to foreclose on that property should the related loan be in default. In addition, under the laws of some states and under the U.S. Comprehensive Environmental Response, Compensation and Liability Act of 1980, we may be liable for costs of addressing releases or threatened releases of hazardous substances that require remedy at a property securing a mortgage loan held by us, if our agents or employees have become sufficiently involved in the hazardous waste aspects of the operations of the related obligor on that loan, regardless of whether or not the environmental damage or threat was caused by the obligor. We also may face this liability after foreclosing on a property securing a mortgage loan held by us. This may harm our financial strength and decrease our profitability.

Regional concentration of our commercial mortgage loan portfolio in California may subject us to losses attributable to economic downturns or catastrophes in that state.

Commercial mortgage lending in the state of California accounted for 26%, or $3.5 billion, of our U.S. investment operations commercial mortgage loan portfolio before valuation allowance as of December 31, 2022. Due to this concentration of commercial mortgage loans in California, we are exposed to potential losses resulting from the risk of an economic downturn in California as well as to catastrophes, including but not limited to earthquakes, that may affect the region. While we generally do not require earthquake insurance for properties on which we make commercial mortgage loans, we do take into account property specific engineering reports, construction type and geographical concentration by fault lines in our investment underwriting guidelines. If economic conditions in California deteriorate or catastrophes occur, we may in the future experience delinquencies or defaults on the portion of our commercial mortgage loan portfolio located in California, which may harm our financial strength and reduce our profitability.

Gross unrealized losses may be realized or result in future credit losses, resulting in a reduction in our net income.

Fixed maturities that are classified as available-for-sale ("AFS") are reported on the consolidated statements of financial position at fair value. Unrealized gains or losses on AFS securities, excluding those in fair value hedging relationships, are recognized as a component of accumulated other comprehensive income ("AOCI") and are, therefore, excluded from net income. Our U.S. investment operations had gross unrealized losses on fixed maturities of $5,296.7 million pre-tax as of December 31, 2022, and the component of gross unrealized losses for securities in a continuous unrealized loss position for over twelve months and for which an allowance for credit loss has not been recorded was $1,572.3 million pre-tax. The accumulated change in fair value of the AFS securities is recognized in net income when the gain or loss is realized upon the sale of the asset or in the event that the decline in fair value requires an allowance for credit loss. Realized losses or credit losses may have a material adverse impact on our net income in a particular quarterly or annual period.

Fluctuations in foreign currency exchange rates could adversely impact our profitability and financial condition.

We are exposed to foreign currency risk in our international operations. Principal International sells products denominated in various local currencies and generally invests the associated assets in local currencies. For diversification purposes, assets backing the products may be partially invested in non-local currencies. In our U.S. operations, we also issue foreign currency-denominated funding agreements to nonqualified investors in the institutional market or invest in foreign currency-denominated investments. The associated foreign currency exchange risk in each instance is hedged or managed to specific risk tolerances. Although our investment and hedging strategies limit the effect of currency exchange rate fluctuation on operating results, weakening of foreign currencies against the U.S. dollar would adversely affect the translation of the results of our international operations into our consolidated financial statements. For further discussion on foreign currency exchange risk, see Item 7A. "Quantitative and Qualitative Disclosures About Market Risk — Foreign Currency Risk."

Risks relating to estimates, assumptions and valuations

Our valuation of investments and the determinations of the amount of allowances and impairments taken on our investments may include methodologies, estimations and assumptions that are subject to differing interpretations and, if changed, could materially adversely affect our results of operations or financial condition.

Fixed maturities, equity securities and derivatives represent the majority of assets and liabilities reported at fair value on our consolidated statements of financial position, excluding separate account assets. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price). Fair value estimates are made based on available market information and judgments about the financial instrument at a specific point in time. Considerable judgment is often required to develop estimates of fair value, and the use of different assumptions or valuation methodologies may have a material effect on the estimated fair value amounts.

For additional information on our valuation methodology, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 15, Fair Value Measurements."

During periods of market disruption including periods of significantly rising or high interest rates, rapidly widening credit spreads or illiquidity, it may be difficult to value certain securities, for example collateralized mortgage obligations and collateralized debt obligations, if trading becomes less frequent and/or market data becomes less observable. There may be certain asset classes that were in active markets with significant observable data that become illiquid due to the current financial environment. In such cases, the valuation process may require more subjectivity and management judgment. As such, valuations may include inputs and assumptions that are less observable or require greater estimation as well as valuation methods that require greater estimation, which could result in values that are different from the value at which the investments may be ultimately sold. Further, rapidly changing credit and equity market conditions could materially impact the valuation of securities as reported within our consolidated financial statements and the period-to-period changes in value could vary significantly. Decreases in value may have a material adverse effect on our results of operations or financial condition.

The determination of the amount of allowances and impairments varies by investment type and is based upon our periodic evaluation and assessment of known and inherent risks associated with the respective asset class. Such evaluations and assessments require significant judgment and are revised as conditions change and new information becomes available. Additional impairments may need to be taken or allowances provided for in the future, and the ultimate loss may exceed management's current loss estimates.

Additionally, our management considers a wide range of factors about the instrument issuer and uses its best judgment in evaluating the cause of the decline in the estimated fair value of the instrument and in assessing the prospects for recovery. Inherent in management's evaluation of the instrument are assumptions and estimates about the operations of the issuer and its future earnings potential. For further information regarding our impairment and allowance methodologies, see Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Investments — U.S. Investment Operations" under the captions "Fixed Maturities" and "Mortgage Loans" and Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies and Estimates — Valuation and Allowance for Credit Loss of Fixed Income Investments."

Any impairments of or valuation allowances against our deferred tax assets could adversely affect our results of operations and financial condition.

Deferred tax liabilities and assets are determined based on the difference between the financial statement and tax bases of assets and liabilities using enacted tax rates expected to be in effect during the years in which the basis differences reverse. We are required to evaluate the recoverability of our deferred tax assets each quarter and establish a valuation allowance, if necessary, to reduce our deferred tax assets to an amount that is more−likely−than−not to be realizable. In determining the need for a valuation allowance, we consider many factors, including future reversals of existing taxable temporary differences, future taxable income exclusive of reversing temporary differences and carryforwards, taxable income in prior carryback years and implementation of any feasible and prudent tax planning strategies management would employ to realize the tax benefit.

Inherent in the provision for income taxes are estimates regarding the deductibility of certain items, the timing of income and expense recognition and the current or future realization of operating losses, capital losses, certain tax credits and future enacted changes in applicable tax rates as well as the tax base. In the event these estimates differ from our prior estimates due to the receipt of new information, we may be required to significantly change the provision for income taxes recorded in the consolidated financial statements. Any such change could significantly affect the amounts reported in the consolidated financial statements in the year these estimates change. A further significant decline in value of assets incorporated into our tax planning strategies could lead to an increase of our valuation allowance on deferred tax assets having an adverse effect on current and future results.

For additional information, see Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies and Estimates — Income Taxes."

We may face losses on our insurance and annuity products if our actual experience differs significantly from our pricing and reserving assumptions.

The profitability of our insurance and annuity products depends significantly upon the extent to which our actual experience is consistent with the assumptions used in setting prices for our products and establishing liabilities for future insurance and annuity policy benefits and claims. The premiums we charge and the liabilities we hold for future policy benefits are based on assumptions reflecting a number of factors, including the amount of premiums we will receive in the future, rate of return on assets we purchase with premiums received, expected claims, mortality, morbidity, lapse rates and expenses. However, due to the nature of the underlying risks and the high degree of uncertainty associated with the determination of the liabilities for unpaid policy benefits and claims, we cannot precisely determine the amounts we will ultimately pay to settle these liabilities, the timing of such payments, or whether the assets supporting the liabilities, together with any future premiums, will be sufficient to satisfy the liabilities. As a result, we may experience volatility in the level of our profitability and our reserves from period to period. To the extent that actual experience is less favorable than our underlying assumptions, we may have to update our assumptions and increase our liabilities, which may harm our financial strength and reduce our profitability.

Our results of operations may also be adversely impacted if our actual investment earnings differ from our pricing and reserve assumptions. Changes in economic conditions may lead to changes in market interest rates or changes in our investment strategies, either of which could cause our actual investment earnings to differ from our pricing and reserve assumptions.

For additional information on our insurance reserves, see Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies and Estimates — Insurance Reserves."

The pattern of amortizing our DAC asset and other actuarial balances may change, impacting both the level of our DAC asset and other actuarial balances and the timing of our net income.

Amortization of our DAC asset and other actuarial balances depends on several assumptions, including but not limited to, mortality and policy lapse. Due to the uncertainty associated with establishing these assumptions, we cannot, with precision, determine the exact pattern of amortization. To the extent actual experience emerges less favorably than expected, the amortization pattern of our DAC asset and other actuarial balances may be adjusted, which may impact the timing of our net income.

For additional information, see Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies and Estimates — Deferred Acquisition Costs and Other Actuarial Balances."

Risks relating to laws, regulations and taxation

Changes in laws or regulations may reduce our profitability or impact how we do business.

Our businesses are subject to comprehensive regulation and supervision throughout the U.S. and in the international markets in which we operate. We are also impacted by federal legislation and administrative policies in areas such as securities laws, employee benefit plan regulations, financial services regulations, U.S. federal taxation and international taxation. Changes in laws or regulations or the interpretation thereof could significantly increase our compliance costs and reduce our profitability. Failure to comply with applicable regulations may expose us to significant penalties, the suspension or revocation of licenses to conduct business and reputational damage.

On December 29, 2022, the SECURE 2.0 Act of 2022 (“SECURE 2.0”) was enacted and includes a number of changes to the U.S. retirement system. While we are still evaluating SECURE 2.0, if proper implementation does not occur or if the provisions are less favorable than anticipated, the full benefits expected from the legislation may be reduced.

Changes in insurance regulations may reduce our profitability.

Our insurance subsidiaries are subject to extensive supervision and regulation. In particular, in the U.S., the laws of the various states establish insurance departments with broad powers to supervise and regulate insurance companies. The supervision and regulation relate to numerous aspects of our business and financial condition, including insurance company laws that apply to PFG and to various transactions between our insurance companies and subsidiaries and other affiliates. The primary purpose of insurance regulation is to protect policyholders, not stockholders or creditors.

State insurance regulators, federal regulators and the NAIC continually reexamine existing laws and regulations and may impose changes in the future. New interpretations of existing laws and the passage of new legislation may harm our ability to sell new policies, increase our claims exposure on policies we issued previously and adversely affect our profitability and financial strength.

State insurance guaranty associations have the right to assess insurance companies doing business in their state for funds to help pay the obligations of insolvent insurance companies to policyholders and claimants. Because the amount and timing of an assessment are beyond our control, the liabilities we have established for these potential assessments may not be adequate. In addition, regulators may change their interpretation or application of existing laws and regulations.

The NAIC regularly reviews and updates its U.S. statutory reserve and RBC requirements. Changes to these requirements may increase the amount of reserves and capital our U.S. insurance companies are required to hold and may adversely impact Principal Life’s ability to pay dividends or other distributions to its parent. See Item 7. “Management’s Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources” for a discussion of regulatory restrictions on Principal Life’s ability to pay dividends or other distributions. In addition, changes in statutory reserve or RBC requirements may adversely impact our financial strength ratings. See the risk factor entitled “A downgrade in our financial strength or credit ratings may increase policy surrenders and withdrawals, reduce new sales, terminate relationships with distributors, impact existing liabilities and increase our cost of capital, any of which could adversely affect our profitability and financial condition” for a discussion of risks relating to our financial strength ratings.

The NAIC continues to implement a principle-based reserving (“PBR”) approach to valuation of life insurance and annuities. In recent years, the PBR framework has been implemented for life insurance and variable annuities. Regulators plan to implement PBR for non-variable annuities in the next few years. The ultimate financial impact of these changes is uncertain, but they could result in more volatile and less predictable reserve and capital levels for these products.

We have implemented, or may implement at any time, reinsurance transactions utilizing affiliated reinsurers and highly rated third parties to finance a portion of the reserves for our term life insurance policies, universal life insurance policies with secondary guarantees and participating life insurance policies. Our ability to enter into new reserve financing transactions will continue to be dependent on the cost and forms of financing available in the market and our ability to obtain required regulatory approvals. For additional information regarding our use of affiliated reinsurance transactions, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 16, Statutory Insurance Financial Information."

The NAIC is pursuing a variety of reforms to its RBC framework, which could increase our capital requirements for our U.S. insurance businesses. Changes to the charge for mortality risk were adopted in 2022.

The NAIC has adopted a group capital calculation. This calculation is not intended to be a regulatory capital requirement, but it will be used by regulators in their supervisory process and could create an additional data point for regulators to consider in evaluating our capital position.

Our international insurance businesses are also subject to comprehensive regulation and supervision from central and/or local governmental authorities in each country in which we operate. New interpretations of existing laws and regulations or the adoption of new laws and regulations may harm our international businesses, increase the cost of compliance and reduce our profitability in those businesses.

The International Association of Insurance Supervisors has adopted its common framework for the supervision of Internationally Active Insurance Groups ("IAIGs"). We currently are not designated as an IAIG. If we were so designated in the future, we may be subject to supervision and capital requirements beyond those applicable to any competitors without those designations. These international frameworks may influence the regulatory capital requirements in the jurisdictions in which we operate, potentially leading to an increase in our capital requirements.

Changes in federal, state and international securities laws may reduce our profitability.

Our asset management and accumulation and life insurance businesses are subject to various levels of regulation under federal, state and international securities laws. For example, insurance and investment products such as variable annuities, variable life insurance, mutual fund products and some funding agreements that constitute securities are subject to securities laws and regulations, including state securities regulation as well as federal regulation under the SEC, FINRA and other regulatory authorities. These laws and regulations are primarily intended to protect investors in the securities markets or investment advisory or brokerage clients and generally grant supervisory agencies and self-regulatory organizations broad administrative powers, including the power to limit or restrict the conduct of business for failure to comply with such laws and regulations. In addition, we are subject to local laws and regulations in the global jurisdictions in which we offer or provide asset management services and products. Changes to these laws or regulations, or the interpretation thereof, that restrict the conduct of our business could significantly increase our compliance costs and reduce our profitability.

Changes in employee benefit regulations may reduce our profitability.

We provide products and services to certain employee benefit plans that are subject to ERISA or the Internal Revenue Code of 1986, as amended. The U.S. Congress has, from time to time, considered legislation relating to changes in ERISA to permit application of state law remedies, such as consequential and punitive damages, in lawsuits for wrongful denial of benefits, which, if adopted, could increase our liability for damages in future litigation. In addition, reductions in contribution levels to defined contribution plans may decrease our profitability.

The DOL is expected to initiate a planned regulatory project that includes evaluation of its prohibited transaction exemptions relating to fiduciary investment advice and a new rulemaking initiative related to the definition of fiduciary. Proposed rules are anticipated to be released in the near future. Similarly, some states may change their insurance and securities laws and/or regulations to address personalized investment advice. New states may adopt an updated NAIC model regulation, which made best interest enhancements to its existing annuity suitability model. Continuing related state fiduciary or "best interest" legislation and/or regulation could occur in 2023.

Financial services regulatory reform may reduce our profitability, impact how we do business or limit our ability to engage in certain capital expenditures.

On July 21, 2010, the Dodd-Frank Act became law. The Act made extensive changes to the laws regulating financial services firms and required various federal agencies to adopt a broad range of new implementation rules and regulations, including those surrounding the use of derivatives. Some aspects of Dodd-Frank continue to be implemented, and there are some efforts to eliminate or adjust certain elements of the law. Uncertainty remains regarding the continued implementation of and potential adjustments to Dodd-Frank and it is uncertain whether changes to Dodd-Frank will result in a material effect on our business operations.

Changes in cybersecurity or privacy regulations may increase our compliance costs, limit our ability to gain insight from data and lead to increased scrutiny.

We collect, process, store, share, disclose and use information from and about our customers, plan participants and website and application users, including personal information and other data. Any actual or perceived failure by us to comply with our privacy policies, privacy-related obligations to customers or third parties, data disclosure and consent obligations or privacy or cybersecurity-related legal obligations may result in governmental enforcement actions, litigation or public statements critical of us. Such actual or perceived failures could also cause our customers to lose trust in us, which could have an adverse effect on our business.

Restrictions on data collection and use may limit opportunities to gain business insights useful to running our business and offering innovative products and services.

We are subject to numerous federal, state and international regulations regarding the privacy and security of personal information. These laws vary widely by jurisdiction. The laws and regulations that affect our business include, but are not limited to the European Union ("EU") GDPR, U.S. federal, state and local data protection laws such as the New York Department of Financial Services Part 500 cybersecurity requirements for financial services companies, the California Consumer Privacy Act ("CCPA") and California Privacy Rights Act ("CPRA"), and China's Cybersecurity Law and the China Personal Information Protection Law ("PIPL"). Regulations such as these, which are designed to protect privacy and prevent misuse of personal information, are complex and change frequently. The public, consumer and privacy advocates, legislatures and regulators are increasingly concerned about the collection, use, sharing and cross border transfer of personal data, especially personal information that may be deemed sensitive, such as U.S. Social Security Numbers, financial information, behavioral data, and biometric and health data. Additional legislative or regulatory action in the United States and globally could further regulate our collection, use, sharing and other processing of personal data. Changes in existing cybersecurity and privacy regulations or the enactment of new regulations may increase our compliance costs and failure to comply with these regulations may lead to reputational damage, fines or civil damages and increased regulatory scrutiny.

Our financial results may be adversely impacted by environmental, social and governance requirements.

Our financial and operational results could be impacted by emerging risk and changes to the regulatory landscape in areas like ESG requirements. While we closely monitor and respond to topics like social, environmental, and demographic changes that include longer lifespans, income and wealth inequalities, environmental challenges and opportunities to expand global access to the financial system across all segments of the population, updated and changing regulatory and societal environment requirements could impact financial and operational results.

Changes and uncertainty in U.S. and non-U.S. legislation, policy or regulation regarding climate risk management or other ESG practices may result in higher regulatory costs, compliance costs and increased capital expenditures, and changes in regulations may impact security asset prices, resulting in realized or unrealized losses on our investments and decreased revenue from asset management. Physical risks and transitional risks could increase the company's cost of doing business. Actual or perceived failure to adequately address ESG expectations of our various stakeholders could lead to a tarnished reputation and loss of customers and clients and could negatively impact our access to capital.

Changes in tax laws could increase our tax costs and reduce sales of our insurance, annuity and investment products.

Many of the insurance, annuity and investment products we issue receive favorable tax treatment under current U.S. federal income tax laws. Changes in U.S. federal income tax laws could reduce or eliminate the tax advantages of certain of our products, thus making these products less attractive to our customers. This may lead to a reduction in sales and deposits, which may adversely impact our profitability.

In addition, we benefit from certain tax items, including but not limited to, dividends received deductions, tax credits (such as foreign tax credits), tax-exempt bond interest and insurance reserve deductions. From time to time, the U.S. Congress, as well as foreign, state and local governments, consider legislative changes that could reduce or eliminate the benefits associated with these and other tax items. The Organisation for Economic Co-operation and Development has released proposed policies around base erosion and profit shifting and modernizing global tax systems originally designed to only account for physical presence. Our profitability could be negatively impacted as legislation is adopted by participating countries. We continue to evaluate the impact potential tax reform proposals may have on our future results of operations and financial condition.

On August 16, 2022, the Inflation Reduction Act of 2022 ("IRA 2022") was enacted by the U.S. government. IRA 2022 contains several provisions, including the implementation of a new corporate alternative minimum tax (the Book Minimum Tax, or "BMT") and an excise tax on stock repurchases by certain corporations, which are effective January 1, 2023. Uncertainty remains regarding the continued implementation of and potential adjustments to IRA 2022 and it is uncertain whether IRA 2022 will result in a material effect on our business operations, profitability, or our ability to engage in certain capital expenditures.

For a further discussion of tax matters, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 11, Income Taxes."

Our ability to pay stockholder dividends, make share repurchases and meet our obligations may be constrained by the limitations on dividends or other distributions Iowa insurance laws impose on Principal Life.

We are an insurance holding company whose assets include all of the outstanding shares of the common stock of Principal Life and other subsidiaries. Our ability to pay dividends to our stockholders, make share repurchases and meet our obligations, including paying operating expenses and any debt service, depends upon the receipt of dividends or other distributions from Principal Life. Iowa insurance laws impose limitations on the ability of Principal Life to pay dividends or make other distributions to its parent. Any inability of Principal Life to pay dividends or make other distributions in the future may cause us to be unable to pay dividends to our stockholders and meet our other obligations. See Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources" for a discussion of regulatory restrictions on Principal Life's ability to pay dividends or make other distributions.

Changes in accounting standards may adversely affect our reported results of operations and financial condition.

Our consolidated financial statements are prepared in conformity with U.S. generally accepted accounting principles ("U.S. GAAP"). From time to time, we are required to adopt new or revised accounting standards issued by the Financial Accounting Standards Board ("FASB"). The required adoption of future accounting standards may adversely affect our reported results of operations and financial condition and may result in significant incremental costs associated with initial implementation and ongoing compliance. For a discussion of the impact of accounting pronouncements issued but not yet implemented, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 1, Nature of Operations and Significant Accounting Policies". In August 2018, the FASB issued final guidance on targeted improvements to the accounting for long-duration insurance contracts. The guidance will become effective for us on January 1, 2023. The new standards will change how we account for many of our insurance and annuity products, which could negatively impact our reported profitability and financial ratios.

Litigation and regulatory investigations may affect our financial strength or reduce our profitability.

We are regularly involved in litigation, both as a defendant and as a plaintiff, but primarily as a defendant. Litigation naming us as a defendant ordinarily arises out of our business operations as a provider of asset management and accumulation products and services; Specialty Benefits insurance and Individual Life insurance; and our investment activities. We are, from time to time, also involved in various governmental, regulatory and administrative proceedings and inquiries.

Legal liability or adverse publicity with respect to current or future legal or regulatory actions, whether or not involving us, may affect our financial strength or reduce our profitability. For further discussion on litigation and regulatory investigation risk, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 13, Contingencies, Guarantees, Indemnifications and Leases" under the caption, "Litigation and Regulatory Contingencies" and Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 11, Income Taxes" under the caption "Other Tax Information."

From time to time, we may become subject to tax audits, tax litigation or similar proceedings, and as a result we may owe additional taxes, interest and penalties in amounts that may be material.

We are subject to income taxes in the United States as well as many other jurisdictions. In determining our provisions for income taxes and our accounting for tax-related matters in general, we are required to exercise judgment. We regularly make estimates where the ultimate tax determination is uncertain. The final determination of any tax audit, appeal of the decision of a taxing authority, tax litigation or similar proceedings may be materially different from that reflected in our historical financial statements. The assessment of additional taxes, interest and penalties could be materially adverse to our current and future results of operations and financial condition.

Applicable laws and our certificate of incorporation and by-laws may discourage takeovers and business combinations that some stockholders might consider in their best interests.

State laws and our certificate of incorporation and by-laws may delay, defer, prevent, or render more difficult a takeover attempt that some stockholders might consider in their best interests. For instance, they may prevent our stockholders from receiving the benefit from any premium to the market price of our common stock offered by a bidder in a takeover context. Even in the absence of a takeover attempt, the existence of these provisions may adversely affect the prevailing market price of our common stock if they are viewed as discouraging takeover attempts in the future.

State laws and our certificate of incorporation and by-laws may also make it difficult for stockholders to replace or remove our management. These provisions may facilitate management entrenchment, which may delay, defer or prevent a change in our control, which may not be in the best interests of our stockholders.

The following provisions, included in our certificate of incorporation and by-laws, may also have anti-takeover effects and may delay, defer or prevent a takeover attempt that some stockholders might consider in their best interests. In particular, our certificate of incorporation and by-laws:

- permit our Board of Directors to issue one or more series of preferred stock;
- divide our Board of Directors into three classes;
- limit the ability of stockholders to remove directors;
- prohibit stockholders from filling vacancies on our Board of Directors;
- prohibit stockholders from calling special meetings of stockholders;
- impose advance notice requirements for stockholder proposals and nominations of directors to be considered at stockholder meetings and
- require the approval of at least 75% of the voting power of our outstanding common stock for the amendment of our by-laws and provisions of our certificate of incorporation governing:
  - the classified board,
  - the director's discretion in determining what he or she reasonably believes to be in the best interests of PFG,
  - the liability of directors,
  - the removal of directors by shareholders,
  - the prohibition on stockholder actions by written consent and
  - the supermajority voting requirements.

In addition, Section 203 of the General Corporation Law of the State of Delaware may limit the ability of an "interested stockholder" to engage in business combinations with us. An interested stockholder is defined to include persons owning 15% or more of our outstanding voting stock.

<u>**Risks relating to our business**</u>

Competition, including from companies that may have greater financial resources, broader arrays of products, higher ratings and stronger financial performance, may impair our ability to retain existing customers, attract new customers and maintain our profitability.

We believe our ability to compete is based on a number of factors including scale, service, product features, price, investment performance, commission structure, distribution capacity, financial strength ratings and name recognition. We compete with a large number of financial services companies such as banks, mutual funds, institutional trust companies, broker-dealers, insurers and asset managers, many of which may have advantages over us in one or more of the above competitive factors.

Each of our segments faces strong competition:

- The primary competitors for our Retirement and Income Solutions and Principal Global Investors segments are asset managers, banks, mutual funds, institutional trust companies, broker-dealers and insurers. Our ability to increase and retain AUM is directly related to the performance of our investments as measured against market averages and the performance of our competitors. Even when securities prices are generally rising, performance can be affected by investment styles.
- Competition for our Principal International segment comes primarily from local financial services firms and other international companies operating on a stand-alone basis or in partnership with local firms.
- Our U.S. Insurance Solutions segment primarily competes with other insurance companies.

In the event competitors charge lower premiums or fees for substantially similar products, we may face pressure to lower our prices in order to attract and retain customers and distributors. Reductions in the premiums and fees we charge may adversely affect our revenues and profitability.

A downgrade in our financial strength or credit ratings may increase policy surrenders and withdrawals, reduce new sales, terminate relationships with distributors, impact existing liabilities and increase our cost of capital, any of which could adversely affect our profitability and financial condition.

A.M. Best, Fitch, Moody's and S&P publish financial strength ratings on U.S. life insurance companies as well as some of our international insurance companies. These ratings indicate the applicable rating agency's opinion regarding an insurance company's ability to meet contractholder and policyholder obligations. These rating agencies also assign credit ratings on non-life insurance entities, such as PFG and Principal Financial Services, Inc. ("PFS"). Credit ratings indicate the applicable rating agency's opinion regarding a debt issuer's ability to meet the terms of debt obligations in a timely manner and are important factors in overall funding profile and ability to access external capital.

Ratings are important factors in establishing the competitive position of insurance companies and maintaining public confidence in products being offered. Our ratings could be downgraded at any time without advance notice by any rating agency. A ratings downgrade, or the potential for such a downgrade, could, among other things:

- materially increase the number of surrenders for all or a portion of the net cash values by the owners of policies and contracts we have issued, and materially increase the number of withdrawals by policyholders of cash values from their policies;
- result in the termination of our relationships with broker-dealers, banks, agents, wholesalers and other distributors of our products and services;
- reduce new sales, particularly with respect to pension risk transfer products and general account GICs and funding agreements purchased by pension plans and other institutions;

- cause some of our existing liabilities to be subject to acceleration, additional collateral support, changes in terms, or creation of additional financial obligations; and
- increase our cost of capital and limit our access to the capital markets.

Any of these consequences could adversely affect our profitability and financial condition.

For further discussion on financial strength and credit ratings outlook, see Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources."

Client terminations or withdrawals or changes in investor preferences may lead to a reduction in revenues for our asset management and accumulation businesses.

Revenues from our asset management and accumulation products are primarily fee-based. Our asset-based fees are typically calculated as a percentage of the market value of AUM. Our asset management and accumulation clients may elect to terminate their relationship with us or withdraw funds, generally on short notice. Client terminations and withdrawals may be driven by a variety of factors, including economic conditions, investment performance, investor preferences or changes in our reputation in the marketplace. Significant terminations or withdrawals may reduce our AUM, thus adversely affecting our revenues and profitability.

In addition, fee levels can vary significantly among different types of investments. We generally earn higher fees on liquid alternatives and equity investments vs. fixed income investments and on actively managed investments vs. indexed or passive investment strategies. Therefore, our fee revenue is impacted by both the value and the composition of our AUM. Investor preferences with respect to asset classes and investment strategies may shift over time due to market conditions, tax law changes, regulatory changes and various other factors. Changes in the composition of our AUM may adversely affect our revenues and profitability.

Guarantees within certain of our products that protect policyholders may decrease our net income or increase the volatility of our results of operations or financial position under U.S. GAAP if our hedging or risk management strategies prove ineffective or insufficient.

Certain of our variable annuity products include guaranteed minimum death benefits and/or guaranteed minimum withdrawal benefits. Periods of significant and sustained downturns in equity markets, increased equity volatility or reduced interest rates could result in an increase in the valuation of the future policy benefit or contractholder fund liabilities associated with such products, resulting in a reduction to net income. We use derivative instruments to attempt to mitigate changes in the liability exposure related to interest rate, equity market and volatility movements, and the volatility of net income associated with these liabilities. However, we remain liable for the guaranteed benefits in the event that derivative counterparties are unable or unwilling to pay. The liability exposure and volatility of net income or OCI may also be influenced by changes in market credit spreads reflecting our own creditworthiness, for which we do not attempt to hedge. In addition, we are subject to the risk that hedging and other management procedures prove ineffective or that unanticipated policyholder behavior or mortality, combined with adverse market events, produces economic losses beyond the scope of the risk management techniques employed. These, individually or collectively, may have a material adverse effect on our net income, financial condition or liquidity. We are also subject to the risk that the cost of hedging these guaranteed minimum benefits increases as implied volatilities increase and/or interest rates decrease, resulting in a reduction to net income.

Our international businesses face political, legal, operational and other risks that could reduce our profitability in those businesses.

Our international businesses face political, legal, operational and other risks that we do not face in our operations in the U.S. We face the risk of discriminatory regulation, nationalization or expropriation of assets, price controls and exchange controls or other restrictions that prevent us from transferring funds from these operations out of the locations in which they operate or converting local currencies we hold into U.S. dollars or other currencies. Our international businesses could also be negatively impacted by rising geopolitical tension, competing legal requirements and increased strategic competition between the U.S. and other countries, such as China. In addition, our international businesses face the risk of political instability and social unrest, which heightens our risks as those may lead to disruptions to those businesses and to local financial markets and commerce and reduced economic activity in the countries in which we operate. Some of our international businesses are, and are likely to continue to be, in emerging or potentially volatile markets. For example, in Chile, a new government proposal to reform the mandatory pension system implies potential changes for fund managers and participants. A complex political environment creates uncertainty regarding the ultimate outcome of the lengthy legislative process toward reform. In addition, we rely on local staff, including local sales forces, in those locations where there is a risk and we may encounter labor problems with local staff, especially in locations where workers' associations and trade unions are strong.

Laws in some countries may require more stringent data security such as requiring the processing and storage of their citizens' personal information to remain in-country. This may result in higher compliance and technology expenses, as well as the suboptimization of business processes.

We face risks arising from fraudulent activities.

Our policyholders may submit fraudulent requests for claim payments. This can result in higher claims expense and higher operational expenses associated with preventing and detecting fraudulent claim requests and other fraudulent activities.

We face risks arising from our participation in joint ventures.

We participate in joint ventures, primarily in our international businesses and real estate investment operations. In these joint ventures, we lack complete management and operational control over the operations, and our joint venture partners may have objectives that are not fully aligned with our interests. These factors may limit our ability to take action to protect or increase the value of our investment in the joint venture.

We may need to fund deficiencies in our Closed Block assets.

In connection with its conversion in 1998 into a stock life insurance company, Principal Life established an accounting mechanism, known as a "Closed Block" for the benefit of participating ordinary life insurance policies that had a dividend scale in force on July 1, 1998. We allocated assets to the Closed Block as of July 1, 1998, in an amount such that we expected the cash flows, together with anticipated revenues from the policies in the Closed Block, to be sufficient to support the Closed Block business, including payment of claims, certain direct expenses, charges and taxes and to provide for the continuation of aggregate dividend scales in accordance with the 1997 policy dividend scales if the experience underlying such scales continued, and to allow for appropriate adjustments in such scales if the experience changed. We will continue to pay guaranteed benefits under the policies included in the Closed Block, in accordance with their terms. The Closed Block assets, cash flows generated by the Closed Block assets and anticipated revenues from policies included in the Closed Block may not be sufficient to provide for the benefits guaranteed under these policies. If they are not sufficient, we must fund the shortfall. Even if they are sufficient, we may choose for business reasons to support dividend payments on policies in the Closed Block with our general account funds.

The Closed Block assets, cash flows generated by the Closed Block assets and anticipated revenues from policies in the Closed Block will benefit only the holders of those policies. In addition, to the extent these amounts are greater than the amounts estimated at the time we funded the Closed Block, dividends payable in respect of the policies included in the Closed Block may be greater than they would have been in the absence of a Closed Block. Any excess net income will be available for distribution over time to Closed Block policyholders but will not be available to our stockholders. See Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 6, Closed Block" for further details.

Our reinsurers could default on their obligations or increase their rates, which could adversely impact our net income and financial condition.

We cede life, annuity, disability, medical and long-term care insurance to other insurance companies through reinsurance. See Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 9, Reinsurance." See Item 1. "Business," for information about the Reinsurance Transaction. The collectability of reinsurance recoverables is largely dependent on the solvency of the individual insurers. We remain liable to the policyholder, even if the reinsurer defaults on its obligations with respect to the ceded business. In addition, a reinsurer's insolvency may cause us to lose our reserve credits on the ceded business, in which case we would be required to establish additional reserves.

The premium rates we charge are based, in part, on the assumption that reinsurance will be available at a certain cost. Most of our reinsurance contracts contain provisions that limit the reinsurer's ability to increase rates on in-force business; however, some do not. If a reinsurer raises the rates it charges on a block of in-force business, our profitability may be negatively impacted if we are not able to pass the increased costs on to the customer. If reinsurers raise the rates they charge on new business, we may be forced to raise the premiums we charge, which could have a negative impact on our competitive position.

We face risks arising from future acquisitions of businesses.

We have acquired businesses in the past and expect to continue to do so in the future. We face a number of risks arising from future acquisition transactions, including difficulties in integrating the acquired business into our operations, difficulties in assimilating and retaining employees and intermediaries, difficulties in retaining the existing customers of the acquired entity, unforeseen liabilities that arise in connection with the acquired business, unfavorable market conditions that could negatively impact our growth expectations for the acquired business and sustained declines in the equity market that could reduce the AUM and fee revenues for certain acquired businesses. These risks may prevent us from realizing the expected benefits from future acquisitions and could result in the impairment of goodwill and/or intangible assets recognized at the time of acquisition.

For additional information on our goodwill and other intangible assets, see Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies and Estimates — Goodwill and Other Intangible Assets."

We face risks in administering the closed Reinsurance Transaction.

During the second quarter of 2022, we closed a coinsurance with funds withheld reinsurance transaction with Talcott Life & Annuity Re, a limited liability company organized under the laws of the Cayman Islands and an affiliate of Talcott Resolution Life, Inc., a subsidiary of Sixth Street, pursuant to which we ceded our in-force U.S. retail fixed annuity and ULSG blocks of business. We face a number of on-going risks arising from the closed transaction, including managing the relationships under reinsurance agreements, managing a smaller portfolio of general account assets and managing relationships with our distribution channels. These risks may prevent us from realizing the expected benefits from the Reinsurance Transaction and could result in the recapture of the ceded business upon the occurrence and continuation of certain events and higher costs related to managing the reinsured blocks of business.

General risks

A pandemic, terrorist attack, military action or other catastrophic event could adversely affect our operations, net income or financial condition.

The occurrence of pandemic disease, man-made disasters such as terrorist attacks and military actions, and natural disasters could adversely affect our operations, net income or financial condition. For example, our mortality and morbidity experience could be adversely impacted by a catastrophic event. In addition, a severe catastrophic event may cause significant volatility in global financial markets, disruptions to commerce and reduced economic activity. Ongoing economic disruptions may lead to declines and volatility in interest rates or equity prices, either of which could adversely affect our results of operations and financial condition. The resulting macroeconomic conditions could adversely affect our cash flows, as well as the value and liquidity of our invested assets. We may also experience operational disruptions if our employees are unable or unwilling to work due to a catastrophic event.

Our financial results may be adversely impacted by global climate changes.

Atmospheric concentrations of carbon dioxide and other greenhouse gases have increased dramatically since the industrial revolution, resulting in a gradual increase in global average temperatures and an increase in the frequency and severity of natural disasters. These trends are expected to continue in the future and have the potential to impact nearly all sectors of the economy. We cannot predict the long-term impacts of climate change, but we will continue to monitor new developments in the future.

Potential impacts may include the following:

- Changes in temperatures and air quality may adversely impact our mortality and morbidity rates. For example, increases in the level of pollution and airborne allergens may cause an increase in upper respiratory and cardiovascular diseases, leading to increased claims in our insurance businesses. However, the risk of increased mortality on our life insurance business may be partly offset by our payout annuity business, where an increase in mortality results in a decrease in benefit payments.
- Climate change may impact asset prices, as well as general economic conditions. For example, rising sea levels may lead to decreases in real estate values in coastal areas. Additionally, government policies to slow climate change (e.g., setting limits on carbon emissions) may have an adverse impact on sectors such as utilities, transportation and manufacturing. Changes in asset prices may impact the value of our fixed income, real estate and commercial mortgage investments. We manage our investment risks by maintaining a well-diversified portfolio, both geographically and by sector. We also monitor our investments on an ongoing basis, allowing us to adjust our exposure to sectors and/or geographical areas that face severe risks due to climate change.
- We maintain extensive business continuity and disaster recovery planning programs. Nonetheless, a natural disaster that affects one of our office locations could disrupt our operations and pose a threat to the safety of our employees.

Technological and societal changes may disrupt our business model and impair our ability to retain existing customers, attract new customers and maintain our profitability.

Technological advances, innovation in the financial services industry and societal changes may impact our business model and competitive position. These changes may lead to significant changes in the marketing, distribution, underwriting and pricing of financial services products. In addition, technological and societal changes may lead to changes in customers' preferences as to how they want to interact with us and the types of products they want to buy. We may need to change our distribution channels, our customer service model or our product offerings to accommodate evolving customer preferences. Implementing these changes may require significant expenditures. To the extent our competitors are more successful than us at adapting to technological changes and evolving customer preferences, our competitive position and profitability may be adversely impacted.

Advances in medical technology may also adversely impact our profitability. Increases in the availability and accuracy of genetic testing may increase our exposure to anti-selection risk. In addition, medical advances may lead to increased longevity. As a result, we may be required to pay annuity benefits over a longer period of time than we had projected, thereby reducing the profitability of our annuity products.

Damage to our reputation may adversely affect our revenues and profitability.

Our continued success is dependent upon our ability to earn and maintain the trust and confidence of customers, distributors, employees and other stakeholders. Damage to our reputation may arise from a variety of sources including, but not limited to, litigation or regulatory actions, compliance failures, employee misconduct, cybersecurity incidents or other fraudulent activities, unfavorable press coverage and unfavorable comments on social media. Adverse developments within our industry may also, by association, negatively impact our reputation or result in greater regulatory or legislative scrutiny. Any damage to our reputation could adversely affect our ability to attract and retain customers, distributors and employees, potentially leading to a reduction in our revenues and profitability.

We may not be able to protect our intellectual property and may be subject to infringement claims.

We rely on a combination of contractual rights and copyright, trademark, patent and trade secret laws to establish and protect our intellectual property. Third parties may infringe or misappropriate our intellectual property. We may have to litigate to enforce and protect our copyrights, trademarks, patents, trade secrets and know-how or to determine their scope, validity or enforceability, which represents a diversion of resources that may be significant in amount and may not prove successful. The loss of intellectual property protection or the inability to secure or enforce the protection of our intellectual property assets could have a material adverse effect on our business and our ability to compete.

We also may be subject to costly litigation in the event another party alleges our operations or activities infringe upon such other party's intellectual property rights. Third parties may have, or may eventually be issued, patents or other protections that could be infringed by our products, methods, processes or services or could otherwise limit our ability to offer certain product features. Any party that holds such a patent could make a claim of infringement against us. We may also be subject to claims by third parties for breach of copyright, trademark, license usage rights or misappropriation of trade secret rights. Any such claims and any resulting litigation could result in significant liability for damages. If we were found to have infringed or misappropriated a third party patent or other intellectual property rights, we could incur substantial liability, and in some circumstances could be enjoined from providing certain products or services to our customers or utilizing and benefiting from certain methods, processes, copyrights, trademarks, trade secrets or licenses, or alternatively could be required to enter into costly licensing arrangements with third parties, all of which could have a material adverse effect on our business, results of operations and financial condition.

If we are unable to attract, develop and retain qualified employees and sales representatives and develop new distribution sources, our results of operations, financial condition and sales of our products may be adversely impacted.

Our continued success is largely dependent on our ability to attract, develop and retain qualified employees. We face intense competition in attracting and retaining key employees, including investment, marketing, finance, actuarial, data analytics, information security, technology, client service and other professionals. If we are unable to attract, develop and retain qualified employees, our results of operations and financial condition may be adversely impacted.

We distribute our asset accumulation, asset management and life and specialty benefit insurance products and services through a variety of distribution channels, including our own internal digital channels, sales representatives, independent brokers, banks, broker-dealers and other third party marketing organizations. We must attract and retain sales representatives to sell our products and digital professionals to build and enhance our customers' digital experience. Strong competition exists among financial services companies for these roles. We compete with other financial services companies for sales representatives primarily on the basis of our financial position, support services and compensation and product features. If we are unable to attract and retain sufficient sales representatives to sell our products, our ability to compete and revenues from new sales would suffer.

Our ability to increase and retain AUM is directly related to the performance of our investments as measured against market averages and the performance of our competitors. If we are unable to attract and retain qualified portfolio managers, we may face reduced sales and increased cash outflows in our asset accumulation and asset management businesses.

Interruptions in information technology, infrastructure or other internal or external systems used for our business operations, or a failure to maintain the confidentiality, integrity or availability of data residing on such systems, could disrupt our business, damage our reputation and adversely impact our profitability.

We rely on external infrastructure, proprietary information technology and third party systems and services to conduct business, including customer service, marketing and sales activities, customer relationship management, producing financial statements and technology/data centers. In addition, we store and process confidential and proprietary business information on both company-owned and third party and/or vendor managed systems, including cloud service providers. We increasingly rely on the internet in order to conduct business and may be adversely impacted by outages in critical infrastructure such as electric grids, undersea cables, satellites or other communications used by us or our third parties. This reliance includes consumer access to the internet and communications systems due to more work taking place outside of corporate locations. The failure of our information technology, infrastructure or other internal and external systems, for any reason, could disrupt our operations, result in the loss of business and adversely impact our profitability.

Financial services companies are regularly targeted by cyber criminals, resulting in unauthorized access to confidential information, theft of funds from online accounts, disruption or degradation of service or other damage. These attacks may take a variety of forms, including web application attacks, denial of service attacks, ransomware, other malware, and social engineering, including phishing. We may also be adversely impacted by successful cyberattacks of partners, vendors and others in our supply chain with whom we conduct business or share information. Information security incidents may also occur due to the failure to control access to, and use of, sensitive systems or information by our workforce, with a potential increase in this threat due to the increase in remote work. The tactics and techniques used by cyber criminals to obtain unauthorized access, or otherwise impact our business negatively change frequently, and we, and our supply chain partners, may be unable to anticipate their schemes to implement preventative measures. The failure of our controls (such as policies, procedures, security controls and monitoring, automation and backup plans) designed to prevent, or limit the effect of, failure, inadvertent use or abuse could result in disruptions or breaches beyond our control.

Any compromise of the security of our systems that results in the disclosure of personally identifiable customer or employee information could damage our reputation, deter customers from purchasing our products and services, expose us to litigation, increase regulatory scrutiny, impact our business operations and require us to incur significant technical, legal and other expenses.

Loss of key vendor relationships or failure of a vendor to protect information of our customers or employees could adversely affect our business or result in losses.

We rely on services and products provided by many vendors in the United States and abroad. These include, for example, vendors of computer hardware and software and vendors of services. In the event that one or more of our vendors suffers a bankruptcy or otherwise becomes unable to continue to provide products or services or fails to protect personal information of our customers or employees, we may suffer operational impairments, reputational damage and financial losses.

Our enterprise risk management framework may not be fully effective in identifying or mitigating all of the risks to which we are exposed.

We utilize an integrated risk management framework, which is designed to manage material risks within established risk appetites and risk tolerances. Nonetheless, our policies and procedures may not be fully effective in identifying or mitigating every risk to which we are exposed. Many of our methods for managing and mitigating risk rely on models and assumptions that are based, in part, on observed historical data. As a result, these methods, models or assumptions may not accurately predict future exposures, which may be significantly greater than our historical measures indicate. We may be exposed to unanticipated risks as a result of changes in market conditions, new products or new business strategies, catastrophes or other unforeseen circumstances. If our risk management framework proves ineffective, we may suffer unexpected losses, which may adversely affect our results of operations and financial condition.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

As of December 31, 2022, we owned properties in our home office complex in Des Moines, Iowa and leased space for various offices located throughout the U.S. and internationally. We believe that our owned and leased properties are suitable and adequate for our current business operations.

Item 3. Legal Proceedings

Disclosure concerning legal proceedings can be found in Item 8. “Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 13, Contingencies, Guarantees, Indemnifications and Leases” under the caption, “Litigation and Regulatory Contingencies” and Item 8. “Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 11, Income Taxes” under the caption, “Other Tax Information,” which are incorporated here by this reference.

Information about our Executive Officers

The following information is furnished with respect to our executive officers, each of whom is elected by and serves at the pleasure of the Board of Directors.

W. Y. (Thomas) Cheong, 54, has been Executive Vice President of the Company since January 2021 and President, Principal Asia of the Company since March 2019. Thomas is from Singapore and is located in our Hong Kong office. Previously, he was Senior Vice President of the Company from March 2019 to December 2020 and served as Vice President, Head of North Asia of the Company from January 2015 to February 2019. Prior to that time, he held several leadership roles in various Asia markets at Manulife Financial Corporation from October 2009 to December 2014 and Prudential UK from October 2000 to September 2009.

Amy C. Friedrich, 52, has been President, U.S. Insurance Solutions since May 2017. Prior to that time, she was Senior Vice President of the Specialty Benefits insurance division of U.S. Insurance Solutions since 2015, and Vice President of Specialty Benefits since 2008.

Patrick G. Halter, 63, has been President and Chief Executive Officer of Principal Asset Management of the Company and Principal Life since November 2022. Prior, he was President of Global Asset Management of the Company and Principal Life since November 2020 and Chief Executive Officer for Principal Global Investors, the investment management firm within our Global Asset Management business, since September 2018. Previously, he served as Chief Operating Officer of Principal Global Investors, since 2016 and was Chief Executive Officer for Principal Real Estate Investors, the dedicated real estate unit of Principal Global Investors, since 2003.

Daniel J. Houston, 61, has been a director of the Company and Principal Life and President and Chief Executive Officer of the Company and Principal Life since August 2015. Prior to that date, he held the same positions except was Chief Operating Officer (and not Chief Executive Officer) since November 2014. Previously, he served as President, Retirement, Insurance and Financial Services of the Company and Principal Life since 2010. He was President, Retirement and Income Solutions of the Company and Principal Life from 2008 until 2010, and was Executive Vice President, Retirement and Income Solutions of the Company and Principal Life from 2006 to 2008.

Kathleen B. Kay, 60, has been Executive Vice President of the Company and Principal Life since March 2022 and Chief Information Officer of the Company and Principal Life since May 2020. She was Senior Vice President of the Company and Principal Life from May 2020 to March 2022. Prior, she was Senior Vice President and Chief Information Officer of Pacific Gas & Electric Company from 2015 to 2020. Previously, she served as Enterprise Chief Technology Officer at SunTrust from 2012 to 2015, Senior Vice President, Business Technology Services of Comerica Bank from 2007 to 2012 and Director, Application Development and Support, OnStar of General Motors from 1984 to 2007.

Natalie Lamarque, 46, has been Executive Vice President and General Counsel of the Company and Principal Life since July 2022 and Secretary of the Company and Principal Life since October 2022. Prior to joining the Company and Principal Life, she was with New York Life Insurance Company in various roles, including General Counsel from March 2020 to June 2022 and Deputy General Counsel from 2019 to 2020, both while a Senior Vice President; Vice President in Corporate Compliance from 2016 to 2019; and Associate General Counsel from 2014 to 2016. Previously, she was an Assistant U.S. Attorney in the Criminal Division of the U.S. Attorney's Office of the Southern District of New York from 2007 to 2014. Prior to that, she was an attorney at Debevoise & Plimpton LLP from 2004 to 2007.

Christopher J. Littlefield, 56, has been President, Retirement and Income Solutions since March 2022. Previously, he was Executive Vice President and General Counsel of the Company and Principal Life since January 2020 and Secretary of the Company and Principal Life from March 2020 to March 2022. Prior to that date, he was President and Chief Executive Officer of Fidelity & Guaranty Life Insurance Holdings from October 2014 to December 2018. Previously, he served as President and Chief Executive Officer of Aviva USA Corporation from February 2009 to October 2013 and served as Chief Operating Officer of Aviva USA Corporation from February 2008 to September 2009. Prior to that, he served as Executive Vice President, General Counsel and Secretary of AmerUS Group Co. from January 2006 to February 2008.

Kenneth A. McCullum, 58, has been Senior Vice President and Chief Risk Officer of the Company and Principal Life since September 2020. Prior to that date, he was Vice President and Chief Actuary since April 2015. Prior to that time, he served as Executive Vice President responsible for business development and in force management at Delaware Life Insurance Company from August 2013 to April 2015 and Senior Vice President responsible for managing the life and annuity businesses at Sun Life Financial from April 2010 to August 2013. Previously, he held several positions at the Hartford from August 1994 to April 2010, including leading its institutional investment products division and serving as Chief Actuary of its legacy holdings division.

Deanna D. Strable-Soethout, 54, has been Executive Vice President and Chief Financial Officer of the Company and Principal Life since February 2017. Prior to that date, she was Executive Vice President of the Company and Principal Life since September 2016 and President, U.S. Insurance Solutions of the Company and Principal Life since March 2015. Prior to that, she served as Senior Vice President of the Company and Principal Life since 2006.

Roberto A. Walker, 57, has been Executive Vice President of the Company since January 2021 and President, Principal Latin America since January 2011. Prior to his current position, he held several leadership roles within the Company including Chief Operating Officer of Principal International Latin America from October 2007 to February 2011, Head of Fund Management overseeing Latin America and Asia mutual funds and asset management from January 2005 to September 2007, Country Head for Principal Mexico from November 1998 to December 2004 and Chief Information Officer and Chief Financial Officer of Principal Chile from September 1996 to October 1998.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock began trading on the New York Stock Exchange under the symbol "PFG" on October 23, 2001. Prior to such date, there was no established public trading market for our common stock. Effective December 15, 2017, we changed our listing to the Nasdaq Global Select Market and continue trading under the symbol "PFG". On January 30, 2023, there were 219,911 stockholders of record of our common stock.

We have historically paid cash dividends on our common stock. Future dividend decisions will be based on and affected by a number of factors, including our results and financial requirements and the impact of regulatory restrictions. See Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources" for a discussion of regulatory restrictions on Principal Life's ability to pay dividends or make other distributions.

The following table presents the amount of our share purchase activity for the periods indicated:

Period	Total number of shares purchased (1)	Average price paid per share	Total number of shares purchased as part of publicly announced programs	Maximum dollar value of shares that may yet be purchased under the programs (in millions) (2)
January 1, 2022 - January 31, 2022	**826,763**	**$74.04**	**800,656**	**$2,595.1**
February 1, 2022 - February 28, 2022	**910,828 (3)**	**$73.20**	**911,849**	**$2,528.3**
March 1, 2022 - March 31, 2022	**9,497,205 (3)**	**$65.93 (4)**	**9,107,538**	**$1,789.5**
April 1, 2022 - April 30, 2022	**—**	**$ —**	**—**	**$1,789.5**
May 1, 2022 - May 31, 2022	**—**	**$ —**	**—**	**$1,789.5**
June 1, 2022 - June 30, 2022	**2,910,298**	**$82.47 (4)**	**2,909,686**	**$1,689.6**
July 1, 2022 - July 31, 2022	**748,272**	**$66.87**	**748,272**	**$1,639.5**
August 1, 2022 - August 31, 2022	**4,056,564**	**$78.98 (5)**	**4,051,659**	**$1,239.5**
September 1, 2022 - September 30, 2022	**1,179,825**	**$67.91 (5)**	**1,178,183**	**$1,239.5**
October 1, 2022 - October 31, 2022	**862,873**	**$77.49**	**862,873**	**$1,172.7**
November 1, 2022 - November 30, 2022	**929,322**	**$89.86**	**928,379**	**$1,089.3**
December 1, 2022 - December 31, 2022	**1,135,705**	**$88.06**	**1,135,705**	**$ 989.2**
Total	**23,057,655**		**22,634,800**	

(1) Includes the number of shares of common stock utilized to execute certain stock incentive awards and shares purchased as part of publicly announced programs.

(2) In June 2021, our Board authorized a share repurchase program of up to $1.2 billion of our outstanding common stock, which has no expiration. In January 2022, our Board of Directors authorized a $1.6 billion increase to the June 2021 share repurchase program authorization, which was completed in August 2022.

(3) Includes immaterial corrections related to the number of shares purchased to execute certain stock incentive awards.

(4) In March 2022, we entered into an accelerated share repurchase program with a third party financial institution to repurchase $700.0 million of common stock. We received approximately 8.5 million shares at an initial cost of $560.0 million from our counterparty as of March 31, 2022. This program closed in June 2022 and an additional 1.4 million shares were delivered based on the $70.53 daily volume-weighted average price of our common stock, less a discount, during the term of the program.

(5) In August 2022, we entered into an accelerated share repurchase program with a third party financial institution to repurchase $400.0 million of common stock. We received approximately 4.1 million shares at an initial cost of $320.0 million from our counterparty as of August 16, 2022, which was recorded in treasury stock. This program closed in September 2022, at which time an additional 1.2 million shares were delivered based on the $76.48 daily volume-weighted average price of our common stock, less a discount, during the term of the program.

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

The following analysis discusses our financial condition as of December 31, 2022, compared with December 31, 2021, our consolidated results of operations for the years ended December 31, 2022 and 2021 and, where appropriate, factors that may affect our future financial performance. The discussion should be read in conjunction with our audited consolidated financial statements and the related notes to the financial statements and the other financial information included elsewhere in this Form 10-K.

For information and analysis relating to our financial condition and consolidated results of operations as of and for the year ended December 31, 2020, as well as for the year ended December 31, 2021 compared with the year ended December 31, 2020, see Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the year ended December 31, 2021.

Forward-Looking Information

Our narrative analysis below contains forward-looking statements intended to enhance the reader's ability to assess our future financial performance. Forward-looking statements include, but are not limited to, statements that represent our beliefs concerning future operations, strategies, financial results or other developments, and contain words and phrases such as "anticipate," "believe," "plan," "estimate," "expect," "intend" and similar expressions. Forward-looking statements are made based upon management's current expectations and beliefs concerning future developments and their potential effects on us. Such forward-looking statements are not guarantees of future performance.

Actual results may differ materially from those included in the forward-looking statements as a result of risks and uncertainties. Those risks and uncertainties include, but are not limited to, the risk factors listed in Item 1A. "Risk Factors."

Overview

We provide financial products and services through the following reportable segments:

- Retirement and Income Solutions;
- Principal Global Investors;
- Principal International and
- U.S. Insurance Solutions.

We also have a Corporate segment, which consists of the assets and activities that have not been allocated to any other segment. See Item 1. "Business" for a description of our reportable segments.

Economic Factors and Trends

Negative market performance led to a decrease in account values in our Retirement and Income Solutions segment in 2022. Since account values are the base by which this business generates revenues, market performance volatility may impact our revenues in future quarters.

Negative market performance led to a decrease in AUM managed by our Principal Global Investors segment in 2022. Since AUM is the base by which this business generates revenues, market performance volatility may impact our revenues in future quarters. Also included in revenues are borrower fees, transaction fees and performance fees, which can fluctuate between years.

In our Principal International segment, local currency AUM is a key indicator of earnings growth. Local currency AUM increased due to favorable market performance. In addition, AUM was positively impacted by foreign currency fluctuations.

In our U.S. Insurance Solutions segment, premium and fee growth is a key indicator of earnings growth. Higher levels of unemployment may impact new sales in our businesses and reduce in-group growth in our Specialty Benefits insurance business in the short-term.

Profitability

Our profitability depends in large part upon our:

- amount of AUM;
- ability to manage the difference between the investment income we earn and the interest we credit to policyholders;
- ability to generate fee revenues by providing trust and custody,administrative and investment management services;
- ability to price our insurance products at a level that enables us to earn a margin over the cost of providing benefits and the related expenses;
- ability to manage our investment portfolio to maximize investment returns and minimize risks such as interest rate changes or defaults or impairments of invested assets;
- ability to effectively hedge fluctuations in foreign currency to U.S. dollar exchange rates on certain transactions and
- ability to manage our operating expenses.

Critical Accounting Policies and Estimates

The increasing complexity of the business environment and applicable authoritative accounting guidance requires us to closely monitor our accounting policies. Our significant accounting policies are described in Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 1, Nature of Operations and Significant Accounting Policies." We have identified critical accounting policies that are complex and require significant judgment and estimates about matters that are inherently uncertain. A summary of our critical accounting policies is intended to enhance the reader's ability to assess our financial condition and results of operations and the potential volatility due to changes in estimates and changes in guidance. The identification, selection and disclosure of critical accounting estimates and policies have been discussed with the Audit Committee of the Board of Directors.

Some of these policies will be impacted when we implement accounting guidance commonly referred to as long-duration targeted improvements ("LDTI") in January 2023. See Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 1, Nature of Operations and Significant Accounting Policies" under the caption "Recent Accounting Pronouncements" for information about that guidance. Comments have been included in the summary below for those policies impacted by LDTI.

Valuation and Allowance for Credit Loss of Fixed Income Investments

Fixed Maturities. Fixed maturities include bonds, asset-backed securities ("ABS"), redeemable preferred stock and certain non-redeemable preferred securities. We classify our fixed maturities as either AFS or trading and, accordingly, carry them at fair value in the consolidated statements of financial position. Volatility in net income can result from changes in fair value of fixed maturities classified as trading. Volatility in other comprehensive income can result from changes in fair value of fixed maturities classified as AFS.

We measure the fair value of our financial assets and liabilities based on assumptions used by market participants in pricing the asset or liability, which may include inherent risk, restrictions on the sale or use of an asset, or nonperformance risk, including our own credit risk. For additional details concerning the methodologies, assumptions and inputs utilized see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 15, Fair Value Measurements" under the caption, "Determination of Fair Value."

The fair values of our public fixed maturities are primarily based on market prices from third party pricing vendors. We have regular interactions with these vendors to ensure we understand their pricing methodologies and to confirm they are utilizing observable market information. In addition, 12% of our invested asset portfolio as of December 31, 2022, was invested in privately placed fixed maturities with no readily available market quotes to determine the fair market value. The majority of these assets are valued using a matrix pricing valuation approach that utilizes observable market inputs. In the matrix approach, securities are grouped into pricing categories that vary by sector, rating and average life. Each pricing category is assigned a risk spread based on observable public market data. The expected cash flows of the security are then discounted back at the current Treasury curve plus the appropriate risk spread. Although the matrix valuation approach provides a fair valuation of each pricing category, the valuation of an individual security within each pricing category may be impacted by company specific factors. This excludes privately placed securities subject to Rule 144A of the Securities Act of 1933 that are primarily based on market prices from third party pricing vendors, similar to public fixed maturities.

If we are unable to price a fixed maturity security using prices from third party pricing vendors or other sources specific to the asset class, we may obtain a broker quote or utilize an internal pricing model specific to the asset utilizing relevant market information, to the extent available and where at least one significant unobservable input is utilized. In addition, there may be certain securities managed by external managers where we obtain the valuation from the external manager when we are unable to obtain prices from third party pricing vendors or other sources. These are reflected in Level 3 in the fair value hierarchy and can include fixed maturities across all asset classes. As of December 31, 2022, approximately 4% of our total fixed maturities were Level 3 securities valued using internal pricing models. See Item 8. “Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 15, Fair Value Measurements” for further discussion.

The $10,167.8 million increase in net unrealized losses from U.S. investment operations for the year ended December 31, 2022, can be attributed to an approximate 116 basis point increase in interest rates and a widening of credit spreads. For additional information about interest rate risk see Item 7A. “Quantitative and Qualitative Disclosures About Market Risk.”

We have a process in place to identify fixed maturity securities that could potentially require an allowance for credit loss. This process involves monitoring market events that could impact issuers’ credit ratings, business climate, management changes, litigation and government actions and other similar factors. This process also involves monitoring late payments, pricing levels, downgrades by rating agencies, key financial ratios, financial statements, revenue forecasts and cash flow projections as indicators of credit issues.

Each reporting period, all securities in an unrealized loss position are reviewed to determine whether a decline in value is due to credit. Relevant facts and circumstances considered include: (1) the extent the fair value is below cost; (2) the reasons for the decline in value; (3) the financial position and access to capital of the issuer, including the current and future impact of any specific events and (4) for structured securities, the adequacy of the expected cash flows. To the extent we determine an unrealized loss is due to credit, an allowance for credit loss is recognized through a reduction to net income. See item 8. “Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 4, Investments” under the caption, “Allowance for Credit Loss” for further discussion.

A number of significant risks and uncertainties are inherent in the process of monitoring credit losses and determining the allowance for credit loss. These risks and uncertainties include: (1) the risk that our assessment of an issuer’s ability to meet all of its contractual obligations will change based on changes in the credit characteristics of that issuer; (2) the risk that the economic outlook will be worse than expected or have more of an impact on the issuer than anticipated; (3) the risk that our investment professionals are making decisions based on fraudulent or misstated information in the financial statements provided by issuers and (4) the risk that new information obtained by us or changes in other facts and circumstances lead us to change our intent to not sell the security prior to recovery of its amortized cost. Any of these situations could result in a charge to net income in a future period. As of December 31, 2022, we had $54,501.9 million in AFS fixed maturities with gross unrealized losses totaling $7,878.3 million. Included in the gross unrealized losses are losses attributable to both movements in market interest rates as well as movement in credit spreads.

For more detailed information concerning allowances for credit loss, see Item 8. “Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 4, Investments” under the caption, “Allowance for Credit Loss.”

Mortgage Loans. Mortgage loans consist primarily of commercial mortgage loans on real estate. Commercial mortgage loans on real estate are generally reported at cost adjusted for amortization of premiums and accrual of discounts, computed using the interest method and net of valuation allowances. We establish a valuation allowance for the risk of credit losses inherent in our mortgage loans, which is maintained at a level believed adequate by management to absorb estimated expected credit losses. The valuation allowance is based on amortized cost excluding accrued interest receivable and includes reserves for pools of financing receivables with similar risk characteristics. Amounts on loans deemed to be uncollectible are charged off and removed from the valuation allowance. The change in the valuation allowance provision is included in net realized capital gains (losses) on our consolidated statements of operations.

For more detailed information concerning mortgage loan valuation allowances, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 4, Investments" under the caption, "Financing Receivables Valuation Allowance."

Derivatives

We use derivatives primarily to hedge or reduce exposure to market risks. The fair values of exchange-traded derivatives are determined through quoted market prices. Exchange-traded derivatives include futures that are settled daily, which reduces their fair value in the consolidated statements of financial position. The fair values of privately negotiated contracts, which are usually referred to as over-the-counter ("OTC") derivatives, that are cleared through centralized clearinghouses are determined through market prices published by the clearinghouses. Variation margin associated with OTC cleared derivatives is settled daily, which reduces their fair value in the consolidated statements of financial position. The fair values of non-cleared OTC derivatives are determined using either pricing valuation models that utilize market observable inputs or broker quotes. On an absolute fair value basis as of December 31, 2022, the majority of our OTC derivative assets and liabilities were valued using pricing valuation models using market observable data with less than 1% using broker quotes. See Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 15, Fair Value Measurements" for further discussion. The fair values of our derivative instruments can be impacted by changes in interest rates, foreign exchange rates, credit spreads, equity indices and volatility, as well as other contributing factors. For additional information see Item 7A. "Quantitative and Qualitative Disclosures About Market Risk."

We also issue certain annuity, universal life and other contracts that include embedded derivatives that have been bifurcated from the host contract. They are valued using a combination of historical data and actuarial judgment. See Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 15, Fair Value Measurements" for further discussion. We include our assumption for own nonperformance risk in the valuation of these embedded derivatives. As our credit spreads widen or tighten, the fair value of the embedded derivative liabilities decrease or increase, leading to an increase or decrease in net income. If the current market credit spreads reflecting our own creditworthiness move to zero (tighten), the reduction to net income would be approximately $124.7 million, net of DAC and income taxes, based on December 31, 2022, reported amounts. In addition, the policyholder behavior assumptions used in the valuation of embedded derivatives include risk margins, which increase the fair value of the embedded derivative liabilities. Certain contract features that have been recorded as embedded derivatives will instead be recorded as market risk benefits under LDTI when it is implemented in January 2023.

We have entered into coinsurance with funds withheld reinsurance arrangements. For funds withheld agreements the economic benefit of the assets flow to reinsurance counterparties, however, we retain legal ownership of the assets within the funds withheld account. Therefore, the assets held under funds withheld agreements are included on our consolidated statements of financial position, with a corresponding funds withheld payable. The funds withheld payable also includes an embedded derivative that has been bifurcated from the host contract. The fair value of the embedded derivative is based on the change in the fair value of the underlying funds withheld investments using the valuation methods and assumptions described for our investments held.

The accounting for derivatives is complex and interpretations of the applicable accounting standards continue to evolve. Judgment is applied in determining the availability and application of hedge accounting designations and the appropriate accounting treatment. Judgment and estimates are used to determine the fair value of some of our derivatives. Volatility in net income can result from changes in fair value of derivatives that do not qualify or are not designated for hedge accounting and changes in fair value of embedded derivatives.

Deferred Acquisition Costs and Other Actuarial Balances

Incremental direct costs of contract acquisition as well as certain costs directly related to acquisition activities (underwriting, policy issuance and processing, medical and inspection and sales force contract selling) for the successful acquisition of new and renewal insurance policies and investment contract business are capitalized to the extent recoverable. Maintenance costs and acquisition costs that are not deferrable are charged to net income as incurred.

Amortization Based on Estimated Gross Profits. DAC for universal life-type insurance contracts and certain investment contracts are generally amortized over the expected lifetime of the contracts in relation to estimated gross profits ("EGPs"). In addition to DAC, the following actuarial balances are also amortized in relation to EGPs.

- Sales inducement asset — Sales inducements are amounts that are credited to the contractholder's account balance as an inducement to purchase the contract. Like DAC, the cost of the sales inducement is capitalized and amortized over the expected life of the contract, in proportion to EGPs.
- Unearned revenue liability — An unearned revenue liability is established when we collect fees or other policyholder assessments for services to be provided in future periods. These revenues are deferred and then amortized over the expected life of the contract, in proportion to EGPs.
- Reinsurance asset or liability — For universal-life type products that are reinsured, a reinsurance asset or liability is established to spread the expected net reinsurance costs or profits in proportion to the EGPs on the underlying business.

We also have additional benefit reserves that are established for annuity or universal life-type contracts that provide benefit features that are expected to produce gains in early years followed by losses in later years. The liabilities are accrued in relation to estimated contract assessments, and they are based on assumptions and methodologies similar to those used in the calculation of EGPs. For more information, see "Insurance Reserves ."

Key assumptions used in the calculation of EGPs include mortality, lapses, equity returns, general account investment yields and expenses as well as the change in our liability for certain guarantees and the difference between actual and expected reinsurance premiums and recoveries, depending on the nature of the contract. Our general account investment yield assumption reflects our long-term projections of interest rates and net realized capital gains (losses). We develop an estimate of EGPs at issue and each valuation date. As actual experience and market conditions emerge, the gross profits may vary from those expected either in magnitude or timing, in which case a true-up of actuarial balances occurs as a charge or credit to current net income. In addition, we are required to revise our assumptions regarding future experience if actual experience or other evidence suggests that earlier estimates should be revised; we refer to this as unlocking. Both actions, reflecting actual experience and market conditions and changing future estimates, can change both the current amount and the future amortization pattern of the DAC asset and related actuarial balances.

For individual variable universal life insurance, individual variable annuities and group annuities that have separate account U.S. equity investment options, we utilize a mean reversion methodology (reversion to the mean assumption), a common industry practice, to determine the future domestic equity market growth rate assumption used for the calculation of EGPs. If actual annualized U.S. equity market performance varies from our 8% long-term assumption, we assume different performance levels in the short-term such that the weighted average return is equal to the long-term assumption over the mean reversion period. However, our mean reversion process generally limits assumed returns to a range of 4-12% during the mean reversion period. For additional details concerning methods of DAC amortization see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 1, Nature of Operations and Significant Accounting Policies" under the caption, "Deferred Acquisition Costs."

When LDTI is implemented in January 2023, amortization of these actuarial balances will generally no longer be based on EGPs.

Internal Replacements. We review policies for modifications that result in the exchange of an existing contract for a new contract. If the new contract is determined to be an internal replacement that is substantially changed from the replaced contract, any unamortized DAC and related actuarial balances are written off and acquisition costs related to the new contract are capitalized as appropriate. If the new contract is substantially unchanged from the replaced contract, we continue to amortize the existing DAC and related actuarial balances.

Recoverability. DAC and sales inducement assets are subject to recoverability testing at the time of policy issue and loss recognition testing on an annual basis, or when an event occurs that may warrant loss recognition. If loss recognition or impairment is necessary, the asset balances are written off to the extent it is determined that future policy premiums and investment income or gross profits are not adequate to cover the balances. When LDTI is implemented in January 2023, DAC assets will no longer be subject to recoverability testing.

Actuarial Assumption Updates. We periodically review and update actuarial assumptions that are inputs to the models for DAC and other actuarial balances and make model refinements as necessary. For more information see "Transactions Affecting Comparability of Results of Operations — Actuarial Assumption Updates."

Sensitivities. As of December 31, 2022, the net balance of DAC and related actuarial balances, excluding balances affected by changes in other comprehensive income ("OCI"), was a $2,933.5 million asset. We perform sensitivity analyses to assess the impact that certain assumptions have on these balances. The following table shows the estimated immediate impact of various assumption changes on our DAC and related actuarial balances.

	Estimated impact to net income (1)
	(in millions)
Reducing the future separate account equity return assumption by 1%	**$(10)**
Reducing the long-term general account fixed income investment yield assumption by 0.5%	**(55)**

(1) Reflects the net increase (decrease) impact on net income of changes to the DAC asset, sales inducement asset, unearned revenue liability, reinsurance asset or liability, additional benefit reserves and related taxes. Includes the impact on net income of changes in DAC and related actuarial balances for our equity method subsidiaries. The DAC and related actuarial balances of the equity method subsidiaries are not included in the total DAC and related actuarial balances listed above as they are not fully consolidated.

Goodwill and Other Intangible Assets

Goodwill and other intangible assets with indefinite lives are not amortized. Intangibles with finite lives are amortized over their estimated useful lives. We formally conduct our annual goodwill and other intangible asset impairment testing during the third quarter or more frequently if events or circumstances change that would more-likely-than-not create an impairment. Goodwill is tested at the reporting unit level, which is one level below the operating segment.

The operating segments and associated reporting units at which we perform our testing are as follows:

- Retirement and Income Solutions: Retirement and Income Solutions — Fee and Retirement and Income Solutions — Spread
- Principal Global Investors: Equity Investments, Fixed Income Investments, Real Estate and Other Alternative Investments, Mutual Funds Complex
- Principal International: Latin America and Asia
- U.S. Insurance Solutions: Specialty Benefits insurance and Individual Life insurance
- Corporate: Corporate subsidiaries

Annual goodwill impairment testing consists of qualitative or quantitative assessments. In the qualitative assessment, we assess relevant events and circumstances that could affect the significant inputs used to determine the fair value of the reporting unit. If when reviewing the qualitative factors it is determined it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount, a quantitative impairment test is performed.

The determination of fair value for our reporting units is primarily based on an income approach whereby we use discounted cash flows for each reporting unit. We apply significant judgment to our discounted cash flow models when determining the estimated fair value of our reporting units. The valuation methodologies utilized are subject to key judgments and assumptions that are sensitive to change. Estimates of fair value are inherently uncertain and represent only management's reasonable expectation regarding future developments. These estimates and the judgments and assumptions upon which the estimates are based will in all likelihood differ in some responses from actual future results.

The key inputs, judgments and assumptions necessary in determining estimated fair value include:

- weighted average cost of capital
- long-term growth rate
- corporate income tax rate
- AUM growth rate
- net revenue growth rate
- business margins on AUM and net revenue

For reporting units that performed a qualitative test of goodwill, we concluded the estimated fair values of all such reporting units were in excess of their carrying values and, therefore, goodwill was not impaired. For reporting units that performed a quantitative test of goodwill, the estimated fair values of all such reporting units, except for Individual Life insurance, were in excess of their carrying values and, therefore, goodwill was not impaired. For the year ended December 31, 2022 we recognized a $27.1 million pre-tax (and after-tax) impairment of goodwill within our Individual Life insurance reporting unit. The impairment was the result of how we allocated equity following the Reinsurance Transaction.

For information about our goodwill and other intangible assets, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 1, Nature of Operations and Significant Accounting Policies," and "Note 2, Goodwill and Other Intangible Assets."

Sensitivities. In connection with our annual impairment testing process, we performed a sensitivity analysis for goodwill impairment with respect to each of our reporting units and determined that a hypothetical 10% decline in the fair value would not result in an impairment of goodwill for any reporting unit. We cannot predict certain future events that might adversely affect the reported value of goodwill and other intangible assets that totaled $1,598.2 million and $1,533.3 million, respectively, as of December 31, 2022. Such events include, but are not limited to, strategic decisions made in response to economic and competitive conditions, the impact of the economic environment on our customer base, interest rate movements, declines in the equity markets, the legal environment in which the businesses operate or a material negative change in our relationships with significant customers.

Insurance Reserves

Reserves are liabilities representing estimates of the amounts that will come due, at some point in the future, to or on behalf of our policyholders. U.S. GAAP, allowing for some degree of managerial judgment, provides guidance for establishing reserves.

Future policy benefits and claims include reserves for individual traditional and group life insurance, disability, medical and long-term care insurance and individual and group annuities that provide periodic income payments. These reserves are computed using assumptions of mortality, morbidity, lapse, investment performance and expense. These assumptions are based on our experience, industry results, emerging trends and future expectations. For long-duration insurance contracts, once these assumptions are made for a given policy or group of policies, they will not be changed over the life of the policy. However, significant changes in experience or assumptions may require us to provide for expected future losses on a product by establishing premium deficiency reserves. Premium deficiency reserves may also be established for short-duration contracts to provide for expected future losses. Our reserve levels are reviewed throughout the year using internal analysis including, among other things, experience studies, claim development analysis and annual loss recognition analysis. To the extent experience indicates potential loss recognition, we recognize losses on certain lines of business. The ultimate accuracy of the assumptions on these long-tailed insurance products cannot be determined until the obligation of the entire block of business on which the assumptions were made is extinguished. Short-term variances of actual results from the assumptions used in the computation of the reserves are reflected in current period net income and can impact quarter-to-quarter net income. When LDTI is implemented in January 2023, reserve methodologies and assumptions for long-duration contracts will change.

Future policy benefits and claims also include reserves for incurred but unreported disability, medical, dental, vision, critical illness, accident, PFML and life insurance claims. We recognize claims costs in the period the service was provided to our policyholders. However, claims costs incurred in a particular period are not known with certainty until after we receive, process and pay the claims. We determine the amount of this liability using actuarial methods based on historical claim payment patterns as well as emerging cost trends, where applicable, to determine our estimate of claim liabilities. We also look back to assess how our prior periods' estimates developed. To the extent appropriate, changes in such development are recorded as a change to current period claim expense. Historically, the amount of the claim reserve adjustment made in subsequent reporting periods for prior period estimates have been within a reasonable range given our normal claim fluctuations.

Future policy benefits and claims also include benefit reserves that are established for annuity or universal life-type contracts that provide benefit features that are expected to produce gains in early years followed by losses in later years. The liabilities are accrued in relation to estimated contract assessments.

We periodically review and update actuarial assumptions that are used to compute reserves. For more information see "Transactions Affecting Comparability of Results of Operations — Actuarial Assumption Updates."

Benefit Plans

The reported expense and liability associated with pension and OPEB plans requires the use of assumptions. Numerous assumptions are made regarding the discount rate, expected long-term rate of return on plan assets, turnover, expected compensation increases, health care claim costs, health care cost trends, retirement rates and mortality. The discount rate and the expected return on plan assets have the most significant impact on the level of expense.

The assumed discount rate is determined by projecting future benefit payments inherent in the Projected Benefit Obligation and discounting those cash flows using a spot yield curve for high quality corporate bonds. Our assumed discount rates were 5.10% for our pension plans and 5.00% for our OPEB plans as of December 31, 2022. Typically, a 0.25% decrease in the discount rate would increase the pension benefits Projected Benefit Obligation by approximately $93.7 million and decrease the Net Periodic Pension Cost ("NPPC") by approximately $1.6 million. Typically, a 0.25% decrease in the discount rate would increase the OPEB accumulated postretirement benefit obligation by approximately $1.4 million and would have a nominal impact on the Net Periodic Benefit Cost ("NPBC"). Typically, a 0.25% increase in the discount rate would result in decreases in benefit obligations and changes in expenses at a level generally commensurate with those noted above.

The assumed long-term rate of return on plan assets is set at the long-term rate expected to be earned based on the long-term investment policy of the plans and the various classes of the invested funds. Historical and future expected returns of multiple asset classes were analyzed to develop a risk-free real rate of return and risk premiums for each asset class. The overall long-term rate for each asset class was developed by combining a long-term inflation component, the real risk-free rate of return and the associated risk premium. A weighted average rate was developed based on long-term returns for each asset class, the plan's target asset allocation policy and the tax structure of the trusts. For the 2022 NPPC and 2022 NPBC, a 5.20% and 4.25% weighted average long-term rate of return was used, respectively. For the 2023 NPPC and 2023 NPBC, a 6.20% and 5.05% weighted average long-term rate of return assumption, respectively, will be used. Typically, a 0.25% decrease in the assumed long-term rate of return would increase the NPPC by approximately $6.6 million and the NPBC by approximately $0.2 million. Typically, a 0.25% increase in this rate would result in a decrease to expense at the same levels. The assumed return on plan assets is based on the fair market value of plan assets as of December 31, 2022.

The compensation increase assumption is generally set at a rate consistent with current and expected long-term compensation and salary policy, including inflation.

For pension costs, actuarial gains and losses are amortized using a straight-line amortization method over the average remaining service period of plan participants, which is approximately 10 years. For OPEB costs, actuarial gains and losses are amortized using a straight-line amortization method over the average future lifetime of the remaining covered group of retirees, which is approximately 14 years. The qualified pension plan does not utilize the allowable corridor, while the nonqualified pension plan and OPEB plans utilize the 10% corridor. Prior service costs are amortized on a weighted average basis over approximately 5 years for pension costs and 5 years for OPEB costs. See Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 12, Employee and Agent Benefits" for further discussion.

Income Taxes

We provide for income taxes based on our estimate of the liability for taxes due. Our tax accounting represents management's best estimate of various events and transactions, such as completion of tax audits or establishment of, or changes to, a valuation allowance associated with certain deferred tax assets, which could affect our estimates and effective income tax rate in a particular quarter or annual period. Deferred tax liabilities and assets are determined based on the difference between the financial statement and tax bases of assets and liabilities using enacted tax rates expected to be in effect during the years in which the basis differences reverse. We are required to evaluate the recoverability of our deferred tax assets each quarter and establish a valuation allowance, if necessary, to reduce our deferred tax assets to an amount that is more-likely-than-not to be realizable. In determining the need for a valuation allowance, we consider many factors, including future reversals of existing taxable temporary differences, future taxable income exclusive of reversing temporary differences and carryforwards, taxable income in prior carryback years and implementation of any feasible and prudent tax planning strategies management would employ to realize the tax benefit.

Deferred income taxes (including federal, state and foreign withholding) have not been provided on approximately $1,157.2 million of accumulated but undistributed earnings from operations of foreign subsidiaries as of December 31, 2022. We do not record deferred income taxes on foreign earnings not expected to be distributed to the U.S. We apply an exception to the general rule, which under U.S. GAAP otherwise requires the recording of deferred income taxes on the anticipated repatriation of foreign earnings as recognized for financial reporting purposes. The exception permits us to not record a deferred income tax liability on foreign earnings we expect to be indefinitely reinvested in our foreign operations. The related deferred income taxes will be recorded in the period it becomes apparent we can no longer positively assert some or all the undistributed earnings will remain invested into the foreseeable future.

Inherent in the provision for income taxes are estimates and our expectations regarding the deductibility of certain items, the timing of income and expense recognition, future performance and the current or future realization of operating losses, capital losses and certain tax credits. We regularly evaluate the capital needs of our domestic and foreign operations considering all available information, including operating and capital plans, regulatory capital requirements, parent company financing and cash flow needs, as well as tax laws applicable to our domestic and foreign subsidiaries. In the event these estimates differ from our prior estimates due to the receipt of new information, we may be required to significantly change the provision for income taxes recorded in the consolidated financial statements. Any such change could significantly affect the amounts reported in the consolidated financial statements in the year these estimates change. A significant decline in value of financial assets could lead to establishment of a valuation allowance on deferred tax assets having an adverse effect on current and future results. In management's judgment, total deferred income tax assets are more-likely-than-not to be realized.

In addition, the amount of income taxes paid is subject to audits in the U.S. as well as various state and foreign jurisdictions. Tax benefits are recognized for book purposes when the more-likely-than-not threshold is met with regard to the validity of an uncertain tax position. Once this threshold is met, for each uncertain tax position we recognize in earnings the largest amount of benefit that is greater than 50% likely of being realized upon ultimate settlement with the Internal Revenue Service or other income taxing authorities for audits ongoing or not yet commenced.

We had \$5.6 million of current income tax payables associated with outstanding audit issues as of December 31, 2022. We believe there are adequate defenses against, or sufficient provisions for, the contested issues, but final resolution of contested issues could take several years while legal remedies are pursued. Consequently, we do not anticipate the ultimate resolution of audits ongoing or not yet commenced to have a material impact on our net income.

See Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 11, Income Taxes" for further discussion.

Transactions Affecting Comparability of Results of Operations

Acquisition

China Pension Joint Venture. On December 28, 2022, we finalized the acquisition of a 17.647% interest in China Construction Bank's pension business with the Social Security Fund of China. CCBP is the first and only asset manager to be permitted to run all types of pension investment portfolios within the country. The joint venture investment is reported within the Principal International segment.

Other

Actuarial Assumption Updates. We periodically review and update actuarial assumptions that are inputs to the models for DAC and other actuarial balances and make model refinements as necessary. Assumption updates and model refinements made during the third quarter resulted in an unlocking of DAC and other actuarial balances that increased (decreased) consolidated net income attributable to Principal Financial Group, Inc. by \$130.3 million and \$(14.2) million for the years ended December 31, 2022 and 2021, respectively.

The following table presents the increase (decrease) to pre-tax operating earnings for each segment.

	For the year ended December 31,	
	2022	**2021**
	(in millions)	
Retirement and Income Solutions	**\$67.3**	\$(67.3)
U.S. Insurance Solutions	**18.8**	34.6

Reinsurance Transaction. During the second quarter of 2022, we closed a coinsurance with funds withheld reinsurance transaction with Talcott Life & Annuity Re, a limited liability company organized under the laws of the Cayman Islands and an affiliate of Talcott Resolution Life, Inc., a subsidiary of Sixth Street, pursuant to which we ceded our in-force U.S. retail fixed annuity and ULSG blocks of business. The economics of the Reinsurance Transaction were effective as of January 1, 2022.

Other Factors Affecting Comparability

Fluctuations in Foreign Currency to U.S. Dollar Exchange Rates

Fluctuations in foreign currency to U.S. dollar exchange rates for locations in which we have operations can affect reported financial results. In years when foreign currencies weaken against the U.S. dollar, translating foreign currencies into U.S. dollars results in fewer U.S. dollars to be reported. When foreign currencies strengthen, translating foreign currencies into U.S. dollars results in more U.S. dollars to be reported.

Foreign currency exchange rate fluctuations create variances in our financial statement line items. The most significant impact occurs within our Principal International segment where pre-tax operating earnings were negatively impacted \$21.4 million for the year ended December 31, 2022, as a result of fluctuations in foreign currency to U.S. dollar exchange rates. This impact was calculated by comparing (a) the difference between current year results and prior year results to (b) the difference between current year results and prior year results translated using current year exchange rates for both periods. We use this approach to calculate the impact of exchange rates on all revenue and expense line items. For a discussion of our approaches to managing foreign currency exchange rate risk, see Item 7A "Quantitative and Qualitative Disclosures About Market Risk — Foreign Currency Risk."

Effects of Inflation

The impact of inflation has not had a material effect on our annual consolidated results of operations over the past two years. However, we may be materially affected by inflation in the future.

Variable Investment Income

Variable investment income includes certain types of investment returns such as prepayment fees and income (loss) from certain elements of our other alternative asset classes, including results of value-add real estate sales activity. Due to its unpredictable nature, variable investment income may or may not be material to our financial results for a given reporting period and may create variances when comparing different reporting periods. For additional information, see "Investment Results."

Recent Accounting Changes

For recent accounting changes, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 1, Nature of Operations and Significant Accounting Policies" under the caption, "Recent Accounting Pronouncements."

Results of Operations

The following table presents summary consolidated financial information for the years indicated:

	For the year ended December 31,		
	2022	**2021**	**Increase (decrease)**
		(in millions)	
Revenues:			
Premiums and other considerations	**$ 5,339.7**	$ 4,841.5	$ 498.2
Fees and other revenues	**4,177.7**	5,012.6	(834.9)
Net investment income	**3,830.4**	4,406.1	(575.7)
Net realized capital gains (losses)	**(258.4)**	2.5	(260.9)
Net realized capital gains on funds withheld assets	**749.4**	—	749.4
Change in fair value of funds withheld embedded derivative	**3,652.8**	—	3,652.8
Total revenues	**17,491.6**	14,262.7	3,228.9
Expenses:			
Benefits, claims and settlement expenses	**6,370.8**	7,097.0	(726.2)
Dividends to policyholders	**94.8**	94.8	—
Operating expenses	**4,965.9**	4,987.3	(21.4)
Total expenses	**11,431.5**	12,179.1	(747.6)
Income before income taxes	**6,060.1**	2,083.6	3,976.5
Income taxes	**1,207.9**	326.2	881.7
Net income	**4,852.2**	1,757.4	3,094.8
Net income attributable to noncontrolling interest	**40.6**	46.8	(6.2)
Net income attributable to Principal Financial Group, Inc.	**$ 4,811.6**	$ 1,710.6	$3,101.0

Year Ended December 31, 2022 Compared to Year Ended December 31, 2021

Net Income Attributable to Principal Financial Group, Inc.

Net income attributable to Principal Financial Group, Inc. increased primarily due to the change in the fair value of the funds withheld embedded derivative.

Total Revenues

Premiums increased for the U.S. Insurance Solutions segment primarily due to a $274.7 million increase from growth in the Specialty Benefits insurance business and a $201.9 million increase in Individual Life insurance premiums, primarily related to the retrocession of ceded premiums as a result of the Reinsurance Transaction.

Fees and other revenues decreased $490.6 million for the U.S. Insurance Solutions segment primarily due to the Reinsurance Transaction. Fees and other revenues decreased $142.3 million for the Retirement and Income Solutions segment primarily resulting from declining financial markets. Fees and other revenues decreased for the Principal Global Investors segment primarily due to $79.4 million lower management fee revenue as a result of decreased average AUM and a $19.2 million decrease in performance fee revenue primarily in our real estate business.

For net investment income and net realized capital gains (losses) variance information, see "Investments — Investment Results" under the captions "Net Investment Income" and "Net Realized Capital Gains (Losses)," respectively.

Net realized capital gains on funds withheld assets increased as a result of the sale of funds withheld assets associated with the Reinsurance Transaction in 2022.

The change in the fair value of the funds withheld embedded derivative increased due to the establishment of the funds withheld payable associated with the Reinsurance Transaction in 2022 and an increase in interest rates.

Total Expenses

Benefits, claims and settlement expenses decreased $610.6 million for the U.S. Insurance Solutions segment primarily due to the Reinsurance Transaction. Benefits, claims and settlement expenses decreased $221.5 million for the Retirement and Income Solutions segment primarily due to a decrease in reserves, stemming from the impact of our exited retail fixed annuity business.

Operating expenses decreased primarily due to $157.0 million of lower incentive compensation costs and a $139.5 million decrease in amounts credited to employee accounts in a nonqualified defined contribution pension plan. Partially offsetting these decreases was $267.2 million of strategic review costs and impacts related to our exited business.

Income Taxes

The effective income tax rate increased to 20% for the year ended December 31, 2022 from 16% for the year ended December 31, 2021, primarily due to a 3% impact related to a decrease of available foreign tax credits on the U.S. taxation of international operations and a 2% impact of an increase in pre-tax income with no proportionate increase in permanent tax differences. See Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 11, Income Taxes" under the caption, "Effective Income Tax Rate" for further discussion.

Results of Operations by Segment

For results of operations by segment see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 17, Segment Information." Beginning in the second quarter of 2022, segment pre-tax operating earnings excludes amounts associated with our exited U.S. retail fixed annuity and ULSG businesses, including strategic review costs and impacts, amortization of reinsurance gain (loss), impacts to actuarial balances of reinsured businesses, net realized capital gains (losses) on funds withheld assets and the change in fair value of the funds withheld embedded derivative.

Retirement and Income Solutions Segment

Retirement and Income Solutions Trends

Several key factors impact revenue and earnings growth in the Retirement and Income Solutions segment. These factors include: the ability of our distribution channels to generate new sales and retain existing business;

pricing decisions that take account of competitive conditions, persistency, investment returns, mortality trends, and operating expense levels; investment management performance; equity market returns and interest rate changes. Profitability ultimately depends on our ability to price products and invest assets at a level that enables us to earn a margin over the cost of providing benefits and the expense of acquiring and administering those products.

Net revenue is a key metric used to understand Retirement and Income Solutions earnings growth. Net revenue, which is used only at the segment level, is defined as operating revenues less benefits, claims and settlement expenses less dividends to policyholders. Net revenue from Retirement and Income Solutions — Fee is largely fee based and is impacted by changes in the equity markets and interest rates. Net revenue from Retirement and Income Solutions — Spread is primarily driven by the difference between investment income earned on the underlying general account assets and the interest rate credited to the contracts.

The following table presents the Retirement and Income Solutions segment net revenue for the years indicated:

	For the year ended December 31,		
	2022	**2021**	**Increase (decrease)**
		(in millions)	
Retirement and Income Solutions — Fee	**$2,023.2**	$2,037.9	$ (14.7)
Retirement and Income Solutions — Spread	**748.2**	928.1	(179.9)
Total Retirement and Income Solutions	**$2,771.4**	$2,966.0	$(194.6)

Retirement and Income Solutions Segment Summary Financial Data

The following table presents certain summary financial data relating to the Retirement and Income Solutions segment for the years indicated:

	For the year ended December 31,		
	2022	**2021**	**Increase (decrease)**
		(in millions)	
Operating revenues:			
Premiums and other considerations	**$1,959.7**	$1,883.6	$ 76.1
Fees and other revenues	**1,741.4**	1,897.6	(156.2)
Net investment income	**2,274.1**	2,728.8	(454.7)
Total operating revenues	**5,975.2**	6,510.0	(534.8)
Expenses:			
Benefits, claims and settlement expenses, including dividends to policyholders	**3,203.8**	3,544.0	(340.2)
Operating expenses	**1,681.0**	1,824.8	(143.8)
Total expenses	**4,884.8**	5,368.8	(484.0)
Pre-tax operating earnings	**$1,090.4**	$1,141.2	$ (50.8)

Year Ended December 31, 2022 Compared to Year Ended December 31, 2021

Pre-Tax Operating Earnings

Pre-tax operating earnings increased in our Fee business due to a decrease in operating expenses partially offset by a decrease in net revenue as described below. Pre-tax operating earnings decreased in our Spread business primarily due to a decrease in net revenue partially offset by a decrease in operating expenses as described below.

Net Revenue

Net revenue decreased in our Fee business primarily due to a $152.7 million decrease in fee revenue primarily resulting from declining financial markets and a $10.9 million decrease in variable investment income. These decreases were partially offset by a $79.1 million impact associated with actuarial assumption updates and model refinements, which were favorable in 2022 compared to unfavorable in 2021, a $46.0 million increase in revenue from our Principal Deposit Sweep program resulting from growth in the business and a $21.3 million increase associated with higher net yields. Net revenue decreased in our Spread business primarily due to a $304.4 million decrease associated with the impacts of our exited retail fixed annuity business along with a $139.0 million decrease in variable investment income. These decreases were partially offset by a $207.7 million increase associated with higher net yields and a $54.7 million impact associated with actuarial assumption updates and model refinements, which were favorable in 2022 with no corresponding impact in 2021.

Operating Expenses

Operating expenses decreased in our Fee business primarily due to a $67.6 million decrease associated with the integration of the Institutional Retirement & Trust business of Wells Fargo Bank, N.A., a $36.2 million decrease in non-deferrable commissions stemming from lower sales in commission eligible products and a $32.5 million decrease in variable compensation. These decreases were partially offset by a $26.0 million increase in staff related expenses and a $24.5 million increase in DAC amortization due to unfavorable market performance in 2022 compared to favorable in 2021. Operating expenses decreased in our Spread business primarily due to an $84.3 million impact from our exited retail fixed annuity business. The decrease was partially offset by a $22.3 million increase largely due to growth in our retained business.

Principal Global Investors Segment

Principal Global Investors Trends

Our overall AUM decreased $81.8 billion in 2022 driven by negative market performance. We continue to expand our global presence and believe we are well positioned to capture changing market conditions and client needs.

The following table provides a summary of AUM managed by Principal Global Investors by the business area that sourced or generated the AUM. Principal Global Investors sourced represents institutional and fund platform AUM sourced by Principal Global Investors' distribution teams. General account represents general account assets of domestic insurance companies and other balance sheet assets. Other affiliated sources represents AUM sourced by other PFG businesses (e.g., separate account assets).

	December 31, 2022	December 31, 2021
	(in billions)	
Principal Global Investors sourced	**$241.6**	$275.9
General account	**63.2**	98.1
Other affiliated sources	**159.9**	172.5
Total AUM	**$464.7**	$546.5

	For the year ended December 31, 2022	2021
	(in billions)	
AUM, beginning of period	**$546.5**	$502.1
Net cash flow	**4.4**	(0.5)
Market performance	**(81.1)**	53.3
Operations acquired (1)	**18.6**	—
Operations disposed (2)	**(23.1)**	(1.2)
Other (3)	**(0.6)**	(7.2)
AUM, end of period	**$464.7**	$546.5

(1) Effective in the first quarter of 2022, includes the integration of Institutional Asset Advisory, which is associated with acquisition of the Institutional Retirement & Trust business of Wells Fargo Bank, N.A.

(2) In the second quarter of 2022, $23.1 billion of Principal Global Investors managed AUM was transferred to third parties per the Reinsurance Transaction.

(3) 2021 includes the removal of $4.7 billion of AUM due to an internal definition change relating to AUM and AUA.

The following table presents certain summary financial data relating to the Principal Global Investors segment for the years indicated:

	For the year ended December 31,		
	2022	**2021**	**Increase (decrease)**
		(in millions)	
Operating revenues:			
Fees and other revenues	**$1,702.4**	$1,824.1	$(121.7)
Net investment income	**13.1**	3.9	9.2
Total operating revenues	**1,715.5**	1,828.0	(112.5)
Expenses:			
Total expenses	**1,106.8**	1,113.6	(6.8)
Pre-tax operating earnings attributable to noncontrolling interest	**4.7**	6.0	(1.3)
Pre-tax operating earnings	**$ 604.0**	$ 708.4	$(104.4)

Year Ended December 31, 2022 Compared to Year Ended December 31, 2021

Pre-Tax Operating Earnings

Pre-tax operating earnings decreased primarily due to $79.4 million lower management fee revenue as a result of decreased average AUM and a $28.3 million increase in non-variable staff costs.

Principal International Segment

Principal International Trends

Our Principal International businesses focus on locations with growing middle classes, favorable demographics and increasing long-term savings, ideally with voluntary or mandatory pension markets. With variations depending upon the specific location, we have targeted these markets for sales of retirement and related products and services, including mutual funds, asset management, income annuities and life insurance accumulation products to businesses and individuals.

We have pursued our international strategy through a combination of acquisitions, start-up operations and joint ventures, which require infusions of capital consistent with our strategy of long-term growth and profitability.

Principal International Segment Summary Financial Data

AUM is generally a key indicator of earnings growth for the segment, as AUM is the base by which we can generate local currency profits. The Cuprum business in Chile differs in that the majority of fees are collected with each deposit by the mandatory retirement customers, based on a capped salary level, as opposed to asset levels. Net customer cash flow and market performance are the two main drivers of local currency AUM growth. Net customer cash flow reflects our ability to attract and retain client deposits. Market performance reflects the investment returns on our underlying AUM. Our financial results are also impacted by fluctuations of the foreign currency to U.S. dollar exchange rates for the locations in which we have business. AUM of our foreign subsidiaries is translated into U.S. dollar equivalents at the end of the reporting period using the spot foreign exchange rates. Revenue and expenses for our foreign subsidiaries are translated into U.S. dollar equivalents at the average foreign exchange rates for the reporting period.

The following table presents the Principal International segment AUM rollforward for the years indicated:

	For the year ended December 31,	
	2022	**2021**
	(in billions)	
AUM, beginning of period	**$152.1**	$165.2
Net cash flow	**(0.8)**	2.0
Market performance	**2.7**	4.3
Effect of exchange rates	**2.8**	(13.7)
Operations disposed (1)	**—**	(1.2)
Other (2)	**(0.3)**	(4.5)
AUM, end of period	**$156.5**	$152.1

(1) During 2021, we exited our retail investment and retirement business in India.

(2) Includes Chile hardship withdrawals of $2.8 billion for the year ended December 31, 2021. 2021 also includes the removal of $1.7 billion of distribution only AUM since it has no impact on the Principal International segment's future management fee revenues.

Net revenue, which is used only at the segment level, is a key metric used to understand the earnings growth for the Principal International segment. The following table presents the net revenue of the Principal International segment for the years indicated:

	For the year ended December 31,		
	2022	**2021**	**Increase (decrease)**
		(in millions)	
Net revenue	**$745.4**	$778.6	$(33.2)

The following table presents certain summary financial data relating to the Principal International segment for the years indicated:

	For the year ended December 31,		
	2022	**2021**	**Increase (decrease)**
		(in millions)	
Operating revenues:			
Premiums and other considerations	**$ 77.7**	$ 127.5	$ (49.8)
Fees and other revenues	**430.8**	496.8	(66.0)
Net investment income	**967.4**	727.5	239.9
Total operating revenues	**1,475.9**	1,351.8	124.1
Expenses:			
Benefits, claims and settlement expenses	**730.5**	573.2	157.3
Operating expenses	**433.6**	465.6	(32.0)
Total expenses	**1,164.1**	1,038.8	125.3
Pre-tax operating earnings attributable to noncontrolling interest	**3.2**	4.0	(0.8)
Pre-tax operating earnings	**$ 308.6**	$ 309.0	$ (0.4)

Year Ended December 31, 2022 Compared to Year Ended December 31, 2021

Pre-Tax Operating Earnings

In Latin America pre-tax operating earnings increased $45.5 million in Brazil as a result of increased earnings from our equity method investments and $24.2 million in Chile primarily due to an increase in mandatory fees. These improvements were mostly offset by a decrease of $51.7 million in Mexico primarily due to regulatory fee reductions and $17.9 million of foreign currency headwinds.

Net Revenue

In Latin America net revenue decreased as a result of $43.3 million lower fees primarily due to regulatory fee reductions and $39.6 million of foreign currency headwinds. These decreases were partially offset by increases of $45.5 million in Brazil as a result of increased earnings from our equity method investments and $21.1 million in Chile primarily due to an increase in mandatory fees. In Asia net revenue decreased $9.8 million due to the exit of the India business in 2021 and $7.9 million primarily due to lower fees on lower average AUM in Hong Kong.

U.S. Insurance Solutions Segment

U.S. Insurance Solutions Segment Summary Financial Data

Premium and fees are a key metric for growth in the U.S. Insurance Solutions segment. We receive premiums on our specialty benefits insurance products as well as our traditional life insurance products. Fees are generated from our specialty benefits fee-for-service products as well as our universal life, variable universal life and indexed universal life insurance products. We use several reinsurance programs to help manage the mortality and morbidity risk. Premium and fees are reported net of reinsurance premiums.

The following table presents the U.S. Insurance Solutions segment premium and fees for the years indicated:

	For the year ended December 31,		
	2022	**2021**	**Increase (decrease)**
		(in millions)	
Premium and fees:			
Specialty Benefits insurance	**$2,804.8**	$2,530.3	$ 274.5
Individual Life insurance	**934.6**	1,253.8	(319.2)

The following table presents certain summary financial data relating to the U.S. Insurance Solutions segment for the years indicated:

	For the year ended December 31,		
	2022	**2021**	**Increase (decrease)**
		(in millions)	
Operating revenues:			
Premiums and other considerations	**$3,306.5**	$2,830.4	$ 476.1
Fees and other revenues	**432.3**	953.5	(521.2)
Net investment income	**576.1**	982.7	(406.6)
Total operating revenues	**4,314.9**	4,766.6	(451.7)
Expenses:			
Benefits, claims and settlement expenses	**2,461.7**	3,028.6	(566.9)
Dividends to policyholders	**94.6**	94.6	—
Operating expenses	**1,226.9**	1,172.6	54.3
Total expenses	**3,783.2**	4,295.8	(512.6)
Pre-tax operating earnings	**$ 531.7**	$ 470.8	$ 60.9

Year Ended December 31, 2022 Compared to Year Ended December 31, 2021

Pre-Tax Operating Earnings

Pre-tax operating earnings increased in our Specialty Benefits insurance business primarily due to $55.9 million in lower COVID-19 claims in 2022 compared to 2021, $27.6 million from strong expense management and $18.0 million due to growth in the business. Pre-tax operating earnings in our Individual Life insurance business decreased $40.7 million due to lower variable investment income and $30.3 million due to the impact associated with actuarial assumption updates and model refinements, which were less favorable in 2022 compared to 2021. These decreases were offset by $34.0 million in lower COVID-19 claims.

Operating Revenues

Premium and fees in our Specialty Benefits insurance business increased $274.5 million from growth in the business. Premium and fees decreased in our Individual Life insurance business $347.0 million primarily due to the impact of our exited ULSG business, offset by $27.8 million due to the impact associated with actuarial assumption updates and model refinements, which were favorable in 2022 compared to unfavorable in 2021.

Net investment income in our Individual Life insurance business decreased $325.9 million primarily due to the impact of our exited ULSG business and $40.7 million due to lower variable investment income.

Total Expenses

Benefits, claims and settlement expenses in our Specialty Benefits insurance business increased $168.2 million from growth in the business, partially offset by $55.9 million in lower COVID-19 claims. Benefits, claims and settlement expenses in our Individual Life insurance business decreased $676.3 million primarily due to the impact of our exited ULSG business.

Operating expenses in our Specialty Benefits business increased $88.5 million primarily due to growth in the business, offset by $27.6 million from expense management. Operating expenses in our Individual Life insurance business decreased $54.2 million primarily associated with the impact of our exited ULSG business, largely offset by an increase in DAC amortization of $47.9 million primarily due to an unfavorable impact from actuarial assumption and model refinements in the current period compared to favorable impacts in the prior year.

Corporate Segment

Corporate Segment Summary Financial Data

The following table presents certain summary financial data relating to the Corporate segment for the years indicated:

	For the year ended December 31,		
	2022	**2021**	**Increase (decrease)**
	(in millions)		
Operating revenues:			
Total operating revenues	**$ (6.5)**	$ 1.8	$ (8.3)
Expenses:			
Total expenses	**400.7**	346.3	54.4
Pre-tax operating earnings attributable to noncontrolling interest	**62.2**	23.5	38.7
Pre-tax operating losses	**$(469.4)**	$(368.0)	$(101.4)

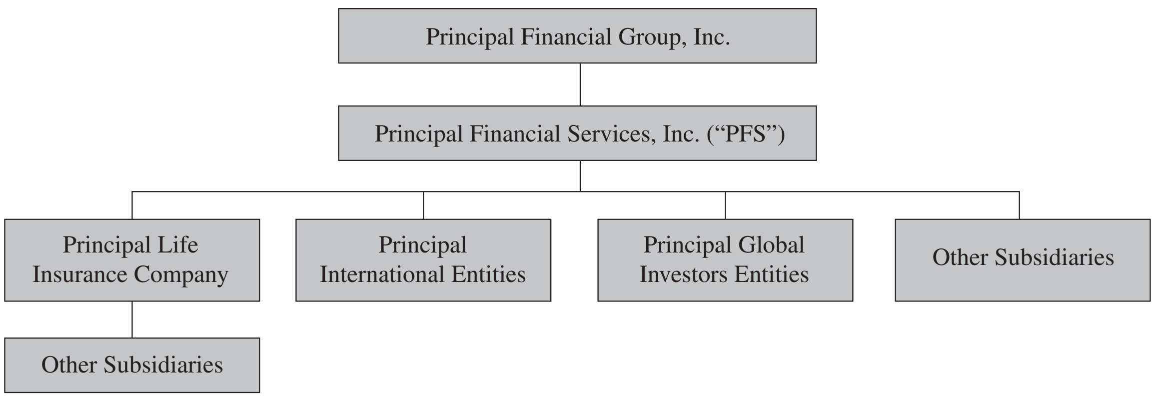
Year Ended December 31, 2022 Compared to Year Ended December 31, 2021

Pre-Tax Operating Losses

Pre-tax operating losses increased primarily due to $82.1 million lower net investment income largely resulting from mark-to-market losses on investments and $29.5 million stranded costs associated with exited business.

Liquidity and Capital Resources

Liquidity and capital resources represent the overall strength of a company and its ability to generate strong cash flows, borrow funds at a competitive rate and raise new capital to meet operating and growth needs. We are in a strong capital and liquidity position as we face the uncertain, volatile and potentially material adverse economic disruptions to our business brought on by the COVID-19 pandemic. We are monitoring our liquidity closely and feel confident in our ability to meet all long-term obligations to customers, policyholders and debt holders. Our sources of strength include our laddered long-term debt maturities with the next maturity occurring May 2023, access to revolving credit facility and contingent funding arrangements, a strong risk-based capital position and our available cash and liquid assets. The combination of these financial levers will enable us to manage through this period of economic volatility. Our legal entity structure has an impact on our ability to meet cash flow needs as an organization. Following is a simplified organizational structure.



Liquidity

Our liquidity requirements have been and will continue to be met by funds from consolidated operations as well as the issuance of commercial paper, common stock, debt or other capital securities and borrowings from credit facilities. We believe the cash flows from these sources are sufficient to satisfy the current liquidity requirements of our operations, including reasonably foreseeable contingencies.

We maintain a level of cash and securities which, combined with expected cash inflows from investments and operations, we believe to be adequate to meet anticipated short-term and long-term payment obligations. We will continue our prudent capital management practice of regularly exploring options available to us to maximize capital flexibility, including accessing the capital markets and careful attention to and management of expenses.

We perform rigorous liquidity stress testing to ensure our asset portfolio includes sufficient high quality liquid assets that could be utilized to bolster our liquidity position under increasingly stressed market conditions. These assets could be utilized as collateral for secured borrowing transactions with various third parties or by selling the securities in the open market if needed.

We also manage liquidity risk by limiting the sales of liabilities with features such as puts or other options that can be exercised at inopportune times. For example, as of December 31, 2022, approximately $14.6 billion, or 99%, of our institutional guaranteed investment contracts and funding agreements cannot be redeemed by contractholders prior to maturity. Our individual annuity liabilities also contain surrender charges and other provisions limiting early surrenders.

The following table summarizes the withdrawal characteristics of our domestic general account investment contracts as of December 31, 2022.

	Contractholder funds	Percentage
	(in millions)	
Not subject to discretionary withdrawal	**$15,962.2**	**46.3%**
Subject to discretionary withdrawal with adjustments:		
Specified surrender charges	**9,689.3**	**28.1**
Market value adjustments	**4,302.2**	**12.5**
Subject to discretionary withdrawal without adjustments	**4,535.0**	**13.1**
Total domestic investment contracts	**$34,488.7**	**100.0%**

Universal life insurance and certain traditional life insurance policies are also subject to discretionary withdrawals by policyholders. However, life insurance policies tend to be less susceptible to withdrawal than our investment contracts because policyholders may be subject to a new underwriting process in order to obtain a new life insurance policy. In addition, our life insurance liabilities include surrender charges to discourage early surrenders.

We had the following short-term credit facilities with various financial institutions as of December 31, 2022:

Obligor/Applicant	Financing structure	Maturity	Capacity	Amount outstanding (3)
			(in millions)	
Principal Life (1)	Credit facility	October 2027	**$800.0**	**$ —**
Principal International Chile (2)	Unsecured lines of credit		**136.9**	**80.7**
Total			**$936.9**	**$80.7**

(1) The credit facility is supported by sixteen banks.

(2) The unsecured lines of credit can be used for repurchase agreements or other borrowings. Each line has a maturity of less than one year.

(3) The amount outstanding is reported in short-term debt on the consolidated statements of financial position.

The revolving credit facilities are committed and available for general corporate purposes. These credit facilities also provide 100% back-stop support for our commercial paper program, of which we had no outstanding balances as of December 31, 2022 and December 31, 2021. Most of the banks supporting the credit facilities have other relationships with us. Due to the financial strength and the strong relationships we have with these providers, we are comfortable we have very low risk the financial institutions would be unable or unwilling to fund these facilities.

The Holding Companies: PFG and PFS. The principal sources of funds available to our parent holding company, PFG, are dividends from subsidiaries as well as its ability to borrow funds at competitive rates and raise capital to meet operating and growth needs. These funds are used by PFG to meet its obligations, which include the payment of dividends on common stock, debt service and the repurchase of stock. The declaration and payment of common stock dividends is subject to the discretion of our Board of Directors ("Board") and will depend on our overall financial condition, results of operations, capital levels, cash requirements, future prospects, receipt of dividends or other distributions from Principal Life (as described below), risk management considerations and other factors deemed relevant by the Board. No significant restrictions limit the payment of dividends by PFG, except those generally applicable to corporations incorporated in Delaware.

Dividends or other distributions from Principal Life, our primary subsidiary, are limited by Iowa law. Under Iowa law, Principal Life may pay dividends or make other distributions only from the earned surplus arising from its business and must receive the prior approval of the Commissioner of Insurance of the State of Iowa (the "Commissioner") to pay stockholder dividends or make any other distribution if such distribution would exceed certain statutory limitations. Iowa law gives the Commissioner discretion to disapprove requests for distributions in excess of these limitations. Extraordinary dividends include those made, together with dividends and other distributions, within the preceding twelve months that exceed the greater of (i) 10% of statutory policyholder surplus as of the previous year-end or (ii) the statutory net gain from operations from the previous calendar year, not to exceed earned surplus. Based on statutory results for the year ended December 31, 2022, the ordinary stockholder dividend limitation for Principal Life is approximately $430.1 million in 2023.

Total stockholder dividends paid by Principal Life to its parent in 2022 were $1,425.0 million, all of which was extraordinary and approved by the Commissioner. As of December 31, 2022, we had $2,102.6 million of cash and liquid assets held in our holding companies and other subsidiaries, which is available for corporate purposes. Corporate balances held in foreign holding companies meet the indefinite reinvestment exception (see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 10, Income Taxes").

In 2021, total stockholder dividends paid by Principal Life to its parent were $1,250.0 million, $950.0 million of which was extraordinary and approved by the Commissioner.

Operations. Our primary consolidated cash flow sources are premiums from insurance products, pension and annuity deposits, asset management fee revenues, administrative services fee revenues, income from investments and proceeds from the sales or maturity of investments. Cash outflows consist primarily of payment of benefits to policyholders and beneficiaries, income and other taxes, current operating expenses, payment of dividends to policyholders, payments in connection with investments acquired, payments made to acquire subsidiaries, payments relating to policy and contract surrenders, withdrawals, policy loans, interest payments and repayment of short-term debt and long-term debt. Our investment strategies are generally intended to provide adequate funds to pay benefits without forced sales of investments. For a discussion of our investment objectives and strategies, see "Investments."

Cash Flows. Cash flow activity, as reported in our consolidated statements of cash flows, provides relevant information regarding our sources and uses of cash. The following discussion of our operating, investing and financing portions of the cash flows excludes cash flows attributable to the separate accounts.

Net cash provided by operating activities was $3,172.9 million and $3,254.4 million for the years ended December 31, 2022 and 2021, respectively. Our insurance business typically generates positive cash flows from operating activities, as premiums collected from our insurance products and income received from our investments exceed acquisition costs, benefits paid, redemptions and operating expenses. These positive cash flows are then invested to support the obligations of our insurance and investment products and required capital supporting these products. Our cash flows from operating activities are affected by the timing of premiums, fees and investment income received and benefits and expenses paid. The increase in cash provided by operating activities was primarily due to fluctuations in receivables and payables associated with the timing of settlements in 2022 as compared to 2021.

Net cash provided by investing activities was $1,058.5 million for the year ended December 31, 2022, compared to net cash used in financing activities of $5,693.7 million for the year ended December 31, 2021. The increase in cash provided by investing activities was due to net sales and maturities of available-for sale securities in 2022 compared to net purchases of available-for sale securities in 2021 and decreased net purchases of mortgage loans in 2022 as compared to 2021. The portfolio changes are due in part to the Reinsurance Transaction and the associated funds withheld portfolio activity during 2022.

Net cash used in financing activities was $1,715.4 million for the year ended December 31, 2022, compared to net cash provided by financing activities of $1,921.5 million for the year ended December 31, 2021. The increase in cash used in financing activities was due to a lower net increase in banking operation deposits in 2022 as compared to 2021 and increased share repurchases in 2022 primarily related to our accelerated share repurchase programs. Additionally, we paid off $300.0 million of long-term debt that matured during the quarter ended September 30, 2022.

Guarantors and Issuers of Guaranteed Securities. PFG has issued certain notes pursuant to transactions registered under the Securities Act of 1933. Such notes include all currently outstanding senior notes and junior subordinated notes, which are subordinated to all our senior debt (collectively, the "registered notes"). For additional information on the senior notes and junior subordinated notes, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 10, Debt."

PFS, a wholly owned subsidiary of PFG, has guaranteed each of the registered notes on a full and unconditional basis. The full and unconditional guarantees require PFS to satisfy the obligations of the guaranteed security immediately, if and when PFG has failed to make a scheduled payment thereunder. If PFS does not make such payment, any holder of the guaranteed security may immediately bring suit directly against PFS for payment of amounts due and payable. No other subsidiary of PFG has guaranteed any of the registered notes.

Summary financial information is presented below on a combined basis for PFG and PFS (the "obligor group") and transactions between the obligor group have been eliminated. The summary financial information excludes subsidiaries that are not issuers or guarantors. Any investments by the obligor group in other subsidiaries have been excluded.

	December 31, 2022	December 31, 2021
	(in millions)	
Summary Statements of Financial Position Information:		
Total investments	**$ 320.7**	$1,338.2
Cash and cash equivalents	**952.0**	516.4
Goodwill	**618.5**	618.5
Other intangibles	**447.4**	475.5
Other assets	**385.4**	385.7
Due from non-obligor subsidiaries	**47.7**	208.2
Total assets	**2,789.5**	3,593.8
Long-term debt	**3,929.2**	4,226.1
Other liabilities	**584.6**	563.6
Due to non-obligor subsidiaries	**793.9**	904.7
Total liabilities	**5,371.1**	5,741.2

	For the year ended December 31, 2022	For the year ended December 31, 2021
	(in millions)	
Summary Statements of Operations Information:		
Total revenues	**$ (7.5)**	$ 223.7
Total expenses	**524.2**	649.7
Net loss	**(462.1)**	(335.3)

Shelf Registration. On April 29, 2020, our shelf registration statement was filed with the SEC and became effective. The shelf registration replaced the shelf registration that had been in effect since May 2017. Under our current shelf registration, we have the ability to issue, in unlimited amounts, unsecured senior debt securities or subordinated debt securities, junior subordinated debt, preferred stock, common stock, warrants, depositary shares, purchase contracts and purchase units of PFG. Our wholly owned subsidiary, PFS, may guarantee, fully and unconditionally or otherwise, our obligations with respect to any non-convertible securities, other than common stock, described in the shelf registration. For information on senior notes issued from our shelf registration, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 10, Debt."

Short-Term Debt. For short-term debt information, see "Liquidity" and Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 10, Debt."

Long-Term Debt. For long-term debt information, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 10, Debt."

Contingent Funding Agreements for Senior Debt Issuance. For information on the contingent funding agreements, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 10, Debt" under the caption "Contingent Funding Agreements for Senior Debt Issuance."

Stockholders' Equity. Proceeds from the issuance of our common stock were $181.7 million and $86.7 million in 2022 and 2021, respectively.

The following table summarizes our return of capital to common stockholders.

	For the year ended December 31, 2022	For the year ended December 31, 2021
	(in millions)	
Dividends to stockholders	**$ 642.3**	$ 654.1
Repurchase of common stock (1)	**1,661.1**	937.2
Total cash returned to common stockholders	**$2,303.4**	$1,591.3
Number of shares repurchased (1)	**23.1**	14.6

(1) Includes common stock utilized to execute certain stock incentive awards and shares purchased as part of publicly announced programs.

In March 2022, we entered into an accelerated share repurchase program with a third party financial institution to repurchase $700.0 million of common stock. This program closed in June 2022. In August 2022, we entered into an accelerated share repurchase program with a third party financial institution to repurchase $400.0 million of common stock. This program closed in September 2022. See Item 5. "Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities" for information about the share repurchase authorizations.

For additional stockholders' equity information, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 14, Stockholders' Equity."

Capitalization

The following table summarizes our capital structure:

	December 31, 2022	December 31, 2021
	($ in millions)	
Debt:		
Short-term debt	**$ 80.7**	$ 79.8
Long-term debt	**3,997.0**	4,280.2
Total debt	**4,077.7**	4,360.0
Total stockholders' equity attributable to PFG (1)	**10,001.7**	16,069.4
Total capitalization	**$14,079.4**	$20,429.4
Debt to equity	**41%**	27%
Debt to capitalization	**29%**	21%

(1) Decrease primarily due to change in AOCI during 2022.

Pension and OPEB Plan Funding

We have defined benefit pension plans covering substantially all of our U.S. employees and certain agents. See Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 11, Employee and Agent Benefits" for a complete discussion of these plans and their effect on the consolidated financial statements.

We report the net funded status of our pension and OPEB plans in the consolidated statements of financial position. The net funded status represents the difference between the fair value of plan assets and the projected benefit obligation for pension and OPEB plans. The measurement of the net funded status can vary based upon the fluctuations in the fair value of the plan assets and the actuarial assumptions used for the plans as discussed below. The net underfunded status of the pension and OPEB obligation was $459.7 million pre-tax and $609.1 million pre-tax as of December 31, 2022 and 2021, respectively. Nonqualified pension plan assets are not included as part of the funding status mentioned above. The nonqualified pension plan assets are held in Rabbi trusts for the benefit of all nonqualified plan participants. The assets held in a Rabbi trust are available to satisfy the claims of general creditors only in the event of bankruptcy. Therefore, these assets are fully consolidated in our consolidated statements of financial position and are not reflected in our funded status as they do not qualify as plan assets under U.S. GAAP. The market value of assets held in these trusts was $336.7 million and $386.3 million as of December 31, 2022 and 2021, respectively.

Our funding policy for the qualified pension plan is to fund the plan annually in an amount at least equal to the minimum annual contributions required under ERISA and, generally, not greater than the maximum amount that can be deducted for U.S. federal income tax purposes. We do not anticipate contributions will be needed in 2023 to satisfy the minimum funding requirements of ERISA for our qualified pension plan. We are unable to estimate the amount that may be contributed, but it is possible that we may fund the plans in 2023 up to $70.0 million. This includes funding for both our qualified and nonqualified pension plans. We do not anticipate contributing to our OPEB plans in 2023.

Effective January 1, 2021, $656.5 million of assets in excess of the expected liability to cover the postretirement medical benefits for retirees were re-designated for non-retiree benefits. The elections were made pursuant to plan provisions which provide for assets in excess of 125% of expected liabilities to fund other benefits covered under the plans. As of December 31, 2022, $398.9 million of re-designated assets remained for non-retiree benefits.

Contractual Obligations and Contractual Commitments

We have contractual obligations identified within Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements; Note 8, Insurance Liabilities, Note 10, Debt and Note 13, Contingencies, Guarantees, Indemnifications and Leases." As of December 31, 2022, we had no unique material cash requirements from known contractual and other obligations.

We have made commitments to fund certain limited partnerships and other funds. As of December 31, 2022, the amount of unfunded commitments was $879.4 million. We are only required to fund additional equity under these commitments when called upon to do so by the partnership or fund; therefore, these commitments are not liabilities on our consolidated statements of financial position.

Off-Balance Sheet Arrangements

Variable Interest Entities. We have relationships with various types of special purpose entities and other entities where we have a variable interest as described in Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 3, Variable Interest Entities." We have made commitments to fund certain limited partnerships, as previously discussed in "Contractual Obligations and Contractual Commitments", some of which are classified as unconsolidated variable interest entities.

Guarantees and Indemnifications. As of December 31, 2022, no significant changes to guarantees and indemnifications have occurred since December 31, 2021. For guarantee and indemnification information, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 13, Contingencies, Guarantees, Indemnifications and Leases" under the caption, "Guarantees and Indemnifications."

Financial Strength and Credit Ratings

Our ratings are influenced by the relative ratings of our peers/competitors as well as many other factors including our operating and financial performance, capital levels, asset quality, liquidity, asset/liability management, overall portfolio mix, financial leverage (i.e., debt), risk exposures, operating leverage and other factors.

The following is a summary of the significant changes or actions in ratings and rating outlooks that have occurred from January 1, 2022, through the date of this filing:

In January 2022, Moody's affirmed the 'A1' financial strength ratings of Principal Life and PNLIC. Moody's also affirmed PFG's senior unsecured debt at 'Baa1', which is guaranteed by PFS. The outlook for PFG, Principal Life and its affiliates has been changed to 'stable' from 'positive'. The rating action follows the announcement of the Reinsurance Transaction. The outlook revision reflects positive credit attributes offset by the introduction of counterparty risk and uncertainty with PFG's operations in Chile.

The following table summarizes our significant financial strength and debt ratings from the major independent rating organizations. A rating is not a recommendation to buy, sell or hold securities. Such a rating may be subject to revision or withdrawal at any time by the assigning rating agency. Each rating should be evaluated independently of any other rating.

	A.M. Best	Fitch	Moody's	S&P
Last review date	March 2022	June 2022	January 2022	June 2022
Current outlook	Stable	Stable	Stable	Stable
Principal Financial Group				
Senior Unsecured Debt	a	A-	Baa1	A-
Junior Subordinated Debt	a-		Baa2	BBB
Long-Term Issuer Default Rating		A		
Principal Life Insurance Company				
Insurer Financial Strength	A+	AA-	A1	A+
Issuer Credit Rating	aa			
Commercial Paper	AMB-1+		P-1	A-1+
Principal National Life Insurance Company				
Insurer Financial Strength	A+	AA-	A1	A+

Impacts of Income Taxes

For income tax information, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 11, Income Taxes."

Fair Value Measurement

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price). The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three levels. The fair value hierarchy gives the highest priority (Level 1) to unadjusted quoted prices in active markets for identical assets or liabilities and gives the lowest priority (Level 3) to unobservable inputs. The level in the fair value hierarchy within which the fair value measurement in its entirety falls is determined based on the lowest level input that is significant to the fair value measurement in its entirety considering factors specific to the asset or liability. See Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 15, Fair Value Measurements" for further details, including a reconciliation of changes in Level 3 fair value measurements.

As of December 31, 2022, 43% of our net assets (liabilities) were Level 1, 54% were Level 2 and 3% were Level 3. Excluding separate account assets as of December 31, 2022, 4% of our net assets (liabilities) were Level 1, 88% were Level 2 and 8% were Level 3.

As of December 31, 2021, 46% of our net assets (liabilities) were Level 1, 53% were Level 2 and 1% were Level 3. Excluding separate account assets as of December 31, 2021, 4% of our net assets (liabilities) were Level 1, 95% were Level 2 and 1% were Level 3.

Changes in Level 3 Fair Value Measurements

Net assets (liabilities) measured at fair value on a recurring basis using significant unobservable inputs (Level 3) as of December 31, 2022, were $7,018.6 million as compared to $1,672.2 million as of December 31, 2021. The increase was primarily related to an increase in the embedded derivative related to the funds withheld agreement, an increase in manually priced private corporate credit securities and a reduction of variable annuity liabilities due to an increase in interest rates during the quarter.

Investments

We had total consolidated assets as of December 31, 2022, of $292,239.6 million, of which $95,089.3 million were invested assets. A portion of our invested assets represent funds withheld backing reserves as part of a coinsurance with funds withheld reinsurance agreement. The funds withheld assets and associated net investment income and net realized capital gains (losses) are not included in the discussions below as the investment risk is passed to the reinsurer. See Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 9, Reinsurance" for more information on the funds withheld assets. The rest of our total consolidated assets are comprised primarily of separate account assets for which we do not bear investment risk; therefore, the discussion and financial information below does not include such assets.

Overall Composition of Invested Assets

Invested assets as of December 31, 2022, were predominantly high quality and broadly diversified across asset class, individual credit, industry and geographic location. Asset allocation is determined based on cash flow and the risk/return requirements of our products. As shown in the following table, the major categories of invested assets are fixed maturities and commercial mortgage loans.

	December 31, 2022		
	Investments excluding funds withheld	Funds withheld	Total
	(in millions)		
Fixed maturities	**$47,856.3**	**$15,794.3**	**$63,650.6**
Equity securities	**1,697.6**	**11.0**	**1,708.6**
Mortgage loans	**17,819.0**	**2,810.8**	**20,629.8**
Real estate	**2,239.7**	**—**	**2,239.7**
Policy loans	**784.7**	**—**	**784.7**
Other investments	**5,896.1**	**179.8**	**6,075.9**
Total invested assets	**76,293.4**	**18,795.9**	**95,089.3**
Cash and cash equivalents	**3,085.1**	**1,762.9**	**4,848.0**
Total invested assets and cash	**$79,378.5**	**$20,558.8**	**$99,937.3**

	December 31, 2021		
	Investments excluding funds withheld	Funds withheld	Total
	(in millions)		
Fixed maturities	$ 78,576.7	$—	$ 78,576.7
Equity securities	2,347.2	—	2,347.2
Mortgage loans	19,668.7	—	19,668.7
Real estate	2,075.4	—	2,075.4
Policy loans	759.6	—	759.6
Other investments	5,478.3	—	5,478.3
Total invested assets	108,905.9	—	108,905.9
Cash and cash equivalents	2,332.0	—	2,332.0
Total invested assets and cash	$111,237.9	$—	$111,237.9

Investment Results

Net Investment Income

The following table presents the yield and investment income, excluding net realized capital gains and losses, for our invested assets for the years indicated. We calculate annualized yields using a simple average of asset classes at the beginning and end of the reporting period. The yields for available-for-sale fixed maturities are calculated using amortized cost. All other yields are calculated using carrying amounts.

	For the year ended December 31,					
	2022		2021		Increase (decrease)	
	Yield (1)	Amount	Yield	Amount	Yield	Amount
			($ in millions)			
Fixed maturities	**4.1%**	**$2,137.1**	3.9%	$2,785.6	0.2%	$(648.5)
Equity securities	**0.4**	**8.9**	2.6	57.7	(2.2)	(48.8)
Mortgage loans — commercial	**3.9**	**542.7**	4.1	653.5	(0.2)	(110.8)
Mortgage loans — residential	**6.4**	**229.0**	5.2	136.7	1.2	92.3
Real estate	**12.9**	**277.7**	10.0	194.4	2.9	83.3
Policy loans	**4.7**	**36.5**	5.0	38.8	(0.3)	(2.3)
Cash and cash equivalents	**2.1**	**57.4**	0.2	4.3	1.9	53.1
Other investments	**12.0**	**680.9**	12.3	650.2	(0.3)	30.7
Total	**4.8**	**3,970.2**	4.4	4,521.2	0.4	(551.0)
Investment expenses	**(0.2)**	**(139.8)**	(0.1)	(115.1)	(0.1)	(24.7)
Net investment income	**4.6%**	**$3,830.4**	4.3%	$4,406.1	0.3%	$(575.7)

(1) The 2022 yield is calculated using beginning balances adjusted for the Reinsurance Transaction.

Year Ended December 31, 2022 Compared to Year Ended December 31, 2021

Net investment income decreased primarily due to impacts of the Reinsurance Transaction in 2022 partially offset by higher inflation-based investment returns on our Latin America average invested assets and cash.

Net Realized Capital Gains (Losses)

The following table presents the contributors to net realized capital gains and losses for the years indicated.

	For the year ended December 31,		
	2022	2021	Increase (decrease)
		(in millions)	
Fixed maturities, available-for-sale — credit losses, including credit sales (1)	**$ (27.1)**	$ (45.2)	$ 18.1
Commercial mortgage loans — credit losses	**(31.2)**	(1.3)	(29.9)
Other — credit gains (losses)	**(3.1)**	7.7	(10.8)
Fixed maturities, available-for-sale and trading — noncredit	**(145.2)**	7.9	(153.1)
Derivatives and related hedge activities (2)	**183.8**	(114.5)	298.3
Other gains (losses)	**(235.6)**	147.9	(383.5)
Net realized capital gains (losses) (3)	**$(258.4)**	$ 2.5	$(260.9)

(1) Includes credit sales, adjustments to the credit loss valuation allowance, write-offs and recoveries on available-for-sale securities.

(2) Includes fixed maturities, trading net gains (losses) of $(16.7) million and $(5.8) million for the years ended December 31, 2022 and 2021, respectively, which are a component of the GMWB embedded derivative hedging program net realized capital gains (losses) reflected in this line.

(3) Net realized capital gains (losses) can be volatile due to credit losses from invested assets, mark-to-market adjustments of certain invested assets and our decision to sell invested assets.

Year Ended December 31, 2022 Compared to Year Ended December 31, 2021

Net realized capital losses increased primarily due to losses on equity securities and sponsored investment funds due to equity market declines, non-credit losses on available-for-sale fixed maturities, losses on GMWB embedded derivatives, and losses on residential whole loan deconsolidation. These were partially offset by increased gains on interest rate swaps not designated as hedging instruments due to changes in interest rates, gains versus losses on currency derivatives, and increased gains on real estate asset swaps.

U.S. Investment Operations

In the following sections, we provide details about U.S. Investment Operations, excluding investments held as part of the coinsurance with funds withheld agreement. We believe the details of the composition of our investment portfolio excluding the funds withheld are most relevant to an understanding of our operations that are pertinent to investors because all funds withheld assets support obligations and liabilities relating to the Reinsurance Transaction. Guidelines are in place to ensure the investment risk associated with these fund withheld assets are appropriately managed. See Footnote 9, Reinsurance, for further information on the funds withheld assets.

Of our invested assets, $68,897.2 million were held by our U.S. operations as of December 31, 2022. Our U.S. invested assets are managed primarily by our Principal Global Investors segment. Our Investment Committee, appointed by our Board, is responsible for establishing investment policies and monitoring risk limits and tolerances. Our primary investment objective is to maximize after-tax returns consistent with acceptable risk parameters. We seek to protect customers' benefits by optimizing the risk/return relationship on an ongoing basis, through asset/liability matching, reducing credit risk, avoiding high levels of investments that may be redeemed by the issuer, maintaining sufficiently liquid investments and avoiding undue asset concentrations through diversification. We are exposed to two primary sources of investment risk:

- credit risk, relating to the uncertainty associated with the continued ability of an obligor to make timely payments of principal and interest and
- interest rate risk, relating to the market price and/or cash flow variability associated with changes in market yield curves.

Our ability to manage credit risk is essential to our business and our profitability. We devote considerable resources to the credit analysis of each new investment. We manage credit risk through industry, issuer and asset class diversification.

A dedicated committee, comprised of senior investment professional staff members, approves the credit rating for the fixed maturities we purchase. We have teams of security analysts, organized by industry and asset class, that analyze and monitor these investments. Investments held in the portfolio are monitored on a continuous basis with a formal review annually or more frequently if material events affect the issuer. The analysis includes both fundamental and technical factors. The fundamental analysis encompasses both quantitative and qualitative analysis of the issuer. The qualitative analysis includes an assessment of both accounting and management aggressiveness of the issuer. In addition, technical indicators such as stock price volatility and credit default swap levels are monitored. We regularly review our investments to determine whether we should re-rate them, employing the following criteria:

- material changes in the issuer's revenues, margins, capital structure or collateral values;
- significant management or organizational changes;
- significant changes regarding the issuer's industry;
- debt service coverage or cash flow ratios that fall below industry-specific thresholds;
- violation of financial covenants and
- other business factors that relate to the issuer.

We purchase credit default swaps to hedge certain credit exposures in our investment portfolio. We economically hedged credit exposure in our portfolio by purchasing credit default swaps with a notional amount of $130.0 million and $145.0 million as of December 31, 2022 and December 31, 2021, respectively. We sell credit default swaps to offer credit protection to investors when entering into synthetic replicating transactions. When selling credit protection, if there is an event of default by the referenced name, we are obligated to pay the counterparty the referenced amount of the contract and receive in return the referenced security. For further information on credit derivatives sold, see Item 8. "Financial Statements and

Supplementary Data, Notes to Consolidated Financial Statements, Note 5, Derivative Financial Instruments" under the caption, "Credit Derivatives Sold."

Our use of derivatives exposes us to counterparty risk, or the risk that the counterparty fails to perform the terms of the derivative contract. We actively manage this risk by:

- obtaining approval of all new counterparties by the Investment Committee;
- establishing exposure limits that take into account non-derivative exposure we have with the counterparty as well as derivative exposure;
- performing similar credit analysis prior to approval on each derivatives counterparty that we do when lending money on a long-term basis;
- diversifying our risk across numerous approved counterparties;
- implementing credit support annex (collateral) agreements ("CSAs") for over-the-counter derivative transactions or similar agreements with a majority of our counterparties to further limit counterparty exposures, which provide for netting of exposures;
- limiting exposure to A credit or better for over-the-counter derivative counterparties without CSAs;
- conducting stress-test analysis to determine the maximum exposure created during the life of a prospective transaction;
- daily monitoring of counterparty credit ratings, exposures and associated collateral levels and
- trading mandatorily cleared contracts through centralized clearinghouses.

We manage our exposure on a net basis, whereby we net positive and negative exposures for each counterparty with agreements in place. For further information on derivative exposure, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 4, Investments" under the caption, "Balance Sheet Offsetting."

A dedicated risk management team is responsible for centralized monitoring of the commercial mortgage loan portfolio. We apply a variety of guidelines to minimize credit risk in our commercial mortgage loan portfolio. When considering new commercial mortgage loans, we review the cash flow fundamentals of the property, make a physical assessment of the underlying commercial real estate, conduct a comprehensive market analysis and compare against industry lending practices. We use a proprietary risk rating model to evaluate all new and substantially all existing loans within the portfolio. The proprietary risk model is designed to stress projected cash flows under simulated economic and market downturns. Our lending guidelines are typically 75% or less loan-to-value ratio and a debt service coverage ratio of at least 1.2 times. We analyze investments outside of these guidelines based on cash flow quality, tenancy and other factors. The following table presents loan-to-value and debt service coverage ratios for our brick and mortar commercial mortgage loans:

	Weighted average loan-to-value ratio		Debt service coverage ratio	
	December 31, 2022	**December 31, 2021**	**December 31, 2022**	**December 31, 2021**
New mortgages	**50%**	50%	**2.3x**	3.2x
Entire mortgage portfolio	**46%**	46%	**2.5x**	2.5x

We also seek to manage call or prepayment risk arising from changes in interest rates. We assess and price for call or prepayment risks in all of our investments and monitor these risks in accordance with asset/liability management policies.

The amortized cost and weighted average yield, calculated using amortized cost, of non-structured fixed maturity securities that will be callable at the option of the issuer, excluding securities with a make-whole provision, were $2,539.0 million and 3.9%, respectively, as of December 31, 2022, and $3,560.6 million and 3.4%, respectively, as of December 31, 2021. In addition, the amortized cost and weighted average yield of RMBS, residential collateralized mortgage obligations, and asset-backed securities — home equity with material prepayment risk were $5,546.1 million and 2.9%, respectively, as of December 31, 2022, and $7,131.1 million and 2.2%, respectively, as of December 31, 2021.

Our investment decisions and objectives are a function of the underlying risks and product profiles of each primary business operation. In addition, we diversify our product portfolio offerings to include products that contain features that will protect us against fluctuations in interest rates. Those features include adjustable crediting rates, policy surrender charges and market value adjustments on liquidations. For further information on our management of interest rate risk, see Item 7A "Quantitative and Qualitative Disclosures About Market Risk — Interest Rate Risk."

Overall Composition of U.S. Invested Assets

As shown in the following table, the major categories of U.S. invested assets are fixed maturities and mortgage loans.

	December 31, 2022		December 31, 2021	
	Carrying amount	% of total	Carrying amount	% of total
	($ in millions)			
Fixed maturities	**$44,745.4**	**65%**	$ 75,553.4	74%
Equity securities	**532.2**	**1**	1,051.5	1
Mortgage loans	**16,866.3**	**25**	18,862.7	19
Real estate	**2,237.4**	**3**	2,060.6	2
Policy loans	**770.2**	**1**	745.7	1
Other investments	**3,745.7**	**5**	3,671.7	3
Total invested assets	**68,897.2**	**100%**	101,945.6	100%
Cash and cash equivalents	**2,894.5**		2,074.8	
Total invested assets and cash	**$71,791.7**		$104,020.4	

Fixed Maturities

Fixed maturities include bonds, ABS, redeemable preferred stock and certain non-redeemable preferred securities.

Fixed maturities were diversified by category of issuer, as shown in the following table for the years indicated.

	December 31, 2022		December 31, 2021	
	Carrying amount	Percent of total	Carrying amount	Percent of total
	($ in millions)			
U.S. government and agencies	**$ 1,432.4**	**3%**	$ 2,067.1	3%
Non-U.S. governments	**400.0**	**1**	949.5	1
States and political subdivisions	**4,544.9**	**10**	9,289.9	12
Corporate — public	**15,661.4**	**35**	23,042.1	31
Corporate — private	**9,144.4**	**20**	20,251.8	27
Residential mortgage-backed pass-through securities	**2,172.3**	**5**	3,262.7	4
Commercial mortgage-backed securities	**3,861.9**	**9**	5,556.1	7
Residential collateralized mortgage obligations	**2,666.9**	**6**	3,834.8	5
Asset-backed securities	**4,861.2**	**11**	7,299.4	10
Total fixed maturities	**$44,745.4**	**100%**	$75,553.4	100%

We believe it is desirable to hold residential mortgage-backed pass-through securities due to their credit quality and liquidity as well as portfolio diversification characteristics. Our portfolio is comprised of Government National Mortgage Association, Federal National Mortgage Association and Federal Home Loan Mortgage Corporation pass-through securities. In addition, our residential collateralized mortgage obligation portfolio offers structural features that allow cash flows to be matched to our liabilities.

We purchase CMBS to diversify the overall credit risks of the fixed maturities portfolio and to provide attractive returns. The primary risks in holding CMBS are structural and credit risks. Structural risks include the security's priority in the issuer's capital structure, the adequacy of and ability to realize proceeds from the collateral and the potential for prepayments. Credit risks involve collateral and issuer/servicer risk where collateral and servicer performance may deteriorate. CMBS are predominantly comprised of large pool securitizations that are diverse by property type, borrower and geographic dispersion. The risks to any CMBS deal are determined by the credit quality of the underlying loans and how those loans perform over time. Another key risk is the vintage of the underlying loans and the state of the markets during a particular vintage.

Similar to CMBS, we purchase ABS for diversification and to provide attractive returns. The primary risks in holding ABS are also structural and credit risks, which are similar to those noted above for CMBS. Our ABS portfolio is diversified by type of asset, issuer, and vintage. We actively monitor holdings of ABS to recognize adverse changes in the risk profile of each security. Prepayments in the ABS portfolio are, in general, insensitive to changes in interest rates or are insulated from such changes by call protection features. In the event we are subject to prepayment risk, we monitor the factors that impact the level of prepayment and prepayment speed for those ABS. In addition, we hold a diverse class of securities, which limits our exposure to any one security.

The international exposure held in our U.S. operation's fixed maturities portfolio was 14% of total fixed maturities as of December 31, 2022, and 16% as of December 31, 2021. It is comprised of corporate and foreign government fixed maturities.

	December 31, 2022	December 31, 2021
	(in millions)	
European Union	**$1,547.7**	$ 2,876.6
Australia/New Zealand	**1,283.4**	2,060.3
United Kingdom	**1,167.4**	2,079.0
Latin America	**1,023.3**	1,578.6
Asia-Pacific	**584.7**	1,364.3
Middle East and Africa	**424.5**	920.7
Europe, non-European Union	**302.5**	713.7
Other	**137.3**	253.7
Total	**$6,470.8**	$11,846.9

International fixed maturities exposure is determined by the country of risk of the obligor entity. All international fixed maturities held by our U.S. operations are either denominated in U.S. dollars or have been swapped into U.S. dollar equivalents. Our international investments are analyzed internally by country and industry credit investment professionals. We control concentrations using issuer and country level exposure benchmarks, which are based on the credit quality of the issuer and the country. Our investment policy limits total international fixed maturities investments and we are within those internal limits. Exposure to Canada is not included in our international exposure. As of December 31, 2022 and December 31, 2021, our investments in Canada totaled $982.9 million and $1,839.5 million, respectively.

Fixed Maturities Credit Concentrations. One aspect of managing credit risk is through industry, issuer and asset class diversification. Our credit concentrations are managed to established limits. The top 10 exposures comprised 4.8% of single-name credit fixed maturity exposures as of December 31, 2022, and 4.6% as of December 31, 2021.

Fixed Maturities Valuation and Credit Quality. Valuation techniques for the fixed maturities portfolio vary by security type and the availability of market data. The use of different pricing techniques and their assumptions could produce different financial results. See Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 15, Fair Value Measurements" for further details regarding our pricing methodology. Once prices are determined, they are reviewed by pricing analysts for reasonableness based on asset class and observable market data. Investment analysts who are familiar with specific securities review prices for reasonableness through direct interaction with external sources, review of recent trade activity or use of internal models. All fixed maturities placed on the "watch list" are periodically analyzed by investment analysts. These analysts periodically meet with the Chief Investment Officer and the Portfolio Managers to determine reasonableness of the analysts' prices. The valuation of bonds for which a credit loss exists and there is no quoted price is typically based on relative value analysis and the present value of the future cash flows expected to be received. Although we believe these values reasonably reflect the fair value of those securities, the key assumptions about risk premiums, performance of underlying collateral (if any) and other market factors involve qualitative and unobservable inputs.

The Securities Valuation Office ("SVO") of the NAIC monitors the bond investments of insurers for regulatory capital and reporting purposes and, when required, assigns securities to one of six categories referred to as NAIC designations. Although NAIC designations are not produced to aid the investment decision making process, NAIC designations may serve as a reasonable proxy for Nationally Recognized Statistical Rating Organizations' ("NRSRO") credit ratings for certain bonds. For most corporate bonds, NAIC designations 1 and 2 include bonds generally considered investment grade by such rating organizations. Bonds are considered investment grade when rated "Baa3" or higher by Moody's, or "BBB-" or higher by S&P. NAIC designations 3 through 6 include bonds generally referred to as below investment grade. Bonds are considered below investment grade when rated "Ba1" or lower by Moody's, or "BB+" or lower by S&P.

For loan-backed and structured securities, as defined by the NAIC, the NAIC designation is not always a reasonable indication of an NRSRO rating as described below. For CMBS and non-agency RMBS, Blackrock Solutions undertakes the modeling of those NAIC designations. This may result in a final designation being higher or lower than the NRSRO credit rating.

The following table presents our total fixed maturities by NAIC designation as of the years indicated as well as the percentage, based on fair value, that each designation comprises.

NAIC designation	December 31, 2022			December 31, 2021		
	Amortized cost	Carrying amount	Percent of carrying amount	Amortized cost	Carrying amount	Percent of carrying amount
			($ in millions)			
1	**$32,398.0**	**$29,011.9**	**65%**	$46,117.2	$49,166.2	65%
2	**14,143.5**	**12,735.3**	**28**	20,140.8	22,094.8	29
3	**2,871.9**	**2,656.1**	**6**	3,909.7	4,016.5	6
4	**357.0**	**312.1**	**1**	245.2	242.2	—
5	**15.3**	**14.5**	**—**	34.4	28.9	—
6	**20.2**	**15.5**	**—**	3.6	4.8	—
Total fixed maturities	**$49,805.9**	**$44,745.4**	**100%**	$70,450.9	$75,553.4	100%

Fixed maturities included 30 securities with an amortized cost of $457.6 million, gross gains of $2.6 million, gross losses of $3.8 million and a carrying amount of $456.4 million as of December 31, 2022, that were still pending a review and assignment of a designation by the SVO. Due to the timing of when fixed maturities are purchased, legal documents are filed and the review by the SVO is completed, we will always have securities in our portfolio that are unrated over a reporting period. In these instances, an equivalent designation is assigned based on our fixed income analyst's assessment.

Commercial Mortgage-Backed Securities. As of December 31, 2022, based on amortized cost, 98% of our CMBS portfolio had an NAIC designation of 1.

The following table presents our exposure by credit quality based on NAIC designations for our CMBS portfolio as of the years indicated.

NAIC designation	December 31, 2022		December 31, 2021	
	Amortized cost	Carrying amount	Amortized cost	Carrying amount
		(in millions)		
1	**$4,340.6**	**$3,801.5**	$5,169.9	$5,285.8
2	**70.8**	**55.8**	169.5	176.3
3	**2.2**	**1.9**	84.2	87.4
4	**3.9**	**2.4**	5.1	5.3
5	**—**	**—**	—	—
6	**0.6**	**0.3**	1.6	1.3
Total (1)	**$4,418.1**	**$3,861.9**	$5,430.3	$5,556.1

(1) The CMBS portfolio included agency CMBS with a $508.4 million amortized cost and a $473.0 million carrying amount as of December 31, 2022, and a $405.5 million amortized cost and a $410.3 million carrying amount as of December 31, 2021.

Fixed Maturities Watch List. We monitor any decline in the credit quality of fixed maturities through the designation of "problem securities," "potential problem securities" and "restructured securities". We define problem securities in our fixed maturity portfolio as securities: (i) with principal and/or interest payments in default or where default is perceived to be imminent in the near term, or (ii) issued by a company that went into bankruptcy subsequent to the acquisition of such securities. We define potential problem securities in our fixed maturity portfolio as securities included on an internal "watch list" for which management has concerns as to the ability of the issuer to comply with the present debt payment terms and which may result in the security becoming a problem or being restructured. The decision whether to classify a performing fixed maturity security as a potential problem involves significant subjective judgments by our management as to the likely future industry conditions and developments with respect to the issuer. We define restructured securities in our fixed maturity portfolio as securities where a concession has been granted to the borrower related to the borrower's financial difficulties that would not have otherwise been considered. We determine that restructures should occur in those instances where greater economic value will be realized under the new terms than through liquidation or other disposition and may involve a change in contractual cash flows. If the present value of the restructured cash flows is less than the current cost of the asset being restructured, a realized capital loss is recorded in net income and a new cost basis is established.

The following table presents the total carrying amount of our fixed maturities portfolio, as well as its problem, potential problem and restructured fixed maturities for the years indicated.

	December 31, 2022	December 31, 2021
	($ in millions)	
Total fixed maturities	**$44,745.4**	$75,553.4
Problem fixed maturities (1)	**$ 20.9**	$ 20.5
Potential problem fixed maturities	**21.8**	5.7
Total problem, potential problem and restructured fixed maturities	**$ 42.7**	$ 26.2
Total problem, potential problem and restructured fixed maturities as a percent of total fixed maturities	**0.10%**	0.03%

(1) The problem fixed maturities carrying amount is net of the credit loss valuation allowance.

Fixed Maturities Credit Losses. Each reporting period, a group of individuals including the Chief Investment Officer, our Portfolio Managers, the assigned analysts and representatives from Investment Accounting review all securities to determine whether a credit loss exists. The analysis focuses on each issuer's ability to service its debts in a timely fashion. Formal documentation of the analysis and our decision is prepared and approved by management. For additional details regarding our process to identify and evaluate securities with credit losses, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 4, Investments" under the caption "Allowance for Credit Loss."

We would not consider a security with unrealized losses to have a decline in value due to credit when it is not our intent to sell the security, it is not more likely than not that we would be required to sell the security before recovery of the amortized cost, which may be maturity, and we expect to recover the amortized cost basis. However, we do sell securities under certain circumstances, such as when we have evidence of a change in the issuer's creditworthiness, when we anticipate poor relative future performance of securities, when a change in regulatory requirements modifies what constitutes a permissible investment or the maximum level of investments held or when there is an increase in capital requirements or a change in risk weights of debt securities. Sales generate both gains and losses.

A number of significant risks and uncertainties are inherent in the process of monitoring credit losses and determining the allowance for credit loss. These risks and uncertainties include: (1) the risk that our assessment of an issuer's ability to meet all of its contractual obligations will change based on changes in the credit characteristics of that issuer, (2) the risk that the economic outlook will be worse than expected or have more of an impact on the issuer than anticipated, (3) the risk that our investment professionals are making decisions based on fraudulent or misstated information in the financial statements provided by issuers and (4) the risk that new information obtained by us or changes in other facts and circumstances lead us to change our intent to not sell the security prior to recovery of its amortized cost. Any of these situations could result in a charge to net income in a future period.

The net realized loss relating to the change in the allowance for credit loss and credit related sales of fixed maturities was $29.7 million and $34.7 million for the years ended December 31, 2022 and 2021, respectively.

Fixed Maturities Available-for-Sale

The following tables present our fixed maturities available-for-sale by industry category, as of the years indicated.

	December 31, 2022				
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Allowance for credit loss	Carrying amount
			(in millions)		
Finance — Banking	$ 2,396.8	$ 3.7	$ 234.6	$ —	$ 2,165.9
Finance — Brokerage	667.3	1.6	88.4	—	580.5
Finance — Finance Companies	338.6	—	61.9	—	276.7
Finance — Financial Other	1,120.5	1.5	162.6	—	959.4
Finance — Insurance	1,882.8	27.2	190.9	—	1,719.1
Finance — Real estate investment trusts ("REITs")	1,785.4	0.4	237.6	—	1,548.2
Industrial — Basic Industry	1,220.6	10.6	116.7	—	1,114.5
Industrial — Capital Goods	1,518.7	5.5	158.5	—	1,365.7
Industrial — Communications	2,286.8	47.4	219.1	—	2,115.1
Industrial — Consumer Cyclical	1,216.9	5.5	135.0	—	1,087.4
Industrial — Consumer Non-Cyclical	3,329.2	15.4	292.9	—	3,051.7
Industrial — Energy	1,872.0	39.9	159.2	—	1,752.7
Industrial — Other	807.9	0.7	65.9	—	742.7
Industrial — Technology	1,392.8	2.6	153.1	—	1,242.3
Industrial — Transportation	1,637.0	5.4	176.2	—	1,466.2
Utility — Electric	2,886.8	17.8	382.2	—	2,522.4
Utility — Natural Gas	389.3	0.7	58.9	—	331.1
Utility — Other	359.8	—	66.3	—	293.5
Government guaranteed	171.8	10.3	13.3	—	168.8
Total corporate securities	27,281.0	196.2	2,973.3	—	24,503.9
Residential mortgage-backed pass-through securities	2,348.8	5.8	187.6	—	2,167.0
Commercial mortgage-backed securities	4,334.7	—	556.2	—	3,778.5
Residential collateralized mortgage obligations	3,113.8	2.6	451.8	0.1	2,664.5
Asset-backed securities — Home equity (1)	73.5	1.6	2.9	—	72.2
Asset-backed securities — All other	1,662.1	—	125.2	—	1,536.9
Collateralized debt obligations — Credit	16.8	—	5.2	—	11.6
Collateralized debt obligations — CMBS	—	0.3	—	—	0.3
Collateralized debt obligations — Loans	3,264.7	1.1	108.9	—	3,156.9
Total mortgage-backed and other asset-backed securities	14,814.4	11.4	1,437.8	0.1	13,387.9
U.S. government and agencies	1,443.9	0.1	90.2	—	1,353.8
States and political subdivisions	5,281.8	9.8	751.4	—	4,540.2
Non-U.S. governments	423.0	18.8	44.0	—	397.8
Total fixed maturities, available-for-sale	$49,244.1	$236.3	$5,296.7	$0.1	$44,183.6

(1) This exposure is all related to sub-prime mortgage loans.

	December 31, 2021				
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Allowance for credit loss	Carrying amount
			(in millions)		
Finance — Banking	$ 4,746.3	$ 333.3	$ 15.2	$ —	$ 5,064.4
Finance — Brokerage	798.8	78.9	5.6	—	872.1
Finance — Finance Companies	524.9	24.8	0.7	—	549.0
Finance — Financial Other	987.4	36.5	1.1	—	1,022.8
Finance — Insurance	2,845.8	400.5	6.7	—	3,239.6
Finance — REITs	2,260.1	148.0	4.8	—	2,403.3
Industrial — Basic Industry	1,794.6	170.7	3.5	—	1,961.8
Industrial — Capital Goods	2,299.1	205.6	8.8	—	2,495.9
Industrial — Communications	3,140.3	407.0	10.6	—	3,536.7
Industrial — Consumer Cyclical	1,905.8	99.8	11.3	—	1,994.3
Industrial — Consumer Non-Cyclical	4,684.6	500.7	13.8	—	5,171.5
Industrial — Energy	2,669.8	335.6	7.1	—	2,998.3
Industrial — Other	760.6	44.5	0.7	—	804.4
Industrial — Technology	2,629.8	207.2	9.6	4.5	2,822.9
Industrial — Transportation	2,119.5	193.3	2.7	—	2,310.1
Utility — Electric	3,970.7	434.2	18.2	—	4,386.7
Utility — Natural Gas	644.6	72.4	2.8	—	714.2
Utility — Other	447.7	29.8	4.2	—	473.3
Government guaranteed	256.1	39.5	0.1	—	295.5
Total corporate securities	39,486.5	3,762.3	127.5	4.5	43,116.8
Residential mortgage-backed pass-through securities	3,113.1	59.0	26.8	—	3,145.3
Commercial mortgage-backed securities	5,404.7	157.0	30.9	0.3	5,530.5
Residential collateralized mortgage obligations	3,781.5	92.4	39.1	—	3,834.8
Asset-backed securities — Home equity (1)	119.1	12.0	0.1	0.1	130.9
Asset-backed securities — All other	3,585.7	26.7	19.2	—	3,593.2
Collateralized debt obligations — Credit	16.8	—	5.1	—	11.7
Collateralized debt obligations — CMBS	—	0.9	—	—	0.9
Collateralized debt obligations — Loans	3,547.9	3.6	4.5	—	3,547.0
Total mortgage-backed and other asset-backed securities	19,568.8	351.6	125.7	0.4	19,794.3
U.S. government and agencies	1,957.7	146.3	37.4	—	2,066.6
States and political subdivisions	8,272.0	1,029.0	16.6	—	9,284.4
Non-U.S. governments	821.6	127.5	2.1	—	947.0
Total fixed maturities, available-for-sale	$70,106.6	$5,416.7	$309.3	$4.9	$75,209.1

(1) This exposure is all related to sub-prime mortgage loans.

Of the $5,296.7 million in gross unrealized losses as of December 31, 2022, $9.3 million in losses were attributed to securities scheduled to mature in one year or less, $316.9 million attributed to securities scheduled to mature between one to five years, $1,017.9 million attributed to securities scheduled to mature between five to ten years, $2,514.8 million attributed to securities scheduled to mature after ten years and $1,437.8 million related to mortgage-backed and other ABS that are not classified by maturity year. As of December 31, 2022, we were in a $5,060.4 million net unrealized loss position as compared to a $5,107.4 million net unrealized gain position as of December 31, 2021. The $10,167.8 million increase in net unrealized losses for the year ended December 31, 2022, can be attributed to an increase in interest rates and widening of credit spreads.

Fixed Maturities Available-For-Sale Unrealized Losses. We believe our long-term fixed maturities portfolio is well diversified among industry types and between publicly traded and privately placed securities.

Each year, we direct the majority of our net cash inflows into investment grade fixed maturities. Our current policy is to limit the percentage of fixed maturities invested in below investment grade assets to 15%.

We invest in privately placed fixed maturities to enhance the overall value of the portfolio, increase diversification and obtain higher yields than are possible with comparable quality public market securities. Generally, private placements provide broader access to management information, strengthened negotiated protective covenants, call protection features and, where applicable, a higher level of collateral. They are, however, generally not freely tradable because of restrictions imposed by U.S. federal and state securities laws and illiquid trading markets.

The following table presents our fixed maturities available-for-sale by investment grade and below investment grade as of the years indicated.

	December 31, 2022					December 31, 2021				
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Allowance for credit loss	Carrying amount	Amortized cost	Gross unrealized gains	Gross unrealized losses	Allowance for credit loss	Carrying amount
	(in millions)									
Investment grade:										
Public	**$37,338.9**	**$217.2**	**$3,951.8**	**$0.1**	**$33,604.2**	$41,401.6	$4,000.6	$179.3	$0.2	$45,222.7
Private	**8,752.7**	**11.2**	**1,070.8**	**—**	**7,693.1**	24,557.3	1,276.7	94.8	—	25,739.2
Below investment grade:										
Public	**1,728.2**	**5.5**	**245.3**	**—**	**1,488.4**	1,428.4	90.8	8.9	—	1,510.3
Private	**1,424.3**	**2.4**	**28.8**	**—**	**1,397.9**	2,719.3	48.6	26.3	4.7	2,736.9
Total fixed maturities, available-for-sale	**$49,244.1**	**$236.3**	**$5,296.7**	**$0.1**	**$44,183.6**	$70,106.6	$5,416.7	$309.3	$4.9	$75,209.1

Included in the public category as of December 31, 2022 and December 31, 2021, were $10.8 billion and $18.3 billion, respectively, of securities subject to certain holding periods and resale restrictions pursuant to Rule 144A of the Securities Act of 1933.

The following tables present the fair value and the gross unrealized losses on our fixed maturities available-for-sale for which an allowance for credit loss has not been recorded by investment category and length of time that individual securities have been in a continuous unrealized loss position as of December 31, 2022 and December 31, 2021, respectively.

	December 31, 2022					
	Less than twelve months		Greater than or equal to twelve months		Total	
	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses
	(in millions)					
Fixed maturities, available-for-sale (1):						
U.S. government and agencies	**$ 1,142.3**	**$ 48.4**	**$ 181.5**	**$ 41.8**	**$ 1,323.8**	**$ 90.2**
Non-U.S. governments	**253.1**	**38.1**	**17.2**	**6.1**	**270.3**	**44.2**
States and political subdivisions	**3,703.9**	**625.8**	**382.6**	**125.6**	**4,086.5**	**751.4**
Corporate	**18,548.4**	**2,352.8**	**2,407.8**	**620.4**	**20,956.2**	**2,973.2**
Residential mortgage-backed pass-through securities	**1,149.9**	**88.7**	**573.5**	**104.5**	**1,723.4**	**193.2**
Commercial mortgage-backed securities	**2,720.5**	**352.4**	**986.6**	**201.8**	**3,707.1**	**554.2**
Collateralized debt obligations (2)	**1,813.1**	**63.9**	**1,207.2**	**50.1**	**3,020.3**	**114.0**
Other debt obligations	**1,976.3**	**197.6**	**1,895.6**	**377.0**	**3,871.9**	**574.6**
Total fixed maturities, available-for-sale	**$31,307.5**	**$3,767.7**	**$7,652.0**	**$1,527.3**	**$38,959.5**	**$5,295.0**

(1) Fair value and gross unrealized losses are excluded for available-for-sale securities for which an allowance for credit loss has been recorded.

(2) Primarily consists of collateralized loan obligations backed by secured corporate loans.

	December 31, 2021					
	Less than twelve months		Greater than or equal to twelve months		Total	
	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses
	(in millions)					
Fixed maturities, available-for-sale (1):						
U.S. government and agencies	$ 129.3	$ 3.4	$ 482.9	$ 34.0	$ 612.2	$ 37.4
Non-U.S. governments	57.5	2.0	—	—	57.5	2.0
States and political subdivisions	687.8	10.5	102.3	6.1	790.1	16.6
Corporate	4,557.7	59.3	1,262.9	67.8	5,820.6	127.1
Residential mortgage-backed pass-through securities	1,562.6	20.6	194.9	6.3	1,757.5	26.9
Commercial mortgage-backed securities	1,293.3	15.5	289.8	15.3	1,583.1	30.8
Collateralized debt obligations (2)	1,592.5	2.8	424.4	6.7	2,016.9	9.5
Other debt obligations	3,949.9	49.4	211.0	9.0	4,160.9	58.4
Total fixed maturities, available-for-sale	$13,830.6	$163.5	$2,968.2	$145.2	$16,798.8	$308.7

(1) Fair value and gross unrealized losses are excluded for available-for-sale securities for which an allowance for credit loss has been recorded.

(2) Primarily consists of collateralized loan obligations backed by secured corporate loans.

Mortgage Loans

Mortgage loans consist of commercial mortgage loans on real estate and residential mortgage loans. For further details about residential mortgage loans, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 4, Investments" under the caption, "Financing Receivables."

Commercial Mortgage Loans. We generally report commercial mortgage loans on real estate at cost adjusted for amortization of premiums and accrual of discounts, computed using the interest method and net of valuation allowances.

Commercial mortgage loans play an important role in our investment strategy by:

- providing strong risk-adjusted relative value in comparison to other investment alternatives;
- enhancing total returns and
- providing strategic portfolio diversification.

As a result, we have focused on constructing a high quality portfolio of mortgages. Our portfolio is generally comprised of mortgages originated with conservative loan-to-value ratios, high debt service coverages and general purpose property types with a strong credit tenancy.

Our commercial mortgage loan portfolio consists primarily of non-recourse, fixed rate mortgages on fully or near fully leased properties. The mortgage portfolio is comprised primarily of office properties, apartments, well anchored retail properties and general-purpose industrial properties.

Our commercial mortgage loan portfolio is diversified by geography and specific collateral property type. Commercial mortgage lending in the state of California accounted for 26% and 23% of our commercial mortgage loan portfolio before valuation allowance as of December 31, 2022 and December 31, 2021, respectively. We are, therefore, exposed to potential losses resulting from the risk of catastrophes, such as earthquakes, that may affect the region. Like other lenders, we generally do not require earthquake insurance for properties on which we make commercial mortgage loans. With respect to California properties, however, we obtain an engineering report specific to each property. The report assesses the building's design specifications, whether it has been upgraded to meet seismic building codes and the maximum loss that is likely to result from a variety of different seismic events. We also obtain a report that assesses, by building and geographic fault lines, the amount of loss our commercial mortgage loan portfolio might suffer under a variety of seismic events.

The typical borrower in our commercial mortgage loan portfolio is a single purpose entity or single asset entity. As of December 31, 2022 and December 31, 2021, the total number of commercial mortgage loans outstanding were 656 and 750, of which 43% and 41% were for loans with principal balances less than $10.0 million as of December 31, 2022 and December 31, 2021, respectively. The average loan size of our commercial mortgage portfolio was $20.7 million and $21.3 million as of December 31, 2022 and December 31, 2021, respectively.

Commercial Mortgage Loan Credit Monitoring. For further details on monitoring and management of our commercial mortgage loan portfolio, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 4, Investments" under the caption, "Financing Receivables Credit Monitoring."

We categorize loans that are 60 days or more delinquent, loans in process of foreclosure and loans with borrowers or credit tenants in bankruptcy that are delinquent as "problem" loans. We categorize loans that are delinquent less than 60 days where the default is expected to be cured and loans with borrowers or credit tenants in bankruptcy that are current as "potential problem" loans. The decision whether to classify a loan delinquent less than 60 days as a potential problem involves significant subjective judgments by management as to the likely future economic conditions and developments with respect to the borrower. We categorize loans for which the original note rate has been reduced below market and loans for which the principal has been reduced as "restructured" loans. We also consider loans that are refinanced more than one year beyond the original maturity or call date at below market rates as restructured.

We had two problem commercial mortgage loans with a carrying amount of $43.8 million for which we had a valuation allowance of $28.3 million as of December 31, 2022. We also had one problem commercial mortgage loan with a carrying amount of $8.8 million for which we also had a valuation allowance of $8.8 million as of December 31, 2021.

	December 31, 2022	**December 31, 2021**
	($ in millions)	
Total commercial mortgage loans	**$13,487.5**	$15,920.1
Restructured problem commercial mortgage loans	**15.5**	—
Total problem, potential problem and restructured commercial mortgage loans	**$ 15.5**	$ —
Total problem, potential problem and restructured commercial mortgage loans as a percent of total commercial mortgage loans	**0.11%**	—%

Commercial Mortgage Loan Valuation Allowance. We establish the commercial mortgage loan valuation allowance at levels considered adequate to absorb estimated expected credit losses within the portfolio. For further details on the commercial mortgage loan valuation allowance, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 4, Investments" under the caption, "Financing Receivables Valuation Allowance."

Real Estate

Real estate consists primarily of commercial equity real estate. As of December 31, 2022 and December 31, 2021, the carrying amount of our equity real estate investment was $2,237.4 million and $2,060.6 million, respectively. Our commercial equity real estate is held in the form of wholly owned real estate, real estate acquired upon foreclosure of commercial mortgage loans and majority owned interests in real estate joint ventures.

Equity real estate is categorized as either "real estate held for investment" or "real estate held for sale. The carrying value of real estate held for investment is generally adjusted for impairments whenever events or changes in circumstances indicate the carrying amount of the asset may not be recoverable. Such impairment adjustments are recorded as net realized capital losses in our consolidated results of operations. No such impairment adjustments were recorded for the year ended December 31, 2022 or for the year ended December 31, 2021.

Once we identify a real estate property to be sold and it is probable that it will be sold, we classify the property as held for sale. We establish a valuation allowance subject to periodic revisions, if necessary, to adjust the carrying value of the property to reflect the lower of its current carrying value or the fair value, less associated selling costs. The valuation allowance did not change for the year ended December 31, 2022 or for the year ended December 31, 2021.

We use research, both internal and external, to recommend appropriate product and geographic allocations and changes to the equity real estate portfolio. We monitor product, geographic and industry diversification separately and together to determine the most appropriate mix.

Equity real estate is distributed across geographic regions of the country. As of December 31, 2022, our largest equity real estate portfolio concentration was in the Pacific (44%) region of the United States. By property type, our largest concentrations were in Apartments (36%) and Industrial (32%) as of December 31, 2022.

Other Investments

Our other investments totaled $3,745.7 million as of December 31, 2022, compared to $3,671.7 million as of December 31, 2021. Other investments include interests in unconsolidated entities, which include real estate properties owned jointly with venture partners and operated by the partners; sponsored investment funds; the cash surrender value of company owned and trust owned life insurance; derivative assets and other investments.

International Investment Operations

Of our invested assets, $7,396.2 million were held by our Principal International segment as of December 31, 2022. The assets are primarily managed by the local Principal International affiliate. Due to the regulatory constraints in each location, each company maintains its own investment policies. As shown in the following table, the major category of international invested assets is fixed maturities. The following table excludes invested assets of the separate accounts.

	December 31, 2022		December 31, 2021	
	Carrying amount	Percent of total	Carrying amount	Percent of total
	($ in millions)			
Fixed maturities	**$3,110.9**	**42%**	$3,023.3	43%
Equity securities	**1,165.4**	**16**	1,295.7	20
Mortgage loans	**952.7**	**13**	806.0	11
Real estate	**2.3**	**—**	14.8	—
Policy loans	**14.5**	**—**	13.9	—
Other investments:				
Direct financing leases	**664.4**	**9**	609.5	9
Investment in unconsolidated operating entities	**1,046.2**	**14**	849.9	12
Derivative assets and other investments	**439.8**	**6**	347.2	5
Total invested assets	**7,396.2**	**100%**	6,960.3	100%
Cash and cash equivalents	**190.6**		257.2	
Total invested assets and cash	**$7,586.8**		$7,217.5	

Regulations in certain locations require investment in the funds we manage. These required regulatory investments are classified as equity securities within our consolidated statements of financial position, with all mark-to-market changes reflected in net investment income. Our investment is primarily dictated by client activity and all investment performance is retained by us.

Item 7A Quantitative and Qualitative Disclosures About Market Risk

Market Risk Exposures and Risk Management

Market risk is the risk we will incur losses due to adverse fluctuations in market rates and prices. Our primary market risk exposures are to interest rates, equity markets and foreign currency exchange rates. The active management of market risk is an integral part of our operations. We manage our overall market risk exposure within established risk tolerance ranges using several approaches, including:

- rebalancing our existing asset or liability portfolios;
- controlling the risk structure of newly acquired assets and liabilities and
- using derivative instruments to modify the market risk characteristics of existing assets or liabilities or assets expected to be purchased.

Interest Rate Risk

Interest rate risk is the risk of economic losses due to adverse changes in interest rates. Interest rate risk arises primarily from our holdings in interest sensitive assets and liabilities. Changes in interest rates impact numerous aspects of our operations, including but not limited to:

- yield on our invested assets;
- rate of interest we credit to contractholder account balances;
- timing of cash flows on assets and liabilities containing embedded prepayment options;
- cost of hedging our GMWB rider;
- discount rate used in valuing our pension and OPEB obligations;
- estimated gross profits and the amortization of our DAC asset and related actuarial balances;
- statutory reserve and capital requirements;
- asset-based fees earned on the fixed income assets we manage;
- interest expense on our long-term borrowings;
- fair value of intangible assets in our reporting units and
- fair value of financial assets and liabilities held at fair value on our consolidated statements of financial position.

Lower interest rates generally result in lower profitability in the long-term. Conversely, higher interest rates generally result in higher profitability in the long-term. However, an increase in market interest rates may cause a decline in the value of financial assets held at fair value on our consolidated statements of financial position.

On January 1, 2023, we will adopt authoritative guidance that will update certain requirements in the accounting for long-duration insurance and annuity contracts. This guidance will change the way we calculate the liability for future policy benefits on traditional and limited-payment contracts, will result in measuring MRB assets and liabilities at fair value and will change the amortization method used for DAC and other actuarial balances. As such, the way in which interest rate risk impacts our operations will change after this guidance is adopted.

Impact of Changes in Long-Term Interest Rate Assumptions

We use long-term interest rate assumptions to calculate reserves, DAC, other actuarial balances and benefit plan obligations in accordance with U.S. GAAP. In setting these assumptions, we consider a variety of factors, including historical experience, emerging trends and future expectations. We evaluate our assumptions on at least an annual basis. Due to the long-term nature of our assumptions, we generally do not revise our assumptions in response to short-term fluctuations in market interest rates. However, we will consider revising our assumptions if a significant change occurs in the factors noted above.

A reduction in our long-term interest rate assumptions may result in increases in our reserves and/or unlocking of our DAC asset and other actuarial balances. For additional information, see Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies and Estimates — Deferred Acquisition Costs and Other Actuarial Balances."

In addition, we have implemented, or may implement at any time, reinsurance transactions utilizing affiliated reinsurers and highly rated third parties to finance a portion of the statutory reserves for our term life insurance policies, universal life insurance policies with secondary guarantees and Closed Block life insurance policies. We calculate an economic reserve, which represents an estimate of our liability associated with these contracts. The excess of the required statutory reserve over the economic reserve is secured by financing provided by highly rated third parties. The long-term interest rate assumption is a key input in the calculation of the economic reserve. A reduction in our long-term interest rate assumption would reduce the portion of the statutory reserve that can be financed through affiliated reinsurers, thus increasing the amount of invested assets we must maintain to support statutory reserves. For additional information, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 16, Statutory Insurance Financial Information."

Impact of Changes in Interest Rates

Changes in interest rates or a sustained low interest rate environment may result in the following impacts, which would impact our financial position and results of operations:

Impact of Falling Interest Rates or Sustained Low Interest Rates	Impact of Rising Interest Rates
Adverse Impacts:	*Positive Impacts:*
A reduction in investment income, which may be partially offset by a reduction in the interest we credit on contractholder account balances; however, our ability to lower crediting rates may be constrained by guaranteed minimum interest rates and competitive pressures	An increase in investment income, which may be partially or fully offset by an increase in the interest we credit on contractholder account balances
An increase in the cost of hedging our GMWB rider	A decrease in the cost of hedging our GMWB rider
An increase in reserves and/or a true-up or unlocking of our DAC asset and other actuarial balances	A true-up or unlocking of our DAC asset and other actuarial balances
A reduction in the discount rate used in valuing our pension and OPEB obligations, leading to an increase in our Projected Benefit Obligation, Net Periodic Pension Cost, Accumulated Postretirement Benefit Obligation and Net Periodic Benefit Cost	An increase in the discount rate used in valuing our pension and OPEB obligations, leading to a decrease in our Projected Benefit Obligation, Net Periodic Pension Cost, Accumulated Postretirement Benefit Obligation and Net Periodic Benefit Cost
An increase in statutory capital we are required to hold as well as the amount of assets we must maintain to support statutory reserves	A decrease in statutory capital we are required to hold as well as the amount of assets we must maintain to support statutory reserves
An increase in prepayments or redemptions on mortgages and bonds we own, which would force us to reinvest the proceeds at lower interest rates	A decrease in prepayments or redemptions on mortgages and bonds we own, which would reduce our opportunity to reinvest the proceeds at higher interest rates
Positive Impacts:	*Adverse Impacts:*
An increase in the value of the fixed income assets we manage, resulting in an increase in our fee revenue in the short-term	A decrease in the value of the fixed income assets we manage, resulting in a decrease in our fee revenue in the short-term
A decrease in the interest expense on our long-term borrowings, to the extent the borrowings have adjustable rates or we are able to refinance our obligations at lower interest rates	An increase in the interest expense on our long-term borrowings, to the extent the borrowings have adjustable rates or we refinance our obligations at higher interest rates
An increase in the fair value of certain financial assets held at fair value on our consolidated statements of financial position	A decrease in the fair value of certain financial assets held at fair value on our consolidated statements of financial position, as discussed below
	A reduction in the fair value of intangible assets in our reporting units, potentially leading to an impairment of goodwill or other intangible assets

We estimate a hypothetical 100 basis point immediate, parallel decrease in U.S. interest rates would impact segment pre-tax operating earnings between (1)% and 1% over the next 12 months excluding the impact of any potential unlocking of our DAC asset and other actuarial balances. This estimate reflects the impact of routine management actions in response to changes in interest rates, such as reducing the interest rates we credit on contractholder account balances, but does not reflect the impact of other actions management may consider, such as curtailing sales of certain products.

The selection of a 100 basis point immediate, parallel decrease in U.S. interest rates should not be construed as a prediction by us of future market events, but rather as an illustration of the impact of such an event. Our exposure will change as a result of ongoing portfolio transactions in response to new business, management's assessment of changing market conditions and changes in our mix of business.

If market rates increase rapidly, policy surrenders, withdrawals and requests for policy loans may increase as customers seek to achieve higher returns. This may result in unlocking of our DAC and other actuarial balances. We may be required to sell assets to raise the cash necessary to respond to such surrenders, withdrawals and loans, thereby realizing capital losses on the assets sold.

Guaranteed Minimum Interest Rate Exposure. The following table provides detail on the differences between the interest rates being credited to contractholders as of December 31, 2022, and the respective guaranteed minimum interest rates ("GMIRs"). Amounts for contracts without significant fee revenues such as GICs, funding agreements, retail fixed income annuities and guaranteed pension contracts are excluded. Additionally, amounts for contracts that are reinsured as part of the Reinsurance Transaction are also excluded. Account values are broken down by GMIR level within the Retirement and Income Solutions and U.S. Insurance Solutions segments.

	Account values (1)					
		Excess of crediting rates over GMIR:				
	At GMIR	Up to 0.50% above GMIR	0.51% to 1.00% above GMIR	1.01% to 2.00% above GMIR	2.01% or more above GMIR	Total
			($ in millions)			
Guaranteed minimum interest rate						
Retirement and Income Solutions						
Up to 1.00%	$ 36.9	$ 24.8	$1,188.9	$ 307.8	$364.9	$ 1,923.3
1.01% – 2.00%	3.6	549.9	6,090.3	1,477.0	9.4	8,130.2
2.01% – 3.00%	346.9	0.1	—	0.1	—	347.1
3.01% – 4.00%	7.8	—	—	—	—	7.8
4.01% and above	18.8	—	—	—	—	18.8
Subtotal	414.0	574.8	7,279.2	1,784.9	374.3	10,427.2
U.S. Insurance Solutions						
Up to 1.00%	—	8.4	10.1	—	0.7	19.2
1.01% – 2.00%	—	—	3.8	257.4	155.0	416.2
2.01% – 3.00%	66.6	191.8	187.5	60.0	0.4	506.3
3.01% – 4.00%	1,645.9	33.6	21.8	22.6	3.2	1,727.1
4.01% and above	40.6	10.1	3.4	1.6	—	55.7
Subtotal	1,753.1	243.9	226.6	341.6	159.3	2,724.5
Total	$2,167.1	$818.7	$7,505.8	$2,126.5	$533.6	$13,151.7
Percentage of total	16.4%	6.2%	57.1%	16.2%	4.1%	100.0%

(1) Includes only the account values, net of policy loans, for products with GMIRs and discretionary crediting rates.

In addition to the domestic account values shown in the table above, Principal International had $577.6 million of account values with GMIRs in Brazil as of December 31, 2022. The Brazil amount includes account values from an equity method subsidiary, adjusted to reflect the proportion of the subsidiary's results reflected in our net income. Our liabilities in Principal International are generally denominated in the functional currency of the location of operation. The pattern of interest rate movements in our international operations will likely differ from the pattern of interest rate movements in the U.S.

Impact of Rising Interest Rates on the Fair Value of Financial Assets. An increase in market interest rates may cause a decline in the value of financial assets held at fair value on our consolidated statements of financial position. Although changes in the fair value of our financial assets due to changes in interest rates may impact the amount of equity reported in our consolidated statements of financial position, these changes will not cause an economic gain or loss unless we sell investments, terminate derivative positions, record an allowance for credit loss, or determine a derivative instrument is no longer an effective hedge.

We estimate a hypothetical 100 basis point immediate, parallel increase in interest rates would reduce the net reported fair value of our financial assets and derivatives by $2,844.2 million as of December 31, 2022, compared to $5,479.7 million as of December 31, 2021. This estimate only reflects the change in fair value for financial assets and derivatives reported at fair value on our consolidated statements of financial position. Assets and liabilities not reported at fair value on our consolidated statements of financial position — including mortgage loans, liabilities relating to insurance contracts, investment contracts, debt and bank deposits — are excluded from this sensitivity analysis. We believe the excluded liability items would economically serve as a partial offset to the net interest rate risk of the financial instruments included in the sensitivity analysis. Separate account assets and liabilities are also excluded from this estimate, as any interest rate risk is borne by the holder of the separate account. Assets backing reserves as part of a coinsurance with funds withheld agreement are excluded from this estimate, as any interest rate risk is passed to the reinsurer. For more information on fair value measurements, see Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 15, Fair Value Measurements."

Our selection of a 100 basis point immediate, parallel increase in interest rates is a hypothetical rate scenario we use to demonstrate potential risk. While a 100 basis point immediate, parallel increase does not represent our view of future market changes, it is a near term reasonably possible hypothetical change that illustrates the potential impact of such events. While this sensitivity analysis provides a representation of interest rate sensitivity, it is based on our portfolio exposures at a point in time and may not be representative of future market results. These exposures will change as a result of ongoing portfolio transactions in response to new business, management's assessment of changing market conditions and available investment opportunities.

Our net estimated potential loss in fair value as of December 31, 2022, decreased $2,635.5 million from December 31, 2021, primarily due to the Reinsurance Transaction.

Interest Rate Risk Management

We manage interest rate risk through the use of an integrated risk management framework. This helps us identify, assess, monitor, report and manage our risks within established limits and risk tolerances. Our internal risk committees monitor and discuss our risk profile and identify necessary actions to mitigate impacts from interest rate risk.

The product designs within our business units result in a variety of different interest rate risk profiles. Therefore, our business units use a variety of different approaches for managing their asset and liability interest rate risks.

- *Retirement Business Stable Cash Flows* — For stable and predictable cash flow liabilities, such as pension risk transfer, WSRS, and investment only, we use investment strategy and hedges to tightly align the cash flow run off of these asset and liability cash flows. Immunization analysis is also utilized in the management of interest rate risk.
- *U.S. Insurance Stable Cash Flows* — Our insurance businesses in many instances contain long-term guarantees with stable and predictable liability cash flows and recurring premiums. We manage the interest rate risk through investment strategy, product crediting rates and analyzing duration and embedded value sensitivity.
- *Principal International* — Our international businesses operate within local regulations and financial market conditions (e.g., derivative markets, assets available) to achieve similar asset and liability cash flow management objectives. In locations with a limited availability of long-dated assets and derivative markets, the duration gap is managed to risk tolerances specific to each location.

We also limit our exposure to interest rate risk through our business mix and strategy. We have intentionally limited our exposure to specific products where investment margins are critical to the product's profitability, and we continue to emphasize the sale of products that generate revenues in the form of fees for service or premiums for insurance coverage and expose us to minimal interest rate risk.

Prepayment risk is controlled by limiting our exposure to investments that are prepayable without penalty prior to maturity at the option of the issuer. We also require additional yield on these investments to compensate for the risk the issuer will exercise such option. Prepayment risk is also controlled by limiting the sales of liabilities with features such as puts or other options that can be exercised at inopportune times. We manage the interest rate risk associated with our long-term borrowings by monitoring the interest rate environment and evaluating refinancing opportunities as maturity dates approach.

The plan fiduciaries use a Dynamic Asset Allocation strategy for our qualified defined benefit pension plan, which strategically allocates an increasing portion of the assets of the pension plan to fixed income securities as the funding status improves. The intended purpose of using the Dynamic Asset Allocation strategy is that the expected change in the value of the plan assets and the change in pension benefit obligation due to market movements are more likely to have more correlation versus a static allocation of assets between categories. For more information see Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies and Estimates — Benefit Plans" and Item 8. "Financial Statements and Supplementary Data, Notes to Consolidated Financial Statements, Note 12, Employee and Agent Benefits."

Use of Derivatives to Manage Interest Rate Risk. We use or have used various derivative financial instruments to manage our exposure to fluctuations in interest rates, including interest rate swaps, interest rate options, to be announced ("TBA") forwards, bond forwards, treasury forwards, swaptions and futures. We use interest rate swaps, treasury forwards and futures contracts to hedge against changes in the value of the GMWB liability. We use interest rate swaps and have used TBA forwards primarily to more closely match the interest rate characteristics of assets and liabilities. They can be used to change the sensitivity to the interest rate of specific assets and liabilities as well as an entire portfolio. We use bond forwards to fix the purchase price of a bond at a specified date in the future. We use interest rate options to manage prepayment risks in our assets and minimum guaranteed interest rates and lapse risks in our liabilities. We have purchased swaptions to hedge interest rate exposure for certain assets and liabilities.

Foreign Currency Risk

Foreign currency risk is the risk we will incur economic losses due to adverse fluctuations in foreign currency exchange rates. This risk arises from foreign currency-denominated funding agreements issued to nonqualified institutional investors in the international market, foreign currency-denominated fixed maturity and equity securities, and our international operations, including expected cash flows and potential acquisition and divestiture activity.

We estimate as of December 31, 2022, a 10% immediate unfavorable change in each of the foreign currency exchange rates to which we are exposed would result in no material change to the net fair value of our foreign currency-denominated instruments identified above because we effectively hedge foreign currency-denominated instruments to minimize exchange rate impacts, which is consistent with our estimate as of December 31, 2021. However, fluctuations in foreign currency exchange rates do affect the translation of segment pre-tax operating earnings and equity of our international operations into our consolidated financial statements.

For our Principal International segment, we estimate a 10% immediate unfavorable change in each of the foreign currency exchange rates to which we were exposed would have resulted in a $310.2 million, or 10.0%, reduction in the total equity excluding noncontrolling interests of our international operations as of December 31, 2022, as compared to an estimated $302.9 million, or 10.0%, reduction as of December 31, 2021. We estimate a 10% unfavorable change in the average foreign currency exchange rates to which we were exposed through our international operations would have resulted in a $37.8 million, or 12.0%, reduction in segment pre-tax operating earnings of our international operations for the year ended December 31, 2022, as compared to an estimated $38.5 million, or 12.0%, reduction for the year ended December 31, 2021.

The selection of a 10% immediate unfavorable change in all currency exchange rates should not be construed as a prediction by us of future market events, but rather as an illustration of the potential impact of such an event. These exposures will change as a result of a change in the size and mix of our foreign operations.

Use of Derivatives to Manage Foreign Currency Risk. The foreign currency risk on funding agreements and fixed maturities in our U.S. operations is mitigated by using currency swaps that swap the foreign currency interest and principal payments to our functional currency. We did not have currency swap agreements associated with foreign-denominated liabilities as of December 31, 2022 and December 31, 2021. The notional amount of our currency swap agreements associated with foreign-denominated fixed maturities was $1,389.8 million and $958.9 million as of December 31, 2022 and December 31, 2021, respectively.

With regard to our international operations, in order to enhance the diversification of our investment portfolios we may invest in bonds denominated in a currency that is different than the currency of our liabilities. We use foreign exchange derivatives to economically hedge the currency mismatch. Our Principal International operations had currency swaps with a notional amount of $244.9 million and $283.8 million as of December 31, 2022 and December 31, 2021, respectively. Our Principal International operations also utilized currency forwards with a notional amount of $672.5 million and $721.7 million as of December 31, 2022 and December 31, 2021, respectively.

We use currency forwards to hedge certain foreign-denominated real estate funds in our domestic operations and net equity investments in our foreign operations, including certain sponsored investment funds. We held currency forwards with a notional amount of $450.6 million and $321.9 million as of December 31, 2022 and December 31, 2021, respectively. We have used currency options to hedge currency risk associated with expected cash flows from our foreign operations. No currency options were utilized as of December 31, 2022 or December 31, 2021.

Equity Risk

Equity risk is the risk we will incur economic losses due to adverse fluctuations in equity markets. As of December 31, 2022 and December 31, 2021, the fair value of our equity securities was $1,708.6 million and $2,347.2 million, respectively. We estimate a 10% decline in the prices of the equity securities would result in a decline in fair value of our equity securities of $170.9 million as of December 31, 2022, as compared to a decline in fair value of our equity securities of $234.7 million as of December 31, 2021.

We are also exposed to the risk that asset-based fees decrease as a result of declines in assets under management due to changes in investment prices and the risk that asset management fees calculated by reference to performance could be lower. The risk of decreased asset-based and asset management fees could also impact our estimates of total gross profits used as a basis for amortizing DAC and other actuarial balances. For further discussion, see Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies and Estimates — Deferred Acquisition Costs and Other Actuarial Balances."

We also have equity risk associated with (1) universal life contracts that credit interest to customers based on changes in an external equity index; (2) variable annuity contracts that have a GMWB rider that allows the customer to make withdrawals of a specified annual amount, either for a fixed number of years or for the lifetime of the customer, even if the account value is reduced to zero; (3) variable annuity contracts that have a guaranteed minimum death benefit ("GMDB") that allows the death benefit to be paid, even if the account value has fallen below the GMDB amount and (4) investment contracts in which the return is subject to minimum contractual guarantees. We are also subject to equity risk based upon the assets that support our employee benefit plans. For further discussion of equity risk associated with these plans, see Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies and Estimates — Benefit Plans."

We estimate an immediate 10% decline in the S&P 500 index, followed by a 2% per quarter increase would reduce our annual segment pre-tax operating earnings by approximately 5% to 8% over the next 12 months. This estimate excludes the impact of any potential unlocking of our DAC asset and other actuarial balances. The selection of a 10% unfavorable change in the S&P 500 index should not be construed as a prediction by us of future market events, but rather as an illustration of the potential impact of such an event. Our exposure will change as a result of changes in our mix of business.

Separate and distinct from our equity risk associated with a decline in the S&P index, we also have equity risk associated with certain alternative investments. These investments are comprised of several asset categories (including hedge funds, private equity, infrastructure and direct lending) that provide an attractive asset match to our long-dated liabilities and create diversification benefits to our fixed income investments. The risk profile of these investments is actively monitored by our Investment Committee and our corporate risk management function. Changes in the value of these investments will impact earnings. We estimate an immediate 10% decline in the value of those assets, followed by a 2% per quarter increase would reduce our annual segment pre-tax operating earnings by less than 8%. This estimate excludes the impact of any potential unlocking of our DAC asset and other actuarial balances. The selection of a 10% unfavorable change in the value of those assets should not be construed as a prediction of future market events, but rather as an illustration of the potential impact of such a decline in value of those assets.

Use of Derivatives to Manage Equity Risk. We economically hedge the universal life products, where the interest credited is linked to an external equity index, by purchasing options that match the product's profile or selling options to offset existing exposures. We economically hedged the GMWB exposure, which includes interest rate risk and equity risk, using futures, options, treasury forwards and interest rate swaps with notional amounts of $1,451.6 million, $1,400.7 million, $4,280.1 million, and $1,818.0 million, respectively, as of December 31, 2022, and notional amounts of $1,924.9 million, $1,699.6 million, $2,181.6 million, and $4,577.1 million, respectively, as of December 31, 2021. The fair value of both the GMWB embedded derivative and associated hedging instruments are sensitive to financial market conditions and the variance related to the change in fair value of these items for a given period is largely dependent on market conditions at the end of the period.

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Principal Financial Group, Inc.

Opinion on Internal Control over Financial Reporting

We have audited Principal Financial Group, Inc.'s internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), (the COSO criteria). In our opinion, Principal Financial Group, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated statements of financial position of the Company as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2022, and the related notes and financial statement schedules listed in the Index at Item 15(a) and our report dated February 16, 2023, expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

Des Moines, Iowa
February 16, 2023

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Principal Financial Group, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of financial position of Principal Financial Group, Inc. (the Company) as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2022, and the related notes and financial statement schedules listed in the Index at Item 15(a) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at 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 U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 16, 2023, expressed an unqualified opinion thereon.

Basis for Opinion

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the 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 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 financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) 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.

Deferred acquisition cost amortization based on estimated gross profits

Description of the Matter

At December 31, 2022, the Company's deferred acquisition costs totaled $4.7 billion. As discussed in Note 1 of the consolidated financial statements, the carrying amount of the deferred acquisition costs is the total of costs deferred less amortization for which a significant portion of the amortization is calculated in relation to the present value of estimated gross profits. There is significant uncertainty inherent in calculating estimated gross profits as the calculation is sensitive to management's best estimate of assumptions such as mortality, lapses, equity returns, general account investment yields and expenses. Management's assumptions are adjusted, also known as unlocking, based on actual policyholder behavior and market experience and projecting for expected trends. The unlocking results in amortization being recalculated using the new assumptions for estimated gross profits, resulting either in additional or less cumulative amortization expense.

Auditing management's estimate of deferred acquisition costs that are amortized in relation to the present value of estimated gross profits was complex because there was a high degree of subjectivity applied in management's methods and assumptions used to calculate estimated gross profits. The high degree of subjectivity was primarily due to the sensitivity of the estimated gross profits to the methods and assumptions which have a significant effect on the valuation of the deferred acquisition costs.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the estimation process, including, among others, controls over the review and approval processes that management has in place for the assumptions used in measuring estimated gross profits.

We involved actuarial specialists to assist with our audit procedures which included, among others, evaluating the methodology applied by management in determining the estimated gross profits with those methods used in prior periods and in the industry. To evaluate the significant assumptions used by management, we compared policyholder behavior assumptions that we identified as being higher risk to prior actual experience and management's estimates of prospective changes in these assumptions. In addition, we compared equity returns and general account investment yields to historical assumptions and observable market data. We performed an independent recalculation of estimated gross profits for a sample of product cohorts for comparison with the actuarial model used by management.

Valuation of investments in securities

Description of the Matter

A subset of the Company's $63.7 billion fixed-income securities portfolio exhibits higher estimation uncertainty when determining fair value. The fixed-income securities, which include bonds, asset-backed securities, redeemable preferred stock and certain non-redeemable preferred securities, are classified as either available-for-sale or trading and, accordingly, are carried at fair value in the consolidated statements of financial position. As discussed in Note 15 of the consolidated financial statements, for certain securities the Company obtains prices from third party pricing vendors, a subset of which exhibit higher estimation uncertainty given the characteristics of the security. In addition, the Company uses a matrix priced internal model to develop the fair value for a subset of corporate bonds. The fair value is developed using a risk spread which creates higher estimation uncertainty.

Auditing the fair value of the securities that exhibit higher estimation uncertainty was especially challenging because determining the fair value is complex and highly judgmental and involves using inputs and assumptions that are not directly observable in the market.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over management's valuation process for the fixed income securities portfolio that exhibits higher estimation uncertainty. This included, among others, testing the review and approval process that management has in place over validating the fair value from third party pricing sources and the assumptions used in determining the fair value for matrix priced securities.

To test the fair value calculation, we utilized the support of our valuation specialists which included, among others, independently calculating a reasonable range of fair values for a sample of securities by using a cash flow model and cash flow and yield assumptions based on independently obtained information or available transaction data for similar securities. We compared these ranges to management's estimates of fair value for the selected securities.

Accounting for Reinsurance of U.S. retail fixed annuity and universal life insurance with secondary guarantee ("ULSG") blocks of business

Description of the Matter

As discussed in Note 1 to the consolidated financial statements, in May 2022, the Company entered into a series of agreements (referred to as the "Reinsurance Transaction") to transfer substantially all of the US Retail fixed annuity and ULSG blocks of business with an effective date of January 1, 2022 to Talcott Life and Annuity Re. A portion of the Reinsurance Transaction is accounted for using deposit accounting and comprises a significant portion of the $7.9 billion deposit asset as of December 31, 2022, with the remainder accounted for as reinsurance and comprises a significant portion of the $14.1 billion reinsurance recoverable as of December 31, 2022. The Company retained the portfolio of assets relating to the underlying policies in funds withheld segregated accounts, which is comprised of fixed maturity securities, equity securities, mortgage loans, accrued interest, other assets and cash and cash equivalents. The Company recorded a funds withheld payable of $20.4 billion as of December 31, 2022, which was net of an $3.7 billion embedded derivative asset, the fair value of which is estimated based on the change in fair value of the assets supporting the funds withheld liability. The Company also recorded a cost of reinsurance asset for this transaction that is included within the Premiums due and other receivables line item, that will be amortized over the remaining life of the underlying business reinsured.

Auditing the Reinsurance Transaction was complex due to multiple elements of the transaction including the assessment of risk transfer of the agreements and the separate lines of business, determination of the cost of reinsurance asset, accounting for the embedded derivative and recording of the deposit asset and reinsurance recoverable amounts.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design, and tested the operating effectiveness of the controls over the reinsurance agreement process including, among others, controls related to the evaluation of risk transfer, the determination of the cost of reinsurance, the accounting for the funds withheld liability and the calculation of the related embedded derivative, and the recognition of the deposit asset and reinsurance recoverable amounts.

Our audit procedures included, among others, assessing the terms of the agreements with Talcott Life & Annuity Re, evaluating management's risk transfer conclusion, testing the calculation of the cost of reinsurance, related amortization, and related embedded derivative, reconciling the funds withheld liability to the investment portfolio which we value and confirm and reconciling the deposit asset and reinsurance recoverable to the recorded reserves based on the terms of the reinsurance agreement.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1967.

Des Moines, Iowa
February 16, 2023

Principal Financial Group, Inc.

Consolidated Statements of Financial Position

	December 31, 2022	December 31, 2021
	(in millions)	
Assets		
Fixed maturities, available-for-sale	**$ 62,889.9**	$ 78,154.5
Fixed maturities, trading	**760.7**	422.2
Equity securities (2022 and 2021 include $740.0 million and $783.7 million related to consolidated variable interest entities)	**1,708.6**	2,347.2
Mortgage loans (2022 and 2021 include $1,179.7 million and $1,260.1 million related to consolidated variable interest entities)	**20,629.8**	19,668.7
Real estate (2022 and 2021 include $649.0 million and $672.0 million related to consolidated variable interest entities)	**2,239.7**	2,075.4
Policy loans	**784.7**	759.6
Other investments (2022 and 2021 include $375.9 million and $522.8 million related to consolidated variable interest entities)	**6,075.9**	5,478.3
Total investments	**95,089.3**	108,905.9
Cash and cash equivalents (2022 and 2021 include $32.4 million and $49.6 million related to consolidated variable interest entities)	**4,848.0**	2,332.0
Accrued investment income	**742.1**	695.8
Reinsurance recoverable and deposit receivable	**22,029.6**	1,186.5
Premiums due and other receivables	**4,283.3**	655.9
Deferred acquisition costs	**4,686.9**	3,757.5
Property and equipment	**996.1**	1,038.0
Goodwill	**1,598.2**	1,627.6
Other intangibles	**1,533.3**	1,600.6
Separate account assets (2022 and 2021 include $34,193.8 million and $33,957.7 million related to consolidated variable interest entities)	**155,375.1**	182,345.4
Other assets	**1,057.7**	512.0
Total assets	**$292,239.6**	$304,657.2
Liabilities		
Contractholder funds (2022 and 2021 include $334.0 million and $344.0 million related to consolidated variable interest entities)	**$ 42,777.3**	$ 43,598.0
Future policy benefits and claims	**44,874.9**	43,948.1
Other policyholder funds	**1,010.5**	1,071.0
Short-term debt	**80.7**	79.8
Long-term debt	**3,997.0**	4,280.2
Income taxes currently payable	**19.2**	15.5
Deferred income taxes	**1,206.8**	2,320.2
Separate account liabilities (2022 and 2021 include $34,193.8 million and $33,957.7 million related to consolidated variable interest entities)	**155,375.1**	182,345.4
Funds withheld payable	**20,436.1**	—
Other liabilities (2022 and 2021 include $86.8 million and $58.7 million related to consolidated variable interest entities)	**12,157.2**	10,540.7
Total liabilities	**281,934.8**	288,198.9
Redeemable noncontrolling interest (2022 and 2021 include $235.3 million and $304.0 million related to consolidated variable interest entities)	**262.0**	332.5
Stockholders' equity		
Common stock, par value $0.01 per share; 2,500.0 million shares authorized; 489.8 million and 484.9 million shares issued as of 2022 and 2021; 243.5 million and 261.7 million shares outstanding as of 2022 and 2021	**4.9**	4.8
Additional paid-in capital	**10,740.4**	10,495.0
Retained earnings	**17,042.3**	12,884.5
Accumulated other comprehensive income (loss)	**(7,199.0)**	1,610.9
Treasury stock, at cost (246.3 million and 223.2 million shares as of 2022 and 2021)	**(10,586.9)**	(8,925.8)
Total stockholders' equity attributable to Principal Financial Group, Inc.	**10,001.7**	16,069.4
Noncontrolling interest	**41.1**	56.4
Total stockholders' equity	**10,042.8**	16,125.8
Total liabilities and stockholders' equity	**$292,239.6**	$304,657.2

See accompanying notes.

Principal Financial Group, Inc.

Consolidated Statements of Operations

	For the year ended December 31,		
	2022	**2021**	**2020**
	(in millions, except per share data)		
Revenues			
Premiums and other considerations	**$ 5,339.7**	$ 4,841.5	$ 6,037.4
Fees and other revenues	**4,177.7**	5,012.6	4,511.1
Net investment income	**3,830.4**	4,406.1	3,890.6
Net realized capital gains (losses) (1)	**(258.4)**	2.5	302.6
Net realized capital gains on funds withheld assets (1)	**749.4**	—	—
Change in fair value of funds withheld embedded derivative	**3,652.8**	—	—
Total revenues	**17,491.6**	14,262.7	14,741.7
Expenses			
Benefits, claims and settlement expenses	**6,370.8**	7,097.0	8,281.5
Dividends to policyholders	**94.8**	94.8	120.2
Operating expenses	**4,965.9**	4,987.3	4,646.5
Total expenses	**11,431.5**	12,179.1	13,048.2
Income before income taxes	**6,060.1**	2,083.6	1,693.5
Income taxes	**1,207.9**	326.2	265.0
Net income	**4,852.2**	1,757.4	1,428.5
Net income attributable to noncontrolling interest	**40.6**	46.8	32.7
Net income attributable to Principal Financial Group, Inc.	**$ 4,811.6**	$ 1,710.6	$ 1,395.8
Earnings per common share			
Basic earnings per common share	**$ 19.16**	$ 6.36	$ 5.08
Diluted earnings per common share	**$ 18.85**	$ 6.27	$ 5.05

(1) Includes realized and unrealized gains (losses). See Note 4, Investments, for further details.

See accompanying notes.

Principal Financial Group, Inc.

Consolidated Statements of Comprehensive Income

	For the year ended December 31,		
	2022	**2021**	**2020**
		(in millions)	
Net income	**$ 4,852.2**	$1,757.4	$1,428.5
Other comprehensive income (loss), net:			
Net unrealized gains (losses) on available-for-sale securities	**(8,988.9)**	(670.9)	1,376.5
Net unrealized gains (losses) on derivative instruments	**(19.9)**	33.6	(35.2)
Foreign currency translation adjustment	**(22.9)**	(254.2)	30.6
Net unrecognized postretirement benefit obligation	**90.6**	115.8	(24.9)
Other comprehensive income (loss)	**(8,941.1)**	(775.7)	1,347.0
Comprehensive income (loss)	**(4,088.9)**	981.7	2,775.5
Comprehensive income attributable to noncontrolling interest	**41.2**	43.3	34.5
Comprehensive income (loss) attributable to Principal Financial Group, Inc.	**$(4,130.1)**	$ 938.4	$2,741.0

See accompanying notes.

Principal Financial Group, Inc.

Consolidated Statements of Stockholders' Equity

	Common stock	Additional paid-in capital	Retained earnings	Accumulated other comprehensive income (loss)	Treasury stock	Noncontrolling interest	Total stockholders' equity
				(in millions)			
Balances as of January 1, 2020	$4.8	$10,182.6	$11,074.3	$ 1,037.9	$ (7,681.6)	$ 67.8	$14,685.8
Common stock issued	—	42.8	—	—	—	—	42.8
Stock-based compensation	—	96.3	(9.2)	—	—	—	87.1
Treasury stock acquired, common	—	—	—	—	(307.0)	—	(307.0)
Dividends to common stockholders	—	—	(614.5)	—	—	—	(614.5)
Distributions to noncontrolling interest	—	—	—	—	—	(40.3)	(40.3)
Contributions from noncontrolling interest	—	—	—	—	—	6.0	6.0
Purchase of subsidiary shares from noncontrolling interest (1)	—	—	—	—	—	(1.4)	(1.4)
Adjustments to redemption amount of redeemable noncontrolling interest	—	(0.1)	—	—	—	(0.1)	(0.2)
Effects of implementation of accounting change related to credit losses, net	—	—	(8.4)	—	—	—	(8.4)
Net income (1)	—	—	1,395.8	—	—	25.2	1,421.0
Other comprehensive income (1)	—	—	—	1,345.2	—	1.2	1,346.4
Balances as of December 31, 2020	4.8	10,321.6	11,838.0	2,383.1	(7,988.6)	58.4	16,617.3
Common stock issued	—	86.7	—	—	—	—	86.7
Stock-based compensation	—	106.1	(10.0)	—	—	0.1	96.2
Treasury stock acquired, common	—	—	—	—	(937.2)	—	(937.2)
Dividends to common stockholders	—	—	(654.1)	—	—	—	(654.1)
Distributions to noncontrolling interest	—	—	—	—	—	(33.7)	(33.7)
Contributions from noncontrolling interest	—	—	—	—	—	7.4	7.4
Purchase of subsidiary shares from noncontrolling interest (1)	—	(16.4)	—	—	—	(1.7)	(18.1)
Adjustments to redemption amount of redeemable noncontrolling interest	—	(3.0)	—	—	—	(0.1)	(3.1)
Net income (1)	—	—	1,710.6	—	—	29.3	1,739.9
Other comprehensive loss (1)	—	—	—	(772.2)	—	(3.3)	(775.5)
Balances as of December 31, 2021	4.8	10,495.0	12,884.5	1,610.9	(8,925.8)	56.4	16,125.8
Common stock issued	**0.1**	**181.6**	—	—	—	—	**181.7**
Stock-based compensation	—	**102.7**	**(11.5)**	—	—	**0.4**	**91.6**
Treasury stock acquired, common	—	—	—	—	**(1,661.1)**	—	**(1,661.1)**
Accelerated share repurchase	—	**(33.9)**	—	—	—	—	**(33.9)**
Dividends to common stockholders	—	—	**(642.3)**	—	—	—	**(642.3)**
Distributions to noncontrolling interest	—	—	—	—	—	**(86.2)**	**(86.2)**
Contributions from noncontrolling interest	—	—	—	—	—	**7.3**	**7.3**
Purchase of subsidiary shares from noncontrolling interest (1)	—	**(5.7)**	—	—	—	**(2.4)**	**(8.1)**
Adjustments to redemption amount of redeemable noncontrolling interest	—	**0.7**	—	—	—	**(0.5)**	**0.2**
Adjustment for reinsurance	—	—	—	**131.8**	—	—	**131.8**
Net income (1)	—	—	**4,811.6**	—	—	**66.4**	**4,878.0**
Other comprehensive loss (1)	—	—	—	**(8,941.7)**	—	**(0.3)**	**(8,942.0)**
Balances as of December 31, 2022	**$4.9**	**$10,740.4**	**$17,042.3**	**$(7,199.0)**	**$(10,586.9)**	**$ 41.1**	**$10,042.8**

(1) Excludes amounts attributable to redeemable noncontrolling interest. See Note 14, Stockholders' Equity, for further details.

See accompanying notes.

Principal Financial Group, Inc.

Consolidated Statements of Cash Flows

	For the year ended December 31,		
	2022	2021	2020
		(in millions)	
Operating activities			
Net income	**$ 4,852.2**	$ 1,757.4	$ 1,428.5
Adjustments to reconcile net income to net cash provided by operating activities:			
Net realized capital (gains) losses	**258.4**	(2.5)	(302.6)
Net realized capital gains on funds withheld assets	**(749.4)**	—	—
Change in fair value of funds withheld embedded derivative	**(3,652.8)**	—	—
Depreciation and amortization expense	**295.9**	275.3	251.9
Amortization of deferred acquisition costs and contract costs	**420.0**	317.8	412.9
Additions to deferred acquisition costs and contract costs	**(421.4)**	(518.7)	(499.9)
Amortization of reinsurance (gain) loss	**84.5**	(18.0)	67.4
Stock-based compensation	**91.3**	96.1	87.2
Income from equity method investments, net of dividends received	**(102.9)**	(166.3)	(10.6)
Changes in:			
Accrued investment income	**(46.3)**	13.8	(24.0)
Net cash flows for trading securities and equity securities with operating intent	**(339.5)**	99.9	144.2
Premiums due and other receivables	**(3,630.0)**	8.3	61.9
Contractholder and policyholder liabilities and dividends	**1,426.9**	1,415.1	1,532.1
Current and deferred income taxes	**873.1**	160.2	442.5
Real estate acquired through operating activities	**(164.4)**	(73.7)	(16.4)
Real estate sold through operating activities	**7.9**	1.8	195.5
Funds withheld, net of reinsurance recoverable and deposit receivable	**3,750.3**	(105.5)	(75.3)
Other assets and liabilities	**345.0**	8.8	(99.3)
Other	**(125.9)**	(15.4)	113.3
Net adjustments	**(1,679.3)**	1,497.0	2,280.8
Net cash provided by operating activities	**3,172.9**	3,254.4	3,709.3
Investing activities			
Fixed maturities available-for-sale and equity securities with intent to hold:			
Purchases	**(19,352.6)**	(16,625.5)	(15,713.4)
Sales	**14,729.7**	2,735.3	3,043.9
Maturities	**6,853.7**	10,960.0	8,819.5
Mortgage loans acquired or originated	**(3,731.2)**	(5,223.5)	(3,249.5)
Mortgage loans sold or repaid	**2,614.6**	2,853.2	2,477.2
Real estate acquired	**(245.2)**	(281.4)	(230.6)
Real estate sold	**374.0**	133.7	2.3
Net purchases of property and equipment	**(116.3)**	(129.9)	(108.8)
Sale of interests in subsidiaries	**—**	27.0	—
Net change in other investments	**(68.2)**	(142.6)	(37.1)
Net cash provided by (used in) investing activities	**1,058.5**	(5,693.7)	(4,996.5)
Financing activities			
Issuance of common stock	**181.7**	86.7	42.8
Accelerated stock repurchase settlement	**(33.9)**	—	—
Acquisition of treasury stock	**(1,661.1)**	(937.2)	(307.0)
Payments for financing element derivatives	**(50.6)**	(39.9)	(30.9)
Purchase of subsidiary shares from noncontrolling interest	**(9.2)**	(24.2)	(1.4)
Dividends to common stockholders	**(642.3)**	(654.1)	(614.5)
Issuance of long-term debt	**15.4**	—	608.9
Principal repayments of long-term debt	**(302.0)**	(1.8)	(65.8)
Net proceeds from (repayments of) short-term borrowings	**0.9**	10.2	(12.6)
Investment contract deposits	**7,346.7**	9,359.8	10,284.4
Investment contract withdrawals	**(7,647.3)**	(8,801.0)	(8,852.7)
Net increase in banking operation deposits	**1,086.3**	2,922.9	569.7
Other	**—**	0.1	0.2
Net cash provided by (used in) financing activities	**(1,715.4)**	1,921.5	1,621.1
Net increase (decrease) in cash and cash equivalents	**2,516.0**	(517.8)	333.9
Cash and cash equivalents at beginning of period	**2,332.0**	2,849.8	2,515.9
Cash and cash equivalents at end of period	**$ 4,848.0**	$ 2,332.0	$ 2,849.8

Principal Financial Group, Inc.

Consolidated Statements of Cash Flows — (continued)

	For the year ended December 31,		
	2022	**2021**	**2020**
		(in millions)	
Supplemental information:			
Cash paid for interest	**$ 175.8**	$ 166.1	$ 162.8
Cash paid for (received from) income taxes	**142.1**	109.9	(172.0)
Supplemental disclosure of non-cash activities:			
Asset changes resulting from deconsolidation of residential whole loan securitizations:			
Decrease in mortgage loans	**$(220.7)**	$ —	$ —
Increase in fixed maturities, available-for-sale	**167.6**	—	—
Assets transferred in kind for settlement to reinsurer	**(428.5)**	—	—
Changes from re-designation of other postretirement employee benefits ("OPEB") plan assets to cover non-retiree benefits:			
Increases in equity securities re-designated from funded status of OPEB plan	**—**	548.1	—
Increases in other investments re-designated from funded status of OPEB plan	**—**	117.5	—
Decrease in tax receivable re-designated from funded status of OPEB plan	**—**	(9.1)	—
Decrease in accumulated other comprehensive income ("AOCI") due to reclassifying excess assets out of funded status of OPEB plan	**—**	9.1	—
Decrease in other assets due to reclassifying excess assets out of funded status of OPEB plan	**—**	(665.6)	—
Assets received in kind from pension risk transfer transactions	**—**	109.5	1,325.2

See accompanying notes.

Principal Financial Group, Inc.
Notes to Consolidated Financial Statements
December 31, 2022

1. Nature of Operations and Significant Accounting Policies

Description of Business

Principal Financial Group, Inc. ("PFG") is a leader in global investment management offering businesses, individuals and institutional clients a wide range of financial products and services, including retirement, asset management and insurance through our diverse family of financial services companies.

Basis of Presentation

The accompanying consolidated financial statements include the accounts of PFG and all other entities in which we directly or indirectly have a controlling financial interest as well as those variable interest entities ("VIEs") in which we are the primary beneficiary. The consolidated financial statements have been prepared in conformity with U.S. generally accepted accounting principles ("U.S. GAAP"). All significant intercompany accounts and transactions have been eliminated.

Uncertainties, including those associated with the novel coronavirus ("COVID-19"), may impact our business, results of operations, financial condition and liquidity. Our use of estimates and assumptions affect amounts reported and disclosed and includes, but is not limited to, the fair value of investments in the absence of quoted market values, investment impairments and valuation allowances, the fair value of derivatives, funds withheld embedded derivative, deferred acquisition costs ("DAC") and other actuarial balances, measurement of goodwill and intangible assets, the liability for future policy benefits and claims, the value of pension and other postretirement benefits and accounting for income taxes and the valuation of deferred tax assets. Our estimates and assumptions could change in the future. Our results of operations and financial condition may also be impacted by other uncertainties including evolving regulatory, legislative and standard-setter accounting interpretations and guidance.

During the second quarter of 2022, we closed a coinsurance with funds withheld reinsurance transaction with Talcott Life &Annuity Re, Ltd. ("Talcott Life & Annuity Re"), a limited liability company organized under the laws of the Cayman Islands and an affiliate of Talcott Resolution Life, Inc., a subsidiary of Sixth Street, pursuant to which we ceded our in-force U.S. retail fixed annuity and universal life insurance with secondary guarantee ("ULSG") blocks of business (the "Reinsurance Transaction"). The economics of the Reinsurance Transaction were effective as of January 1, 2022. As such, we recorded impacts for January through June 2022 in our second quarter 2022 results. See Note 9, Reinsurance, for further details.

Reclassifications have been made to prior periods to report the reinsurance recoverable and deposit receivable on the consolidated statements of financial position. Those amounts were previously reported in premiums due and other receivables. Certain reclassifications have been made to prior period consolidated statements of cash flows to conform to the December 31, 2022, presentation. This included presenting separate line items within operating activities for amortization of reinsurance (gain) loss and funds withheld, net of reinsurance recoverable and deposit receivable, among other reclassifications.

Consolidation

We have relationships with various special purpose entities and other legal entities that must be evaluated to determine if the entities meet the criteria of a VIE or a voting interest entity ("VOE"). This assessment is performed by reviewing contractual, ownership and other rights, including involvement of related parties, and requires use of judgment. First, we determine if we hold a variable interest in an entity by assessing if we have the right to receive expected losses and expected residual returns of the entity. If we hold a variable interest, then the entity is assessed to determine if it is a VIE. An entity is a VIE if the equity at risk is not sufficient to support its activities, if the equity holders lack a controlling financial interest or if the entity is structured with non-substantive voting rights. In addition to the previous criteria, if the entity is a limited partnership or similar entity, it is a VIE if the limited partners do not have the power to direct the entity's most significant

1. Nature of Operations and Significant Accounting Policies — (continued)

activities through substantive kick-out rights or participating rights. A VIE is evaluated to determine the primary beneficiary. The primary beneficiary of a VIE is the enterprise with (1) the power to direct the activities of a VIE that most significantly impact the entity's economic performance and (2) the obligation to absorb losses of the entity or the right to receive benefits from the entity that could potentially be significant to the VIE. When we are the primary beneficiary, we are required to consolidate the entity in our financial statements. We reassess our involvement with VIEs on a quarterly basis. For further information about VIEs, refer to Note 3, Variable Interest Entities.

If an entity is not a VIE, it is considered a VOE. VOEs are generally consolidated if we own a greater than 50% voting interest. If we determine our involvement in an entity no longer meets the requirements for consolidation under either the VIE or VOE models, the entity is deconsolidated. Entities in which we have management influence over the operating and financing decisions but are not required to consolidate, other than investments accounted for at fair value under the fair value option, are reported using the equity method.

Recent Accounting Pronouncements

Description	Date of adoption	Effect on our consolidated financial statements or other significant matters
Standards not yet adopted:		
Targeted improvements to the accounting for long-duration insurance contracts This authoritative guidance updates certain requirements in the accounting for long-duration insurance and annuity contracts. 1. The assumptions used to calculate the liability for future policy benefits on traditional and limited-payment contracts will be reviewed and updated periodically. Cash flow assumptions will be reviewed at least annually and updated when necessary with the impact recognized in net income. Discount rate assumptions are prescribed as the current upper-medium grade (low credit risk) fixed income instrument yield and will be updated quarterly with the impact recognized in other comprehensive income ("OCI"). 2. Market risk benefits, which are contracts or contract features that provide protection to the policyholder from capital market risk and expose us to other-than-nominal capital market risk, are measured at fair value. The periodic change in fair value is recognized in net income with the exception of the periodic change in fair value related to our own nonperformance risk, which is recognized in OCI. 3. DAC and other actuarial balances for all insurance and annuity contracts will be amortized on a constant basis over the expected term of the related contracts. 4. Additional disclosures are required, including disaggregated rollforwards of significant insurance liabilities and other account balances as well as disclosures about significant inputs, judgments, assumptions and methods used in measurement. The guidance for the liability for future policy benefits for traditional and limited-payment contracts and DAC will	January 1, 2023	We created a governance framework and a plan to support implementation of the standard. Our implementation and evaluation process included, but was not limited to the following: • identifying and documenting contracts and contract features in scope of the guidance; • identifying the actuarial models, systems and processes to be updated; • evaluating and selecting our systems solutions for implementing the new guidance; • building models and evaluating preliminary output as models are developed; • evaluating and finalizing our key accounting policies; • assessing the impact to our chart of accounts; • developing format and content of new disclosures; • conducting financial dry runs using model output and updated chart of accounts; • evaluating transition requirements and impacts and • establishing and documenting appropriate internal controls. This guidance will change how we account for many of our insurance and annuity products. The transition date impact from adoption of this standard is a decrease to our total

1. Nature of Operations and Significant Accounting Policies — (continued)

Description	Date of adoption	Effect on our consolidated financial statements or other significant matters
be applied on a modified retrospective basis; that is, to contracts in force as of the beginning of the earliest period presented (January 1, 2021, also referred to as the transition date) based on their existing carrying amounts. An entity may elect to apply the changes retrospectively. The guidance for market risk benefits will be applied retrospectively.		stockholders' equity of approximately $5.3 billion, of which approximately $5.1 billion impacted AOCI and approximately $0.2 billion impacted retained earnings. The most significant driver of the AOCI adjustment is due to the requirement to update the discount rate assumption to reflect an upper-medium grade fixed-income instrument, which will generally be equivalent to a single-A interest rate matched to the duration characteristics of our insurance liabilities. The most significant driver of the retained earnings adjustment is the valuation of contracts as market risk benefits.
Troubled debt restructurings and vintage disclosures This authoritative guidance eliminates the accounting requirements for troubled debt restructurings ("TDRs") by creditors and enhances the disclosure requirements for certain loan refinancing and restructuring by creditors when a borrower is experiencing financial difficulty. The update requires entities to disclose current-period gross write-offs by year of origination for financing receivables and net investments in leases. The amendments in this update should be applied prospectively, except for the transition method related to the recognition and measurement of troubled debt restructurings, for which an entity has the option to apply a modified retrospective transition method. Early adoption is permitted.	January 1, 2023	The adoption of this guidance is not expected to have a material impact on our consolidated financial statements.
Targeted improvements to accounting for hedging activities — portfolio layer method This authoritative guidance intends to further align the economics of a company's risk management activities in its financial statements with hedge accounting requirements. The guidance expands the current single-layer method to allow multiple hedge layers of a single closed portfolio. Non-prepayable assets can also be included in the same portfolio. This guidance also clarifies the current guidance on accounting for fair value basis adjustments applicable to both a single hedged layer and multiple hedged layers. Upon adoption, the application of these hedge strategies would be applied prospectively. Early adoption is permitted.	January 1, 2023	This guidance will not have a material impact on our consolidated financial statements.
Standards adopted:		
Simplifying the accounting for income taxes This authoritative guidance simplifies the accounting for income taxes by removing certain exceptions, including exceptions related to the incremental approach for intraperiod tax allocation, calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. Also, the guidance clarifies the accounting for franchise taxes, transactions that result in a step-up in the tax basis of goodwill and enacted changes in tax laws or rates. It specifies that an entity is not required to allocate the consolidated amount of current and deferred tax expense to a legal entity that is	January 1, 2021	This guidance did not have a material impact on our consolidated financial statements.

1. Nature of Operations and Significant Accounting Policies — (continued)

Description	Date of adoption	Effect on our consolidated financial statements or other significant matters
not subject to tax in its separate financial statements, although an entity may elect to do so. The guidance will be applied based on varying transition methods defined by amendment. Early adoption is permitted.		
Facilitation of the effects of reference rate reform on financial reporting This authoritative guidance provides optional expedients and exceptions for contracts and hedging relationships affected by reference rate reform. An entity may elect not to apply certain modification accounting requirements to contracts affected by reference rate reform and instead account for the modified contract as a continuation of the existing contract. Also, an entity may apply optional expedients to continue hedge accounting for hedging relationships in which the critical terms change due to reference rate reform. This guidance eases the financial reporting impacts of reference rate reform on contracts and hedging relationships and is effective until December 31, 2022. A subsequent amendment issued in December 2022 extended the relief date from December 31, 2022, to December 31, 2024, and was effective upon issuance.	March 12, 2020	We adopted the guidance upon issuance prospectively and elected the applicable optional expedients and exceptions for contracts and hedging relationships impacted by reference rate reform through December 31, 2024. The guidance did not have an impact on our consolidated financial statements upon adoption.
Goodwill impairment testing This authoritative guidance simplifies how an entity is required to test goodwill for impairment by eliminating Step 2 (which measures a goodwill impairment loss by comparing the implied fair value of a reporting unit's goodwill to the carrying amount of that goodwill) from the goodwill impairment test. A goodwill impairment loss will be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. Entities will continue to have the option to perform a qualitative assessment to determine if a quantitative impairment test is necessary.	January 1, 2020	This guidance reduced complexity and costs associated with performing a Step 2 test, should one be needed in the future. This guidance did not have a material impact on our consolidated financial statements at adoption.
Credit losses This authoritative guidance requires entities to use a current expected credit loss ("CECL") model to measure impairment for most financial assets that are not recorded at fair value through net income. Under the CECL model, an entity will estimate lifetime expected credit losses considering available relevant information about historical events, current conditions and reasonable and supportable forecasts. The CECL model does not apply to available-for-sale debt securities; however, the credit loss calculation and subsequent recoveries for available-for-sale securities are required to be recorded through an allowance. This guidance also expands the required credit loss disclosures.	January 1, 2020	We adopted the guidance using the modified retrospective approach. A cumulative effect adjustment of $8.4 million was recorded as a decrease to retained earnings. We recorded an offsetting increase in the allowance for credit loss for mortgage loans, reinsurance recoverables and commitments and a decrease for deferred tax impacts. See Note 4, Investments, for further details.

When we adopt new accounting standards, we have a process in place to perform a thorough review of the pronouncement, identify the financial statement and system impacts and create an implementation plan among our impacted business units to ensure we are compliant with the pronouncement on the date of adoption. This includes having effective processes and controls in place to support the reported amounts. Each of the standards listed above is in varying stages in our implementation process based on its issuance and adoption dates. We are on track to implement guidance by the respective effective dates.

1. Nature of Operations and Significant Accounting Policies — (continued)

Use of Estimates in the Preparation of Financial Statements

The preparation of our consolidated financial statements and accompanying notes requires management to make estimates and assumptions that affect the amounts reported and disclosed. These estimates and assumptions could change in the future as more information becomes known, which could impact the amounts reported and disclosed in the consolidated financial statements and accompanying notes. The most critical estimates include those used in determining:

- the fair value of investments in the absence of quoted market values;
- investment impairments and valuation allowances;
- the fair value of and accounting for derivatives;
- the DAC and other actuarial balances where the amortization is based on estimated gross profits ("EGPs");
- the measurement of goodwill, indefinite lived intangible assets, finite lived intangible assets and related impairments or amortization, if any;
- the liability for future policy benefits and claims;
- the value of our pension and other postretirement benefit obligations and
- accounting for income taxes and the valuation of deferred tax assets.

A description of such critical estimates is incorporated within the discussion of the related accounting policies that follow. In applying these policies, management makes subjective and complex judgments that frequently require estimates about matters that are inherently uncertain. Actual results could differ from these estimates.

Closed Block

Principal Life Insurance Company ("Principal Life") operates a closed block ("Closed Block") for the benefit of individual participating dividend-paying policies in force at the time of the 1998 mutual insurance holding company ("MIHC") formation. See Note 6, Closed Block, for further details.

Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, money market instruments and other debt issues with a maturity date of three months or less when purchased.

Investments

Fixed maturities include bonds, asset-backed securities ("ABS"), redeemable preferred stock and certain non-redeemable preferred securities. Equity securities include mutual funds, common stock, non-redeemable preferred stock and required regulatory investments. We classify fixed maturities as either available-for-sale or trading at the time of the purchase and, accordingly, carry them at fair value. Equity securities are also carried at fair value. See Note 15, Fair Value Measurements, for methodologies related to the determination of fair value. Unrealized gains and losses related to fixed maturities, available-for-sale, excluding those in fair value hedging relationships, are reflected in stockholders' equity, net of adjustments associated with DAC and related actuarial balances, derivatives in cash flow hedge relationships and applicable income taxes. Mark-to-market adjustments on certain equity securities and mark-to-market adjustments on certain fixed maturities, trading are reflected in net realized capital gains (losses). Unrealized gains and losses related to hedged portions of fixed maturities, available-for-sale in fair value hedging relationships are reflected in net investment income.

1. Nature of Operations and Significant Accounting Policies — (continued)

Mark-to-market adjustments related to certain securities carried at fair value with an investment objective to realize economic value through mark-to-market changes are reflected in net investment income.

The amortized cost of fixed maturities includes cost adjusted for amortization of premiums and discounts, computed using the interest method. The amortized cost of fixed maturities, available-for-sale is adjusted for changes in fair value of the hedged portions of securities in fair value hedging relationships and excludes accrued interest receivable. Accrued interest receivable is reported in accrued investment income on the consolidated statements of financial position. Fixed maturities, available-for-sale are subject to an allowance for credit loss and changes in the allowance are reported in net income as a component of net realized capital gains (losses). Interest income, as well as prepayment fees and the amortization of the related premium or discount, is reported in net investment income. For loan-backed and structured securities, we recognize income using a constant effective yield based on currently anticipated cash flows.

Commercial and residential mortgage loans are generally reported at cost adjusted for amortization of premiums and accrual of discounts, computed using the interest method and net of valuation allowances. Amortized cost excludes accrued interest receivable. Interest income is accrued on the principal amount of the loan based on the loan's contractual interest rate. Interest income, as well as prepayment of fees and the amortization of the related premium or discount, is reported in net investment income on the consolidated statements of operations. Accrued interest receivable is reported in accrued investment income on the consolidated statements of financial position. Any changes in the loan valuation allowances are reported in net realized capital gains (losses) on the consolidated statements of operations. See Note 4, Investments, for further details of our valuation allowance.

Our commercial and residential mortgage loan portfolios can include loans that have been modified. We assess loan modifications on a case-by-case basis to evaluate whether a TDR has occurred. In response to COVID-19, the Coronavirus Aid, Relief and Economic Security Act, which was subsequently amended by the Consolidated Appropriations Act, 2021, (collectively the "CARES Act") provides a temporary suspension of TDR accounting for certain COVID-19 related loan modifications where the loan was not more than 30 days past due as of December 31, 2019. We elected the TDR relief in the CARES Act beginning in the second quarter of 2020. The CARES Act TDR relief does not apply to modifications completed subsequent to the earlier of 60 days after the national emergency related to COVID-19 ends, or January 1, 2022. In addition, the Interagency Statement on Loan Modifications and Reporting for Financial Institutions Working with Customers Affected by the Coronavirus (As Revised on April 7, 2020) ("Interagency Statement") provides additional guidance to determine if a short-term COVID-19 related loan modification is a TDR. We consider the CARES Act and the Interagency Statement when assessing loan modifications to determine whether a TDR has occurred. As of January 1, 2022, the TDR relief ended. See Note 4, Investments, under the caption "Mortgage Loan Modifications" for further details.

Real estate investments are reported at cost less accumulated depreciation. The initial cost bases of properties acquired through loan foreclosures are the lower of the fair market values of the properties at the time of foreclosure or the outstanding loan balance. Buildings and land improvements are generally depreciated on the straight-line method over the estimated useful life of improvements and tenant improvement costs are depreciated on the straight-line method over the term of the related lease. We recognize impairment losses for properties when indicators of impairment are present and a property's expected undiscounted cash flows are not sufficient to recover the property's carrying value. In such cases, the cost basis of the property is reduced to fair value. Real estate expected to be disposed is carried at the lower of cost or fair value, less cost to sell, with valuation allowances established accordingly and depreciation no longer recognized. The carrying amount of real estate held for sale was $240.6 million and $88.7 million as of December 31, 2022 and 2021, respectively. Any impairment losses and any changes in valuation allowances are reported in net income.

1. Nature of Operations and Significant Accounting Policies — (continued)

Net realized capital gains and losses on sales of investments are determined on the basis of specific identification. In general, in addition to realized capital gains and losses on investment sales and periodic settlements on derivatives not designated as hedges, we report gains and losses related to the following in net realized capital gains (losses) on the consolidated statements of operations: mark-to-market adjustments on certain equity securities, mark-to-market adjustments on certain fixed maturities, trading, mark-to-market adjustments on sponsored investment funds, mark-to-market adjustments on derivatives not designated as hedges, cash flow hedge gains (losses) when the hedged item impacts realized capital gains (losses), changes in the valuation allowance for fixed maturities, available-for-sale and certain financing receivables, impairments of real estate held for investment and impairments of equity method investments. Investment gains and losses on sales of certain real estate held for sale due to investment strategy and mark-to-market adjustments on certain securities carried at fair value with an investment objective to realize economic value through mark-to-market changes are reported as net investment income and are excluded from net realized capital gains (losses).

Policy loans and certain other investments are reported at cost. Interests in unconsolidated entities, joint ventures and partnerships are generally accounted for using the equity method. We had certain real estate ventures for which the fair value option had been elected in prior periods. See Note 15, Fair Value Measurements, for detail on these investments.

Derivatives

Overview

Derivatives are financial instruments whose values are derived from interest rates, foreign exchange rates, financial indices or the values of securities. Derivatives generally used by us include swaps, options, futures and forwards. Derivative positions are either assets or liabilities in the consolidated statements of financial position and are measured at fair value, generally by obtaining quoted market prices or through the use of pricing models. See Note 15, Fair Value Measurements, for policies related to the determination of fair value. Fair values can be affected by changes in interest rates, foreign exchange rates, financial indices, values of securities, credit spreads, and market volatility and liquidity.

Accounting and Financial Statement Presentation

We designate derivatives as either:

(a) a hedge of the exposure to changes in the fair value of a recognized asset or liability or an unrecognized firm commitment, including those denominated in a foreign currency (“fair value hedge”);

(b) a hedge of a forecasted transaction or the exposure to variability of cash flows to be received or paid related to a recognized asset or liability, including those denominated in a foreign currency (“cash flow hedge”);

(c) a hedge of a net investment in a foreign operation or

(d) a derivative not designated as a hedging instrument.

Our accounting for the ongoing changes in fair value of a derivative depends on the intended use of the derivative and the designation, as described above, and is determined when the derivative contract is entered into or at the time of redesignation. Hedge accounting is used for derivatives that are specifically designated in advance as hedges and that reduce our exposure to an indicated risk by having a high correlation between changes in the value of the derivatives and the items being hedged at both the inception of the hedge and

1. Nature of Operations and Significant Accounting Policies — (continued)

throughout the hedge period. Cash flows associated with derivatives are included within operating and financing activities in the consolidated statements of cash flows.

Fair Value Hedges. When a derivative is designated as a fair value hedge and is determined to be highly effective, changes in its fair value, along with changes in the fair value of the hedged asset, liability or firm commitment attributable to the hedged risk, are reported in the same consolidated statements of operations line item that is used to report the earnings effect of the hedged item. For fair value hedges of fixed maturities, available-for-sale, these changes in fair value are reported in net investment income. A fair value hedge determined to be highly effective may still result in a mismatch between the change in the fair value of the hedging instrument and the change in the fair value of the hedged item attributable to the hedged risk. Certain fair value hedges use the last-of-layer method to hedge a designated amount (the "last layer") within a closed portfolio of prepayable assets that is expected to remain outstanding for the length of the hedging relationship and is not expected to be impacted by prepayments, defaults or other factors that affect the timing and amount of cash flows. Prepayment risk is excluded when measuring the change in fair value attributable to the hedged risk under the last-of-layer method.

Cash Flow Hedges. When a derivative is designated as a cash flow hedge and is determined to be highly effective, changes in its fair value are recorded as a component of OCI. At the time the variability of cash flows being hedged impacts net income, the related portion of deferred gains or losses on the derivative instrument is reclassified and reported in net income.

Net Investment in a Foreign Operation Hedge. When a derivative is used as a hedge of a net investment in a foreign operation, its change in fair value, to the extent effective as a hedge, is recorded as a component of OCI. If the foreign operation is sold or upon complete or substantially complete liquidation, the deferred gains or losses on the derivative instrument are reclassified into net income.

Non-Hedge Derivatives. If a derivative does not qualify or is not designated for hedge accounting, all changes in fair value are reported in net income without considering the changes in the fair value of the economically associated assets or liabilities.

Hedge Documentation and Effectiveness Testing. At inception, we formally document all relationships between hedging instruments and hedged items, as well as our risk management objective and strategy for undertaking various hedge transactions. This process includes associating all derivatives designated as fair value or cash flow hedges with specific assets or liabilities on the consolidated statements of financial position or with specific firm commitments or forecasted transactions. Documentation of fair value hedges that use the last-of-layer method supports the expectation that the hedged last layer amount is anticipated to be outstanding at the end of the hedging relationship and includes expectations of prepayments, defaults or other factors that affect the timing and amount of cash flows. Effectiveness of the hedge is formally assessed at inception and throughout the life of the hedging relationship. Even if a hedge is determined to be highly effective, the hedge may still result in a mismatch between the change in the fair value of the hedging instrument and the change in the fair value of the hedged item attributable to the hedged risk.

We use qualitative and quantitative methods to assess hedge effectiveness. Qualitative methods may include monitoring changes to terms and conditions and counterparty credit ratings. Quantitative methods may include statistical tests including regression analysis and minimum variance and dollar offset techniques. For last-of-layer method hedges, the assessment of hedge effectiveness includes confirming we expect the hedged last layer amount to be outstanding at the end of the hedging relationship.

Termination of Hedge Accounting. We prospectively discontinue hedge accounting when (1) the criteria to qualify for hedge accounting is no longer met, e.g., a derivative is determined to no longer be highly effective in offsetting the change in fair value or cash flows of a hedged item; (2) the derivative expires, is sold,

1. Nature of Operations and Significant Accounting Policies — (continued)

terminated or exercised or (3) we remove the designation of the derivative being the hedging instrument for a fair value or cash flow hedge.

If it is determined that a derivative no longer qualifies as an effective hedge, the derivative will continue to be carried on the consolidated statements of financial position at its fair value, with changes in fair value recognized prospectively in net realized capital gains (losses). The asset or liability under a fair value hedge will no longer be adjusted for changes in fair value pursuant to hedging rules and the existing basis adjustment is amortized to the consolidated statements of operations line associated with the asset or liability. If a last-of-layer method hedging relationship is discontinued, the outstanding basis adjustment is allocated to the individual assets in the closed portfolio and those amounts are amortized consistent with the amortization of other discounts or premiums associated with those assets.

The component of AOCI related to discontinued cash flow hedges that are no longer highly effective is amortized to the consolidated statements of operations consistent with the net income impacts of the original hedged cash flows. If a cash flow hedge is discontinued because it is probable the hedged forecasted transaction will not occur, the deferred gain or loss is immediately reclassified from AOCI into net income.

Embedded Derivatives. We purchase and issue certain financial instruments and products that contain a derivative that is embedded in the financial instrument or product. We assess whether this embedded derivative is clearly and closely related to the asset or liability that serves as its host contract. If we deem that the embedded derivative's terms are not clearly and closely related to the host contract, and a separate instrument with the same terms would qualify as a derivative instrument, the derivative is bifurcated from that contract and held at fair value on the consolidated statements of financial position, with changes in fair value reported in net income.

Contractholder and Policyholder Liabilities

Contractholder and policyholder liabilities (contractholder funds, future policy benefits and claims and other policyholder funds) include reserves for investment contracts, individual and group annuities that provide periodic income payments, universal life insurance, variable universal life insurance, indexed universal life insurance, term life insurance, participating traditional individual life insurance, group dental and vision insurance, group critical illness, group accident, paid family and medical leave ("PFML"), group short-term and long-term disability insurance, group life insurance, individual disability insurance and long-term care insurance. It also includes a provision for dividends on participating policies.

Investment contracts are contractholders' funds on deposit with us and generally include reserves for pension and annuity contracts. Reserves on investment contracts are equal to the cumulative deposits less any applicable charges and withdrawals plus credited interest. Reserves for universal life, variable universal life and indexed universal life insurance contracts are equal to cumulative deposits less charges plus credited interest, which represents the account balances that accrue to the benefit of the policyholders.

We hold additional reserves on certain long-duration contracts where benefit features result in gains in early years followed by losses in later years; universal life, variable universal life and indexed universal life insurance contracts that contain no lapse guarantee features; and annuities with guaranteed minimum death benefits.

Reserves for individual and group annuities that provide periodic income payments, nonparticipating term life insurance and disability income contracts are computed on a basis of assumed investment yield, mortality, morbidity and expenses, including a provision for adverse deviation, which generally varies by plan, year of issue and policy duration. Investment yield is based on our experience. Mortality, morbidity and withdrawal rate assumptions are based on our experience and are periodically reviewed against both industry standards and experience. For long-duration insurance contracts, significant changes in experience or

1. Nature of Operations and Significant Accounting Policies — (continued)

assumptions may require us to provide for expected future losses on a product by establishing premium deficiency reserves. Premium deficiency reserves may also be established for short-duration contracts to provide for expected future losses.

Reserves for participating life insurance contracts are based on the net level premium reserve for death and endowment policy benefits. This net level premium reserve is calculated based on dividend fund interest rates and mortality rates guaranteed in calculating the cash surrender values described in the contract.

Participating business represented approximately 3%, 4% and 5% of our life insurance in force and 17%, 18% and 20% of the number of life insurance policies in force as of December 31, 2022, 2021 and 2020, respectively. Participating business represented approximately 17%, 22% and 24% of life insurance premiums for the years ended December 31, 2022, 2021 and 2020, respectively. The amount of dividends to policyholders is declared annually by Principal Life's Board of Directors. The amount of dividends to be paid to policyholders is determined after consideration of several factors including interest, mortality, morbidity and other expense experience for the year and judgment as to the appropriate level of statutory surplus to be retained by Principal Life. At the end of the reporting period, Principal Life establishes a dividend liability for the pro rata portion of the dividends expected to be paid on or before the next policy anniversary date.

Some of our policies and contracts require payment of fees or other policyholder assessments in advance for services that will be rendered over the estimated lives of the policies and contracts. These payments are established as unearned revenue liabilities upon receipt and included in other policyholder funds in the consolidated statements of financial position. These unearned revenue reserves are amortized to net income over the estimated lives of these policies and contracts in relation to the emergence of EGPs.

Short-Duration Contracts

We include the following group products in our short-duration insurance contracts disclosures: long-term disability ("LTD"), group life waiver, dental, vision, short-term disability ("STD"), critical illness, accident, PFML and group life.

Future policy benefits and claims include reserves for group life and disability insurance that provide periodic income payments. These reserves are computed using assumptions of mortality, morbidity and investment performance. These assumptions are based on our experience, industry results, emerging trends and future expectations. Future policy benefits and claims also include reserves for incurred but unreported group disability, dental, vision, critical illness, accident, PFML and life insurance claims. We recognize claims costs in the period the service was provided to our policyholders. However, claims costs incurred in a particular period are not known with certainty until after we receive, process and pay the claims. We determine the amount of this liability using actuarial methods based on historical claim payment patterns as well as emerging cost trends, where applicable, to determine our estimate of claim liabilities.

We have defined claim frequency as follows for each short-duration product:

- LTD: Claim frequency is based on submitted reserve claim counts.
- Group Life Waiver: Claim frequency is based on submitted reserve claim counts, consistent with LTD.
- Dental and Vision: Claim frequency is based on the claim form, which may include one or more procedures.
- STD, Critical Illness, Accident and PFML: Claim frequency is based on submitted claims.
- Group Life: Claim frequency is based on submitted life claims (lives, not coverages).

We did not make any significant changes to our methodologies or assumptions used to calculate the liability for unpaid claims for short-duration contracts during 2022.

1. Nature of Operations and Significant Accounting Policies — (continued)

Liability for Unpaid Claims

The liability for unpaid claims for both long-duration and short-duration contracts is an estimate of the ultimate net cost of reported and unreported losses not yet settled. This liability is estimated using actuarial analyses and case basis evaluations. Although considerable variability is inherent in such estimates, we believe the liability for unpaid claims is adequate. These estimates are continually reviewed and, as adjustments to this liability become necessary, such adjustments are reflected in net income. Our liability for unpaid claims does not include any allocated claim adjustment expenses.

We incur claim adjustment expenses for both long-duration and short-duration contracts that cannot be allocated to a specific claim. Our claim adjustment expense liability is estimated using actuarial analyses based on historical trends of expenses and expected claim runout patterns.

See Note 8, Insurance Liabilities, under the caption "Liability for Unpaid Claims" for further details.

Recognition of Premiums and Other Considerations, Fees and Other Revenues and Benefits

Products with fixed and guaranteed premiums and benefits consist principally of whole life and term life insurance policies and individual disability income. Premiums from these products are recognized as premium revenue when due. Related policy benefits and expenses for individual life products are associated with earned premiums and result in the recognition of profits over the expected term of the policies and contracts.

Immediate annuities with life contingencies include products with fixed and guaranteed annuity considerations and benefits and consist principally of group and individual single premium annuities with life contingencies. Annuity considerations from these products are recognized as premium revenue. However, the collection of these annuity considerations does not represent the completion of the earnings process, as we establish annuity reserves using estimates for mortality and investment assumptions, which include provision for adverse deviation as required by U.S. GAAP. We anticipate profits to emerge over the life of the annuity products as we earn investment income, pay benefits and release reserves.

Group life, dental, vision, critical illness, accident, PFML and disability premiums are generally recorded as premium revenue over the term of the coverage. Certain group contracts contain experience premium refund provisions based on a pre-defined formula that reflects their claim experience. Experience premium refunds reduce revenue over the term of the coverage and are adjusted to reflect current experience. Related policy benefits and expenses are associated with earned premiums and result in the recognition of profits over the term of the policies and contracts. Fees for contracts providing claim processing or other administrative services are recorded as revenue over the period the service is provided.

Universal life-type policies are insurance contracts with terms that are not fixed. Amounts received as payments for such contracts are not reported as premium revenues. Revenues for universal life-type insurance contracts consist of policy charges for the cost of insurance, policy initiation and administration, surrender charges and other fees that have been assessed against policy account values and investment income. Policy benefits and claims that are charged to expense include interest credited to contracts and benefit claims incurred in the period in excess of related policy account balances.

Investment contracts do not subject us to significant risks arising from policyholder mortality or morbidity and consist primarily of guaranteed investment contracts ("GICs"), funding agreements and certain deferred annuities. Amounts received as payments for investment contracts are established as investment contract liability balances and are not reported as premium revenues. Revenues for investment contracts consist of investment income and policy administration charges. Investment contract benefits that are charged to expense include benefit claims incurred in the period in excess of related investment contract liability balances and interest credited to investment contract liability balances.

1. Nature of Operations and Significant Accounting Policies — (continued)

Fees and other revenues are earned for asset management, investment advisory and distribution services provided to retail and institutional clients based largely upon contractual rates applied to the specified amounts in the clients' portfolios, which include various platforms such as mutual funds, collective investment trusts and business trusts. Additionally, fees and other revenues are earned for administrative services performed including recordkeeping, trust and custody and reporting services for retirement savings plans, insurance companies, endowments and other financial institutions and other products. Fees and other revenues received for performance of asset management and administrative services are recognized as revenue when earned, typically when the service is performed.

Fees for managing customers' mandatory retirement savings accounts in Chile are collected with each monthly deposit made by our customers. If a customer stops contributing before retirement age, we collect no fees but services are still provided. We recognize revenue from these long-term service contracts as services are performed over the life of the contract.

Deferred Acquisition Costs

Incremental direct costs of contract acquisition as well as certain costs directly related to acquisition activities (underwriting, policy issuance and processing, medical and inspection and sales force contract selling) for the successful acquisition of new and renewal insurance policies and investment contract business are capitalized to the extent recoverable. Commissions and other incremental direct costs for the acquisition of long-term service contracts are also capitalized to the extent recoverable. Maintenance costs and acquisition costs that are not deferrable are charged to net income as incurred.

DAC for universal life-type insurance contracts and certain investment contracts are amortized over the expected lifetime of the contracts in relation to EGPs or, in certain circumstances, estimated gross revenues ("EGR"). This amortization is adjusted in the current period when EGPs or EGRs are revised. EGRs include similar assumptions as the revenue component of EGPs and the changes of future estimates and reflection of actual experience and market conditions is done in the same manner as EGPs.

For individual variable universal life insurance, individual variable annuities and group annuities that have separate account U.S. equity investment options, we utilize a mean reversion methodology (reversion to the mean assumption), a common industry practice, to determine the future domestic equity market growth rate assumption used for the calculation of EGPs.

DAC for participating life insurance policies are amortized in proportion to estimated gross margins ("EGM") rather than EGPs. EGMs include similar assumption items as EGPs. We stopped selling participating business in the early 2000s. Some products allow for underwritten death benefit increases and cost of living adjustments, resulting in a small amount of new DAC each year, and the amortization schedules are modified as appropriate.

DAC for non-participating term life insurance and individual disability policies are amortized over the premium-paying period of the related policies using assumptions consistent with those used in computing policyholder liabilities. Once these assumptions are made for a given policy or group of policies, they will not be changed over the life of the policy unless a loss recognition event occurs.

DAC on insurance policies and investment contracts are subject to recoverability testing at the time of policy issue and loss recognition testing on an annual basis, or when an event occurs that may warrant loss recognition. If loss recognition or impairment is necessary, DAC would be written off to the extent it is determined that future policy premiums and investment income or gross profits are not adequate to cover related losses and expenses.

DAC on short-duration group benefits policies are amortized over the estimated term of the underlying contracts.

1. Nature of Operations and Significant Accounting Policies — (continued)

Deferred Acquisition Costs on Internal Replacements

All insurance and investment contract modifications and replacements are reviewed to determine if the internal replacement results in a substantially changed contract. If so, the acquisition costs, sales inducements and unearned revenue associated with the new contract are deferred and amortized over the lifetime of the new contract. In addition, the existing DAC, sales inducement costs and unearned revenue balances associated with the replaced contract are written off. If an internal replacement results in a substantially unchanged contract, the acquisition costs, sales inducements and unearned revenue associated with the new contract are immediately recognized in the period incurred. In addition, the existing DAC, sales inducement costs or unearned revenue balance associated with the replaced contract is not written off, but instead is carried over to the new contract.

Long-Term Debt

Long-term debt includes notes payable, nonrecourse mortgages and other debt with a maturity date greater than one year at the date of issuance. Current maturities of long-term debt are classified as long-term debt in our consolidated statements of financial position. Long-term debt is primarily recorded at the unpaid principal balance, net of unamortized discount, premium and issuance costs.

Reinsurance

We enter into reinsurance agreements with other companies in the normal course of business in order to limit losses and minimize exposure to significant risks.

We evaluate each insurance agreement to determine whether the agreement provides indemnification against loss or liability related to insurance risk. For agreements that expose the reinsurer to reasonable possibility of significant loss from insurance risk, the reinsurance method of accounting is used for the agreement. Assets and liabilities related to reinsurance ceded are reported on a gross basis on the consolidated statements of financial position. Insurance liabilities are reported before the effects of reinsurance and we record an offsetting reinsurance recoverable, net of valuation allowance. Premiums and expenses are reported net of reinsurance ceded on the consolidated statements of operations.

If an agreement does not expose the reinsurer to reasonable possibility of significant loss from insurance risk, the deposit method of accounting is used for the agreement. We record a deposit receivable, net of valuation allowance, if necessary. The deposit receivable is adjusted as amounts are paid or received on the underlying contracts. Accretion on the deposit receivable is calculated using an effective interest method and is reported in fees and other revenues and operating expense on the consolidated statements of operations.

The cost of reinsurance related to long-duration contracts is amortized over the life of the underlying reinsured policies using assumptions consistent with those used to account for the underlying policies.

We have entered into coinsurance with funds withheld reinsurance agreements in which we record a funds withheld payable that contains an embedded derivative for which the fair value is estimated based on the change in fair value of the assets supporting the funds withheld payable. The change in fair value of the funds withheld embedded derivative is separately reported on the consolidated statements of operations. Gains and losses that do not flow to the reinsurer are reported in net realized capital gains (losses) on funds withheld assets on the consolidated statements of operations.

For further information about reinsurance, refer to Note 9, Reinsurance. For further information about the financing receivables valuation allowance on the reinsurance recoverable and deposit receivable, refer to Note 4, Investments.

1. Nature of Operations and Significant Accounting Policies — (continued)

Separate Accounts

The separate accounts are legally segregated and are not subject to the claims that arise out of any of our other business. The client, rather than us, directs the investments and bears the investment risk of these funds. The separate account assets represent the fair value of funds that are separately administered by us for contracts with equity, real estate and fixed income investments and are presented as a summary total within the consolidated statements of financial position. An equivalent amount is reported as separate account liabilities, which represent the obligation to return the monies to the client. We receive fees for mortality, withdrawal and expense risks, as well as administrative, maintenance and investment advisory services that are included in the consolidated statements of operations. Net deposits, net investment income and realized and unrealized capital gains and losses of the separate accounts are not reflected in the consolidated statements of operations.

Separate account assets and separate account liabilities include certain international retirement accumulation products where the segregated funds and associated obligation to the client are consolidated within our financial statements. We have determined that summary totals are the most meaningful presentation for these funds.

As of December 31, 2022 and December 31, 2021, the separate accounts included a separate account valued at $101.4 million and $95.1 million, respectively, which primarily included shares of our stock that were allocated and issued to eligible participants of qualified employee benefit plans administered by us as part of the policy credits issued under our 2001 demutualization. These shares are included in both basic and diluted earnings per share calculations. In the consolidated statements of financial position, the separate account shares are recorded at fair value and are reported as separate account assets with a corresponding separate account liability. Changes in fair value of the separate account shares are reflected in both the separate account assets and separate account liabilities and do not impact our results of operations.

Income Taxes

We file a U.S. consolidated income tax return that includes all of our qualifying subsidiaries. In addition, we file income tax returns in all states and foreign jurisdictions in which we conduct business. Our policy of allocating income tax expenses and benefits to companies in the group is generally based upon pro rata contribution of taxable income or operating losses. We are taxed at corporate rates on taxable income based on existing tax laws. Current income taxes are charged or credited to net income based upon amounts estimated to be payable or recoverable as a result of taxable operations for the current year. Deferred income taxes are provided for the tax effect of temporary differences in the financial reporting and income tax bases of assets and liabilities, net operating loss carryforwards and tax credit carryforwards using enacted income tax rates and laws. The effect on deferred income tax assets and deferred income tax liabilities of a change in tax rates is recognized in net income in the period in which the change is enacted. Subsequent to a change in tax rates and laws, any stranded tax effects remaining in AOCI will be released only if an entire portfolio is liquidated, sold or extinguished.

Foreign Exchange

Assets and liabilities of our foreign subsidiaries and affiliates denominated in non-U.S. dollars, where the U.S. dollar is not the functional currency, are translated into U.S. dollar equivalents at the year-end spot foreign exchange rates. Resulting translation adjustments are reported as a component of stockholders' equity, along with any related hedge and tax effects. Revenues and expenses for these entities are translated at the average exchange rates. Revenue, expense and other foreign currency transaction and translation adjustments that affect cash flows are reported in net income, along with related hedge and tax effects.

1. Nature of Operations and Significant Accounting Policies — (continued)

Goodwill and Other Intangibles

Goodwill and other intangible assets include the cost of acquired subsidiaries in excess of the fair value of the net tangible assets recorded in connection with acquisitions. Goodwill and indefinite lived intangible assets are not amortized. Rather, they are tested for impairment during the third quarter each year, or more frequently if events or changes in circumstances indicate that the asset might be impaired. Goodwill is tested at the reporting unit level, which is the same level as or one level below the operating segment, if financial information is prepared and regularly reviewed by management at that level. Once goodwill has been assigned to a reporting unit, it is no longer associated with a particular acquisition; therefore, all of the activities within a reporting unit, whether acquired or organically grown, are available to support the goodwill value. Impairment testing for indefinite-lived intangible assets primarily consists of a qualitative assessment to determine if a quantitative assessment is needed for a comparison of the fair value of the intangible asset with its carrying value.

Intangible assets with a finite useful life are amortized as related benefits emerge and are reviewed periodically for indicators of impairment in value. If facts and circumstances suggest possible impairment, the sum of the estimated undiscounted future cash flows expected to result from the use of the asset is compared to the current carrying value of the asset. If the undiscounted future cash flows are less than the carrying value, an impairment loss is recognized for the excess of the carrying amount of assets over their fair value.

Earnings Per Common Share

Basic earnings per common share is calculated by dividing net income available to common stockholders by the weighted-average number of common shares outstanding for the period and excludes the dilutive effect of equity awards. Diluted earnings per common share reflects the potential dilution that could occur if dilutive securities, such as options and non-vested stock grants, were exercised or resulted in the issuance of common stock.

Actuarial Balance Re-Cohorting

In 2021, we completed a comprehensive review of our business mix and capital management options (the “Strategic Review”). We made the decision to exit our U.S. retail ULSG business. The ULSG business was previously managed together with our other universal life (“UL”) business within our U.S. Insurance Solutions segment. As such, calculations of actuarial balances included UL and ULSG in the same cohorts, which are the unit of account used for measurement. As a result of the Strategic Review, we made the decision in the second quarter of 2022 to manage the ULSG business separately from our other UL business effective as of January 1, 2022. This led to us re-cohorting the UL business, resulting in separate cohorts for the ULSG business vs. the remaining UL business.

1. Nature of Operations and Significant Accounting Policies — (continued)

The re-cohorting impacted the measurement of our DAC, cost of reinsurance, unearned revenue liability and additional liability for certain benefit features. The pre-tax impacts to comprehensive income were as follows:

	For the year ended December 31, 2022
	(in millions)
Increase to income before taxes	
Deferred acquisition costs amortization (1)	**$(106.6)**
Cost of reinsurance amortization (2)	**4.2**
Unearned revenue liability amortization (3)	**32.4**
Change in additional liability for certain benefit features (2)	**139.7**
Total increase to income before income taxes	**69.7**
Increase to pre-tax other comprehensive income	
Deferred acquisition cost unrealized losses	**(5.6)**
Cost of reinsurance unrealized gains	**8.7**
Unearned revenue liability unrealized gains	**8.5**
Change in additional liability for certain benefit features unrealized gains	**24.3**
Total increase to pre-tax other comprehensive income	**35.9**
Total increase to pre-tax comprehensive income	**$ 105.6**

(1) Reported in operating expenses.

(2) Reported in benefits, claims and settlement expenses.

(3) Reported in fees and other revenues.

2. Goodwill and Other Intangible Assets

Goodwill

The changes in the carrying amount of goodwill reported in our segments were as follows:

	Retirement and Income Solutions	Principal Global Investors	Principal International	U.S. Insurance Solutions	Corporate	Consolidated
			(in millions)			
Balance as of January 1, 2021	$675.9	$320.9	$656.6	$ 56.6	$ 1.0	$1,711.0
Goodwill disposed (1)	—	—	(2.3)	—	—	(2.3)
Impairment (2)	—	—	—	—	(1.0)	(1.0)
Foreign currency	—	(2.5)	(77.6)	—	—	(80.1)
Balance as of December 31, 2021	675.9	318.4	576.7	56.6	—	1,627.6
Impairment (3)	**—**	**—**	**—**	**(27.1)**	**—**	**(27.1)**
Foreign currency	**—**	**(7.4)**	**5.1**	**—**	**—**	**(2.3)**
Balance as of December 31, 2022	**$675.9**	**$311.0**	**$581.8**	**$ 29.5**	**$ —**	**$1,598.2**

(1) Relates to the sale of our India asset management business.

(2) Relates to the buyout of the minority interest in RobustWealth, Inc. and realignment of the business.

(3) Resulted from a change in the allocation of equity between our reportable operating segments following the Reinsurance Transaction.

2. Goodwill and Other Intangible Assets — (continued)

Finite Lived Intangible Assets

Amortized intangible assets primarily relate to customer relationship intangibles associated with our acquisition of the Institutional Retirement & Trust business of Wells Fargo Bank, N.A. (the "Acquired Business") and previous acquisitions in Chile, Mexico and Hong Kong. The finite lived intangible assets that continue to be subject to amortization over a weighted average remaining expected life of 16 years were as follows:

	December 31,	
	2022	**2021**
	(in millions)	
Gross carrying value	**$1,235.1**	$1,262.8
Accumulated amortization	**472.6**	432.1
Net carrying value	**$ 762.5**	$ 830.7

During 2022 and 2021, we fully amortized other finite lived intangible assets of $34.4 million and $15.0 million, respectively.

The amortization expense for intangible assets with finite useful lives was $70.7 million, $75.3 million and $73.5 million for 2022, 2021 and 2020, respectively. As of December 31, 2022, the estimated amortization expense for the next five years is as follows (in millions):

Year ending December 31:	
2023	**$67.3**
2024	**66.3**
2025	**61.0**
2026	**56.9**
2027	**56.7**

Indefinite Lived Intangible Assets

The net carrying amount of unamortized indefinite lived intangible assets was $770.8 million and $769.9 million as of December 31, 2022 and 2021, respectively. As of both December 31, 2022 and 2021, $608.0 million relates to investment management contracts associated with our acquisition of WM Advisors, Inc. in 2006. The remaining balance primarily relates to the trade name intangible associated with our acquisition of Administradora de Fondos de Pensiones Cuprum S.A. ("Cuprum") in 2013.

3. Variable Interest Entities

We have relationships with various types of entities which may be VIEs. Certain VIEs are consolidated in our financial results. See Note 1, Nature of Operations and Significant Accounting Policies, under the caption "Consolidation" for further details of our consolidation accounting policies. We did not provide financial or other support to investees designated as VIEs for the periods ended December 31, 2022 and December 31, 2021.

Consolidated Variable Interest Entities

Mandatory Retirement Savings Funds

We hold an equity interest in Chilean mandatory privatized social security funds in which we provide asset management services. We determined the mandatory privatized social security funds, which also include

3. Variable Interest Entities — (continued)

contributions for voluntary pension savings, voluntary non-pension savings and compensation savings accounts, are VIEs. This is because the equity holders as a group lack the power, due to voting rights or similar rights, to direct the activities of the entity that most significantly impact the entity's economic performance and also because equity investors are protected from below-average market investment returns relative to the industry's return, due to a regulatory guarantee that we provide. Further, we concluded we are the primary beneficiary through our power to make decisions and our significant variable interest in the funds. The purpose of the funds, which reside in legally segregated entities, is to provide long-term retirement savings. The obligation to the customer is directly related to the assets held in the funds and, as such, we present the assets as separate account assets and the obligation as separate account liabilities within our consolidated statements of financial position.

Principal International Hong Kong offers retirement pension schemes in which we provide trustee, administration and asset management services to employers and employees under the Hong Kong Mandatory Provident Fund and Occupational Retirement Schemes Ordinance pension schemes. Each pension scheme has various guaranteed and non-guaranteed constituent funds, or investment options, in which customers can invest their money. The guaranteed funds provide either a guaranteed rate of return to the customer or a minimum guarantee on withdrawals under certain qualifying events. We determined the guaranteed funds are VIEs due to the fact the equity holders, as a group, lack the obligation to absorb expected losses due to the guarantee we provide. We concluded we are the primary beneficiary because we have the power to make decisions and to receive benefits and the obligation to absorb losses that could be potentially significant to the VIE. Therefore, we consolidate the underlying assets and liabilities of the funds and present as separate accounts or within the general account, depending on the terms of the guarantee.

Real Estate

We invest in several real estate limited partnerships and limited liability companies. The entities invest in real estate properties. Certain of these entities are VIEs based on the combination of our significant economic interest and related voting rights. We determined we are the primary beneficiary as a result of our power to control the entities through our significant ownership. Due to the nature of these real estate investments, the investment balance will fluctuate as we purchase and sell interests in the entities and as capital expenditures are made to improve the underlying real estate.

Sponsored Investment Funds

We sponsor and invest in certain investment funds for which we provide asset management services. Although our asset management fee is commensurate with the services provided and consistent with fees for similar services negotiated at arms-length, we have a variable interest for funds where our other interests are more than insignificant. The funds are VIEs as the equity holders lack power through voting rights to direct the activities of the entity that most significantly impact its economic performance. We determined we are the primary beneficiary of the VIEs where our interest in the entity is more than insignificant and we are the asset manager.

Residential Mortgage Loans

We invest in ABS trusts. The trusts issue various collateralized mortgage obligation certificates and purchase residential mortgage loans. The trusts are considered VIEs due to insufficient equity to sustain themselves. We concluded we are the primary beneficiary as we purchase substantially all of the certificates and have the obligation to absorb losses that could potentially be significant to the VIEs. We deconsolidated a trust during the fourth quarter of 2022 as we no longer held substantially all of the certificates.

3. Variable Interest Entities — (continued)

Assets and Liabilities of Consolidated Variable Interest Entities

The carrying amounts of our consolidated VIE assets, which can only be used to settle obligations of consolidated VIEs, and liabilities of consolidated VIEs for which creditors do not have recourse were as follows:

	December 31, 2022		December 31, 2021	
	Total assets	Total liabilities	Total assets	Total liabilities
	(in millions)			
Mandatory retirement savings funds (1)	**$34,876.9**	**$34,528.3**	$34,687.0	$34,301.8
Real estate (2)	**689.6**	**42.2**	709.6	36.1
Sponsored investment funds (3)	**471.4**	**2.6**	609.4	2.5
Residential mortgage loans (4)	**1,182.6**	**41.8**	1,263.2	20.3
Total	**$37,220.5**	**$34,614.9**	$37,269.2	$34,360.7

(1) The assets of the mandatory retirement savings funds primarily include separate account assets and equity securities. The liabilities primarily include separate account liabilities and contractholder funds.

(2) The assets of the real estate VIEs primarily include real estate, other investments and cash. Liabilities primarily include other liabilities.

(3) The assets of sponsored investment funds are primarily fixed maturities and equity securities, certain of which are reported with other investments, and cash. The consolidated statements of financial position included a $235.3 million and $304.0 million redeemable noncontrolling interest for sponsored investment funds as of December 31, 2022 and December 31, 2021, respectively.

(4) The assets of the residential mortgage loans VIEs primarily include residential mortgage loans. The liabilities primarily include other liabilities.

Unconsolidated Variable Interest Entities

We hold a variable interest in a number of VIEs where we are not the primary beneficiary. Our investments in these VIEs are reported in fixed maturities, available-for-sale; fixed maturities, trading; equity securities and other investments in the consolidated statements of financial position and are described below.

Unconsolidated VIEs include certain commercial mortgage-backed securities ("CMBS"), residential mortgage-backed pass-through securities ("RMBS") and other ABS. All of these entities were deemed VIEs because the equity within these entities is insufficient to sustain them. We determined we are not the primary beneficiary in the entities within these categories of investments. This determination was based primarily on the fact we do not own the class of security that controls the unilateral right to replace the special servicer or equivalent function.

We invest in cash collateralized debt obligations, collateralized bond obligations, collateralized loan obligations and other collateralized structures, which are VIEs due to insufficient equity to sustain the entities. We have determined we are not the primary beneficiary of these entities primarily because we do not control the economic performance of the entities and were not involved with the design of the entities or because we do not have a potentially significant variable interest in the entities for which we are the asset manager.

We have invested in various VIE trusts and similar entities as a debt holder. Most of these entities are classified as VIEs due to insufficient equity to sustain them. In addition, we have an entity classified as a VIE based on the combination of our significant economic interest and lack of voting rights. We have determined we are not the primary beneficiary primarily because we do not control the economic performance of the entities and were not involved with the design of the entities.

3. Variable Interest Entities — (continued)

We have invested in partnerships and other funds, which are classified as VIEs. The entities are VIEs as equity holders lack the power to control the most significant activities of the entities because the equity holders do not have either the ability by a simple majority to exercise substantive kick-out rights or substantive participating rights. We have determined we are not the primary beneficiary because we do not have the power to direct the most significant activities of the entities.

As previously discussed, we sponsor and invest in certain investment funds that are VIEs. We determined we are not the primary beneficiary of the VIEs for which we are the asset manager but do not have a potentially significant variable interest in the funds.

We hold an equity interest in Mexican mandatory privatized social security funds in which we provide asset management services. Our equity interest in the funds is considered a variable interest. We concluded the funds are VIEs because the equity holders as a group lack decision-making ability through their voting rights. We are not the primary beneficiary of the VIEs because although we, as the asset manager, have the power to direct the activities of the VIEs, we do not have a potentially significant variable interest in the funds.

The carrying value and maximum loss exposure for our unconsolidated VIEs were as follows:

	Asset carrying value	Maximum exposure toloss (1)
	(in millions)	
December 31, 2022		
Fixed maturities, available-for-sale:		
Corporate	**$ 111.8**	**$ 127.2**
Residential mortgage-backed pass-through securities	**2,228.7**	**2,420.6**
Commercial mortgage-backed securities	**4,864.6**	**5,572.2**
Collateralized debt obligations (2)	**4,566.4**	**4,820.0**
Other debt obligations	**6,507.6**	**7,566.2**
Fixed maturities, trading:		
Residential mortgage-backed pass-through securities	**5.4**	**5.4**
Commercial mortgage-backed securities	**83.4**	**83.4**
Collateralized debt obligations (2)	**5.7**	**5.7**
Other debt obligations	**80.0**	**80.0**
Equity securities	**99.8**	**99.8**
Other investments:		
Other limited partnership and fund interests (3)	**1,473.5**	**2,434.9**
December 31, 2021		
Fixed maturities, available-for-sale:		
Corporate	$ 142.1	$ 136.9
Residential mortgage-backed pass-through securities	3,152.9	3,122.3
Commercial mortgage-backed securities	5,562.2	5,436.2
Collateralized debt obligations (2)	3,559.6	3,564.7
Other debt obligations	7,560.4	7,487.8
Fixed maturities, trading:		
Residential mortgage-backed pass-through securities	117.4	117.4
Commercial mortgage-backed securities	25.6	25.6
Collateralized debt obligations (2)	7.5	7.5
Other debt obligations	8.2	8.2
Equity securities	115.4	115.4
Other investments:		
Other limited partnership and fund interests (3)	1,209.6	2,053.8

(1) Our risk of loss is limited to our initial investment measured at amortized cost for fixed maturities, available-for-sale. Our risk of

3. Variable Interest Entities — (continued)

loss is limited to our investment measured at fair value for our fixed maturities, trading and equity securities. Our risk of loss is limited to our carrying value plus any unfunded commitments and/or guarantees and similar provisions for our other investments. A carrying value of zero is used if distributions have been received in excess of our investment, resulting in a negative carrying value for the investment. Unfunded commitments are not liabilities on our consolidated statements of financial position because we are only required to fund additional equity when called upon to do so by the general partner or investment manager.

(2) Primarily consists of collateralized loan obligations backed by secured corporate loans.

(3) As of December 31, 2022 and December 31, 2021, the maximum exposure to loss for other limited partnership and fund interests includes $144.3 million and $130.5 million, respectively, of debt within certain of our managed international real estate funds that is fully secured by assets whose value exceeds the amount of the debt, but also includes recourse to the investment manager.

Money Market Funds

We are the investment manager for certain money market mutual funds. These types of funds are exempt from assessment under any consolidation model due to a scope exception for money market funds registered under Rule 2a-7 of the Investment Company Act of 1940 or similar funds. As of December 31, 2022 and December 31, 2021, money market mutual funds we manage held $4.2 billion and $4.8 billion in total assets, respectively. We have no contractual obligation to contribute to these funds; however, we provide support through the waiver of fees and through expense reimbursements. The amount of fees waived and expenses reimbursed was insignificant.

4. Investments

Our investments include assets backing reserves as part of a coinsurance with funds withheld agreement. The funds withheld invested assets are reported within their respective line items, primarily consisting of fixed maturities available-for-sale, mortgage loans and other investments. See Note 9, Reinsurance, for more information on the funds withheld invested assets.

Fixed Maturities and Equity Securities

The amortized cost, gross unrealized gains and losses, allowance for credit loss and fair value of fixed maturities, available-for-sale were as follows:

	Amortized cost (1)	Gross unrealized gains	Gross unrealized losses	Allowance for credit loss	Fair value
			(in millions)		
December 31, 2022					
Fixed maturities, available-for-sale:					
U.S. government and agencies	**$ 1,990.9**	**$ 0.1**	**$ 251.2**	**$ —**	**$ 1,739.8**
Non-U.S. governments	**611.2**	**20.9**	**64.8**	**—**	**567.3**
States and political subdivisions	**7,355.4**	**13.7**	**1,136.8**	**—**	**6,232.3**
Corporate	**40,370.4**	**461.0**	**4,640.5**	**7.7**	**36,183.2**
Residential mortgage-backed pass-through securities	**2,420.6**	**6.2**	**198.1**	**—**	**2,228.7**
Commercial mortgage-backed securities	**5,572.2**	**0.5**	**708.1**	**—**	**4,864.6**
Collateralized debt obligations (2)	**4,705.6**	**4.5**	**143.7**	**—**	**4,566.4**
Other debt obligations	**7,236.8**	**5.7**	**734.8**	**0.1**	**6,507.6**
Total fixed maturities, available-for-sale	**$70,263.1**	**$512.6**	**$7,878.0**	**$7.8**	**$62,889.9**

4. Investments — (continued)

	Amortized cost (1)	Gross unrealized gains	Gross unrealized losses	Allowance for credit loss	Fair value
			(in millions)		
December 31, 2021					
Fixed maturities, available-for-sale:					
U.S. government and agencies	$ 1,978.0	$ 148.0	$ 37.4	$ —	$ 2,088.6
Non-U.S. governments	851.0	133.1	2.1	—	982.0
States and political subdivisions	8,290.7	1,030.3	16.6	—	9,304.4
Corporate	42,139.2	4,044.8	224.5	15.1	45,944.4
Residential mortgage-backed pass-through securities	3,122.3	59.0	28.4	—	3,152.9
Commercial mortgage-backed securities	5,436.2	157.8	31.5	0.3	5,562.2
Collateralized debt obligations (2)	3,564.7	4.5	9.6	—	3,559.6
Other debt obligations	7,487.8	131.1	58.4	0.1	7,560.4
Total fixed maturities, available-for-sale	$72,869.9	$5,708.6	$408.5	$15.5	$78,154.5

(1) Amortized cost excludes accrued interest receivable of $578.0 million and $542.6 million as of December 31, 2022 and December 31, 2021, respectively.

(2) Primarily consists of collateralized loan obligations backed by secured corporate loans.

The amortized cost and fair value of fixed maturities, available-for-sale as of December 31, 2022, by expected maturity, were as follows:

	Amortized cost	Fair value
	(in millions)	
Due in one year or less	**$ 1,658.8**	**$ 1,645.6**
Due after one year through five years	**8,661.8**	**8,328.4**
Due after five years through ten years	**11,636.1**	**10,626.7**
Due after ten years	**28,371.2**	**24,121.9**
Subtotal	**50,327.9**	**44,722.6**
Mortgage-backed and other asset-backed securities	**19,935.2**	**18,167.3**
Total	**$70,263.1**	**$62,889.9**

Actual maturities may differ because borrowers may have the right to call or prepay obligations. Our portfolio is diversified by industry, issuer and asset class. Credit concentrations are managed to established limits.

4. Investments — (continued)

Net Investment Income

The major components of net investment income are shown below and are net of amounts on funds withheld invested assets that are passed directly to the reinsurer. See Note 9, Reinsurance, for further details.

	For the year ended December 31,		
	2022	**2021**	**2020**
		(in millions)	
Fixed maturities, available-for-sale	**$2,100.3**	$2,766.3	$2,660.5
Fixed maturities, trading	**36.8**	19.3	18.7
Equity securities	**8.9**	57.7	62.8
Mortgage loans	**771.7**	790.2	724.7
Real estate	**277.7**	194.4	180.8
Policy loans	**36.5**	38.8	41.6
Cash and cash equivalents	**57.4**	4.3	17.4
Derivatives	**171.3**	28.2	(1.8)
Other	**509.6**	622.0	296.5
Total	**3,970.2**	4,521.2	4,001.2
Investment expenses	**(139.8)**	(115.1)	(110.6)
Net investment income	**$3,830.4**	$4,406.1	$3,890.6

Net Realized Capital Gains and Losses

The major components of net realized capital gains (losses) on investments are shown below and are net of amounts on funds withheld invested assets that are passed directly to the reinsurer. See Note 9, Reinsurance, for further details. The amounts below do not include net realized capital gains (losses) on funds withheld assets that are not passed to the reinsurer, which are separately reported on the consolidated statements of operations.

	For the year ended December 31,		
	2022	**2021**	**2020**
		(in millions)	
Fixed maturities, available-for-sale:			
Gross gains	**$ 41.5**	$ 64.4	$134.2
Gross losses	**(191.5)**	(29.2)	(48.5)
Net credit losses (1)	**(8.9)**	(45.0)	(22.9)
Hedging, net	**(0.7)**	(9.5)	(9.7)
Fixed maturities, trading (2)	**(30.1)**	(33.3)	3.2
Equity securities (3)	**(171.9)**	100.0	70.5
Mortgage loans	**(74.6)**	6.5	(15.5)
Derivatives	**177.4**	(116.9)	77.3
Other	**0.4**	65.5	114.0
Net realized capital gains (losses)	**$(258.4)**	$ 2.5	$302.6

(1) Net credit losses include adjustments to the credit loss valuation allowance, write-offs and recoveries on available-for-sale securities.

(2) Unrealized gains (losses) on fixed maturities, trading still held at the reporting date were $(19.9) million, $(32.2) million and $5.3 million for the years ended December 31, 2022, 2021 and 2020, respectively. This excludes $1.4 million of unrealized losses on

4. Investments — (continued)

fixed maturities, trading still held at the reporting date for the year ended December 31, 2022, that were reported in net realized capital gains (losses) on funds withheld assets.

(3) Unrealized gains (losses) on equity securities still held at the reporting date were $(117.1) million, $58.6 million and $64.6 million for the years ended December 31, 2022, 2021 and 2020, respectively. This excludes $(0.7) million, $28.7 million and $35.2 million of unrealized gains on equity securities still held at the reporting date for the years ended December 31, 2022, 2021 and 2020, respectively, that were reported in net investment income and $(1.7) million that were reported in net realized capital gains (losses) on funds withheld assets for the year ended December 31, 2022.

Proceeds from sales of investments (excluding call and maturity proceeds) in fixed maturities, available-for-sale were $13,647.0 million, $2,110.9 million and $2,421.9 million in 2022, 2021 and 2020, respectively.

Allowance for Credit Loss

We have a process in place to identify fixed maturity securities that could potentially require an allowance for credit loss. This process involves monitoring market events that could impact issuers' credit ratings, business climate, management changes, litigation and government actions and other similar factors. This process also involves monitoring late payments, pricing levels, downgrades by rating agencies, key financial ratios, financial statements, revenue forecasts and cash flow projections as indicators of credit issues.

Each reporting period, all securities in an unrealized loss position are reviewed to determine whether a decline in value is due to credit. Relevant facts and circumstances considered include: (1) the extent the fair value is below cost; (2) the reasons for the decline in value; (3) the financial position and access to capital of the issuer, including the current and future impact of any specific events and (4) for structured securities, the adequacy of the expected cash flows. To the extent we determine an unrealized loss is due to credit, an allowance for credit loss is recognized through a reduction to net income.

We estimate the amount of the allowance for credit loss as the difference between amortized cost and the present value of the expected cash flows of the security. The present value is determined using the best estimate cash flows discounted at the effective interest rate implicit to the security at the date of purchase or the current yield to accrete an asset-backed or floating rate security. The methodology and assumptions for establishing the best estimate cash flows vary depending on the type of security. The ABS cash flow estimates are based on security specific facts and circumstances that may include collateral characteristics, expectations of delinquency and default rates, loss severity and prepayment speeds and structural support, including subordination and guarantees. The corporate security cash flow estimates are derived from scenario-based outcomes of expected corporate restructurings or liquidations using bond specific facts and circumstances including timing, security interests and loss severity. We do not measure a credit loss allowance on accrued interest receivable because we write off the accrued interest receivable balance to net investment income in a timely manner when we have concern regarding collectability.

Amounts on fixed maturities, available-for-sale deemed to be uncollectible are written off and removed from the allowance for credit loss. A write-off may also occur if we intend to sell a security or whether it is more likely than not we will be required to sell the security before the recovery of its amortized cost which, in some cases, may extend to maturity.

4. Investments — (continued)

A rollforward of the allowance for credit loss by major security type was as follows.

	For the year ended December 31, 2022								
	U.S. government and agencies	Non-U.S. governments	States and political subdivisions	Corporate	Residential mortgage-backed pass-through securities	Commercial mortgage-backed securities	Collateralized debt obligations (1)	Other debt obligations	Total
	(in millions)								
Beginning balance	**$—**	**$—**	**$—**	**$15.1**	**$—**	**$ 0.3**	**$—**	**$0.1**	**$15.5**
Additions for credit losses not previously recorded	**—**	**—**	**—**	**5.8**	**—**	**—**	**—**	**—**	**5.8**
Reductions for securities sold during the period	**—**	**—**	**—**	**(8.7)**	**—**	**—**	**—**	**—**	**(8.7)**
Additional increases (decreases) for credit losses on securities with an allowance recorded in the previous period	**—**	**—**	**—**	**(4.2)**	**—**	**—**	**—**	**—**	**(4.2)**
Write-offs charged against allowance	**—**	**—**	**—**	**—**	**—**	**(0.3)**	**—**	**—**	**(0.3)**
Foreign currency translation adjustment	**—**	**—**	**—**	**(0.3)**	**—**	**—**	**—**	**—**	**(0.3)**
Ending balance	**$—**	**$—**	**$—**	**$ 7.7**	**$—**	**$ —**	**$—**	**$0.1**	**$ 7.8**

	For the year ended December 31, 2021								
	U.S. government and agencies	Non-U.S. governments	States and political subdivisions	Corporate	Residential mortgage-backed pass-through securities	Commercial mortgage-backed securities	Collateralized debt obligations (1)	Other debt obligations	Total
	(in millions)								
Beginning balance	$—	$—	$—	$ 0.9	$—	$ 4.3	$ 2.2	$ —	$ 7.4
Additions for credit losses not previously recorded	—	—	—	27.5	—	0.4	—	0.1	28.0
Reductions for securities sold during the period	—	—	—	(12.4)	—	—	—	—	(12.4)
Additional increases (decreases) for credit losses on securities with an allowance recorded in the previous period	—	—	—	—	—	2.4	0.4	—	2.8
Write-offs charged against allowance	—	—	—	—	—	(6.8)	(2.6)	—	(9.4)
Foreign currency translation adjustment	—	—	—	(0.9)	—	—	—	—	(0.9)
Ending balance	$—	$—	$—	$ 15.1	$—	$ 0.3	$ —	$0.1	$ 15.5
Accrued interest written off to net investment income	$—	$—	$—	$ 0.2	$—	$ —	$ —	$ —	$ 0.2

4. Investments — (continued)

	For the year ended December 31, 2020								
	U.S. government and agencies	Non-U.S. governments	States and political subdivisions	Corporate	Residential mortgage-backed pass-through securities	Commercial mortgage-backed securities	Collateralized debt obligations (1)	Other debt obligations	Total
	(in millions)								
Beginning balance (2)	$—	$—	$—	$ —	$—	$ —	$ —	$—	$ —
Additions for credit losses not previously recorded	—	—	—	13.2	—	2.9	0.1	—	16.2
Reductions for securities sold during the period	—	—	—	(7.0)	—	—	—	—	(7.0)
Additional increases (decreases) for credit losses on securities with an allowance recorded in the previous period	—	—	—	(5.9)	—	4.0	2.1	—	0.2
Write-offs charged against allowance	—	—	—	—	—	(2.6)	—	—	(2.6)
Foreign currency translation adjustment	—	—	—	0.6	—	—	—	—	0.6
Ending balance	$—	$—	$—	$ 0.9	$—	$ 4.3	$2.2	$—	$ 7.4

(1) Primarily consists of collateralized loan obligations backed by secured corporate loans.

(2) The allowance for credit loss associated with fixed maturities, available-for-sale was applied prospectively upon adoption of authoritative guidance effective January 1, 2020.

During 2022 and 2020, we did not write off any accrued interest to net investment income.

Available-for-Sale Securities in Unrealized Loss Positions Without an Allowance for Credit Loss

For available-for-sale securities with unrealized losses for which an allowance for credit loss has not been recorded, the gross unrealized losses and fair value, aggregated by investment category and length of time that individual securities have been in a continuous unrealized loss position were as follows:

	December 31, 2022					
	Less than twelve months		Greater than or equal to twelve months		Total	
	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses
	(in millions)					
Fixed maturities, available-for-sale (1):						
U.S. government and agencies	**$ 1,528.3**	**$ 209.4**	**$ 181.5**	**$ 41.8**	**$ 1,709.8**	**$ 251.2**
Non-U.S. governments	**407.5**	**57.7**	**19.9**	**7.1**	**427.4**	**64.8**
States and political subdivisions	**5,303.5**	**1,008.9**	**391.9**	**127.8**	**5,695.4**	**1,136.7**
Corporate	**27,309.5**	**3,944.6**	**2,944.1**	**698.0**	**30,253.6**	**4,642.6**
Residential mortgage-backed pass-through securities	**1,201.7**	**97.5**	**574.8**	**105.7**	**1,776.5**	**203.2**
Commercial mortgage-backed securities	**3,648.5**	**484.0**	**1,124.8**	**222.5**	**4,773.3**	**706.5**
Collateralized debt obligations (2)	**2,832.2**	**89.0**	**1,330.1**	**54.7**	**4,162.3**	**143.7**
Other debt obligations	**3,419.8**	**292.0**	**2,283.8**	**437.6**	**5,703.6**	**729.6**
Total fixed maturities, available-for-sale	**$45,651.0**	**$6,183.1**	**$8,850.9**	**$1,695.2**	**$54,501.9**	**$7,878.3**

4. Investments — (continued)

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(1) Fair value and gross unrealized losses are excluded for available-for-sale securities for which an allowance for credit loss has been recorded.

(2) Primarily consists of collateralized loan obligations backed by secured corporate loans.

Of the total amounts, Principal Life Insurance Company's ("Principal Life") consolidated portfolio represented $53,353.1 million in available-for-sale fixed maturities with gross unrealized losses of $7,741.4 million. Of the available-for-sale fixed maturities within Principal Life's consolidated portfolio in a gross unrealized loss position, 94% were investment grade (rated AAA through BBB-) with an average price of 87 (carrying value/amortized cost) as of December 31, 2022. Gross unrealized losses in our fixed maturities portfolio increased during the year ended December 31, 2022, primarily due to an increase in interest rates and a widening of credit spreads.

For those securities that had been in a continuous unrealized loss position for less than twelve months, Principal Life's consolidated portfolio held 7,589 securities with a carrying value of $44,857.0 million and unrealized losses of $6,096.3 million reflecting an average price of 88 as of December 31, 2022. Of this portfolio, 95% was investment grade (rated AAA through BBB-) as of December 31, 2022, with associated unrealized losses of $5,920.4 million. The unrealized losses on these securities can primarily be attributed to changes in market interest rates and changes in credit spreads since the securities were acquired.

For those securities that had been in a continuous unrealized loss position greater than or equal to twelve months, Principal Life's consolidated portfolio held 1,654 securities with a carrying value of $8,496.1 million and unrealized losses of $1,645.1 million as of December 31, 2022. The average credit rating of this portfolio was AA- with an average price of 84 as of December 31, 2022. Of the $1,645.1 million in unrealized losses, the corporate sector accounts for $654.9 million in unrealized losses with an average price of 80 and an average credit rating of BBB+. Furthermore, unrealized losses include $320.2 million within the collateralized mortgage obligation security sector with an average price of 81 and an average credit rating of AAA; $220.9 million within the CMBS sector with an average price of 83 and an average credit rating of AA+; and $126.8 million within the states and political subdivision sector with an average price of 75 and an average credit rating of AA-. The unrealized losses on these securities can primarily be attributed to changes in market interest rates and changes in credit spreads since the securities were acquired.

Because we expected to recover our amortized cost, we did not record an allowance for credit loss on these securities as of December 31, 2022. Because it was not our intent to sell the fixed maturity available-for-sale securities with unrealized losses and it was not more likely than not that we would be required to sell these securities before recovery of the amortized cost, which may be at maturity, we did not write down these investments to fair value.

4. Investments — (continued)

	December 31, 2021					
	Less than twelve months		Greater than or equal to twelve months		Total	
	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses
	(in millions)					
Fixed maturities, available-for-sale (1):						
U.S. government and agencies	$ 129.3	$ 3.4	$ 482.9	$ 34.0	$ 612.2	$ 37.4
Non-U.S. governments	57.8	2.0	—	—	57.8	2.0
States and political subdivisions	690.2	10.5	102.3	6.1	792.5	16.6
Corporate	5,281.6	121.2	1,327.5	101.5	6,609.1	222.7
Residential mortgage-backed pass- through securities	1,562.6	22.2	194.9	6.3	1,757.5	28.5
Commercial mortgage-backed securities	1,297.4	15.6	299.6	15.7	1,597.0	31.3
Collateralized debt obligations (2)	1,592.5	2.8	424.4	6.7	2,016.9	9.5
Other debt obligations	3,949.9	49.4	211.0	9.0	4,160.9	58.4
Total fixed maturities, available-for-sale	$14,561.3	$227.1	$3,042.6	$179.3	$17,603.9	$406.4

(1) Fair value and gross unrealized losses are excluded for available-for-sale securities for which an allowance for credit loss has been recorded.

(2) Primarily consists of collateralized loan obligations backed by secured corporate loans.

Of the total amounts, Principal Life's consolidated portfolio represented $15,792.6 million in available-for-sale fixed maturities with gross unrealized losses of $288.0 million. Of the available-for-sale fixed maturities within Principal Life's consolidated portfolio in a gross unrealized loss position, 91% were investment grade (rated AAA through BBB-) with an average price of 98 (carrying value/amortized cost) as of December 31, 2021. Gross unrealized losses in our fixed maturities portfolio increased during the year ended December 31, 2021, primarily due to an increase in interest rates, partially offset by tightening of credit spreads.

For those securities that had been in a continuous unrealized loss position for less than twelve months, Principal Life's consolidated portfolio held 1,805 securities with a carrying value of $13,052.3 million and unrealized losses of $150.9 million reflecting an average price of 99 as of December 31, 2021. Of this portfolio, 90% was investment grade (rated AAA through BBB-) as of December 31, 2021, with associated unrealized losses of $138.9 million. The unrealized losses on these securities can primarily be attributed to changes in market interest rates and changes in credit spreads since the securities were acquired.

For those securities that had been in a continuous unrealized loss position greater than or equal to twelve months, Principal Life's consolidated portfolio held 459 securities with a carrying value of $2,740.3 million and unrealized losses of $137.1 million as of December 31, 2021. The average credit rating of this portfolio was A+ with an average price of 95 as of December 31, 2021. Of the $137.1 million in unrealized losses, the corporate sector accounts for $67.1 million in unrealized losses with an average price of 95 and an average credit rating of BBB+. Furthermore, unrealized losses include $30.9 million within the U.S. government and agency security sector with an average price of 93 and an average credit rating of AAA, $15.3 million within the commercial mortgage-backed security sector with an average price of 95 and an average credit rating of AAA and $6.7 million within the collateralized debt obligation sector with an average price of 98 and an average credit rating of AA+. The unrealized losses on these securities can primarily be attributed to changes in market interest rates and changes in credit spreads since the securities were acquired.

Because we expected to recover our amortized cost, we did not record an allowance for credit loss on these securities as of December 31, 2021. Because it was not our intent to sell the fixed maturity available-for-sale securities with unrealized losses and it was not more likely than not that we would be required to sell these

4. Investments — (continued)

securities before recovery of the amortized cost, which may be at maturity, we did not write down these investments to fair value.

Net Unrealized Gains and Losses on Available-for-Sale Securities and Derivative Instruments

The net unrealized gains and losses on investments in available-for-sale securities and the net unrealized gains and losses on derivative instruments in cash flow hedge relationships are reported as separate components of stockholders' equity. The cumulative amount of net unrealized gains and losses on available-for-sale securities and derivative instruments in cash flow hedge relationships net of adjustments related to DAC and related actuarial balances, policyholder liabilities, noncontrolling interest and applicable income taxes was as follows:

	December 31, 2022	December 31, 2021
	(in millions)	
Net unrealized gains (losses) on fixed maturities, available-for-sale (1)	**$(7,445.7)**	$5,289.9
Net unrealized gains on derivative instruments	**50.7**	80.1
Adjustments for assumed changes in amortization patterns	**649.7**	(266.1)
Adjustments for assumed changes in policyholder liabilities	**(77.1)**	(689.2)
Net unrealized gains on other investments and noncontrolling interest adjustments	**7.9**	40.5
Provision for deferred income tax benefits (taxes)	**1,456.9**	(936.0)
Net unrealized gains (losses) on available-for-sale securities and derivative instruments	**$(5,357.6)**	$3,519.2

(1) Excludes net unrealized gains (losses) on fixed maturities, available-for-sale included in fair value hedging relationships.

Financing Receivables

Mortgage Loans

Mortgage loans consist of commercial and residential mortgage loans. Our commercial mortgage loan portfolio consists primarily of non-recourse, fixed rate mortgages on stabilized properties. Our residential mortgage loan portfolio is composed of first lien and home equity mortgages concentrated in Chile and the United States.

Commercial and residential mortgage loans are generally reported at cost adjusted for amortization of premiums and accrual of discounts, computed using the interest method and net of valuation allowances. Amortized cost excludes accrued interest receivable. Interest income is accrued on the principal amount of the loan based on the loan's contractual interest rate. Interest income, as well as prepayment of fees and the amortization of the related premium or discount, is reported in net investment income on the consolidated statements of operations. Accrued interest receivable is reported in accrued investment income on the consolidated statements of financial position. Any changes in the loan valuation allowances are reported in net realized capital gains (losses) on the consolidated statements of operations. Further details relating to our valuation allowance are included under the caption "Financing Receivables Valuation Allowance."

Direct Financing Leases

Our direct financing leases are concentrated in Chile. Our Chilean operations enter into private placement contracts for commercial, industrial and office space properties whereby our Chilean operations purchase the real estate and/or building from the seller-lessee but then lease the property back to the seller-lessee. Ownership of the property is transferred to the lessee by the end of the lease term. Direct financing leases are reported as a component of other investments in the consolidated statements of financial position.

4. Investments — (continued)

Reinsurance Recoverable and Deposit Receivable

Our reinsurance recoverables include amounts due from reinsurers for paid or unpaid claims, claims incurred but not reported or policy benefits. We cede life, disability, medical and long-term care insurance as well as fixed annuity contracts with significant life insurance risk to other insurance companies through reinsurance. Deposit receivables include amounts due from the reinsurer for fixed annuity contracts without significant life insurance risk recorded using the deposit method of accounting.

Credit Quality Information for Financing Receivables

The amortized cost of our financing receivables by credit risk and vintage was as follows:

	December 31, 2022						
	2022	2021	2020	2019	2018	Prior	Total
				(in millions)			
Commercial mortgage loans:							
A- and above	$1,036.4	$2,277.9	$1,807.3	$2,210.2	$2,187.9	$4,624.9	$14,144.6
BBB+ thru BBB-	385.6	439.6	156.8	418.7	238.9	691.7	2,331.3
BB+ thru BB-	104.0	16.8	3.0	—	8.9	71.7	204.4
B+ and below	—	—	—	—	8.3	41.7	50.0
Total	$1,526.0	$2,734.3	$1,967.1	$2,628.9	$2,444.0	$5,430.0	$16,730.3
Direct financing leases:							
A- and above	$ 110.5	$ 13.0	$ 39.9	$ 1.4	$ 42.9	$ 167.3	$ 375.0
BBB+ thru BBB-	33.9	21.9	62.4	11.9	11.7	70.4	212.2
BB+ thru BB-	2.7	57.3	12.1	2.0	—	2.1	76.2
B+ and below	—	1.6	—	—	—	—	1.6
Total	$ 147.1	$ 93.8	$ 114.4	$ 15.3	$ 54.6	$ 239.8	$ 665.0
Residential mortgage loans:							
Performing	$1,144.8	$1,740.7	$ 447.1	$ 133.0	$ 75.4	$ 417.8	$ 3,958.8
Non-performing	8.0	4.7	2.2	1.7	0.6	7.0	24.2
Total	$1,152.8	$1,745.4	$ 449.3	$ 134.7	$ 76.0	$ 424.8	$ 3,983.0
Reinsurance recoverable and deposit receivable							$22,032.3

	December 31, 2021						
	2021	2020	2019	2018	2017	Prior	Total
				(in millions)			
Commercial mortgage loans:							
A- and above	$2,275.9	$1,722.7	$2,412.9	$2,383.3	$1,437.2	$4,334.2	$14,566.2
BBB+ thru BBB-	278.6	305.6	294.0	131.4	302.1	380.0	1,691.7
BB+ thru BB-	32.8	5.3	—	—	—	55.4	93.5
B+ and below	—	—	—	8.8	—	34.5	43.3
Total	$2,587.3	$2,033.6	$2,706.9	$2,523.5	$1,739.3	$4,804.1	$16,394.7
Direct financing leases:							
A- and above	$ 11.7	$ 41.8	$ 1.4	$ 39.4	$ 16.6	$ 235.6	$ 346.5
BBB+ thru BBB-	30.2	57.9	22.0	17.9	15.5	50.2	193.7
BB+ thru BB-	50.8	13.4	1.9	—	—	2.1	68.2
B+ and below	1.5	—	—	—	—	—	1.5
Total	$ 94.2	$ 113.1	$ 25.3	$ 57.3	$ 32.1	$ 287.9	$ 609.9
Residential mortgage loans:							
Performing	$2,039.1	$ 510.1	$ 155.6	$ 91.2	$ 102.4	$ 415.6	$ 3,314.0
Non-performing	—	1.8	0.6	—	0.8	2.7	5.9
Total	$2,039.1	$ 511.9	$ 156.2	$ 91.2	$ 103.2	$ 418.3	$ 3,319.9
Reinsurance recoverable and deposit receivable							$ 1,189.2

4. Investments — (continued)

The amortized cost of commercial mortgage loans, direct financing leases and residential mortgage loans excluded accrued interest receivable of $57.7 million, $0.0 million and $19.6 million, respectively, as of December 31, 2022, and $60.7 million, $1.2 million and $16.7 million, respectively, as of December 31, 2021.

Financing Receivables Credit Monitoring

Commercial Mortgage Loan Credit Risk Profile Based on Internal Rating

We actively monitor and manage our commercial mortgage loan and direct financing lease portfolios. All commercial mortgage loans and direct financing leases are analyzed regularly and substantially all are internally rated, based on a proprietary risk rating cash flow model, in order to monitor the financial quality of these assets. The models stress expected cash flows at various levels and at different points in time depending on the durability of the income stream, which includes our assessment of factors such as location (macro and micro markets), tenant quality and lease expirations. Our internal rating analysis presents expected losses in terms of an S&P Global ("S&P") bond equivalent rating for domestic commercial mortgage loans and Feller rate equivalent for Chilean commercial mortgage loans and direct financing leases. As the credit risk for commercial mortgage loans and direct financing leases increases, we adjust our internal ratings downward with loans in the category "B+ and below" having the highest risk for credit loss. Internal ratings on commercial mortgage loans and direct financing leases are updated at least annually and potentially more often for certain investments with material changes in collateral value or occupancy and for investments on an internal "watch list".

Commercial mortgage loans and direct financing leases that require more frequent and detailed attention are identified and placed on an internal "watch list". Among the criteria that may indicate a potential problem are significant negative changes in ratios of loan to value or contract rents to debt service, major tenant vacancies or bankruptcies, borrower sponsorship problems, late payments, delinquent taxes and loan relief/ restructuring requests.

Residential Mortgage Loan Credit Risk Profile Based on Performance Status

Our residential mortgage loan portfolio is monitored based on performance of the loans. Monitoring on a residential mortgage loan increases when the loan is delinquent or earlier if there is an indication of potential impairment. We define non-performing domestic residential mortgage loans as loans 90 days or greater delinquent or on non-accrual status. We define non-performing residential first lien mortgages in the Chilean market as loans that have missed a specified number of coupon payments based on the nature of the loans and collection practices in that market.

Non-Accrual Financing Receivables

Financing receivables are placed on non-accrual status if we have concern regarding the collectability of future payments or if a financing receivable has matured without being paid off or extended. Factors considered may include conversations with the borrower, loss of major tenant, bankruptcy of borrower or major tenant, decreased property cash flow for commercial mortgage loans and direct financing leases or number of days past due and other circumstances for residential mortgage loans. Based on an assessment as to the collectability of the principal, a determination is made to apply any payments received either against the principal, against the valuation allowance or according to the contractual terms. When a financing receivable is placed on non-accrual status, the accrued unpaid interest receivable is reversed against interest income. Accrual of interest resumes after factors resulting in doubts about collectability have improved. Financing receivables in the Chilean market are carried on accrual for a longer period of delinquency than domestic financing receivables, as assessment of collectability is based on the nature of the financing receivables and collection practices in that market.

4. Investments — (continued)

The amortized cost of financing receivables on non-accrual status was as follows:

	December 31, 2022		
	Beginning amortized cost on nonaccrual status	Ending amortized cost on nonaccrual status	Amortized cost of nonaccrual assets without a valuation allowance
		(in millions)	
Commercial mortgage loans	**$13.2**	**$50.0**	**$ —**
Residential mortgage loans	**4.0**	**17.8**	**0.6**
Total	**$17.2**	**$67.8**	**$0.6**

	December 31, 2021		
	Beginning amortized cost on nonaccrual status	Ending amortized cost on nonaccrual status	Amortized cost of nonaccrual assets without a valuation allowance
		(in millions)	
Commercial mortgage loans	$10.7	$13.2	$ —
Residential mortgage loans	10.8	4.0	0.7
Total	$21.5	$17.2	$0.7

Interest income recognized on non-accrual financing receivables was as follows:

	For the year ended December 31,		
	2022	2021	2020
		(in millions)	
Commercial mortgage loans	**$0.9**	$0.5	$—
Total	**$0.9**	$0.5	$—

The aging of our financing receivables, based on amortized cost, was as follows:

	December 31, 2022						
	30-59 days past due	60-89 days past due	90 days or more past due	Total past due	Current	Total (1)	Amortized cost 90 days or more and accruing
				(in millions)			
Commercial mortgage loans	**$ 45.9**	**$ 7.5**	**$14.4**	**$ 67.8**	**$16,662.5**	**$16,730.3**	**$ —**
Direct financing leases	**6.6**	**6.2**	**1.6**	**14.4**	**650.6**	**665.0**	**1.6**
Residential mortgage loans	**73.1**	**15.4**	**16.2**	**104.7**	**3,878.3**	**3,983.0**	**6.4**
Total	**$125.6**	**$29.1**	**$32.2**	**$186.9**	**$21,191.4**	**$21,378.3**	**$8.0**

4. Investments — (continued)

	December 31, 2021						
	30-59 days past due	60-89 days past due	90 days or more past due	Total past due	Current	Total (1)	Amortized cost 90 days or more and accruing
				(in millions)			
Commercial mortgage loans	$ 0.7	$ —	$ 7.1	$ 7.8	$16,386.9	$16,394.7	$2.7
Direct financing leases	—	1.9	0.7	2.6	607.3	609.9	0.7
Residential mortgage loans	59.2	9.6	5.2	74.0	3,245.9	3,319.9	1.9
Total	$59.9	$11.5	$13.0	$84.4	$20,240.1	$20,324.5	$5.3

(1) As of both December 31, 2022 and December 31, 2021, no reinsurance recoverables or deposit receivables were considered past due.

Financing Receivables Valuation Allowance

We establish a valuation allowance to provide for the risk of credit losses inherent in our financing receivables. The valuation allowance is maintained at a level believed adequate by management to absorb estimated expected credit losses. The valuation allowance is based on amortized cost excluding accrued interest receivable and includes reserves for pools of financing receivables with similar risk characteristics. We do not measure a credit loss allowance on accrued interest receivable because we write off the uncollectible accrued interest receivable balance to net investment income in a timely manner, generally within 90 days domestically or, in the Chilean market, based on the nature of the loans and collection practices in that market. During 2022 and 2021, we did not write off any commercial mortgage loan accrued interest or residential mortgage loan accrued interest.

For commercial and residential mortgage loans and direct financing leases, management's periodic evaluation and assessment of the valuation allowance adequacy is based on known and inherent risks in the portfolio, adverse situations that may affect a borrower's ability to repay, the estimated value of the underlying collateral, composition of the portfolio, portfolio delinquency information, underwriting standards, peer group information, current and forecasted economic conditions, loss experience and other relevant factors. For reinsurance recoverables and deposit receivables, management's periodic evaluation and assessment of the valuation allowance adequacy is based on known and inherent risks, adverse situations that may affect a reinsurer's ability to repay, current and forecasted economic conditions, industry loss experience and other relevant factors.

Our commercial mortgage loans and direct financing leases are pooled by risk rating level with an estimated loss ratio applied against each risk rating level. The loss ratio is generally based upon historical loss experience for each risk rating level as adjusted for certain current and forecasted environmental factors management believes to be relevant. Environmental factors are forecasted for two years or less with immediate reversion to historical experience. The allowance for direct financing leases is also adjusted for the residual value of the leased assets. A commercial mortgage loan or direct financing lease is evaluated individually if it does not continue to share similar risk characteristics of a pool. We analyze the need for an individual evaluation for any domestic commercial mortgage loan that is delinquent for 60 days or more, in process of foreclosure, restructured, on the internal "watch list" or that currently is evaluated individually. We analyze the need for an individual evaluation for any Chilean commercial mortgage loan or direct financing lease that is considered past due based on collection practices in the Chilean market and the nature of the loan or lease.

We estimate expected credit losses for certain commercial mortgage loan or direct financing lease commitments where we have a contractual obligation to extend credit. The expected credit losses are estimated based on the commercial mortgage loan or direct financing lease valuation allowance process described previously, adjusted for probability of funding. The estimated expected credit losses for commercial mortgage

4. Investments — (continued)

loan and direct financing lease commitments are reported in other liabilities on the consolidated statements of financial position. The change in the credit loss liability for commitments is included in net realized capital gains (losses) on the consolidated statements of operations. Once funded, expected credit losses for commercial mortgage loans or direct financing leases are included within the commercial mortgage loan or direct financing lease valuation allowance described previously.

We evaluate residential mortgage loans based on aggregated risk factors and historical loss experience by pool type. We adjust these quantitative factors for qualitative factors of present and forecasted conditions. Qualitative factors include items such as economic and business conditions, changes in the portfolio, value of underlying collateral and concentrations. A residential mortgage loan is evaluated individually if it does not continue to share similar risk characteristics of a pool. We analyze the need for an individual evaluation for any domestic residential mortgage loan that is delinquent for 60 days or more, in process of foreclosure, restructured, on the internal "watch list" or that currently is evaluated individually. We analyze the need for an individual evaluation for any Chilean residential mortgage loan that is considered past due based on collection practices in the Chilean market and the nature of the loan.

As discussed previously, commercial and residential mortgage loans and direct financing leases are evaluated individually if the asset does not continue to share similar risk characteristics of a pool. When we determine a commercial or residential mortgage loan is probable of foreclosure, a valuation allowance is established equal to the difference between the carrying amount of the mortgage loan and the estimated value of the collateral reduced by the cost to sell. For certain commercial mortgage loans where repayment is expected to be provided substantially through the operation or sale of the collateral and the borrower is experiencing financial difficulty, we elect to establish a valuation allowance equal to the difference between the carrying amount of the mortgage loan and the estimated value of the real estate collateral, which may be reduced by the cost to sell. Estimated value may also be based on either the present value of the expected future cash flows discounted at the asset's effective interest rate or the asset's observable market price. Subsequent changes in the estimated value are reflected in the valuation allowance. Amounts on financing receivables deemed to be uncollectible are charged off and removed from the valuation allowance. The change in the valuation allowance for loans and direct financing leases is included in net realized capital gains (losses) on the consolidated statements of operations.

Our reinsurance recoverables and deposit receivable are pooled by reinsurer risk rating with an estimated loss ratio applied against each risk rating level. The loss ratio is generally based upon industry historical loss experience and expected recovery timing as adjusted for certain current and forecasted environmental factors management believes to be relevant. Environmental factors are forecasted for five years or less with immediate reversion to industry historical experience. A reinsurance recoverable or deposit receivable is evaluated individually if it does not continue to share similar risk characteristics of a pool. We analyze the need for an individual evaluation for any reinsurance recoverable or deposit receivable based on past due payments and changes in reinsurer risk ratings. The change in the valuation allowance for reinsurance recoverables and deposit receivable is included in benefits, claims and settlement expenses on the consolidated statements of operations.

4. Investments — (continued)

A rollforward of our valuation allowance was as follows:

	For the year ended December 31, 2022				
	Commercial mortgage loans	Direct financing leases	Residential mortgage loans	Reinsurance recoverables	Total
			(in millions)		
Beginning balance	**$43.9**	**$0.4**	**$ 2.0**	**$2.7**	**$49.0**
Provision	**34.0**	**0.2**	**1.5**	**—**	**35.7**
Charge-offs	**—**	**—**	**(0.2)**	**—**	**(0.2)**
Recoveries	**—**	**—**	**2.3**	**—**	**2.3**
Ending balance	**$77.9**	**$0.6**	**$ 5.6**	**$2.7**	**$86.8**

	For the year ended December 31, 2021				
	Commercial mortgage loans	Direct financing leases	Residential mortgage loans	Reinsurance recoverables	Total
			(in millions)		
Beginning balance	$43.2	$ 0.1	$ 6.9	$2.7	$52.9
Provision (1)	1.0	0.4	(8.0)	—	(6.6)
Charge-offs	—	—	(0.5)	—	(0.5)
Recoveries	—	—	3.6	—	3.6
Foreign currency translation adjustment	(0.3)	(0.1)	—	—	(0.4)
Ending balance	$43.9	$ 0.4	$ 2.0	$2.7	$49.0

	For the year ended December 31, 2020				
	Commercial mortgage loans	Direct financing leases	Residential mortgage loans	Reinsurance recoverables	Total
			(in millions)		
Beginning balance	$27.3	$ —	$ 3.3	$2.5	$33.1
Provision (2)	15.5	0.1	1.5	0.2	17.3
Charge-offs	—	—	(0.9)	—	(0.9)
Recoveries	—	—	2.8	—	2.8
Foreign currency translation adjustment	0.4	—	0.2	—	0.6
Ending balance	$43.2	$0.1	$ 6.9	$2.7	$52.9

(1) During the year ended December 31, 2021, certain valuation allowances for residential mortgage loans were released. This release was a result of further adjustments to our current and forecasted environmental factors management believed to be relevant as global economic activity improved from previously adverse impacts due to COVID-19.

(2) During the year ended December 31, 2020, COVID-19 adversely impacted global economic activity and contributed to significant volatility in financial markets. As a result, certain current and forecasted environmental factors management believed to be relevant were adjusted, resulting in an increase in the valuation allowance for commercial and residential mortgage loans and direct financing leases.

4. Investments — (continued)

Mortgage Loans

We periodically purchase mortgage loans as well as sell mortgage loans we have originated. Mortgage loans purchased and sold were as follows:

	For the year ended December 31,		
	2022	2021	2020
	(in millions)		
Commercial mortgage loans:			
Purchased	**$ 325.4**	$ 118.2	$ 166.8
Sold	**15.6**	73.8	7.6
Residential mortgage loans:			
Purchased (1)	**1,846.0**	2,370.9	1,151.1
Sold	**535.7**	88.9	117.4

(1) Includes mortgage loans purchased by residential mortgage loan VIEs.

Our commercial mortgage loan portfolio is diversified by geographic region and specific collateral property type as follows:

	December 31, 2022		December 31, 2021	
	Amortized cost	Percent of total	Amortized cost	Percent of total
	($ in millions)			
Geographic distribution				
New England	**$ 512.1**	**3.1%**	$ 585.6	3.6%
Middle Atlantic	**4,505.6**	**26.9**	4,536.5	27.7
East North Central	**652.5**	**3.9**	623.9	3.8
West North Central	**370.9**	**2.2**	338.6	2.1
South Atlantic	**2,558.3**	**15.3**	2,464.9	15.0
East South Central	**339.8**	**2.0**	378.9	2.3
West South Central	**1,204.9**	**7.2**	1,243.7	7.6
Mountain	**938.7**	**5.6**	925.6	5.6
Pacific	**5,115.3**	**30.6**	4,864.4	29.7
International	**532.2**	**3.2**	432.6	2.6
Total	**$16,730.3**	**100.0%**	$16,394.7	100.0%
Property type distribution				
Office	**$ 4,322.0**	**25.9%**	$ 4,789.8	29.3%
Retail	**1,499.4**	**9.0**	1,622.1	9.9
Industrial	**3,235.9**	**19.3**	2,966.4	18.1
Apartments	**6,827.1**	**40.8**	6,234.3	38.0
Hotel	**72.5**	**0.4**	85.7	0.5
Mixed use/other	**773.4**	**4.6**	696.4	4.2
Total	**$16,730.3**	**100.0%**	$16,394.7	100.0%

Mortgage Loan Modifications

We assess COVID-19 related loan modifications to determine if they are in scope of the CARES Act TDR relief and the Interagency Statement guidance, which was effective in the second quarter of 2020. See

4. Investments — (continued)

Note 1, Nature of Operations and Significant Accounting Policies, under the caption "Investments" for further details. COVID-19 related loan modifications typically include delayed principal and interest payments. Based on the terms of the delayed principal and interest payments, past due status generally will not advance and loans generally will not be placed on non-accrual status during the delay. We did not have a significant amount of COVID-19 related loan modifications that were in scope of the CARES Act TDR relief or the Interagency Statement guidance for the years ended December 31, 2021 and 2020.

We assess loan modifications outside the scope of the CARES Act TDR relief or Interagency Statement guidance on a case-by-case basis to evaluate whether a TDR has occurred. When we have commercial mortgage loan TDRs, they are modified to delay or reduce principal payments and to reduce or delay interest payments. The commercial mortgage loan modifications result in delayed cash receipts, a decrease in interest income and loan rates that are considered below market. When we have residential mortgage loan TDRs, they include modifications of interest-only payment periods, delays in principal balloon payments and interest rate reductions. Residential mortgage loan modifications result in delayed or decreased cash receipts and a decrease in interest income.

When we have commercial mortgage loan TDRs, they are reserved for in the mortgage loan valuation allowance at the estimated fair value of the underlying collateral reduced by the cost to sell.

When we have residential mortgage loan TDRs, they are specifically reserved for in the mortgage loan valuation allowance if losses result from the modification. Residential mortgage loans that have defaulted or have been discharged through bankruptcy are reduced to the expected collectible amount.

The following table includes information about outstanding loans that were modified and met the criteria of a TDR during the periods indicated.

	For the year ended December 31, 2022			
	TDRs		TDRs in payment default	
	Number of contracts	Recorded investment	Number of contracts	Recorded investment
	(in millions)		(in millions)	
Commercial mortgage loans	1	$35.5	—	$—
Total	1	$35.5	—	$—

We did not have any significant loans that were modified and met the criteria of a TDR for the years ended December 31, 2021 and 2020.

Real Estate

Depreciation expense on invested real estate was $66.1 million, $67.4 million and $65.3 million in 2022, 2021 and 2020, respectively. Accumulated depreciation was $708.5 million and $652.0 million as of December 31, 2022 and 2021, respectively.

Other Investments

Other investments include interests in unconsolidated entities, domestic and international joint ventures and partnerships and properties owned jointly with venture partners and operated by the partners. Such investments are generally accounted for using the equity method. In applying the equity method, we record our share of income or loss reported by the equity investees in net investment income. Summarized financial information for these unconsolidated entities was as follows:

4. Investments — (continued)

	December 31,	
	2022	**2021**
	(in millions)	
Total assets	**$209,547.3**	$177,429.0
Total liabilities	**81,346.4**	72,001.3
Total equity	**$128,200.9**	$105,427.7
Net investment in unconsolidated entities (1)	**$ 2,721.8**	$ 2,162.5

	For the year ended December 31,		
	2022	**2021**	**2020**
		(in millions)	
Total revenues	**$44,987.0**	$21,769.6	$14,989.0
Net income	**34,290.5**	15,638.5	7,757.0
Our share of net income of unconsolidated entities (1)	**294.1**	383.0	143.9

(1) Our most significant equity investee is Brasilprev Seguros e Previdencia, a co-managed joint venture in Brazil.

In addition, other investments include direct financing leases. See the captions "Financing Receivables" and "Financing Receivables Valuation Allowance" for further details related to our valuation of direct financing leases.

Furthermore, other investments include $1,115.6 million and $1,032.1 million of cash surrender value of company owned life insurance as of December 31, 2022 and 2021, respectively.

Derivative assets are carried at fair value and reported as a component of other investments. See Note 5, Derivative Financial Instruments, for further details. Certain sponsored investment funds are also carried at fair value and reported as a component of other investments, with changes in fair value included in net realized capital gains (losses) on our consolidated statements of operations. The fair value of these funds was $617.8 million and $801.4 million as of December 31, 2022 and 2021, respectively.

Securities Posted as Collateral

As of December 31, 2022 and 2021, we posted $6,411.0 million and $5,195.9 million, respectively, in commercial mortgage loans and residential first lien mortgages to satisfy collateral requirements associated with our obligation under funding agreements with Federal Home Loan Bank of Des Moines ("FHLB Des Moines"). In addition, as of December 31, 2022 and 2021, we posted $3,569.7 million and $2,589.3 million, respectively, in fixed maturities, available-for-sale and trading securities to satisfy collateral requirements primarily associated with a reinsurance arrangement, our derivative credit support annex (collateral) agreements, Futures Commission Merchant ("FCM") agreements, a lending arrangement and our obligation under funding agreements with FHLB Des Moines. Since we did not relinquish ownership rights on these instruments, they are reported as mortgage loans, fixed maturities, available-for-sale and fixed maturities, trading, respectively, on our consolidated statements of financial position. Of the securities posted as collateral, as of December 31, 2022 and 2021, $503.8 million and $186.0 million, respectively, could be sold or repledged by the secured party.

4. Investments — (continued)

Balance Sheet Offsetting

Financial assets subject to master netting agreements or similar agreements were as follows:

		Gross amounts not offset in the consolidated statements of financial position		
	Gross amount of recognized assets (1)	Financial instruments (2)	Collateral received	Net amount
		(in millions)		
December 31, 2022				
Derivative assets	**$321.0**	**$(135.7)**	**$(151.9)**	**$33.4**
Reverse repurchase agreements	**124.4**	**—**	**(124.4)**	**—**
Total	**$445.4**	**$(135.7)**	**$(276.3)**	**$33.4**
December 31, 2021				
Derivative assets	$337.1	$(100.1)	$(229.7)	$ 7.3
Reverse repurchase agreements	16.4	—	(16.4)	—
Total	$353.5	$(100.1)	$(246.1)	$ 7.3

(1) The gross amount of recognized derivative and reverse repurchase agreement assets are reported with other investments and cash and cash equivalents, respectively, on the consolidated statements of financial position. The gross amounts of derivative and reverse repurchase agreement assets are not netted against offsetting liabilities for presentation on the consolidated statements of financial position.

(2) Represents amount of offsetting derivative liabilities that are subject to an enforceable master netting agreement or similar agreement that are not netted against the gross derivative assets for presentation on the consolidated statements of financial position.

Financial liabilities subject to master netting agreements or similar agreements were as follows:

		Gross amounts not offset in the consolidated statements of financial position		
	Gross amount of recognized liabilities (1)	Financial instruments (2)	Collateral pledged	Net amount
		(in millions)		
December 31, 2022				
Derivative liabilities	**$634.2**	**$(135.7)**	**$(485.1)**	**$13.4**
December 31, 2021				
Derivative liabilities	$225.3	$(100.1)	$(115.2)	$10.0

(1) The gross amount of recognized derivative liabilities is reported with other liabilities on the consolidated statements of financial position. The above excludes derivative liabilities, which are primarily embedded derivatives that are not subject to master netting agreements or similar agreements. The gross amounts of derivative liabilities are not netted against offsetting assets for presentation on the consolidated statements of financial position.

(2) Represents amount of offsetting derivative assets that are subject to an enforceable master netting agreement or similar agreement that are not netted against the gross derivative liabilities for presentation on the consolidated statements of financial position.

The financial instruments that are subject to master netting agreements or similar agreements include right of setoff provisions. Derivative instruments include provisions to setoff positions covered under the agreements with the same counterparties and provisions to setoff positions outside of the agreements with the same counterparties in the event of default by one of the parties. Derivative instruments also include collateral

4. Investments — (continued)

or variation margin provisions, which are generally settled daily with each counterparty. See Note 5, Derivative Financial Instruments, for further details.

Repurchase and reverse repurchase agreements include provisions to setoff other repurchase and reverse repurchase balances with the same counterparty. Repurchase and reverse repurchase agreements also include collateral provisions with the counterparties. For reverse repurchase agreements we require the counterparties to pledge collateral with a value greater than the amount of cash transferred. We have the right but do not sell or repledge collateral received in reverse repurchase agreements. Repurchase agreements are structured as secured borrowings for all counterparties. We pledge fixed maturities available-for-sale, which the counterparties have the right to sell or repledge. Interest incurred on repurchase agreements is reported as part of operating expenses on the consolidated statements of operations. Net proceeds related to repurchase agreements are reported as a component of financing activities on the consolidated statements of cash flows. We did not have any outstanding repurchase agreements as of December 31, 2022 and December 31, 2021.

5. Derivative Financial Instruments

Derivatives are generally used to hedge or reduce exposure to market risks associated with assets held or expected to be purchased or sold and liabilities incurred or expected to be incurred. Derivatives are used to change the characteristics of our asset/liability mix consistent with our risk management activities. Derivatives are also used in asset replication strategies.

Types of Derivative Instruments

Interest Rate Contracts

Interest rate risk is the risk we will incur economic losses due to adverse changes in interest rates. Sources of interest rate risk include the difference between the maturity and interest rate changes of assets with the liabilities they support, timing differences between the pricing of liabilities and the purchase or procurement of assets and changing cash flow profiles from original projections due to prepayment options embedded within asset and liability contracts. We use various derivatives to manage our exposure to fluctuations in interest rates.

Interest rate swaps are contracts in which we agree with other parties to exchange, at specified intervals, the difference between fixed rate and/or floating rate interest amounts based upon designated market rates or rate indices and an agreed upon notional principal amount. Generally, no cash is exchanged at the outset of the contract and no principal payments are made by any party. Cash is paid or received based on the terms of the swap. We use interest rate swaps primarily to more closely match the interest rate characteristics of assets and liabilities and to mitigate the risks arising from timing mismatches between assets and liabilities (including duration mismatches). We also use interest rate swaps to hedge against changes in the value of assets we anticipate acquiring and other anticipated transactions and commitments. Interest rate swaps are used to hedge against changes in the value of the guaranteed minimum withdrawal benefit ("GMWB") liability. The GMWB rider on our variable annuity products provides for guaranteed minimum withdrawal benefits regardless of the actual performance of various equity and/or fixed income funds available with the product. Additionally, we utilize interest rate swaps to replicate the returns of floating rate assets.

Interest rate options, including interest rate caps and interest rate floors, which can be combined to form interest rate collars, are contracts that entitle the purchaser to pay or receive the amounts, if any, by which a specified market rate exceeds a cap strike interest rate, or falls below a floor strike interest rate, respectively, at specified dates. We use interest rate options to manage prepayment risks in our assets and minimum guaranteed interest rates and lapse risks in our liabilities.

5. Derivative Financial Instruments — (continued)

A swaption is an option to enter into an interest rate swap at a future date. We have purchased swaptions to hedge interest rate exposure for certain assets and liabilities. Swaptions not only hedge against the downside risk, but also allow us to take advantage of any upside benefits.

In exchange-traded futures transactions, we agree to purchase or sell a specified number of contracts, the values of which are determined by the values of designated classes of securities, and to post variation margin on a daily basis in an amount equal to the difference in the daily market values of those contracts. We enter into exchange-traded futures with regulated futures commissions merchants who are members of a trading exchange. We use exchange-traded futures to hedge against changes in value of the GMWB liability.

Interest rate forwards, including to be announced ("TBA") forwards, bond forwards and treasury forwards, are contracts to take delivery of a fixed income security at a specified price at a future date. TBA forwards deliver government guaranteed mortgage-backed securities. Bond forwards and treasury forwards deliver corporate or municipal and U.S. Treasury bonds, respectively. At inception of the TBA and treasury forward contracts we do not intend to take physical delivery. We intend to take delivery of the bond forwards referencing corporate or municipal bonds. We have used TBA forwards to gain exposure to the investment risk and return of agency mortgage-backed security pools in order to reduce asset and liability duration mismatch. Treasury forwards are used to hedge against changes in the value of the GMWB liability. Bond forwards are used to gain leverage through synthetic exposure during the forward period and fix the purchase price of a bond at a specified date in future.

Foreign Exchange Contracts

Foreign currency risk is the risk we will incur economic losses due to adverse fluctuations in foreign currency exchange rates. This risk arises from foreign currency-denominated funding agreements issued to nonqualified institutional investors in the international market, foreign currency-denominated fixed maturity and equity securities, and our international operations, including expected cash flows and potential acquisition and divestiture activity. We use various derivatives to manage our exposure to fluctuations in foreign currency exchange rates.

Currency swaps are contracts in which we agree with other parties to exchange, at specified intervals, a series of principal and interest payments in one currency for that of another currency. Generally, the principal amount of each currency is exchanged at the beginning and termination of the currency swap by each party. The interest payments are primarily fixed-to-fixed rate; however, they may also be fixed-to-floating rate or floating-to-fixed rate. These transactions are entered into pursuant to master agreements that provide for a single net payment to be made by one counterparty for payments made in the same currency at each due date. We use currency swaps to reduce market risks from changes in currency exchange rates with respect to investments or liabilities denominated in foreign currencies that we either hold or intend to acquire or sell.

Currency forwards are contracts in which we agree with other parties to deliver or receive a specified amount of an identified currency at a specified future date. Typically, the price is agreed upon at the time of the contract and payment for such a contract is made at the specified future date. We use currency forwards to reduce market risks from changes in currency exchange rates with respect to investments or liabilities denominated in foreign currencies that we either hold or intend to acquire or sell. We use currency forwards to hedge certain foreign-denominated real estate funds in our domestic operations and net equity investments in foreign operations, including certain sponsored investment funds.

Currency options are contracts that give the holder the right, but not the obligation to buy or sell a specified amount of the identified currency within a limited period of time at a contracted price. The contracts are net settled in cash, based on the differential in the current foreign exchange rate and the strike price. Purchased and sold options can be combined to form a foreign currency collar where we receive a payment if

5. Derivative Financial Instruments — (continued)

the foreign exchange rate is below the purchased option strike price and make a payment if the foreign exchange rate is above the sold option strike price. We have used currency options to hedge expected cash flows from our foreign operations.

Equity Contracts

Equity risk is the risk that we will incur economic losses due to adverse fluctuations in common stock prices. We use various derivatives to manage our exposure to equity risk, which arises from products in which the return or interest we credit is tied to an external equity index as well as products subject to minimum contractual guarantees.

We purchase equity call spreads ("option collars") to hedge the equity participation rates promised to contractholders in conjunction with our fixed deferred annuity and universal life products that credit interest based on changes in an external equity index. We use exchange-traded futures and equity put options to hedge against changes in the value of the GMWB liability related to the GMWB rider on our variable annuity product. The premium associated with certain options is paid quarterly over the life of the option contract.

Credit Contracts

Credit risk relates to the uncertainty associated with the continued ability of a given obligor to make timely payments of principal and interest. We use credit default swaps to enhance the return on our investment portfolio by providing comparable exposure to fixed income securities that might not be available in the primary market. They are also used to hedge credit exposures in our investment portfolio. Credit derivatives are used to sell or buy credit protection on an identified name or names on an unfunded or synthetic basis in return for receiving or paying a quarterly premium. The premium generally corresponds to a referenced name's credit spread at the time the agreement is executed. In cases where we sell protection, we also buy a quality cash bond to match against the credit default swap, thereby entering into a synthetic transaction replicating a cash security. When selling protection, if there is an event of default by the referenced name, as defined by the agreement, we are obligated to pay the counterparty the referenced amount of the contract and receive in return the referenced security in a principal amount equal to the notional value of the credit default swap.

Other Contracts

Embedded Derivatives. We purchase or issue certain financial instruments or products that contain a derivative instrument that is embedded in the financial instrument or product. When it is determined that the embedded derivative possesses economic characteristics that are not clearly or closely related to the economic characteristics of the host contract and a separate instrument with the same terms would qualify as a derivative instrument, the embedded derivative is bifurcated from the host instrument for measurement purposes. The embedded derivative, which is reported with the host instrument in the consolidated statements of financial position, is carried at fair value.

We offer group annuity contracts that have guaranteed separate accounts as an investment option. We also offer funds with embedded fixed rate guarantees as investment options in our defined contribution plans in Hong Kong.

We have fixed deferred annuities and universal life products that credit interest based on changes in an external equity index. We also have certain variable annuity products with a GMWB rider, which allows the customer to make withdrawals of a specified annual amount, either for a fixed number of years or for the lifetime of the customer, even if the account value is fully exhausted. Declines in the equity markets may increase our exposure to benefits under contracts with the GMWB. We economically hedge the exposure in these contracts, as previously explained.

5. Derivative Financial Instruments — (continued)

We have a funds withheld payable associated with our coinsurance with funds withheld agreement with Talcott Life & Annuity Re. The funds withheld payable has an embedded total return swap as the total return of the funds withheld assets are transferred to Talcott Life & Annuity Re, which is not based on our own creditworthiness.

Exposure

Our risk of loss is typically limited to the fair value of our derivative instruments and not to the notional or contractual amounts of these derivatives. We are also exposed to credit losses in the event of nonperformance of the counterparties. Our current credit exposure is limited to the value of derivatives that have become favorable to us. This credit risk is minimized by purchasing such agreements from financial institutions with high credit ratings and by establishing and monitoring exposure limits. We also utilize various credit enhancements, including collateral and credit triggers to reduce the credit exposure to our derivative instruments.

Derivatives may be exchange-traded or they may be privately negotiated contracts, which are usually referred to as over-the-counter ("OTC") derivatives. Certain of our OTC derivatives are cleared and settled through central clearing counterparties ("OTC cleared"), while others are bilateral contracts between two counterparties ("bilateral OTC"). Our derivative transactions are generally documented under International Swaps and Derivatives Association, Inc. ("ISDA") Master Agreements. Management believes that such agreements provide for legally enforceable set-off and close-out netting of exposures to specific counterparties. Under such agreements, in connection with an early termination of a transaction, we are permitted to set off our receivable from a counterparty against our payables to the same counterparty arising out of all included transactions. For reporting purposes, we do not offset fair value amounts of bilateral OTC derivatives for the right to reclaim cash collateral or the obligation to return cash collateral against fair value amounts recognized for derivative instruments executed with the same counterparties under master netting agreements. OTC cleared derivatives have variation margin that is legally characterized as settlement of the derivative exposure, which reduces their fair value in the consolidated statements of financial position.

We posted $750.9 million and $240.8 million in cash and securities under collateral arrangements as of December 31, 2022 and December 31, 2021, respectively, to satisfy collateral and initial margin requirements associated with our derivative credit support agreements and FCM agreements.

Certain of our derivative instruments contain provisions that require us to maintain an investment grade rating from each of the major credit rating agencies on our debt. If the ratings on our debt were to fall below investment grade, it would be in violation of these provisions and the counterparties to the derivative instruments could request immediate payment or demand immediate and ongoing full overnight collateralization on derivative instruments in net liability positions. The aggregate fair value, inclusive of accrued interest, of all derivative instruments with credit-risk-related contingent features that were in a liability position without regard to netting under derivative credit support annex agreements as of December 31, 2022 and December 31, 2021, was $632.6 million and $146.3 million, respectively. Cleared derivatives have contingent features that require us to post excess margin as required by the FCM. The terms surrounding excess margin vary by FCM agreement. With respect to derivatives containing collateral provisions, we posted collateral and initial margin of $750.9 million and $240.8 million as of December 31, 2022 and December 31, 2021, respectively, in the normal course of business, which reflects netting under derivative agreements. If the credit-risk-related contingent features underlying these agreements were triggered on December 31, 2022, we would be required to post an additional $89.6 million of collateral to our counterparties.

As of December 31, 2022 and December 31, 2021, we had received $148.8 million and $214.9 million, respectively, of cash collateral associated with our derivative credit support annex agreements and FCM agreements, for which we recorded a corresponding liability reflecting our obligation to return the collateral.

5. Derivative Financial Instruments — (continued)

Notional amounts are used to express the extent of our involvement in derivative transactions and represent a standard measurement of the volume of our derivative activity. Notional amounts represent those amounts used to calculate contractual flows to be exchanged and are not paid or received, except for contracts such as currency swaps. Credit exposure represents the gross amount owed to us under derivative contracts as of the valuation date. The notional amounts and credit exposure of our derivative financial instruments by type were as follows:

	December 31, 2022	December 31, 2021
	(in millions)	
Notional amounts of derivative instruments		
Interest rate contracts:		
Interest rate swaps	**$52,249.9**	$47,927.4
Interest rate options	**4,418.9**	2,373.9
Interest rate forwards	**2,527.5**	2,181.6
Interest rate futures	**877.5**	1,774.5
Foreign exchange contracts:		
Currency swaps	**1,634.7**	1,242.7
Currency forwards	**1,123.1**	1,043.6
Equity contracts:		
Equity options	**2,049.3**	2,378.2
Equity futures	**574.1**	150.4
Credit contracts:		
Credit default swaps	**400.0**	295.0
Other contracts:		
Embedded derivatives	**31,071.2**	10,060.8
Total notional amounts at end of period	**$96,926.2**	$69,428.1
Credit exposure of derivative instruments		
Interest rate contracts:		
Interest rate swaps	**$ 64.2**	$ 205.9
Interest rate options	**41.7**	24.5
Interest rate forwards	**0.1**	15.3
Foreign exchange contracts:		
Currency swaps	**171.1**	51.1
Currency forwards	**34.0**	11.3
Equity contracts:		
Equity options	**16.5**	37.3
Credit contracts:		
Credit default swaps	**3.6**	2.7
Total gross credit exposure	**331.2**	348.1
Less: collateral received	**191.9**	244.6
Net credit exposure	**$ 139.3**	$ 103.5

5. Derivative Financial Instruments — (continued)

The fair value of our derivative instruments classified as assets and liabilities was as follows:

	Derivative assets (1)		Derivative liabilities (2)	
	December 31, 2022	December 31, 2021	December 31, 2022	December 31, 2021
	(in millions)			
Derivatives designated as hedging instruments				
Interest rate contracts	**$ 20.0**	$ 4.1	**$ 105.1**	$ 19.0
Foreign exchange contracts	**134.6**	48.4	**19.7**	17.6
Total derivatives designated as hedging instruments	**$154.6**	$ 52.5	**$ 124.8**	$ 36.6
Derivatives not designated as hedging instruments				
Interest rate contracts	**$ 81.1**	$233.4	**$ 439.9**	$ 13.0
Foreign exchange contracts	**65.9**	11.3	**21.9**	83.3
Equity contracts	**16.5**	37.3	**45.6**	90.9
Credit contracts	**3.5**	2.6	**2.0**	2.2
Other contracts	**—**	—	**(3,684.6)**	356.3
Total derivatives not designated as hedging instruments	**167.0**	284.6	**(3,175.2)**	545.7
Total derivative instruments	**$321.6**	$337.1	**$(3,050.4)**	$582.3

(1) The fair value of derivative assets is reported with other investments on the consolidated statements of financial position.

(2) The fair value of derivative liabilities is reported with other liabilities on the consolidated statements of financial position, with the exception of certain embedded derivative liabilities. Embedded derivatives with a net liability fair value of $(31.8) million and $356.3 million as of December 31, 2022 and December 31, 2021, respectively, are reported with contractholder funds on the consolidated statements of financial position. Embedded derivatives with a net (asset) liability fair value of $(3,652.8) million as of December 31, 2022, are reported with funds withheld payable on the consolidated statements of financial position.

Credit Derivatives Sold

When we sell credit protection, we are exposed to the underlying credit risk similar to purchasing a fixed maturity security instrument. Our credit derivative contracts sold reference a single name or reference security (referred to as "single name credit default swaps"). These instruments are either referenced in an OTC credit derivative transaction or embedded within an investment structure that has been fully consolidated into our financial statements.

These credit derivative transactions are subject to events of default defined within the terms of the contract, which normally consist of bankruptcy, failure to pay, or modified restructuring of the reference entity and/or issue. If a default event occurs for a reference name or security, we are obligated to pay the counterparty an amount equal to the notional amount of the credit derivative transaction. As a result, our maximum future payment is equal to the notional amount of the credit derivative. In certain cases, we also may have purchased credit protection with identical underlyings to certain of our sold protection transactions. As of December 31, 2022 and December 31, 2021, we did not purchase credit protection relating to our sold protection transactions. In certain circumstances, our potential loss could also be reduced by any amount recovered in the default proceedings of the underlying credit name.

The following tables show our credit default swap protection sold by types of contract, types of referenced/underlying asset class and external agency rating for the underlying reference security. The maximum future payments are undiscounted and have not been reduced by the effect of any offsetting transactions, collateral or recourse features described above.

5. Derivative Financial Instruments — (continued)

	December 31, 2022			
	Notional amount	**Fair value**	**Maximum future payments**	**Weighted average expected life (in years)**
		(in millions)		
Single name credit default swaps				
Corporate debt				
A	**$ 40.0**	**$ 0.4**	**$ 40.0**	**2.5**
BBB	**190.0**	**2.2**	**190.0**	**3.1**
BB	**20.0**	**(0.2)**	**20.0**	**4.5**
Sovereign				
A	**20.0**	**0.2**	**20.0**	**2.5**
Total credit default swap protection sold	**$270.0**	**$ 2.6**	**$270.0**	**3.1**

	December 31, 2021			
	Notional amount	**Fair value**	**Maximum future payments**	**Weighted average expected life (in years)**
		(in millions)		
Single name credit default swaps				
Corporate debt				
A	$ 20.0	$0.4	$ 20.0	3.5
BBB	110.0	1.7	110.0	3.0
Sovereign				
A	20.0	0.5	20.0	3.5
Total credit default swap protection sold	$150.0	$2.6	$150.0	3.1

Fair Value and Cash Flow Hedges

Fair Value Hedges

We use fixed-to-floating rate interest rate swaps to more closely align the interest rate characteristics of certain assets and have used them to align the interest rate characteristics of certain liabilities. In general, these swaps are used in asset and liability management to modify duration, which is a measure of sensitivity to interest rate changes.

The net interest effect of interest rate swap transactions for derivatives in fair value hedges is recorded as an adjustment to income or expense of the underlying hedged item in our consolidated statements of operations.

The following amounts were recorded on the consolidated statements of financial position related to cumulative basis adjustments for fair value hedges. The amortized cost includes the amortized cost basis and the fair value hedging basis adjustment.

5. Derivative Financial Instruments — (continued)

Line item in the consolidated statements of financial position in which the h edged item is included	Amortized cost of hedged item		Cumulative amount of fair value hedging basis adjustment increase/(decrease) included in the amortized cost of the hedged item	
	December 31, 2022	December 31, 2021	December 31, 2022	December 31, 2021
		(in millions)		
Fixed maturities, available-for-sale (1):				
Active hedging relationships	**$3,498.6**	$1,859.9	**$(153.4)**	$(7.1)
Discontinued hedging relationships	**48.8**	79.7	**1.3**	2.8
Total fixed maturities, available-for-sale in active or discontinued hedging relationships	**$3,547.4**	$1,939.6	**$(152.1)**	$(4.3)

(1) These amounts include the amortized cost basis of closed portfolios used to designate last-of-layer hedging relationships in which the hedged last layer amount is expected to remain at the end of the hedging relationship. As of December 31, 2022 and December 31, 2021, the amortized cost basis of the closed portfolios used in these hedging relationships was $3,256.9 million and $1,390.4 million, respectively, the cumulative basis adjustments associated with these hedging relationships was $(102.4) million and $(3.9) million, respectively, and the amount of the designated hedged items were $1,110.0 million and $510.0 million, respectively.

Cash Flow Hedges

We utilize floating-to-fixed rate interest rate swaps to eliminate the variability in cash flows of recognized financial assets and liabilities.

We enter into currency exchange swap agreements to convert both principal and interest payments of certain foreign denominated assets and liabilities into U.S. dollar denominated fixed rate instruments to eliminate the exposure to future currency volatility on those items.

We use bond forwards and have used floating-to-fixed rate interest rate swaps to hedge forecasted transactions.

The net interest effect of interest rate swap and currency swap transactions for derivatives in cash flow hedges is recorded as an adjustment to income or expense of the underlying hedged item in our consolidated statements of operations.

The maximum length of time we are hedging our exposure to the variability in future cash flows for forecasted transactions, excluding those related to the payments of variable interest on existing financial assets and liabilities, is 4.2 years. As of December 31, 2022, we had $102.1 million of net losses reported in AOCI on the consolidated statements of financial position related to active hedges of forecasted transactions. If a hedged forecasted transaction is no longer probable of occurring, cash flow hedge accounting is discontinued. If it is probable that the hedged forecasted transaction will not occur, the deferred gain or loss is immediately reclassified from AOCI into net income.

The following table shows the effect of derivatives in cash flow hedging relationships on the consolidated statements of financial position.

5. Derivative Financial Instruments — (continued)

Derivatives in cash flow hedging relationships	Related hedged item	Amount of gain (loss) recognized in AOCI on derivatives for the year ended December 31, 2022	2021	2020
			(in millions)	
Interest rate contracts	Fixed maturities, available-for-sale	**$(102.1)**	$ —	$ (3.0)
Interest rate contracts	Investment contracts	**15.9**	4.1	—
Foreign exchange contracts	Fixed maturities, available-for-sale	**84.2**	53.4	(37.1)
Total		**$ (2.0)**	$57.5	$(40.1)

We expect to reclassify net gains of $18.7 million from AOCI into net income in the next 12 months, which includes both net deferred gains on discontinued hedges and net gains on periodic settlements of active hedges. Actual amounts may vary from this amount as a result of market conditions.

Effect of Fair Value and Cash Flow Hedges on Consolidated Statements of Operations

The following tables show the effect of derivatives in fair value and cash flow hedging relationships and the related hedged items on the consolidated statements of operations.

	For the year ended December 31, 2022: Net investment income related to hedges of fixed maturities, available-for-sale	Net realized capital gains (losses) related to hedges of fixed maturities, available-for-sale	Benefits, claims and settlement expenses related to hedges of investment contracts
		(in millions)	
Total amounts of consolidated statement of operations line items in which the effects of fair value and cash flow hedges are reported	**$3,830.4**	**$(258.4)**	**$6,370.8**
Gains on fair value hedging relationships:			
Interest rate contracts:			
Loss recognized on hedged item	**$ (154.4)**	**$ —**	**$ —**
Gain recognized on derivatives	**151.6**	**—**	**—**
Amortization of hedged item basis adjustments	**(1.3)**	**—**	**—**
Amounts related to periodic settlements on derivatives	**5.2**	**—**	**—**
Total gain recognized for fair value hedging relationships	**$ 1.1**	**$ —**	**$ —**
Gains on cash flow hedging relationships:			
Interest rate contracts:			
Gain (loss) reclassified from AOCI on derivatives	**$ 9.0**	**$ —**	**$ (0.1)**
Gain reclassified from AOCI as a result that a forecasted transaction is no longer probable of occurring	**—**	**18.5**	**—**
Amounts related to periodic settlements on derivatives	**—**	**—**	**3.7**
Foreign exchange contracts:			
Gain reclassified from AOCI on derivatives	**—**	**0.6**	**—**
Amounts related to periodic settlements on derivatives	**14.5**	**—**	**—**
Total gain recognized for fair value hedging relationships	**$ 23.5**	**$ 19.1**	**$ 3.6**

5. Derivative Financial Instruments — (continued)

	For the year ended December 31, 2021		
	Net investment income related to hedges of fixed maturities, available-for-sale	Net realized capital gains related to hedges of fixed maturities, available-for-sale	Benefits, claims and settlement expenses related to hedges of investment contracts
	(in millions)		
Total amounts of consolidated statement of operations line items in which the effects of fair value and cash flow hedges are reported	$4,406.1	$ 2.5	$7,097.0
Losses on fair value hedging relationships:			
Interest rate contracts:			
Loss recognized on hedged item	$ (28.7)	$ —	$ —
Gain recognized on derivatives	28.6	—	—
Amortization of hedged item basis adjustments	(1.8)	—	—
Amounts related to periodic settlements on derivatives	(10.0)	—	—
Total loss recognized for fair value hedging relationships	$ (11.9)	$ —	$ —
Gains (losses) on cash flow hedging relationships:			
Interest rate contracts:			
Gain (loss) reclassified from AOCI on derivatives	$ 15.4	$ —	$ (0.1)
Gain reclassified from AOCI as a result that a forecasted transaction is no longer probable of occurring	—	1.0	—
Amounts related to periodic settlements on derivatives	—	—	(0.4)
Foreign exchange contracts:			
Gain reclassified from AOCI on derivatives	—	9.2	—
Amounts related to periodic settlements on derivatives	9.6	—	—
Total gain (loss) recognized for fair value hedging relationships	$ 25.0	$10.2	$ (0.5)

5. Derivative Financial Instruments — (continued)

	For the year ended December 31, 2020		
	Net investment income related to hedges of fixed maturities, available-for-sale	Net realized capital gains related to hedges of fixed maturities, available-for-sale	Benefits, claims and settlement expenses related to hedges of investment contracts
		(in millions)	
Total amounts of consolidated statement of operations line items in which the effects of fair value and cash flow hedges are reported	$3,890.6	$302.6	$8,281.5
Losses on fair value hedging relationships:			
Interest rate contracts:			
Gain recognized on hedged item	$ 3.3	$ —	$ —
Loss recognized on derivatives	(3.8)	—	—
Amortization of hedged item basis adjustments	(2.5)	—	—
Amounts related to periodic settlements on derivatives	(6.2)	—	—
Total loss recognized for fair value hedging relationships	$ (9.2)	$ —	$ —
Gains (losses) on cash flow hedging relationships:			
Interest rate contracts:			
Gain (loss) reclassified from AOCI on derivatives	$ 18.1	$ 2.7	$ (0.1)
Gain reclassified from AOCI as a result that a forecasted transaction is no longer probable of occurring	—	0.1	—
Foreign exchange contracts:			
Gain reclassified from AOCI on derivatives	—	6.3	—
Amounts related to periodic settlements on derivatives	8.2	—	—
Total gain (loss) recognized for fair value hedging relationships	$ 26.3	$ 9.1	$ (0.1)

Net Investment Hedges

We may take measures to hedge our net equity investments in our foreign operations from currency risk. This is accomplished with the use of currency forwards.

Gains and losses associated with net investment hedges are recorded in AOCI and will be released into net income if our investment in the foreign operation is sold or substantially liquidated.

The following tables show the effect of foreign exchange contracts used to hedge a portion of our net investment in certain sponsored investment funds on the consolidated financial statements.

	Amount of gain recognized in AOCI on derivatives for the year ended December 31,		
Derivatives in net investment hedging relationships	**2022**	**2021**	**2020**
		(in millions)	
Foreign exchange contracts	**$1.5**	$2.9	$7.9
Total	**$1.5**	$2.9	$7.9

5. Derivative Financial Instruments — (continued)

Derivatives in net investment hedging relationships	Amount of gain reclassified from AOCI into net realized capital gains (losses) for the year ended December 31, 2022	2021	2020
	(in millions)		
Foreign exchange contracts	**$—**	$—	$(7.1)
Total	**$—**	$—	$(7.1)

Derivatives Not Designated as Hedging Instruments

Our use of futures, certain swaptions and swaps, option collars, options and forwards are effective from an economic standpoint, but they have not been designated as hedges for financial reporting purposes. As such, periodic changes in the market value of these instruments, which includes mark-to-market gains and losses as well as periodic and final settlements, primarily flow directly into net realized capital gains (losses) on the consolidated statements of operations. However, the change in fair value of the funds withheld embedded derivative is separately reported on the consolidated statements of operations.

The following table shows the effect of derivatives not designated as hedging instruments, including fair value changes of embedded derivatives that have been bifurcated from the host contract, on the consolidated statements of operations.

Derivatives not designated as hedging instruments	Amount of gain (loss) recognized in net income on derivatives for the year ended December 31, 2022	2021	2020
	(in millions)		
Interest rate contracts	**$ (317.7)**	$ (46.6)	$ 346.5
Foreign exchange contracts	**83.7**	(121.9)	54.7
Equity contracts	**20.7**	(81.5)	(96.6)
Credit contracts	**0.1**	0.1	1.8
Other contracts (1)	**4,033.1**	103.7	(255.5)
Total	**$3,819.9**	$(146.2)	$ 50.9

(1) Includes the change in fair value of the funds withheld embedded derivative.

6. Closed Block

In connection with the 1998 MIHC formation, Principal Life formed a Closed Block to provide reasonable assurance to policyholders included therein that, after the formation of the MIHC, assets would be available to maintain dividends in aggregate in accordance with the 1997 policy dividend scales, if the experience underlying such scales continued. Assets of Principal Life were allocated to the Closed Block in an amount that produces cash flows which, together with anticipated revenue from policies and contracts included in the Closed Block, were expected to be sufficient to support the Closed Block policies. This includes, but is not limited to, provisions for payment of claims, certain expenses, charges and taxes, and to provide for continuation of policy and contract dividends in aggregate in accordance with the 1997 dividend scales, if the experience underlying such scales continues, and to allow for appropriate adjustments in such scales, if such experience changes. Due to adjustable life policies being included in the Closed Block, the Closed Block is charged with amounts necessary to properly fund for certain adjustments, such as face amount and premium increases, that are made to these policies after the Closed Block inception date. These amounts are referred to as Funding Adjustment Charges.

6. Closed Block — (continued)

Assets allocated to the Closed Block inure solely to the benefit of the holders of policies included in the Closed Block. Closed Block assets and liabilities are carried on the same basis as other similar assets and liabilities. Principal Life will continue to pay guaranteed benefits under all policies, including the policies within the Closed Block, in accordance with their terms. If the assets allocated to the Closed Block, the investment cash flows from those assets and the revenues from the policies included in the Closed Block, including investment income thereon, prove to be insufficient to pay the benefits guaranteed under the policies included in the Closed Block, Principal Life will be required to make such payments from its general funds. No additional policies were added to the Closed Block, nor was the Closed Block affected in any other way, as a result of the demutualization.

A policyholder dividend obligation ("PDO") is required to be established for higher than expected earnings in the Closed Block that will need to be paid as dividends unless future performance of the Closed Block is less favorable than originally expected. A model of the Closed Block was established to produce the pattern of expected earnings, assets and liabilities in the Closed Block. These projections are utilized to determine ratios that will allow us to compare actual cumulative earnings to expected cumulative earnings and determine the amount of the PDO. As of December 31, 2022 and 2021, the PDO was $0.0 million and $210.7 million, respectively.

Closed Block liabilities and assets designated to the Closed Block were as follows:

	December 31, 2022	December 31, 2021
	(in millions)	
Closed Block liabilities		
Future policy benefits and claims	**$3,128.1**	$3,286.0
Other policyholder funds	**5.1**	5.3
Policyholder dividends payable	**168.2**	176.6
Policyholder dividend obligation	**—**	210.7
Other liabilities	**24.9**	8.8
Total Closed Block liabilities	**3,326.3**	3,687.4
Assets designated to the Closed Block		
Fixed maturities, available-for-sale	**1,690.2**	2,191.6
Fixed maturities, trading	**2.0**	2.4
Equity securities	**0.8**	1.0
Mortgage loans	**544.9**	554.9
Policy loans	**407.4**	425.2
Other investments	**62.2**	48.4
Total investments	**2,707.5**	3,223.5
Cash and cash equivalents	**62.0**	19.7
Accrued investment income	**30.3**	32.6
Reinsurance recoverable and deposit receivable	**3.9**	5.1
Premiums due and other receivables	**4.1**	3.3
Deferred tax asset	**62.0**	24.6
Other assets	**0.1**	—
Total assets designated to the Closed Block	**2,869.9**	3,308.8
Excess of Closed Block liabilities over assets designated to the Closed Block	**456.4**	378.6
Amounts included in accumulated other comprehensive income	**(111.9)**	0.6
Maximum future earnings to be recognized from Closed Block assets and liabilities	**$ 344.5**	$ 379.2

6. Closed Block — (continued)

Closed Block revenues and expenses were as follows:

	For the year ended December 31,		
	2022	2021	2020
		(in millions)	
Revenues			
Premiums and other considerations	**$178.0**	$196.1	$217.6
Net investment income	**129.1**	137.6	143.6
Net realized capital gains (losses)	**(21.2)**	(4.6)	16.0
Total revenues	**285.9**	329.1	377.2
Expenses			
Benefits, claims and settlement expenses	**184.3**	212.0	212.8
Dividends to policyholders	**92.5**	92.6	117.8
Operating expenses	**2.2**	2.3	2.7
Total expenses	**279.0**	306.9	333.3
Closed Block revenues, net of Closed Block expenses, before income taxes	**6.9**	22.2	43.9
Income taxes	**0.7**	3.9	8.4
Closed Block revenues, net of Closed Block expenses and income taxes	**6.2**	18.3	35.5
Funding adjustments and other transfers	**28.5**	(4.0)	(2.2)
Closed Block revenues, net of Closed Block expenses, income taxes and funding adjustments	**$ 34.7**	$ 14.3	$ 33.3

The change in maximum future earnings of the Closed Block was as follows:

	For the year ended December 31,		
	2022	2021	2020
		(in millions)	
Beginning of year	**$379.2**	$393.5	$426.9
Effects of implementation of accounting changes (1)	**—**	—	0.1
End of year	**344.5**	379.2	393.5
Change in maximum future earnings	**$ (34.7)**	$ (14.3)	$ (33.3)

(1) Includes the effects of implementation of accounting changes related to credit losses in 2020.

Principal Life charges the Closed Block with U.S. federal income taxes, payroll taxes, state and local premium taxes and other state or local taxes, licenses and fees as provided in the plan of reorganization.

7. Deferred Acquisition Costs

Acquisition costs deferred and amortized were as follows:

	For the year ended December 31,		
	2022	2021	2020
		(in millions)	
Balance at beginning of year	**$3,757.5**	$3,409.7	$3,521.3
Costs deferred during the year	**379.0**	461.4	457.0
Amortized to expense during the year (1)	**(384.4)**	(285.4)	(388.1)
Adjustment related to unrealized (gains) losses on available-for-sale securities and derivative instruments (2)	**934.8**	171.8	(180.5)
Balance at end of year	**$4,686.9**	$3,757.5	$3,409.7

7. Deferred Acquisition Costs — (continued)

(1) Includes adjustments for revisions to estimated gross profits. Amortization for the year ended December 31, 2022, includes the impact from re-cohorting. Refer to Note 1, Nature of Operations and Significant Accounting Policies, under the caption "Actuarial Balance Re-Cohorting" for further details.

(2) The adjustment for the year ended December 31, 2022, includes the impact from re-cohorting. Refer to Note 1, Nature of Operations and Significant Accounting Policies, under the caption "Actuarial Balance Re-Cohorting" for further details.

8. Insurance Liabilities

Contractholder Funds

Major components of contractholder funds in the consolidated statements of financial position were as follows:

	December 31,	
	2022	2021
	(in millions)	
Liabilities for investment contracts:		
Liabilities for individual annuities	**$ 7,739.3**	$10,652.3
GICs	**13,787.7**	12,206.0
Funding agreements	**12,318.7**	11,685.5
Other investment contracts	**1,493.4**	1,593.5
Total liabilities for investment contracts	**35,339.1**	36,137.3
Universal life and other reserves	**7,438.2**	7,460.7
Total contractholder funds	**$42,777.3**	$43,598.0

Our GICs and funding agreements contain provisions limiting or prohibiting early surrenders, which typically include penalties for early surrenders, minimum notice requirements or, in the case of funding agreements with survivor options, minimum pre-death holding periods and specific maximum amounts.

Funding agreements include those issued directly to nonqualified institutional investors and those issued to the FHLB Des Moines under their membership funding programs. As of December 31, 2022 and 2021, $4,275.5 million and $4,252.4 million, respectively, of liabilities were outstanding with respect to issuances under the program with FHLB Des Moines. In addition, we have five separate programs where the funding agreements have been issued directly or indirectly to unconsolidated special purpose entities. Claims for principal and interest under funding agreements are afforded equal priority to claims of life insurance and annuity policyholders under insolvency provisions of Iowa Insurance Laws.

Principal Life was authorized to issue up to $4.0 billion of funding agreements under a program established in 1998 to support the prospective issuance of medium term notes by an unaffiliated entity in non-U.S. markets. As of December 31, 2022 and 2021, $75.6 million and $75.0 million, respectively, of liabilities were outstanding with respect to the issuance outstanding under this program.

In addition, Principal Life was authorized to issue up to $7.0 billion of funding agreements under a program established in 2001 to support the prospective issuance of medium term notes by an unaffiliated entity in both domestic and international markets. The unaffiliated entity is an unconsolidated special purpose entity. As of December 31, 2022 and 2021, $201.9 million and $201.8 million, respectively, of liabilities were being held with respect to issuances outstanding under this program. Principal Life does not anticipate any new issuance activity under this program, given our December 2005 termination of the dealership agreement for this program and the availability of the program established in 2011 described below.

8. Insurance Liabilities — (continued)

Additionally, Principal Life was authorized to issue up to $5.0 billion of funding agreements under a program that was originally established in 2011 to support the prospective issuance of medium term notes by an unaffiliated entity in both domestic and international markets. The unaffiliated entity is an unconsolidated special purpose entity. In June 2015, this program was amended to authorize issuance of up to an additional $4.0 billion. In November 2017, this program was amended to authorize issuance of up to an additional $4.0 billion. In February 2021, this program was amended to authorize issuance of up to an additional $4.0 billion. As of December 31, 2022 and 2021, $7,765.7 million and $7,156.3 million, respectively, of liabilities were being held with respect to issuances outstanding under this program. Principal Life's payment obligations on each funding agreement issued under this program are guaranteed by PFG. The program established in 2011 is not registered with the United States Securities and Exchange Commission ("SEC").

Liability for Unpaid Claims

The liability for unpaid claims is reported in future policy benefits and claims within our consolidated statements of financial position. Activity associated with unpaid claims was as follows:

	For the year ended December 31,		
	2022	2021	2020
		(in millions)	
Balance at beginning of year	**$2,659.4**	$2,534.9	$2,365.5
Less: reinsurance recoverable	**442.1**	436.9	403.8
Net balance at beginning of year	**2,217.3**	2,098.0	1,961.7
Incurred:			
Current year	**1,664.2**	1,572.5	1,376.8
Prior years	**32.1**	7.2	26.6
Total incurred	**1,696.3**	1,579.7	1,403.4
Payments:			
Current year	**1,093.2**	1,025.0	863.8
Prior years	**465.4**	435.4	403.3
Total payments	**1,558.6**	1,460.4	1,267.1
Net balance at end of year	**2,355.0**	2,217.3	2,098.0
Plus: reinsurance recoverable	**478.1**	442.1	436.9
Balance at end of year	**$2,833.1**	$2,659.4	$2,534.9
Amounts not included in the rollforward above:			
Claim adjustment expense liabilities	**$ 59.7**	$ 59.5	$ 57.8

Incurred liability adjustments relating to prior years, which affected current operations during 2022, 2021 and 2020, resulted in part from developed claims for prior years being different than were anticipated when the liabilities for unpaid claims were originally estimated. These trends have been considered in establishing the current year liability for unpaid claims.

Short-Duration Contracts

Claims Development

The following tables present undiscounted information about claims development by incurral year, including separate information about incurred claims and paid claims net of reinsurance for the periods indicated. The tables also include information on incurred but not reported claims and the cumulative number of reported claims.

8. Insurance Liabilities — (continued)

The tables present information for the number of years for which claims incurred typically remain outstanding, but do not exceed ten years. The data is disaggregated into groupings of claims with similar characteristics, such as duration of the claim payment period and average claim amount, and with consideration to the overall size of the groupings. Outstanding liabilities equal total net incurred claims less total net paid claims plus outstanding liabilities for net unpaid claims of prior years.

LTD and Group Life Waiver Claims

	Net incurred claims (1)										Incurred but not reported claims	Cumulative number of reported claims
	December 31,											
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022	2022
	($ in millions)											
Incurral year												
2013	$219.3	$203.3	$188.4	$190.7	$182.3	$179.5	$177.1	$173.4	$174.5	**$ 174.5**	**$ 0.1**	**7,051**
2014		242.2	231.4	214.4	218.1	206.2	201.9	202.0	199.3	**199.8**	**0.1**	**7,604**
2015			231.0	227.2	217.2	215.3	208.2	210.0	211.8	**210.5**	**0.1**	**7,181**
2016				229.8	228.4	219.4	219.5	214.4	218.7	**221.9**	**0.1**	**6,167**
2017					238.4	239.7	243.1	245.8	245.2	**246.5**	**0.1**	**6,082**
2018						239.4	245.1	239.2	239.8	**235.3**	**0.1**	**5,774**
2019							255.2	248.4	240.4	**240.2**	**5.7**	**5,945**
2020								252.1	231.0	**221.1**	**8.4**	**5,913**
2021									259.7	**244.5**	**4.0**	**5,484**
2022										**274.3**	**109.8**	**3,422**
Total net incurred claims										**$2,268.6**		

	Net cumulative paid claims (1)									
	December 31,									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	(in millions)									
Incurral year										
2013	$12.5	$55.0	$81.4	$97.0	$106.4	$116.4	$123.2	$129.0	$134.9	**$ 139.6**
2014		16.1	66.0	96.3	111.8	122.3	132.4	140.8	147.2	**153.3**
2015			16.9	67.0	98.0	114.6	126.8	137.1	146.5	**154.0**
2016				16.2	70.6	105.6	124.9	136.8	147.2	**157.1**
2017					17.8	76.5	115.0	135.9	151.7	**165.4**
2018						20.1	79.9	115.7	135.7	**150.3**
2019							19.2	79.7	117.5	**136.4**
2020								20.6	78.8	**113.1**
2021									19.8	**79.0**
2022										**19.6**
Total net paid claims										**1,267.8**
All outstanding liabilities for unpaid claims prior to 2013 net of reinsurance										**239.5**
Total outstanding liabilities for unpaid claims net of reinsurance										**$1,240.3**

(1) 2013 - 2021 unaudited.

8. Insurance Liabilities — (continued)

Dental, Vision, STD, Critical Illness, Accident and PFML Claims

	Net incurred claims (1)		Incurred but not reported claims	Cumulative number of reported claims
	December 31,			
	2021	2022	2022	2022
	($ in millions)			
Incurral year				
2021	$826.0	**$ 814.1**	**$ —**	**3,749,753**
2022		**924.4**	**56.5**	**4,114,456**
Total net incurred claims		**$1,738.5**		

	Net cumulative paid claims (1)	
	December 31,	
	2021	2022
	(in millions)	
Incurral year		
2021	$753.4	**$ 813.3**
2022		**845.5**
Total net paid claims		**1,658.8**
All outstanding liabilities for unpaid claims prior to 2021 net of reinsurance		**—**
Total outstanding liabilities for unpaid claims net of reinsurance		**$ 79.7**

(1) 2021 unaudited.

8. Insurance Liabilities — (continued)

Group Life Claims

	Net incurred claims (1)		Incurred but not reported claims	Cumulative number of reported claims
	December 31,			
	2021	2022	2022	2022
	($ in millions)			
Incurral year				
2021	$317.6	**$321.5**	**$ 0.8**	**7,079**
2022		**279.3**	**24.7**	**5,368**
Total net incurred claims		**$600.8**		

	Net cumulative paid claims (1)	
	December 31,	
	2021	2022
	(in millions)	
Incurral year		
2021	$243.9	**$314.3**
2022		**218.3**
Total net paid claims		**532.6**
All outstanding liabilities for unpaid claims prior to 2021 net of reinsurance		**5.0**
Total outstanding liabilities for unpaid claims net of reinsurance		**$ 73.2**

(1) 2021 unaudited.

Reconciliation of Unpaid Claims to Liability for Unpaid Claims

Our reconciliation of net outstanding liabilities for unpaid claims of short-duration contracts to the liability for unpaid claims follows:

	December 31, 2022			
	LTD and Group Life Waiver	Dental, Vision, STD, Critical Illness, Accident and PFML	Group Life	Consolidated
	(in millions)			
Net outstanding liabilities for unpaid claims	**$1,240.3**	**$79.7**	**$73.2**	**$1,393.2**
Reconciling items:				
Reinsurance recoverable on unpaid claims	**45.3**	**—**	**0.4**	**45.7**
Impact of discounting	**(209.4)**	**—**	**—**	**(209.4)**
Liability for unpaid claims — short-duration contracts	**$1,076.2**	**$79.7**	**$73.6**	**1,229.5**
Insurance contracts other than short-duration				**1,603.6**
Liability for unpaid claims				**$2,833.1**

8. Insurance Liabilities — (continued)

Claim Duration and Payout

Our historical average percentage of claims paid in each year from incurral was as follows:

Year	December 31, 2022 (1) LTD and Group Life Waiver	Dental, Vision, STD, Critical Illness, Accident and PFML	Group Life
1	**7.9%**	**91.8%**	**79.6%**
2	**24.7**	**8.0**	**18.5**
3	**15.4**		
4	**8.3**		
5	**5.8**		
6	**5.2**		
7	**4.3**		
8	**3.4**		
9	**3.2**		
10	**2.6**		

(1) Unaudited.

Discounting

The following table provides the carrying amount of liabilities reported at present value for short-duration contract unpaid claims. We use a range of discount rates to derive the present value of the unpaid claims. The ranges of discount rates as well as the aggregate amount of discount deducted to derive the liabilities for unpaid claims and interest accretion recognized are also disclosed. Interest accretion is included in benefits, claims and settlement expenses within our consolidated statements of operations.

	LTD and Group Life Waiver	Dental, Vision, STD, Critical Illness, Accident and PFML	Group Life
		($ in millions)	
Carrying amount of liabilities for unpaid claims			
December 31, 2022	**$1,076.2**	**$ 79.7**	**$ 73.6**
December 31, 2021	1,057.5	73.1	80.2
Range of discount rates			
December 31, 2022	**2.8-7.0%**	**— - —%**	**— - —%**
December 31, 2021	2.8-7.0	— - —	— - —
Aggregate amount of discount			
December 31, 2022	**$ 209.4**	**$ —**	**$ —**
December 31, 2021	208.0	—	—
Interest accretion			
For the year ended:			
December 31, 2022	**$ 33.0**	**$ —**	**$ —**
December 31, 2021	33.8	—	—
December 31, 2020	33.9	—	—

9. Reinsurance

We reinsure a portion of the insurance risks associated with our individual disability, traditional life, universal life, medical and long-term care insurance as well as retail fixed annuity contracts with significant life insurance risk through reinsurance agreements with unaffiliated reinsurance companies, primarily on a quota share, excess loss, yearly renewable term or coinsurance basis. During the second quarter of 2022, we closed a coinsurance with funds withheld reinsurance transaction with Talcott Life & Annuity Re in which we ceded our in-force U.S. retail fixed annuity and ULSG blocks of business. The economics of the transaction were effective as of January 1, 2022. We use both the reinsurance and deposit methods of accounting for this transaction. For further information about this transaction, refer to Note 1, Nature of Operations and Significant Accounting Policies.

We are contingently liable with respect to reinsurance ceded to other companies in the event the reinsurer is unable to meet the obligations it has assumed. As of December 31, 2022, and December 31, 2021, we had $14,128.7 million and $1,186.5 million of net ceded reinsurance recoverables, respectively, which does not reflect potentially offsetting impacts of collateral. As of December 31, 2022, and December 31, 2021, $13,660.1 million, or 99.7%, and $578.0 million, or 95.5%, were with our five largest ceded reinsurers, respectively.

The effects of reinsurance on premiums and other considerations and policy and contract benefits were as follows:

	For the year ended December 31,		
	2022	2021	2020
	(in millions)		
Premiums and other considerations:			
Direct	**$ 5,796.1**	$5,492.1	$6,647.1
Ceded	**(456.4)**	(650.6)	(609.7)
Net premiums and other considerations	**$ 5,339.7**	$4,841.5	$6,037.4
Benefits, claims and settlement expenses:			
Direct	**$ 7,947.0**	$7,766.2	$8,810.1
Ceded	**(1,576.2)**	(669.2)	(528.6)
Net benefits, claims and settlement expenses	**$ 6,370.8**	$7,097.0	$8,281.5

As of December 31, 2022, we had a $7,900.9 million reinsurance deposit receivable.

Refer to Note 4, Investments, for information on our financing receivables valuation allowance related to the reinsurance recoverable and deposit receivable.

Cost of Reinsurance

A reinsurance asset or liability is established to spread the expected net reinsurance costs or profits over the expected term of the contracts. The cost of reinsurance asset and liability are reported in premiums due and other receivables and liability for future policy benefits and claims, respectively, on the consolidated statements of financial position. The cost of reinsurance asset and liability included on the consolidated statements of financial position were as follows:

	December 31, 2022	December 31, 2021
	(in millions)	
Cost of reinsurance asset	**$3,689.2**	$46.5
Cost of reinsurance liability	**$ 84.2**	$22.1

Cost of reinsurance amortization of $84.5 million, $(18.0) million and $67.4 million for the years ended December 31, 2022, 2021 and 2020, respectively, was reported in benefits, claims and settlement expenses on the consolidated statements of operations.

9. Reinsurance — (continued)

Funds Withheld

The following assets were held in support of our reserves associated with our coinsurance with funds withheld agreement and are reported in the line items shown on the consolidated statements of financial position.

	December 31, 2022
	(in millions)
Fixed maturities, available-for-sale	**$15,693.5**
Fixed maturities, trading	**100.8**
Equity securities	**11.0**
Mortgage loans	**2,810.8**
Other investments	**179.8**
Cash and cash equivalents	**1,762.9**
Accrued interest income	**178.7**
Net other liabilities	**(33.6)**
Net assets	**$20,703.9**

Certain assets are reported at amortized cost while the fair value of those assets is reflected in the funds withheld payable. We had a $20,436.1 million funds withheld payable as of December 31, 2022, which was net of a $3,652.8 million embedded derivative asset. The change in fair value of the embedded derivative was a gain of $3,652.8 million, $0.0 million and $0.0 million for the years ended December 31, 2022, 2021 and 2020, respectively.

While the economic benefits of the funds withheld assets flow to Talcott Life & Annuity Re, we retain legal ownership of the assets within the funds withheld account. Guidelines are in place to ensure the investment risk is appropriately managed. Net investment income and net realized capital gains (losses) related to the assets on the consolidated statements of operations is reported net of the amounts that flow to Talcott Life & Annuity Re. The realized gains and losses that do not flow to Talcott Life & Annuity Re are reported in net realized capital gains (losses) on funds withheld assets on the consolidated statements of operations.

Following are the components of net investment income on the funds withheld assets that were passed to Talcott Life & Annuity Re.

	For the year ended December 31, 2022
	(in millions)
Fixed maturities, available-for-sale	**$745.9**
Fixed maturities, trading	**2.0**
Equity securities	**0.6**
Mortgage loans	**98.4**
Cash and cash equivalents	**18.2**
Other	**4.8**
Total	**869.9**
Investment expenses	**(20.5)**
Net investment income	**$849.4**

9. Reinsurance — (continued)

Following are the components of net realized capital gains (losses) on the funds withheld assets that were passed to Talcott Life & Annuity Re.

	For the year ended December 31, 2022
	(in millions)
Fixed maturities, available-for-sale	**$(235.5)**
Fixed maturities, trading	**(6.4)**
Equity securities	**(2.4)**
Mortgage loans	**(24.8)**
Derivatives	**2.7**
Other	**3.3**
Net realized capital losses	**$(263.1)**

10. Debt

Short-Term Debt

The components of short-term debt were as follows:

			December 31, 2022	
Obligor/Applicant	**Financing structure**	**Maturity**	**Capacity**	**Short-term debt outstanding**
			(in millions)	
Principal Life	Credit facility	October 2027	**$800.0**	**$ —**
Principal International Chile (1)	Unsecured lines of credit		**136.9**	**80.7**
Total			**$936.9**	**$80.7**

			December 31, 2021	
Obligor/Applicant	**Financing structure**	**Maturity**	**Capacity**	**Short-term debt outstanding**
			(in millions)	
PFG, PFS and Principal Life as co-borrowers	Credit facility	November 2023	$600.0	$ —
PFG, PFS, Principal Life and Principal Financial Services V (UK) Ltd as co-borrowers	Credit facility	November 2023	200.0	—
Principal International Chile (1)	Unsecured lines of credit		145.6	79.8
Total			$945.6	$79.8

(1) The unsecured lines of credit can be used for repurchase agreements or other borrowings. Each line has a maturity of less than one year.

Our revolving credit facilities are committed and available for general corporate purposes. These credit facilities also provide 100% back-stop support for our commercial paper program, of which we had no outstanding balances as of December 31, 2022 and 2021. The weighted-average interest rate on short-term borrowings as of December 31, 2022 and 2021, was 6.0% and 3.2%, respectively.

10. Debt — (continued)

The components of long-term debt were as follows:

	December 31, 2022		
	Principal	Net unamortized discount, premium and debt issuance costs	Carrying amount
		(in millions)	
3.125% notes payable, due 2023	**$ 300.0**	**$ (0.1)**	**$ 299.9**
3.4% notes payable, due 2025	**400.0**	**(1.2)**	**398.8**
3.1% notes payable, due 2026	**350.0**	**(1.4)**	**348.6**
3.7% notes payable, due 2029	**500.0**	**(4.3)**	**495.7**
2.125% notes payable, due 2030	**600.0**	**(3.6)**	**596.4**
6.05% notes payable, due 2036	**505.6**	**(2.3)**	**503.3**
4.625% notes payable, due 2042	**300.0**	**(2.9)**	**297.1**
4.35% notes payable, due 2043	**300.0**	**(3.0)**	**297.0**
4.3% notes payable, due 2046	**300.0**	**(3.1)**	**296.9**
Floating rate notes payable, due 2055	**400.0**	**(4.5)**	**395.5**
Non-recourse mortgages and notes payable	**67.1**	**0.7**	**67.8**
Total long-term debt	**$4,022.7**	**$(25.7)**	**$3,997.0**

	December 31, 2021		
	Principal	Net unamortized discount, premium and debt issuance costs	Carrying amount
		(in millions)	
3.3% notes payable, due 2022	$ 300.0	$ (0.3)	$ 299.7
3.125% notes payable, due 2023	300.0	(0.4)	299.6
3.4% notes payable, due 2025	400.0	(1.7)	398.3
3.1% notes payable, due 2026	350.0	(1.9)	348.1
3.7% notes payable, due 2029	500.0	(5.0)	495.0
2.125% notes payable, due 2030	600.0	(4.1)	595.9
6.05% notes payable, due 2036	505.6	(2.3)	503.3
4.625% notes payable, due 2042	300.0	(3.0)	297.0
4.35% notes payable, due 2043	300.0	(3.0)	297.0
4.3% notes payable, due 2046	300.0	(3.1)	296.9
Floating rate notes payable, due 2055	400.0	(4.6)	395.4
Non-recourse mortgages and notes payable	53.7	0.3	54.0
Total long-term debt	$4,309.3	$(29.1)	$4,280.2

Net discount, premium and issuance costs associated with issuing these notes are amortized to expense over the respective terms using the interest method.

On June 12, 2020, we issued $500.0 million of senior notes at a discount. On August 3, 2020, we issued an additional $100.0 million of senior notes at a premium. These notes bear interest at 2.125% and will mature in

10. Debt — (continued)

2030. Interest on the notes is payable semi-annually on June 15 and December 15 each year, beginning on December 15, 2020. The proceeds from these notes were used for general corporate purposes.

On May 7, 2019, we issued $500.0 million of senior notes. The notes bear interest at 3.7% and will mature in 2029. Interest on the notes is payable semi-annually on May 15 and November 15 each year, beginning on November 15, 2019. The proceeds from these notes, along with available cash, were used to fund the acquisition of the Acquired Business.

On November 10, 2016, we issued $650.0 million of senior notes. We issued a $350.0 million series of notes that bear interest at 3.1% and will mature in 2026 and a $300.0 million series of notes that bear interest at 4.3% and will mature in 2046. Interest on the notes is payable semi-annually on May 15 and November 15 each year, beginning on May 15, 2017. The proceeds from these notes were used to redeem our notes payable due in 2017 and 2019. We incurred a one-time cost to extinguish this debt before the scheduled maturity date.

On May 7, 2015, we issued $400.0 million of senior notes. The notes bear interest at 3.4% and will mature in 2025. Interest on the notes is payable semi-annually on May 15 and November 15 each year, beginning on November 15, 2015. In addition, on May 7, 2015, we issued $400.0 million of junior subordinated notes, which are subordinated to all our senior debt. The notes became callable in 2020 and have a maturity date in 2055. The notes initially bore a fixed rate of interest at 4.7% and converted to a floating rate at the date the notes became callable. Interest on the notes was payable semi-annually on May 15 and November 15 each year. After the call date the notes bear interest at 3-month LIBOR plus 3.044%, reset quarterly and payable in arrears in February, May, August and November each year. We have the right to defer interest payments on the junior subordinated notes for up to 5 years without resulting in a default, during which time interest will be compounded. The proceeds from these notes were used to redeem preferred stock, with the remainder available for general corporate purposes.

On November 16, 2012, we issued $900.0 million of senior notes. We issued a $300.0 million series of notes that bore interest at 1.85% and were to mature in 2017. These notes were repaid following our November 2016 debt issuance. We issued a $300.0 million series of notes that bear interest at 3.125% and will mature in 2023 and a $300.0 million series of notes that bear interest at 4.35% and will mature in 2043. Interest on the notes is payable semi-annually on May 15 and November 15 each year, beginning on May 15, 2013. The proceeds were used to fund our acquisition of Cuprum.

On September 5, 2012, we issued $600.0 million of senior notes. We issued a $300.0 million series of notes that bear interest at 3.3% and matured in 2022 and a $300.0 million series of notes that bear interest at 4.625% and will mature in 2042. Interest on the notes is payable semi-annually on March 15 and September 15 each year, beginning on March 15, 2013. The proceeds were used for the repayment of the $400.0 million aggregate principal amount of notes due in 2014 and to partially fund our acquisition of Cuprum.

On October 16 and December 5, 2006, we issued $500.0 million and $100.0 million, respectively, of senior notes. The notes bear interest at a rate of 6.05% per year. Interest on the notes is payable semi-annually on April 15 and October 15 each year and began on April 15, 2007. The notes will mature on October 15, 2036. A portion of the proceeds were used to fund the 2006 acquisition of WM Advisors, Inc., with the remaining proceeds being used for general corporate purposes. A tender offer in the fourth quarter of 2016 resulted in redemption of $94.4 million of the senior notes. We incurred a one-time cost to extinguish this debt before the scheduled maturity date.

The non-recourse mortgages and notes payable are primarily financings for real estate developments. Outstanding principal balances as of December 31, 2022, ranged from $3.0 million to $15.9 million per development with interest rates ranging from 3.5% to 4.8%. Outstanding principal balances as of December 31, 2021, ranged from $3.1 million to $14.4 million per development with interest rates ranging from 3.5% to 4.8%. Outstanding debt is secured by the underlying real estate properties, which were reported as real estate

10. Debt — (continued)

on our consolidated statements of financial position with a carrying value of $317.6 million and $198.3 million as of December 31, 2022 and 2021, respectively.

As of December 31, 2022, future annual maturities of long-term debt were as follows (in millions):

Year ending December 31:	
2023	**$ 325.2**
2024	**32.8**
2025	**399.2**
2026	**355.1**
2027	**0.1**
Thereafter	**2,884.6**
Total future maturities of long-term debt	**$3,997.0**

Contingent Funding Agreements for Senior Debt Issuance

On March 8, 2018, we entered into two contingent funding agreements: (1) a 10-year contingent funding agreement with a Delaware trust (“2028 Trust”) formed by us in connection with the sale by the trust of $400.0 million pre-capitalized trust securities redeemable February 15, 2028 (“2028 P-Caps”) in a Rule 144A private placement and (2) a 30-year contingent funding agreement with a Delaware trust (“2048 Trust”) formed by us in connection with the sale by the trust of $350.0 million pre-capitalized trust securities redeemable February 15, 2048 (“2048 P-Caps”) in a Rule 144A private placement. The trusts invested the proceeds from the sale of the 2028 P-Caps and 2048 P-Caps in a portfolio of principal and interest strips of U.S. Treasury securities. The contingent funding agreements provide us a put option that gives us the right to sell at any time: (1) to the 2028 Trust up to $400.0 million of its 4.111% Senior Notes due 2028 (“4.111% Senior Notes”) and (2) to the 2048 Trust up to $350.0 million of its 4.682% Senior Notes due 2048 (“4.682% Senior Notes”) and receive in exchange a corresponding amount of the principal and interest strips of U.S. Treasury securities held by the trusts. The 4.111% Senior Notes and 4.682% Senior Notes will not be issued unless and until a put option is exercised. We agreed to pay a semi-annual put premium of 1.275% and 1.580% per annum on the unexercised portion of the put option to the 2028 Trust and 2048 Trust, respectively, and to reimburse the trusts for expenses. The put option premiums are recorded in operating expenses in the consolidated statements of operations. The 4.111% Senior Notes and 4.682% Senior Notes will be fully, irrevocably and unconditionally guaranteed by PFS. In addition, our obligations under the put option agreement and the expense reimbursement agreement with the trusts are also guaranteed by PFS. The contingent funding agreements with the trusts provide us with a source of liquid assets, which could be used to meet future financial obligations or to provide additional capital.

The put options described above will be exercised automatically in full if we fail to make certain payments to the trusts, including any failure to pay the put option premium or expense reimbursements when due, if such failure is not cured within 30 days, and upon certain bankruptcy events involving us or PFS. We are also required to exercise the put option in full: (i) if we reasonably believe that our consolidated shareholders’ equity, calculated in accordance with U.S. GAAP but excluding AOCI and noncontrolling interest, has fallen below $4.0 billion, subject to adjustment in certain cases; (ii) upon the occurrence of an event of default under the 4.111% Senior Notes and 4.682% Senior Notes; and (iii) if certain events occur relating to each trust’s status as an “investment company” under the Investment Company Act of 1940. In addition, we are required to purchase from the trusts any principal and interest strips of U.S. Treasury securities that are due and not paid.

We have an unlimited right to unwind a prior voluntary exercise of the put options by repurchasing all of the 4.111% Senior Notes and 4.682% Senior Notes held by the trusts in exchange for a corresponding amount

10. Debt — (continued)

of principal and interest strips of U.S. Treasury securities. If the put options have been fully exercised, the 4.111% Senior Notes and 4.682% Senior Notes issued may be redeemed by us prior to their maturity at par or, if greater, at a make-whole redemption price, in each case plus accrued and unpaid interest to the date of redemption. The 2028 P-Caps are to be redeemed by the 2028 Trust on February 15, 2028, or upon any early redemption of the 4.111% Senior Notes. The 2048 P-Caps are to be redeemed by the 2048 Trust on February 15, 2048, or upon any early redemption of the 4.682% Senior Notes.

11. Income Taxes

Income Taxes (Benefits)

Our income taxes (benefits) were as follows:

	For the year ended December 31,		
	2022	**2021**	**2020**
		(in millions)	
Current income taxes (benefits):			
U.S. federal	**$ (56.3)**	$110.3	$ 15.8
State	**20.7**	19.4	5.0
Foreign	**53.6**	38.3	55.4
Tax benefit of operating loss carryforward	**(9.5)**	(1.2)	(3.3)
Total current income taxes	**8.5**	166.8	72.9
Deferred income taxes (benefits):			
U.S. federal	**1,201.3**	154.6	143.6
State	**8.0**	16.6	11.5
Foreign	**(9.9)**	(11.8)	37.0
Total deferred income taxes	**1,199.4**	159.4	192.1
Income taxes	**$1,207.9**	$326.2	$265.0

Our income before income taxes was as follows:

	For the year ended December 31,		
	2022	**2021**	**2020**
		(in millions)	
Domestic	**$5,821.5**	$1,889.1	$1,323.2
Foreign	**238.6**	194.5	370.3
Total income before income taxes	**$6,060.1**	$2,083.6	$1,693.5

Effective Income Tax Rate

Our provision for income taxes may not have the customary relationship of taxes to income. A reconciliation between the U.S. corporate income tax rate and the effective income tax rate was as follows:

	For the year ended December 31,		
	2022	**2021**	**2020**
U.S. corporate income tax rate	**21%**	21%	21%
Dividends received deduction	**(1)**	(4)	(4)
Tax credits	**(1)**	(2)	(3)
Impact of equity method presentation	**—**	(1)	(1)
Global Intangible Low-Taxed Income	**1**	—	—
State income taxes	**—**	1	1
Other	**—**	1	2
Effective income tax rate	**20%**	16%	16%

11. Income Taxes — (continued)

Unrecognized Tax Benefits

Our changes in unrecognized tax benefits were as follows:

	For the year ended December 31,		
	2022	**2021**	**2020**
		(in millions)	
Balance at beginning of period	**$45.5**	$46.9	$ 61.6
Additions based on tax positions related to the current year	**—**	1.8	1.3
Additions for tax positions of prior years	**—**	—	17.4
Reductions for tax positions related to the current year	**(3.3)**	(3.2)	(3.2)
Settlements	**—**	—	(14.5)
Expired statute of limitations	**—**	—	(15.7)
Balance at end of period (1)	**$42.2**	$45.5	$ 46.9

(1) If recognized, $1.6 million of the above amount of unrecognized tax benefits would reduce our 2022 effective income tax rate. We recognize interest and penalties related to uncertain tax positions in operating expenses within the consolidated statements of operations.

As of December 31, 2022, 2021 and 2020, we had recognized $1.4 million, $1.2 million and $1.1 million of accumulated pre-tax interest and penalties related to unrecognized tax benefits, respectively. We do not believe there is a reasonable possibility the total amount of the unrecognized tax benefits will significantly increase or decrease in the next twelve months considering recent settlements and the status of current and pending Internal Revenue Service ("IRS") examinations.

11. Income Taxes — (continued)

Net Deferred Income Taxes

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Our significant components of net deferred income taxes were as follows:

	December 31,	
	2022	**2021**
	(in millions)	
Deferred income tax assets:		
Net operating loss carryforwards	**$ 86.1**	$ 68.2
Tax credit carryforwards	**65.8**	—
Net unrealized losses on available-for-sale securities	**1,572.3**	—
Employee benefits	**305.3**	377.9
Gross deferred income tax assets	**2,029.5**	446.1
Valuation allowance	**(42.9)**	(28.0)
Total deferred income tax assets	**1,986.6**	418.1
Deferred income tax liabilities:		
Deferred acquisition costs	**(794.7)**	(582.3)
Investments, including derivatives	**(224.7)**	(304.2)
Funds withheld embedded derivative	**(767.1)**	—
Net unrealized gains on available-for-sale securities	**—**	(1,118.1)
Real estate	**(141.0)**	(141.6)
Intangible assets	**(386.9)**	(408.0)
Insurance liabilities	**(735.9)**	(44.2)
Other deferred income tax liabilities	**(27.6)**	(54.9)
Total deferred income tax liabilities	**(3,077.9)**	(2,653.3)
Total net deferred income tax liabilities	**$(1,091.3)**	$(2,235.2)

Our net deferred income taxes by jurisdiction were as follows:

	December 31,	
	2022	**2021**
	(in millions)	
Deferred income tax assets:		
State	**$ 83.1**	$ 61.2
Foreign	**32.4**	23.8
Net deferred income tax assets	**115.5**	85.0
Deferred income tax liabilities:		
U.S. federal	**(920.5)**	(2,023.6)
Foreign	**(286.3)**	(296.6)
Net deferred income tax liabilities	**(1,206.8)**	(2,320.2)
Total net deferred income tax liabilities	**$(1,091.3)**	$(2,235.2)

In management's judgment, total deferred income tax assets are more likely than not to be realized. Included in the deferred income tax asset are federal net operating loss and tax credit carryforwards available to offset future taxable income or income taxes. As of December 31, 2022 and 2021, we had net operating loss

11. Income Taxes — (continued)

and tax credit carryforwards for U.S. federal income tax purposes of $131.9 million and $0.0 million, respectively, primarily attributable to a reinsurance transaction that occurred during 2022. U.S. federal net operating losses carryover indefinitely; however, the tax credit carryforwards will expire if unused in 2042. As of December 31, 2022, these carryforwards are anticipated to be utilized before expiration; therefore, no valuation allowance has been provided for the related deferred income tax asset.

As of December 31, 2022 and 2021, state net operating loss carryforwards were $250.0 million and $267.3 million, respectively, and will expire between 2032 and 2040. As of December 31, 2022 and 2021, foreign net operating loss carryforwards were $229.5 million and $164.1 million, respectively, with some expiring in 2022 while others never expire. We maintain valuation allowances by jurisdiction against the deferred income tax assets related to some of these carryforwards and other items, as utilization of these income tax benefits fail the more likely than not criteria in certain jurisdictions. As of December 31, 2022 and 2021, valuation allowances of $42.9 million and $28.0 million, respectively, had been recorded against the income tax benefits associated primarily with foreign net operating loss carryforwards and net unrealized capital losses on benefit plan trusts. Adjustments to the valuation allowance will be made if there is a change in management's assessment of the amount of the deferred income tax assets that are more likely than not to be realized.

Deferred tax liabilities are recognized for taxes payable on the unremitted earnings from foreign operations of our subsidiaries, except where it is our intention to indefinitely reinvest a portion or all of these undistributed earnings. As of December 31, 2022 and 2021, any applicable taxes that would be due upon repatriation were not provided on approximately $1,157.2 million and $912.8 million, respectively, of such accumulated but undistributed earnings from operations of foreign subsidiaries. We currently do not intend to repatriate these unremitted earnings because we have several liquidity options to fund our domestic operations and obligations. These options include investing and financing activities, such as issuing debt, as well as cash flow and dividends from domestic operations. As of December 31, 2022 and 2021, it was not practicable to determine the amount of the unrecognized deferred tax liability that would arise if foreign earnings were remitted, due to the complexity of our international holding company structure, and other significant tax attributes and varying state tax laws. Taxes on remittances would be limited to foreign currency gains or losses, foreign withholding taxes and state income taxes, which we would anticipate to be immaterial. As of December 31, 2022, deferred taxes were also not provided on the approximately $106.2 million of excess book carrying value over tax basis with respect to the original investment in our foreign subsidiaries. A tax liability will be recognized when we no longer plan to indefinitely reinvest a portion or all of these earnings or when we plan to sell a portion or all of our ownership interest.

Effects of Tax Legislation

The Inflation Reduction Act of 2022 ("IRA 2022") was enacted by the U.S. government on August 16, 2022. The IRA 2022 implements a new corporate alternative minimum tax (the Book Minimum Tax or "BMT") effective January 1, 2023. We are expected to be an "Applicable Corporation," which requires computation of our U.S. federal income tax liability under two systems, the U.S. regular corporate tax ("RCT") and the BMT. Although the BMT may apply in any given year when tentative minimum tax ("TMT") then exceeds the RCT liability, as a "prepayment" the BMT generates a corresponding alternative minimum tax credit ("AMTC"). The AMTC is accounted for as a deferred tax asset ("DTA") with an indefinite carryover life recoverable in years when the RCT liability then exceeds TMT.

The tax accounting consequences of a change in tax law is required to be recognized in the period legislation is enacted. Generally, a company is also required to consider the impact of new tax law on realizability of its DTAs, including determination of whether a change to their valuation allowance amounts is necessary. We made an accounting policy election to disregard our BMT status when evaluating DTAs under the RCT system associated with the IRA 2022.

11. Income Taxes — (continued)

The State of Iowa coupled with the Internal Revenue Code effective January 1, 2019, and subsequently issued interpretative guidance in the fourth quarter of 2019 on application of the U.S. Global Intangible Low-Taxed Income rules. The State of Iowa's interpretation resulted in an $11.1 million increase in total income tax expense for adjustments to deferred tax assets and liabilities in our 2019 financial statements. Iowa legislation was enacted on June 29, 2020 to de-couple from the federal application of the U.S. Global Intangible Low-Taxed Income rules effective retroactively to January 1, 2019; therefore, the above-mentioned increase in total income tax expense reported in 2019 was reversed in 2020.

Other Tax Information

Income tax returns are filed in U.S. federal jurisdiction as well as various states and foreign jurisdictions where we and one or more of our subsidiaries conduct business. Although determined by jurisdiction, with few exceptions our tax uncertainties relate primarily to U.S. federal income tax matters. The IRS has completed examination of our consolidated U.S. federal income tax returns for years prior to 2013 and did not exam 2013 and 2014. IRS claims for refund for tax years 2004 through 2008, following settlement of a partnership matter with the Department of Justice in March 2019, were finalized in 2020 and have been received in full as of December 31, 2021. IRS claims for refund filed for tax years 2006 through 2008 were received in September 2020. In 2019, an IRS 30-day letter on examination of tax years 2009 through 2012 was received, the proposed adjustments found acceptable, and associated tax settlements subsequently occurred in 2020 prior to expiration of the extended statute of limitations. As of December 31, 2022 and 2021, we had $(5.6) million and $12.7 million, respectively, of current income tax receivables (payables) associated with outstanding audit issues.

The U.S. federal statute of limitations has expired for years prior to 2015. The IRS is currently auditing our U.S. federal income tax returns for tax years 2015-2018, which remain open through statute extensions. The normal statute of limitations remains open for tax years thereafter. The IRS will begin audit of tax years 2019-2021 in 2023. We do not expect the results of these audits, subsequent related adjustments or developments in other tax areas for all open tax years to significantly change the possible increase in the amount of unrecognized tax benefits, but the outcome of tax reviews is uncertain and unforeseen results can occur.

We believe we have adequate defenses against, or sufficient provisions for, contested issues, but final resolution could take several years depending on whether legal remedies are pursued. Consequently, we do not believe issues that might arise in tax years subsequent to 2014 will have a material impact on our net income.

12. Employee and Agent Benefits

We provide a U.S. qualified defined benefit pension plan, covering U.S. employees that meet certain eligibility requirements and certain agents contracted on or before December 31, 2018. A final average pay benefit formula has been in place for plan participants employed prior to January 1, 2002. For agents, this formula ended on December 31, 2018, and for employees the formula ended on December 31, 2022. The final average pay benefit is based on the years of service and generally the employee's or agent's average annual compensation during the last five years prior to the earliest of termination, retirement or the formula end date. A cash balance benefit was added on January 1, 2002. A participant's cash balance account is credited with an amount based on the participant's salary, age and service. These credits accrue with interest. For plan participants hired on and after January 1, 2002, only the cash balance benefit applies. For pre-2002 participants, the pension benefit earned prior to the final average pay formula end date is the greater of the final average pay benefit or the cash balance benefit earned before the end date. They will also earn a new cash balance benefit for service after the formula end date.

In addition, we sponsor non-qualified defined benefit plans subject to Section 409A of the Internal Revenue Code. This plan is for certain highly compensated employees and agents to replace the benefit that

12. Employee and Agent Benefits — (continued)

cannot be provided by the qualified defined benefit pension plan due to IRS limits. These nonqualified plans generally parallel the qualified plan but offer different payment options. No agent will become a new participant in the nonqualified plan after December 31, 2018.

We provide certain health care, life insurance and long-term care benefits for retired employees, their beneficiaries and covered dependents ("other postretirement benefits"). While virtually all U.S. employees continue to have access to the postretirement health care and life insurance benefits, only those U.S. employees that were hired prior to January 1, 2002, and retired prior to January 1, 2011, (post-65 medical) or January 1, 2020, (life insurance and pre-65 medical) were eligible to receive subsidized benefits. All others pay the full cost of coverage. The long-term care plan was subsidized only for those who retired prior to January 1, 2000, and is no longer accessible. The subsidy level for all benefits varies by plan, age, service and retirement date.

The funding policy for all employee benefit plans is to fund the cost of providing pension benefits in the years that the employees and agents are providing service, taking into account the funding status of the trust. For the qualified defined benefit plan, this policy will be subject to an amount no lower than the minimum annual contribution required under the Employee Retirement Income Security Act ("ERISA"), and, generally, not greater than the maximum amount that can be deducted for U.S. federal income tax purposes. While we designate assets to cover the computed liability of the nonqualified pension plan, the assets are not included as part of the asset balances presented in this footnote as they do not qualify as plan assets in accordance with U.S. GAAP.

12. Employee and Agent Benefits — (continued)

Obligations and Funded Status

The plans' combined funded status, reconciled to amounts recognized in the consolidated statements of financial position, was as follows:

	Pension benefits		Other postretirement benefits	
	December 31,		December 31,	
	2022	2021	2022	2021
	(in millions)			
Change in benefit obligation				
Benefit obligation at beginning of year	**$(4,183.7)**	$(4,210.2)	**$ (95.3)**	$(108.0)
Service cost	**(78.4)**	(83.2)	**—**	—
Interest cost	**(112.8)**	(103.3)	**(2.3)**	(2.2)
Actuarial gain	**1,023.5**	75.8	**19.5**	7.6
Participant contributions	**—**	—	**(6.4)**	(6.1)
Benefits paid	**142.0**	137.2	**13.5**	13.5
Other	**—**	—	**—**	(0.1)
Benefit obligation at end of year	**$(3,209.4)**	$(4,183.7)	**$ (71.0)**	$ (95.3)
Change in plan assets				
Fair value of plan assets at beginning of year	**$ 3,550.1**	$ 3,373.5	**$119.8**	$ 780.6
Actual return on plan assets	**(754.3)**	208.7	**(20.0)**	1.6
Employer contribution	**72.5**	105.1	**1.7**	1.5
Participant contributions	**—**	—	**6.4**	6.1
Benefits paid	**(142.0)**	(137.2)	**(13.5)**	(13.5)
Assets re-designated for non-retiree benefits	**—**	—	**—**	(656.5)
Fair value of plan assets at end of year	**$ 2,726.3**	$ 3,550.1	**$ 94.4**	$ 119.8
Amount recognized in statement of financial position				
Other assets	**$ —**	$ —	**$ 23.4**	$ 24.5
Other liabilities	**(483.1)**	(633.6)	**—**	—
Total	**$ (483.1)**	$ (633.6)	**$ 23.4**	$ 24.5
Amount recognized in accumulated other comprehensive (income) loss				
Total net actuarial (gain) loss	**$ 442.0**	$ 588.0	**$ (20.2)**	$ (26.7)
Prior service benefit	**(87.4)**	(104.2)	**(5.1)**	(6.2)
Pre-tax accumulated other comprehensive (income) loss	**$ 354.6**	$ 483.8	**$ (25.3)**	$ (32.9)

The accumulated benefit obligation for all defined benefit pension plans was $3,209.4 million and $4,149.3 million as of December 31, 2022 and 2021, respectively.

Employer contributions to the pension plans include contributions made directly to the qualified pension plan assets and contributions from corporate assets to pay nonqualified pension benefits. Benefits paid from the pension plans include both qualified and nonqualified plan benefits. Nonqualified pension plan assets are not included as part of the asset balances presented in this footnote. The nonqualified pension plan assets are held in Rabbi trusts for the benefit of all nonqualified plan participants. The assets held in a Rabbi trust are available to satisfy the claims of general creditors only in the event of bankruptcy. Therefore, these assets are fully consolidated in our consolidated statements of financial position and are not reflected in our funded status as they do not qualify as plan assets under U.S. GAAP. The market value of assets held in these trusts was $336.7 million and $386.3 million as of December 31, 2022 and 2021, respectively.

12. Employee and Agent Benefits — (continued)

Pension Plan Changes and Plan Gains/Losses

For the year ended December 31, 2022, the pension plans had an actuarial gain primarily due to an increase in discount rate. For the year ended December 31, 2021, the pension plans had an actuarial gain primarily due to an increase in discount rate offset by changes in actuarial assumptions.

Other Postretirement Plan Changes and Plan Gains/Losses

For the year ended December 31, 2022, the other postretirement benefit plans had an actuarial gain primarily due to an increase in the discount rates and actual medical claims costs being lower than previously expected. For the year ended December 31, 2021, the other postretirement benefit plans had an actuarial gain primarily due to an increase in the discount rate and actual, along with projected, medical claim costs being lower than previously expected.

Effective January 1, 2021, $656.5 million of assets in excess of the expected liability to cover the postretirement medical benefits for retirees were re-designated for non-retiree benefits. The elections were made pursuant to plan provisions, which provide for assets in excess of 125% of expected liabilities to fund other benefits covered under the plans. The re-designated assets, net of associated tax receivable impacts related to a tax adjustment to accumulated other comprehensive income, are not included as part of the asset balances presented in the footnote as they no longer qualify as plan assets in accordance with U.S. GAAP. The re-designated assets are included in equity securities and other investments on our consolidated statements of financial position beginning January 1, 2021.

Information for Pension Plans With an Accumulated Benefit Obligation in Excess of Plan Assets

For 2022 and 2021, both the qualified and nonqualified plans had accumulated benefit obligations in excess of plan assets. As noted previously, the nonqualified plans have assets that are deposited in trusts that fail to meet the U.S. GAAP requirements to be included in plan assets; however, these assets are included in our consolidated statements of financial position.

	December 31,	
	2022	**2021**
	(in millions)	
Projected benefit obligation	**$3,209.4**	$4,183.7
Accumulated benefit obligation	**3,209.4**	4,149.3
Fair value of plan assets	**2,726.3**	3,550.1

We did not have any other postretirement benefit plans with an accumulated postretirement benefit obligation in excess of plan assets.

12. Employee and Agent Benefits — (continued)

Components of Net Periodic Benefit Cost

	Pension benefits			Other postretirement benefits		
	For the year ended December 31,					
	2022	2021	2020	2022	2021	2020
	(in millions)					
Service cost	**$ 78.4**	$ 83.2	$ 72.7	**$ —**	$ —	$ —
Interest cost	**112.8**	103.3	117.3	**2.3**	2.2	2.8
Expected return on plan assets	**(178.9)**	(182.7)	(156.8)	**(4.9)**	(4.8)	(36.0)
Amortization of prior service benefit	**(16.8)**	(16.8)	(16.8)	**(1.1)**	(1.1)	(1.0)
Recognized net actuarial (gain) loss	**55.7**	70.2	75.4	**(1.1)**	(0.5)	—
Net periodic benefit cost (income)	**$ 51.2**	$ 57.2	$ 91.8	**$(4.8)**	$(4.2)	$(34.2)

The components of net periodic benefit cost including the service cost component are included in operating expenses on the consolidated statements of operations.

The pension plans' actuarial gains and losses are amortized using a straight-line amortization method over the average remaining service period of plan participants. The other postretirement plans use a straight-line amortization over the average future lifetime of its remaining covered group of retirees. For the qualified pension plan, gains and losses are amortized without use of the 10% allowable corridor. For the nonqualified pension plans and other postretirement benefit plans, the corridors allowed are used.

	Pension benefits		Other postretirement benefits	
	For the year ended December 31,			
	2022	2021	2022	2021
	(in millions)			
Other changes recognized in accumulated other comprehensive (income) loss				
Net actuarial (gain) loss	**$ (90.3)**	$(101.8)	**$5.4**	$(4.4)
Amortization of gain (loss)	**(55.7)**	(70.2)	**1.1**	0.5
Amortization of prior service benefit	**16.8**	16.8	**1.1**	1.1
Total recognized in pre-tax accumulated other comprehensive (income) loss	**$(129.2)**	$(155.2)	**$7.6**	$(2.8)
Total recognized in net periodic benefit cost and pre-tax accumulated other comprehensive (income) loss	**$ (78.0)**	$ (98.0)	**$2.8**	$(7.0)

Net actuarial (gain) loss and net prior service cost benefit have been recognized in AOCI.

Assumptions

Weighted-average assumptions used to determine benefit obligations as disclosed under the Obligations and Funded Status section

	Pension benefits	
	December 31,	
	2022	2021
Discount rate	**5.10%**	2.75%
Interest crediting rate — cash balance benefit	**5.00%**	5.00%
Rate of compensation increase	**4.53%**	4.59%

12. Employee and Agent Benefits — (continued)

	Other postretirement benefits	
	December 31,	
	2022	2021
Discount rate	**5.00%**	2.50%
Rate of compensation increase	**N/A**	N/A

Weighted average assumptions used to determine net periodic benefit cost

	Pension benefits		
	For the year ended December 31,		
	2022	2021	2020
Discount rate	**2.75%**	2.50%	3.25%
Expected long-term return on plan assets	**5.20%**	5.55%	5.60%
Interest crediting rate — cash balance benefit	**5.00%**	5.00%	5.00%
Rate of compensation increase:			
Cash balance benefit	**4.59%**	4.92%	4.95%
Traditional benefit	**N/A%**	2.96%	2.98%

	Other postretirement benefits		
	For the year ended December 31,		
	2022	2021	2020
Discount rate (1)	**2.50%**	2.10%	2.95%
Expected long-term return on plan assets	**4.25%**	4.25%	4.94%
Rate of compensation increase	**N/A**	N/A	N/A

(1) During the second quarter 2020, subsidy increases provided under the long-term care plan were capped at 5% per calendar year. This change was remeasured as of March 31, 2020. A discount rate of 2.95% was used until the remeasurement date at which time a discount rate of 2.90% was used.

The assumed salary growth rates used to project benefits for the projected benefit obligation are age-based for home office employees. The rate labeled cash balance benefit (relative to employees accruing a cash balance) is the lifecount-weighted average rate of salary growth in the coming year only, as the impact of salary assumption for cash balance benefits are limited to the upcoming year service cost. The rate labeled traditional benefit (relative to employees still accruing a final average pay benefit) is the lifecount-weighted average (at each age) of the single annual growth rate at the age that is equivalent to applying the scale from that age to assumed termination or retirement ages. For the December 31, 2021, pension benefit obligation and going forward, one average rate of compensation increase is disclosed for all participants as the traditional benefit is frozen as of December 31, 2022.

For the pension benefits, the discount rate is determined by projecting future benefit payments inherent in the projected benefit obligation and discounting those cash flows using a spot yield curve for high quality corporate bonds. The plans' expected benefit payments are discounted to determine a present value using the yield curve and the discount rate is the level rate that produces the same present value. The expected return on plan assets is the long-term rate we expect to be earned based on the long-term investment policy of the plans and the various classes of invested funds. A weighted average rate was developed based on those overall rates and the target asset allocation of the plans.

For other postretirement benefits, the discount rate is determined by projecting future benefit payments inherent in the accumulated postretirement benefit obligation and discounting those cash flows using a spot

12. Employee and Agent Benefits — (continued)

yield curve for high quality corporate bonds. The plans' expected benefit payments are discounted to determine a present value using the yield curve and the discount rate is the level rate that produces the same present value. The 4.25% expected long-term return on plan assets for 2022 was based on the weighted average expected long-term asset returns for the plans. The expected long-term rates for the home office medical/life, agent medical/life and post-65 medical plans were 4.25%, 4.25% and 4.25%, respectively.

Assumed Health Care Cost Trend Rates Used to Determine Net Periodic Benefit Cost

	December 31,	
	2022	**2021**
Health care cost trend rate assumed for next year under age 65	**7.00%**	7.00%
Health care cost trend rate assumed for next year age 65 and over	**6.00%**	6.50%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	**4.50%**	4.50%
Year that the rate reaches the ultimate trend rate (under age 65)	**2031**	2030
Year that the rate reaches the ultimate trend rate (65 and older)	**2028**	2029

Pension Plan and Other Postretirement Benefit Plan Assets

Fair value is defined as the price that would be received to sell an asset in an orderly transaction between market participants at the measurement date (an exit price). The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three levels.

- Level 1 — Fair values are based on unadjusted quoted prices in active markets for identical assets.
- Level 2 — Fair values are based on inputs other than quoted prices within Level 1 that are observable for the asset, either directly or indirectly.
- Level 3 — Fair values are based on significant unobservable inputs for the asset.

Our pension plan assets consist of investments in pooled separate accounts and single client separate accounts. Net asset value ("NAV") of the pooled separate accounts is calculated in a manner consistent with U.S. GAAP for investment companies and is determinative of their fair value. Several of the pooled separate accounts invest in publicly quoted mutual funds or actively managed stocks. The fair value of the underlying mutual funds or stocks is used to determine the NAV of the separate account, which is not publicly quoted. Some of the pooled separate accounts also invest in fixed income securities. The fair value of the underlying securities is based on quoted prices of similar assets and used to determine the NAV of the separate account. Some of the pooled separate accounts invest in real estate properties. The fair value is based on discounted cash flow valuation models that utilize public real estate market data inputs such as transaction prices, market rent growth, vacancy levels, leasing absorption, market capitalization rates and discount rates.

The single client separate accounts invest in fixed income securities, hedge funds, a pooled separate account investment and other assets. The fixed income securities include U.S. Treasury bonds for which the fair value is based on quoted prices of identical assets in active markets. The fair value of the other fixed income securities is determined either from prices obtained from third party pricing vendors who use observable market information to determine prices or from internal models using substantially all observable inputs or a matrix pricing valuation approach. The hedge funds are measured at fair value using the NAV per share (or its equivalent) practical expedient and have not been classified in the fair value hierarchy. The NAV of the pooled separate account investment is calculated in a manner consistent with U.S. GAAP for investment companies and is determinative of its fair value. The carrying amounts of other assets, which are highly liquid in nature, are used to approximate fair value.

12. Employee and Agent Benefits — (continued)

Our other postretirement benefit plan assets consist of cash, investments in fixed income security portfolios and investments in equity security portfolios. Because of the nature of cash, its carrying amount approximates fair value. The fair value of fixed income investment funds, U.S. equity portfolios and international equity portfolios is based on quoted prices in active markets for identical assets.

Pension Plan Assets

The fair value of the qualified pension plan's assets by asset category as of the most recent measurement date was as follows:

	December 31, 2022				
	Assets measured at fair value	Amount measured at net asset value	Fair value hierarchy level		
			Level 1	Level 2	Level 3
	(in millions)				
Asset category					
Pooled separate account investments:					
U.S. large cap equity portfolios (1)	**$ 282.5**	**$ —**	**$ —**	**$ 282.5**	**$—**
U.S. small/mid cap equity portfolios (2)	**47.3**	**—**	**—**	**47.3**	**—**
Balanced asset portfolios (3)	**101.4**	**—**	**—**	**101.4**	**—**
International equity portfolios (4)	**143.9**	**—**	**—**	**143.9**	**—**
Real estate investment portfolios (5)	**238.4**	**—**	**—**	**238.4**	**—**
Single client separate account investments:					
Fixed income securities:					
U.S. government and agencies	**447.0**	**—**	**447.0**	**—**	**—**
States and political subdivisions	**25.0**	**—**	**—**	**25.0**	**—**
Corporate	**1,336.9**	**—**	**—**	**1,336.9**	**—**
Commercial mortgage-backed securities	**16.1**	**—**	**—**	**16.1**	**—**
Other debt obligations	**4.1**	**—**	**—**	**4.1**	**—**
Hedge funds (6)	**27.9**	**27.9**	**—**	**—**	**—**
Pooled separate account investment (7)	**43.7**	**—**	**—**	**43.7**	**—**
Other (8)	**12.1**	**—**	**—**	**12.1**	**—**
Total	**$2,726.3**	**$27.9**	**$447.0**	**$2,251.4**	**$—**

12. Employee and Agent Benefits — (continued)

	December 31, 2021				
	Assets measured at fair value	Amount measured at net asset value	Fair value hierarchy level		
			Level 1	Level 2	Level 3
	(in millions)				
Asset category					
Pooled separate account investments:					
U.S. large cap equity portfolios (1)	$ 422.5	$ —	$ —	$ 422.5	$—
U.S. small/mid cap equity portfolios (2)	65.9	—	—	65.9	—
Balanced asset portfolios (3)	119.0	—	—	119.0	—
International equity portfolios (4)	252.5	—	—	252.5	—
Real estate investment portfolios (5)	239.6	—	—	239.6	—
Single client separate account investments:					
Fixed income securities:					
U.S. government and agencies	451.2	—	451.2	—	—
States and political subdivisions	31.2	—	—	31.2	—
Corporate	1,678.1	—	—	1,678.1	—
Commercial mortgage-backed securities	18.2	—	—	18.2	—
Other debt obligations	9.2	—	—	9.2	—
Hedge funds (6)	175.7	175.7	—	—	—
Pooled separate account investment (7)	79.3	—	—	79.3	—
Other (8)	7.7	—	—	7.7	—
Total	$3,550.1	$175.7	$451.2	$2,923.2	$—

(1) The portfolios invest primarily in publicly traded equity securities of large U.S. companies.

(2) The portfolios invest primarily in publicly traded equity securities of mid-sized and small U.S. companies.

(3) The portfolios are a combination of underlying fixed income and equity investment options. These investment options may include balanced, asset allocation, target-date and target-risk investment options. Although typically lower risk than investment options that invest solely in equities, all investment options in this category have the potential to lose value.

(4) The portfolios invest primarily in publicly traded equity securities of non-U.S. companies.

(5) The portfolio invests primarily in U.S. commercial real estate properties through a separate account.

(6) The hedge funds have varying investment strategies that also have a variety of redemption terms and conditions. We do not have unfunded commitments associated with these hedge funds.

(7) The single client separate accounts invest in a money market pooled separate account.

(8) Includes cash and net (payables)/receivables for the single client separate accounts.

We have established an investment policy that provides the investment objectives and guidelines for the pension plan. Our investment strategy is to achieve the following:

- Obtain a reasonable long-term return consistent with the level of risk assumed and at a cost of operation within prudent levels. Performance benchmarks are monitored.
- Ensure sufficient liquidity to meet the emerging benefit liabilities for the plan.
- Provide for diversification of assets in an effort to avoid the risk of large losses and maximize the investment return to the pension plan consistent with market and economic risk.

In administering the qualified pension plan's asset allocation strategy, we consider the projected liability stream of benefit payments, the relationship between current and projected assets of the plan and the projected

12. Employee and Agent Benefits — (continued)

actuarial liabilities streams, the historical performance of capital markets adjusted for the perception of future short- and long-term capital market performance and the perception of future economic conditions.

According to our investment policy, the target asset allocation for the qualified plan is:

Asset category	Target allocation
Fixed income security portfolios	**25% - 80%**
Equity portfolios	**5% - 60%**
Private investments	**10%- 20%**

Other Postretirement Benefit Plan Assets

The fair value of the other postretirement benefit plans' assets by asset category as of the most recent measurement date was as follows:

	December 31, 2022			
	Assets measured at fair value	Fair value hierarchy level		
		Level 1	Level 2	Level 3
	(in millions)			
Asset category				
Cash and cash equivalents	**$ 0.6**	**$ 0.6**	**$—**	**$—**
Fixed income security portfolios (1)	**47.6**	**47.6**	**—**	**—**
U.S. equity portfolios (2)	**33.6**	**33.6**	**—**	**—**
International equity portfolios (3)	**12.6**	**12.6**	**—**	**—**
Total	**$94.4**	**$94.4**	**$—**	**$—**

	December 31, 2021			
	Assets measured at fair value	Fair value hierarchy level		
		Level 1	Level 2	Level 3
	(in millions)			
Asset category				
Cash and cash equivalents	$ 0.6	$ 0.6	$—	$—
Fixed income security portfolios (1)	57.7	57.7	—	—
U.S. equity portfolios (2)	42.8	42.8	—	—
International equity portfolios (3)	18.7	18.7	—	—
Total	$119.8	$119.8	$—	$—

(1) The portfolios invest in various fixed income securities, primarily of U.S. origin. These include, but are not limited to, corporate bonds, residential mortgage-backed securities, commercial mortgage-backed securities, U.S. Treasury securities, agency securities, asset-backed securities and collateralized mortgage obligations.

(2) The portfolios invest primarily in publicly traded equity securities of large U.S. companies.

(3) The portfolios invest primarily in publicly traded equity securities of non-U.S. companies.

12. Employee and Agent Benefits — (continued)

The investment strategies for the other postretirement benefit plans are similar to those employed by the qualified pension plan. According to our investment policy, the target asset allocation for the other postretirement benefit plans is:

Asset category	Target allocation
Fixed income security portfolios	**50%**
U.S. equity portfolios	**35%**
International equity portfolios	**15%**

Contributions

Our funding policy for our qualified pension plan is to fund the plan annually in an amount at least equal to the minimum annual contribution required under ERISA and, generally, not greater than the maximum amount that can be deducted for U.S. federal income tax purposes. We do not anticipate contributions will be needed to satisfy the minimum funding requirements of ERISA for our qualified plan. We are unable to estimate the amount that may be contributed, but it is possible that we may fund the plans in 2023 up to $70.0 million. This includes funding for both our qualified and nonqualified pension plans. While we designate assets to cover the computed liability of the nonqualified plan, the assets are not included as part of the asset balances presented in this footnote as they do not qualify as plan assets in accordance with U.S. GAAP. We may contribute to our other postretirement benefit plans in 2023 pending future analysis.

Estimated Future Benefit Payments

The estimated future benefit payments, which reflect expected future service, are:

	Pension benefits	Other postretirement benefits (gross benefit payments, including prescription drug benefits)
	(in millions)	
Year ending December 31:		
2023	**$ 190.7**	**$13.5**
2024	**184.0**	**12.5**
2025	**187.0**	**11.3**
2026	**200.3**	**10.1**
2027	**209.2**	**9.0**
2028–2032	**1,159.6**	**34.6**

The above table reflects the total estimated future benefits to be paid from the plan, including both our share of the benefit cost and the participants' share of the cost, which is funded by their contributions to the plan.

The assumptions used in calculating the estimated future benefit payments are the same as those used to measure the benefit obligation for the year ended December 31, 2022.

12. Employee and Agent Benefits — (continued)

Defined Benefit Pension Plans Supplemental Information

Certain key summary data is shown below separately for qualified and nonqualified plans.

	For the year ended December 31,					
	2022			2021		
	Qualified Plan	Nonqualified Plan	Total	Qualified Plan	Nonqualified Plan	Total
	(in millions)					
Amount recognized in statement of financial position						
Other assets	$ —	$ —	$ —	$ —	$ —	$ —
Other liabilities	(70.7)	(412.4)	(483.1)	(108.4)	(525.2)	(633.6)
Total	$ (70.7)	$(412.4)	$(483.1)	$(108.4)	$(525.2)	$(633.6)
Amount recognized in accumulated other comprehensive loss						
Total net actuarial loss	$ 390.7	$ 51.3	$ 442.0	$ 415.5	$ 172.5	$ 588.0
Prior service benefit	(72.6)	(14.8)	(87.4)	(85.2)	(19.0)	(104.2)
Pre-tax accumulated other comprehensive loss	$ 318.1	$ 36.5	$ 354.6	$ 330.3	$ 153.5	$ 483.8
Components of net periodic benefit cost						
Service cost	$ 72.5	$ 5.9	$ 78.4	$ 76.2	$ 7.0	$ 83.2
Interest cost	98.7	14.1	112.8	90.1	13.2	103.3
Expected return on plan assets	(178.9)	—	(178.9)	(182.7)	—	(182.7)
Amortization of prior service benefit	(12.6)	(4.2)	(16.8)	(12.6)	(4.2)	(16.8)
Recognized net actuarial loss	39.7	16.0	55.7	52.8	17.4	70.2
Net periodic benefit cost	$ 19.4	$ 31.8	$ 51.2	$ 23.8	$ 33.4	$ 57.2
Other changes recognized in accumulated other comprehensive (income) loss						
Net actuarial (gain) loss	$ 15.0	$(105.3)	$ (90.3)	$ (95.3)	$ (6.5)	$(101.8)
Amortization of net loss	(39.7)	(16.0)	(55.7)	(52.8)	(17.4)	(70.2)
Amortization of prior service benefit	12.6	4.2	16.8	12.6	4.2	16.8
Total recognized in pre-tax accumulated other comprehensive income	$ (12.1)	$(117.1)	$(129.2)	$(135.5)	$ (19.7)	$(155.2)
Total recognized in net periodic benefit cost and pre-tax accumulated other comprehensive (income) loss	$ 7.3	$ (85.3)	$ (78.0)	$(111.7)	$ 13.7	$ (98.0)

Defined Contribution and Deferred Compensation Plans

In addition, we have defined contribution plans that are generally available to all U.S. employees and agents. Eligible participants could not contribute more than $20,500 of their compensation to the plans in 2022. Effective January 1, 2006, we made several changes to the retirement programs. In general, the pension and supplemental executive retirement plan benefit formulas were reduced and the 401(k) matching contribution was increased. Employees who were ages 47 or older with at least ten years of service on December 31, 2005, could elect to retain the prior benefit provisions and forgo receipt of the additional matching contributions. The employees who elected to retain the prior benefit provisions are referred to as "Grandfathered Choice Participants." We match the Grandfathered Choice Participant's contribution at a 50% contribution rate up to a maximum matching contribution of 3% of the participant's compensation. For all other participants, we match the participant's contributions at a 75% contribution rate up to a maximum matching contribution of 6% of the participant's compensation. The defined contribution plans allow

12. Employee and Agent Benefits — (continued)

employees to choose among various investment options, including our common stock, which is available through our Employee Stock Ownership Plan ("ESOP"). We contributed $70.3 million, $60.5 million and $56.7 million in 2022, 2021 and 2020, respectively, to our qualified defined contribution plans.

The number of shares of our common stock allocated to participants in the ESOP was 1.8 million and 2.0 million as of December 31, 2022 and 2021, respectively. As of December 31, 2022 and 2021, the fair value of the ESOP, which includes earned and unearned common stock, was $148.4 million and $146.1 million, respectively. The ESOP's total assets include our common stock and cash. The ESOP purchases our common stock on the open market. The number of shares of our common stock held within the ESOP is treated as outstanding in both our basic and diluted earnings per share calculations.

We also have nonqualified deferred compensation plans available to select employees and agents that allow them to defer compensation amounts in excess of limits imposed by U.S. federal tax law with respect to the qualified plans. For certain nonqualified deferred compensation plans that include an employer matching contribution, in 2022 we matched the Grandfathered Choice Participant's deferral at a 50% match deferral rate up to a maximum matching deferral of 3% of the participant's compensation. For all other participants in nonqualified deferred compensation plans that include an employer matching contribution, we matched the participant's deferral at a 75% match deferral rate up to a maximum matching deferral of 6% of the participant's compensation. We contributed $3.9 million, $3.4 million and $3.1 million in 2022, 2021 and 2020, respectively, to our nonqualified deferred compensation plans.

13. Contingencies, Guarantees, Indemnifications and Leases

Litigation and Regulatory Contingencies

We are regularly involved in litigation, both as a defendant and as a plaintiff, but primarily as a defendant. Litigation naming us as a defendant ordinarily arises out of our business operations as a provider of asset management and accumulation products and services, individual life insurance, specialty benefits insurance and our investment activities. Some of the lawsuits may be class actions, or purport to be, and some may include claims for unspecified or substantial punitive and treble damages.

We may discuss such litigation in one of three ways. We accrue a charge to income and disclose legal matters for which the chance of loss is probable and for which the amount of loss can be reasonably estimated. We may disclose contingencies for which the chance of loss is reasonably possible and provide an estimate of the possible loss or range of loss or a statement that such an estimate cannot be made. Finally, we may voluntarily disclose loss contingencies for which the chance of loss is remote in order to provide information concerning matters that potentially expose us to possible losses.

In addition, regulatory bodies such as state insurance departments, the SEC, the Financial Industry Regulatory Authority ("FINRA"), the Department of Labor ("DOL") and other regulatory agencies in the U.S. and in international locations in which we do business, regularly make inquiries and conduct examinations or investigations concerning our compliance with, among other things, insurance laws, securities laws, ERISA and laws governing the activities of broker-dealers. We receive requests from regulators and other governmental authorities relating to industry issues and may receive additional requests, including subpoenas and interrogatories, in the future.

On November 12, 2014, Frederick Rozo filed a class action lawsuit in the United States District Court for the Southern District of Iowa against Principal Life and us. We were later dismissed as a defendant. The Plaintiff alleged that defendants breached fiduciary duties and engaged in prohibited transactions under ERISA in connection with a general account guaranteed product known as the Principal Fixed Income Option ("PFIO"). On May 12, 2017, the district court certified a nationwide class of participants and beneficiaries

13. Contingencies, Guarantees, Indemnifications and Leases — (continued)

who had funds invested in one of the PFIO contracts. On September 25, 2018, the district court granted Principal Life's motion for summary judgment. On February 3, 2020, the Eighth Circuit Court of Appeals reversed that ruling and remanded the case back to the district court. A bench trial was held before the district court in November 2020. The court issued its ruling on April 8, 2021, finding in favor of Principal Life on all claims. The Plaintiff appealed this ruling to the Eighth Circuit Court of Appeals, which upheld the decision in Principal Life's favor on September 2, 2022. The Plaintiff did not appeal the Eighth Circuit Court of Appeals' decision; as such, the district court's ruling in Principal Life's favor stands.

While the outcome of any pending or future litigation or regulatory matter cannot be predicted, management does not believe any such matter will have a material adverse effect on our business or financial position. As of December 31, 2022, we had no estimated loss accrued related to the legal matter discussed above because we believe the chance of loss from this matter is not probable and the amount of loss cannot be reasonably estimated.

To the extent such matters present a reasonably possible chance of loss, we are generally not able to estimate the possible loss or range of loss associated therewith. The outcome of such matters is always uncertain and unforeseen results can occur. It is possible that such outcomes could require us to pay damages or make other expenditures or establish accruals in amounts that we could not estimate at December 31, 2022.

Guarantees and Indemnifications

In the normal course of business, we have provided guarantees to third parties primarily related to former subsidiaries and joint ventures. The terms of these agreements range in duration and often are not explicitly defined. The maximum exposure under these agreements as of December 31, 2022, was approximately $80.0 million. At inception, the fair value of such guarantees was insignificant. In addition, we believe the likelihood is remote that material payments will be required. Therefore, any liability accrued within our consolidated statements of financial position is insignificant. Should we be required to perform under these guarantees, we generally could recover a portion of the loss from third parties through recourse provisions included in agreements with such parties, the sale of assets held as collateral that can be liquidated in the event performance is required under the guarantees or other recourse generally available to us; therefore, such guarantees would not result in a material adverse effect on our business or financial position. While the likelihood is remote, such outcomes could materially affect net income in a particular quarter or annual period. Furthermore, in connection with our contingent funding agreements, we are required to purchase any principal and interest strips of U.S. Treasury securities that are due and not paid from the associated unconsolidated trusts. The maximum exposure under these agreements as of December 31, 2022, was $750.0 million. See Note 10, Debt, for further details.

We manage mandatory privatized social security funds in Chile. By regulation, we have a required minimum guarantee on the funds' relative return. Because the guarantee has no limitation with respect to duration or amount, the maximum exposure of the guarantee in the future is indeterminable.

We are also subject to various other indemnification obligations issued in conjunction with divestitures, acquisitions, financing and reinsurance transactions whose terms range in duration and often are not explicitly defined. Certain portions of these indemnifications may be capped, while other portions are not subject to such limitations; therefore, the overall maximum amount of the obligation under the indemnifications cannot be reasonably estimated. At inception, the fair value of such indemnifications was insignificant. In addition, we believe the likelihood is remote that material payments will be required. Therefore, any liability accrued within our consolidated statements of financial position is insignificant. While we are unable to estimate with certainty the ultimate legal and financial liability with respect to these indemnifications, we believe that performance under these indemnifications would not result in a material adverse effect on our business or

13. Contingencies, Guarantees, Indemnifications and Leases — (continued)

financial position. While the likelihood is remote, performance under these indemnifications could materially affect net income in a particular quarter or annual period.

Guaranty Funds

Under state insurance guaranty fund laws, insurers doing business in a state can be assessed, up to prescribed limits, for certain obligations of insolvent insurance companies to policyholders and claimants. A state's fund assesses its members based on their pro rata market share of written premiums in the state for the classes of insurance for which the insolvent insurer was engaged. Some states permit member insurers to recover assessments paid through full or partial premium tax offsets. We accrue liabilities for guaranty fund assessments when an assessment is probable, can be reasonably estimated and when the event obligating us to pay has occurred. While we cannot predict the amount and timing of any future assessments, we have established reserves we believe are adequate for assessments relating to insurance companies that are currently subject to insolvency proceedings. As of December 31, 2022 and 2021, the liability balance for guaranty fund assessments, which is not discounted, was $20.6 million and $21.0 million, respectively, and was reported within other liabilities in the consolidated statements of financial position. As of both December 31, 2022 and 2021, $9.7 million related to premium tax offsets were included in premiums due and other receivables in the consolidated statements of financial position.

Leases

As a lessee, we lease office space, data processing equipment, office furniture and office equipment under various operating leases. We also lease buildings and hardware storage equipment under finance leases. Lease assets and liabilities are recognized at the commencement of a lease based on the present value of lease payments over the lease term. We generally use our incremental borrowing rate based on the information available at the lease commencement date to determine the present value of lease payments. Lease term may include options to extend or terminate the lease when it is reasonably certain we will exercise the option. Leases with an initial term of twelve months or less are not recorded on the consolidated statements of financial position. We recognize lease expense for leases on a straight-line basis over the lease term. Some of our lease agreements include payments for property taxes, insurance, utilities or common area maintenance, which are not based on an index or rate. These payments are recognized in net income in the period in which the obligation has occurred.

We sublease certain office space to third parties, which are primarily operating leases. We record sublease income on a straight-line basis over the lease term.

The lease assets and liabilities were as follows:

	December 31,	
	2022	**2021**
	(in millions)	
Assets		
Operating lease assets (1)	**$194.7**	$210.5
Finance lease assets (1)	**82.4**	94.2
Total lease assets	**$277.1**	$304.7
Liabilities		
Operating lease liabilities (2)	**$196.5**	$209.9
Finance lease liabilities (2)	**83.0**	94.8
Total lease liabilities	**$279.5**	$304.7

13. Contingencies, Guarantees, Indemnifications and Leases — (continued)

(1) Operating and finance lease assets are primarily reported within property and equipment on the consolidated statements of financial position.

(2) Operating and finance lease liabilities are reported within other liabilities on the consolidated statements of financial position.

The lease cost was as follows:

	For the year ended December 31,		
	2022	2021	2020
		(in millions)	
Finance lease cost (1):			
Amortization of right-of-use assets	**$ 34.0**	$ 30.5	$20.5
Interest on lease liabilities	**1.2**	1.0	1.0
Operating lease cost (1)	**61.6**	66.6	58.7
Other lease cost (1) (2)	**12.4**	10.8	8.6
Sublease income (3)	**(1.5)**	(1.7)	(1.6)
Total lease cost	**$107.7**	$107.2	$87.2

(1) Finance, operating and other lease costs are primarily included in operating expenses on the consolidated statements of operations.

(2) Other lease cost primarily reflects variable and short-term lease costs.

(3) Sublease income is included in fees and other revenues on the consolidated statements of operations.

Payments for operating leases for the years ended December 31, 2022, 2021 and 2020, were $58.3 million, $63.0 million and $71.6 million, respectively. Payments for finance leases for the years ended December 31, 2022, 2021 and 2020, were $35.1 million, $31.4 million and $21.2 million, respectively. The following represents future payments due by period for lease obligations:

	Operating leases	Finance leases	Total
		(in millions)	
For the twelve months ending December 31:			
2023	**$ 51.2**	**$35.0**	**$ 86.2**
2024	**41.1**	**30.2**	**71.3**
2025	**35.6**	**14.6**	**50.2**
2026	**30.9**	**5.0**	**35.9**
2027	**24.9**	**0.4**	**25.3**
2028 and thereafter	**37.0**	**—**	**37.0**
Total lease payments	**220.7**	**85.2**	**305.9**
Less: interest	**24.2**	**2.2**	**26.4**
Present value of lease liabilities	**$196.5**	**$83.0**	**$279.5**

The weighted-average remaining lease term and weighted-average discount rates were as follows:

	For the year ended December 31,		
	2022	2021	2020
Weighted-average remaining lease term (in years):			
Operating leases	**6.4**	6.5	6.7
Finance leases	**2.8**	3.2	3.0
Weighted-average discount rate:			
Operating leases	**3.6%**	3.4%	3.2%
Finance leases	**1.7%**	1.0%	1.8%

14. Stockholders' Equity

Common Stock Dividends

	For the year ended December 31,		
	2022	**2021**	**2020**
Dividends declared per common share	**$2.56**	$2.44	$2.24

Reconciliation of Outstanding Common Shares

	For the year ended December 31,		
	2022	**2021**	**2020**
		(in millions)	
Beginning balance	**261.7**	273.3	276.6
Shares issued	**4.9**	3.0	2.6
Treasury stock acquired	**(23.1)**	(14.6)	(5.9)
Ending balance	**243.5**	261.7	273.3

In November 2018, our Board of Directors ("Board") authorized a share repurchase program of up to $500.0 million of our outstanding common stock, which was completed in February 2020. In February 2020, our Board authorized a share repurchase program of up to $900.0 million of our outstanding common stock, which was completed in November 2021. In June 2021, our Board authorized a share repurchase program of up to $1.2 billion of our outstanding common stock, which was completed in August 2022. In January 2022, our Board authorized a $1.6 billion increase to the June 2021 share repurchase program authorization, which has no expiration date. Shares repurchased under these programs are accounted for as treasury stock, carried at cost and reflected as a reduction to stockholders' equity.

In March 2022, we entered into an accelerated share repurchase program with a third party financial institution to repurchase $700.0 million of common stock. We received approximately 8.5 million shares at an initial cost of $560.0 million from our counterparty as of March 31, 2022, which was recorded in treasury stock. The associated $140.0 million forward contract was recorded in additional paid-in capital. This program closed in June 2022, at which time an additional 1.4 million shares were delivered based on the $70.53 daily volume-weighted average price of our common stock, less a discount, during the term of the program.

In August 2022, we entered into an accelerated share repurchase program with a third party financial institution to repurchase $400.0 million of common stock. We received approximately 4.1 million shares at an initial cost of $320.0 million from our counterparty as of August 16, 2022, which was recorded in treasury stock. This program closed in September 2022, at which time an additional 1.2 million shares were delivered based on the $76.48 daily volume-weighted average price of our common stock, less a discount, during the term of the program.

14. Stockholders' Equity — (continued)

Other Comprehensive Income (Loss)

	For the year ended December 31, 2022		
	Pre-Tax	Tax	After-Tax
		(in millions)	
Net unrealized losses on available-for-sale securities during the period	**$(13,167.3)**	**$2,791.3**	**$(10,376.0)**
Reclassification adjustment for losses included in net income (1)	**398.9**	**(87.6)**	**311.3**
Adjustments for assumed changes in amortization patterns	**926.6**	**(194.6)**	**732.0**
Adjustments for assumed changes in policyholder liabilities	**430.0**	**(86.2)**	**343.8**
Net unrealized losses on available-for-sale securities	**(11,411.8)**	**2,422.9**	**(8,988.9)**
Net unrealized losses on derivative instruments during the period	**(1.4)**	**0.3**	**(1.1)**
Reclassification adjustment for gains included in net income (2)	**(28.0)**	**5.8**	**(22.2)**
Adjustments for assumed changes in amortization patterns	**7.3**	**(1.6)**	**5.7**
Adjustments for assumed changes in policyholder liabilities	**(2.9)**	**0.6**	**(2.3)**
Net unrealized losses on derivative instruments	**(25.0)**	**5.1**	**(19.9)**
Foreign currency translation adjustment	**(27.7)**	**4.8**	**(22.9)**
Unrecognized postretirement benefit obligation during the period	**85.8**	**(22.3)**	**63.5**
Amortization of amounts included in net periodic benefit cost (4)	**36.7**	**(9.6)**	**27.1**
Net unrecognized postretirement benefit obligation	**122.5**	**(31.9)**	**90.6**
Other comprehensive loss	**$(11,342.0)**	**$2,400.9**	**$ (8,941.1)**

	For the year ended December 31, 2021		
	Pre-Tax	Tax	After-Tax
		(in millions)	
Net unrealized losses on available-for-sale securities during the period	$(2,960.0)	$ 665.4	$(2,294.6)
Reclassification adjustment for losses included in net income (1)	19.4	(5.1)	14.3
Adjustments for assumed changes in amortization patterns	171.4	(36.0)	135.4
Adjustments for assumed changes in policyholder liabilities	1,913.1	(439.1)	1,474.0
Net unrealized losses on available-for-sale securities	(856.1)	185.2	(670.9)
Net unrealized gains on derivative instruments during the period	66.7	(14.0)	52.7
Reclassification adjustment for gains included in net income (2)	(25.5)	5.4	(20.1)
Adjustments for assumed changes in amortization patterns	(0.2)	—	(0.2)
Adjustments for assumed changes in policyholder liabilities	1.6	(0.4)	1.2
Net unrealized gains on derivative instruments	42.6	(9.0)	33.6
Foreign currency translation adjustment during the period	(267.9)	(5.6)	(273.5)
Reclassification adjustment for losses included in net income (3)	19.3	—	19.3
Foreign currency translation adjustment	(248.6)	(5.6)	(254.2)
Unrecognized postretirement benefit obligation during the period	106.5	(28.5)	78.0
Amortization of amounts included in net periodic benefit cost (4)	51.8	(14.0)	37.8
Net unrecognized postretirement benefit obligation	158.3	(42.5)	115.8
Other comprehensive loss	$ (903.8)	$ 128.1	$ (775.7)

14. Stockholders' Equity — (continued)

	For the year ended December 31, 2020		
	Pre-Tax	Tax	After-Tax
		(in millions)	
Net unrealized gains on available-for-sale securities during the period	$ 3,441.4	$(728.7)	$ 2,712.7
Reclassification adjustment for gains included in net income (1)	(52.9)	12.6	(40.3)
Adjustments for assumed changes in amortization patterns	(179.0)	37.6	(141.4)
Adjustments for assumed changes in policyholder liabilities	(1,478.2)	323.7	(1,154.5)
Net unrealized gains on available-for-sale securities	1,731.3	(354.8)	1,376.5
Net unrealized losses on derivative instruments during the period	(28.1)	6.5	(21.6)
Reclassification adjustment for gains included in net income (2)	(27.1)	5.1	(22.0)
Adjustments for assumed changes in amortization patterns	2.7	(0.5)	2.2
Adjustments for assumed changes in policyholder liabilities	7.8	(1.6)	6.2
Net unrealized losses on derivative instruments	(44.7)	9.5	(35.2)
Foreign currency translation adjustment during the period	(11.7)	(2.6)	(14.3)
Reclassification adjustment for losses included in net income (3)	43.0	1.9	44.9
Foreign currency translation adjustment	31.3	(0.7)	30.6
Unrecognized postretirement benefit obligation during the period	(91.9)	24.9	(67.0)
Amortization of amounts included in net periodic benefit cost (4)	57.6	(15.5)	42.1
Net unrecognized postretirement benefit obligation	(34.3)	9.4	(24.9)
Other comprehensive income	$ 1,683.6	$(336.6)	$ 1,347.0

(1) Pre-tax reclassification adjustments relating to available-for-sale securities are reported in net realized capital gains (losses) on the consolidated statements of operations.

(2) See Note 5, Derivative Financial Instruments, under the caption "Effect of Fair Value and Cash Flow Hedges on Consolidated Statements of Operations" for further details.

(3) The 2021 pre-tax reclassification adjustment related to the release of cumulative translation adjustment from the dissolution of foreign subsidiaries. The 2020 pre-tax reclassification adjustment primarily related to the release of the cumulative translation adjustment from the dissolution of a foreign subsidiary and the net impact of deconsolidated sponsored investment funds and associated net investment hedges. The adjustments were reported in net realized capital gains (losses) on the consolidated statements of operations. For the year ended December 31, 2020, $8.7 million of this reclassification relates to noncontrolling interest and is reported in net income attributable to noncontrolling interest on the consolidated statements of operations.

(4) Amount is comprised of amortization of prior service cost (benefit) and recognized net actuarial (gain) loss, which is reported in operating expenses on the consolidated statements of operations. See Note 12, Employee and Agent Benefits, under the caption "Components of Net Periodic Benefit Cost" for further details.

14. Stockholders' Equity — (continued)

Accumulated Other Comprehensive Income (Loss)

	Net unrealized gains (losses) on available-for-sale securities (1)	Noncredit component of impairment losses on fixed maturities available-for-sale	Net unrealized gains on derivative instruments	Foreign currency translation adjustment	Unrecognized postretirement benefit obligation	Accumulated other comprehensive income (loss)
			(in millions)			
Balances as of January 1, 2020	$ 2,806.0	$(44.1)	$ 53.4	$(1,341.8)	$(435.6)	$ 1,037.9
Other comprehensive income during the period, net of adjustments	1,416.7	—	(13.2)	(7.3)	(67.0)	1,329.2
Amounts reclassified from AOCI	(40.3)	—	(22.0)	36.2	42.1	16.0
Other comprehensive income	1,376.4	—	(35.2)	28.9	(24.9)	1,345.2
Effects of implementation of accounting change related to the reclassification of certain tax effects, net	(44.1)	44.1	—	—	—	—
Balances as of December 31, 2020	4,138.3	—	18.2	(1,312.9)	(460.5)	2,383.1
Other comprehensive loss during the period, net of adjustments	(685.2)	—	53.7	(270.0)	78.0	(823.5)
Amounts reclassified from AOCI	14.3	—	(20.1)	19.3	37.8	51.3
Other comprehensive loss	(670.9)	—	33.6	(250.7)	115.8	(772.2)
Balances as of December 31, 2021	3,467.4	—	51.8	(1,563.6)	(344.7)	1,610.9
Other comprehensive loss during the period, net of adjustments	**(9,300.0)**	**—**	**2.3**	**(23.7)**	**63.5**	**(9,257.9)**
Amounts reclassified from AOCI	**311.3**	**—**	**(22.2)**	**—**	**27.1**	**316.2**
Other comprehensive loss	**(8,988.7)**	**—**	**(19.9)**	**(23.7)**	**90.6**	**(8,941.7)**
Adjustment for reinsurance (2)	**124.4**	**—**	**7.4**	**—**	**—**	**131.8**
Balances as of December 31, 2022	**$(5,396.9)**	**$ —**	**$ 39.3**	**$(1,587.3)**	**$(254.1)**	**$(7,199.0)**

(1) Net unrealized gains (losses) on available-for-sale securities for which an allowance for credit loss has been recorded were $0.3 million, $(2.1) million and $(2.9) million as of December 31, 2022, 2021 and 2020, respectively.

(2) Reflects the January 1, 2022, balance associated with our ULSG business that was ceded to Talcott Life & Annuity Re.

Noncontrolling Interest

Interests held by unaffiliated parties in consolidated entities are reflected in noncontrolling interest, which represents the noncontrolling partners' share of the underlying net assets of our consolidated subsidiaries. Noncontrolling interest that is not redeemable is reported in the equity section of the consolidated statements of financial position.

The noncontrolling interest holders in certain of our consolidated entities maintain an equity interest that is redeemable at the option of the holder, which may be exercised on varying dates. Since redemption of the noncontrolling interest is outside of our control, this interest is excluded from stockholders' equity and reported separately as redeemable noncontrolling interest on the consolidated statements of financial position. Our redeemable noncontrolling interest primarily relates to consolidated sponsored investment funds for which interests are redeemed at fair value from the net assets of the funds.

For our redeemable noncontrolling interest related to other consolidated subsidiaries, redemptions are required to be purchased at fair value or a value based on a formula that management intended to reasonably approximate fair value based on a fixed multiple of earnings over a measurement period. The carrying value

14. Stockholders' Equity — (continued)

of the redeemable noncontrolling interest is compared to the redemption value at each reporting period. Any adjustments to the carrying amount of the redeemable noncontrolling interest for changes in redemption value prior to exercise of the redemption option are determined after the attribution of net income or loss of the subsidiary and are recognized in the redemption value as they occur. Adjustments to the carrying value of redeemable noncontrolling interest result in adjustments to additional paid-in capital and/or retained earnings. Adjustments are recorded in retained earnings to the extent the redemption value of the redeemable noncontrolling interest exceeds its fair value and will impact the numerator in our earnings per share calculations. All other adjustments to the redeemable noncontrolling interest are recorded in additional paid-in capital.

Following is a reconciliation of the changes in the redeemable noncontrolling interest (in millions):

	For the year ended December 31,		
	2022	2021	2020
	(in millions)		
Beginning balance	**$ 332.5**	$255.6	$264.9
Net income (loss) attributable to redeemable noncontrolling interest	**(25.8)**	17.5	7.5
Redeemable noncontrolling interest of deconsolidated entities (1)	**(2.8)**	(37.4)	(91.9)
Contributions from redeemable noncontrolling interest	**67.3**	166.8	136.2
Distributions to redeemable noncontrolling interest	**(108.9)**	(66.8)	(62.0)
Purchase of subsidiary shares from redeemable noncontrolling interest (2)	**(1.1)**	(6.1)	—
Change in redemption value of redeemable noncontrolling interest	**(0.2)**	3.1	0.2
Stock-based compensation attributable to redeemable noncontrolling interest	**0.1**	—	0.1
Other comprehensive income (loss) attributable to redeemable noncontrolling interest	**0.9**	(0.2)	0.6
Ending balance	**$ 262.0**	$332.5	$255.6

(1) We deconsolidated certain sponsored investment funds as they no longer met the requirements for consolidation.

(2) In 2022, we acquired an additional interest in Origin Asset Management. In 2021, we acquired the remaining interest in Principal Innovations, Inc. and its wholly owned subsidiary, RobustWealth, Inc.

Dividend Limitations

The declaration and payment of our common stock dividends is subject to the discretion of our Board of Directors and will depend on our overall financial condition, results of operations, capital levels, cash requirements, future prospects, receipt of dividends or other distributions from Principal Life (as described below), risk management considerations and other factors deemed relevant by the Board. No significant restrictions limit the payment of dividends by us, except those generally applicable to corporations incorporated in Delaware.

Under Iowa law, Principal Life may pay dividends or make other distributions only from the earned surplus arising from its business and must receive the prior approval of the Commissioner of Insurance of the State of Iowa ("the Commissioner") to pay stockholder dividends or make any other distribution if such distribution would exceed certain statutory limitations. Iowa law gives the Commissioner discretion to disapprove requests for distributions in excess of these limitations. Extraordinary dividends include those made, together with dividends and other distributions, within the preceding twelve months that exceed the greater of (i) 10% of Principal Life's statutory policyholder surplus as of the previous year-end or (ii) the statutory net gain from operations from the previous calendar year, not to exceed earned surplus. Based on this limitation and 2022 statutory results, Principal Life could pay approximately $430.1 million in ordinary stockholder dividends in 2023 without prior regulatory approval. However, because the dividend test is based

14. Stockholders' Equity — (continued)

on dividends previously paid over rolling 12-month periods, if paid before a specified date during 2023, some or all of such dividends may be extraordinary and require regulatory approval.

15. Fair Value Measurements

We use fair value measurements to record fair value of certain assets and liabilities and to estimate fair value of financial instruments not recorded at fair value but required to be disclosed at fair value. Certain financial instruments, particularly policyholder liabilities other than investment contracts, are excluded from these fair value disclosure requirements.

Valuation Hierarchy

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price). The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three levels. The level in the fair value hierarchy within which the fair value measurement in its entirety falls is determined based on the lowest level input that is significant to the fair value measurement in its entirety considering factors specific to the asset or liability.

- **Level 1** — Fair values are based on unadjusted quoted prices in active markets for identical assets or liabilities.
- **Level 2** — Fair values are based on inputs other than quoted prices within Level 1 that are observable for the asset or liability, either directly or indirectly.
- **Level 3** — Fair values are based on at least one significant unobservable input for the asset or liability.

Determination of Fair Value

The following discussion describes the valuation methodologies and inputs used for assets and liabilities measured at fair value on a recurring basis. The techniques utilized in estimating the fair value of financial instruments are reliant on the assumptions used. Care should be exercised in deriving conclusions about our business, its value or financial position based on the fair value information of financial instruments presented below.

Fair value estimates are made based on available market information and judgments about the financial instrument at a specific point in time. Such estimates do not consider the tax impact of the realization of unrealized gains or losses. In addition, the disclosed fair value may not be realized in the immediate settlement of the financial instrument. We validate prices through an investment analyst review process, which includes validation through direct interaction with external sources, review of recent trade activity or use of internal models. In circumstances where broker quotes are used to value an instrument, we generally receive one non-binding quote. Broker quotes are validated through an investment analyst review process, which includes validation through direct interaction with external sources and use of internal models or other relevant information. We did not make any significant changes to our valuation processes during 2022.

Fixed Maturities

Fixed maturities include bonds, ABS, redeemable preferred stock and certain non-redeemable preferred securities. When available, the fair value of fixed maturities is based on quoted prices of identical assets in active markets. These are reflected in Level 1 and primarily include U.S. Treasury bonds and actively traded redeemable corporate preferred securities.

15. Fair Value Measurements — (continued)

When quoted prices of identical assets in active markets are not available, our first priority is to obtain prices from third party pricing vendors. We have regular interaction with these vendors to ensure we understand their pricing methodologies and to confirm they are utilizing observable market information. Their methodologies vary by asset class and include inputs such as estimated cash flows, benchmark yields, reported trades, broker quotes, credit quality, industry events and economic events. Fixed maturities with validated prices from pricing services, which includes the majority of our public fixed maturities in all asset classes, are generally reflected in Level 2. Also included in Level 2 are corporate bonds when quoted market prices are not available, for which an internal model using substantially all observable inputs or a matrix pricing valuation approach is used. In the matrix approach, securities are grouped into pricing categories that vary by sector, rating and average life. Each pricing category is assigned a risk spread based on studies of observable public market data from the investment professionals assigned to specific security classes. The expected cash flows of the security are then discounted back at the current Treasury curve plus the appropriate risk spread. Although the matrix valuation approach provides a fair valuation of each pricing category, the valuation of an individual security within each pricing category may also be impacted by company specific factors.

If we are unable to price a fixed maturity security using prices from third party pricing vendors or other sources specific to the asset class, we may obtain a broker quote or utilize an internal pricing model specific to the asset utilizing relevant market information, to the extent available and where at least one significant unobservable input is utilized. These are reflected in Level 3 in the fair value hierarchy and can include fixed maturities across all asset classes. As of December 31, 2022, less than 4% of our total fixed maturities were Level 3 securities valued using internal pricing models.

The primary inputs, by asset class, for valuations of the majority of our Level 2 investments from third party pricing vendors or our internal pricing valuation approach are described below.

U.S. Government and Agencies/Non-U.S. Governments. Inputs include recently executed market transactions, interest rate yield curves, maturity dates, market price quotations and credit spreads relating to similar instruments.

States and Political Subdivisions. Inputs include Municipal Securities Rulemaking Board reported trades, U.S. Treasury and other benchmark curves, material event notices, new issue data and obligor credit ratings.

Corporate. Inputs include recently executed transactions, market price quotations, benchmark yields, issuer spreads and observations of equity and credit default swap curves related to the issuer. For private placement corporate securities valued through the matrix valuation approach inputs include the current Treasury curve and risk spreads based on sector, rating and average life of the issuance.

RMBS, CMBS, Collateralized Debt Obligations and Other Debt Obligations. Inputs include cash flows, priority of the tranche in the capital structure, expected time to maturity for the specific tranche, reinvestment period remaining and performance of the underlying collateral including prepayments, defaults, deferrals, loss severity of defaulted collateral and, for RMBS, prepayment speed assumptions. Other inputs include market indices and recently executed market transactions.

Equity Securities

Equity securities include mutual funds, common stock, non-redeemable preferred stock and required regulatory investments. Fair values of equity securities are determined using quoted prices in active markets for identical assets when available, which are reflected in Level 1. When quoted prices are not available, we may utilize internal valuation methodologies appropriate for the specific asset that use observable inputs such as underlying share prices or the NAV, which are reflected in Level 2. Fair values might also be determined using

15. Fair Value Measurements — (continued)

broker quotes or through the use of internal models or analysis that incorporate significant assumptions deemed appropriate given the circumstances and consistent with what other market participants would use when pricing such securities, which are reflected in Level 3.

Derivatives

The fair values of exchange-traded derivatives are determined through quoted market prices, which are reflected in Level 1. Exchange-traded derivatives include futures that are settled daily, which reduces their fair value in the consolidated statements of financial position. The fair values of OTC cleared derivatives are determined through market prices published by the clearinghouses, which are reflected in Level 2. The clearinghouses utilize the secured overnight financing rate ("SOFR") curve in their valuation. Variation margin associated with OTC cleared derivatives is settled daily, which reduces their fair value in the consolidated statements of financial position. The fair values of bilateral OTC derivative instruments are determined using either pricing valuation models that utilize market observable inputs or broker quotes. The majority of our bilateral OTC derivatives are valued with models that use market observable inputs, which are reflected in Level 2. Significant inputs include contractual terms, interest rates, currency exchange rates, credit spread curves, equity prices and volatilities. These valuation models consider projected discounted cash flows, relevant swap curves and appropriate implied volatilities. Certain bilateral OTC derivatives utilize unobservable market data, primarily independent broker quotes that are nonbinding quotes based on models that do not reflect the result of market transactions, which are reflected in Level 3.

Our non-cleared derivative contracts are generally documented under ISDA Master Agreements, which provide for legally enforceable set-off and close-out netting of exposures to specific counterparties. Collateral arrangements are bilateral and based on current ratings of each entity. We utilize the SOFR curve to value our positions. Counterparty credit risk is routinely monitored to ensure our adjustment for nonperformance risk is appropriate. Our centrally cleared derivative contracts are conducted with regulated centralized clearinghouses, which provide for daily exchange of cash collateral or variation margin equal to the difference in the daily market values of those contracts that eliminates the nonperformance risk on these trades.

Interest Rate Contracts. For non-cleared contracts, which include interest rate swaps and have included swaptions, we use discounted cash flow valuation techniques to determine the fair value using observable swap curves as the inputs. These are reflected in Level 2. We have forward contracts for which we obtain prices from third party pricing vendors. These are reflected in Level 2. For centrally cleared contracts we use published prices from clearinghouses. These are reflected in Level 2. In addition, we had interest rate options that were valued using broker quotes. These were reflected in Level 3.

Foreign Exchange Contracts. We use discounted cash flow valuation techniques that utilize observable swap curves and exchange rates as the inputs to determine the fair value of foreign currency swaps. These are reflected in Level 2. Currency forwards are and currency options were valued using observable market inputs, including forward currency exchange rates. These are reflected in Level 2. In addition, we had a limited number of non-standard currency swaps that were valued using broker quotes. These were reflected within Level 3.

Equity Contracts. We use an option pricing model using observable implied volatilities, dividend yields, index prices and swap curves as the inputs to determine the fair value of equity options. These are reflected in Level 2.

Credit Contracts. We use either the ISDA Credit Default Swap Standard discounted cash flow model that utilizes observable default probabilities and recovery rates as inputs to determine the fair value of credit default swaps. These are reflected in Level 2. In addition, we have a limited number of credit default swaps that are valued using broker quotes. These are reflected within Level 3.

15. Fair Value Measurements — (continued)

Other Investments

Other investments reported at fair value include invested assets of consolidated sponsored investment funds, unconsolidated sponsored investment funds, other investment funds reported at fair value, equity method real estate investments for which the fair value option was elected and certain redeemable and nonredeemable preferred stock.

Invested assets of consolidated sponsored investment funds include equity securities, fixed maturities and derivative assets, for which fair values are determined as previously described, and are reflected in Level 1 and Level 2.

The fair value of unconsolidated sponsored investment funds and other investment funds is determined using the NAV of the fund. The NAV of the fund represents the price at which we would be able to initiate a transaction. Investments for which the NAV represents a quoted price in an active market for identical assets are reflected in Level 1. Investments that do not have a quoted price in an active market are reflected in Level 2.

Equity method real estate investments for which the fair value option was elected were reflected in Level 3. The equity method real estate investments consisted of underlying real estate and debt. The real estate fair value was estimated using a discounted cash flow valuation model that utilized public real estate market data inputs such as transaction prices, market rents, vacancy levels, leasing absorption, market cap rates and discount rates. The debt fair value was estimated using a discounted cash flow analysis based on our incremental borrowing rate for similar borrowing arrangements. The last equity method real estate investment for which the fair value option was elected was sold in the third quarter of 2021.

Cash Equivalents

Certain cash equivalents are reported at fair value on a recurring basis and include money market instruments and other short-term investments with maturities of three months or less. Fair values of these cash equivalents may be determined using public quotations, when available, which are reflected in Level 1. When public quotations are not available, because of the highly liquid nature of these assets, carrying amounts may be used to approximate fair values, which are reflected in Level 2.

Separate Account Assets

Separate account assets include equity securities, debt securities, cash equivalents and derivative instruments, for which fair values are determined as previously described, and are reflected in Level 1, Level 2 and Level 3. Separate account assets also include commercial mortgage loans, for which the fair value is estimated by discounting the expected total cash flows using market rates that are applicable to the yield, credit quality and maturity of the loans. The market clearing spreads vary based on mortgage type, weighted average life, rating and liquidity. These are reflected in Level 3. Finally, separate account assets include real estate, for which the fair value is estimated using discounted cash flow valuation models that utilize various public real estate market data inputs. In addition, each property is appraised annually by an independent appraiser. The real estate included in separate account assets is recorded net of related mortgage encumbrances for which the fair value is estimated using discounted cash flow analysis based on our incremental borrowing rate for similar borrowing arrangements. The real estate within the separate accounts is reflected in Level 3.

Investment and Universal Life Contracts

Certain universal life, annuity and other investment contracts include embedded derivatives that have been bifurcated from the host contract and are measured at fair value on a recurring basis, which are reflected in Level 3. The key assumptions for calculating the fair value of the embedded derivative liabilities are market assumptions (such as equity market returns, interest rate levels, market volatility and correlations) and

15. Fair Value Measurements — (continued)

policyholder behavior assumptions (such as lapse, mortality, utilization and withdrawal patterns). Risk margins are included in the policyholder behavior assumptions. The assumptions are based on a combination of historical data and actuarial judgment. The embedded derivative liabilities are valued using models that incorporate a spread reflecting our own creditworthiness.

The assumption for our own nonperformance risk for investment contracts and any embedded derivatives bifurcated from certain universal life, annuity and investment contracts is based on the current market credit spreads for debt-like instruments we have issued and are available in the market.

Funds Withheld Payable

The funds withheld payable includes an embedded derivative that has been bifurcated from the host contract and is measured at fair value on a recurring basis, which is reflected in Level 3. The fair value is determined based on the change in the estimated fair value of the underlying funds withheld investments. The fair value of these assets is determined as previously described.

Other Liabilities

Derivative liabilities of consolidated sponsored investment funds are reported at fair value within other liabilities. Fair values of these derivatives are determined as previously described and are reflected in Level 2.

15. Fair Value Measurements — (continued)

Assets and Liabilities Measured at Fair Value on a Recurring Basis

Assets and liabilities measured at fair value on a recurring basis were as follows:

	December 31, 2022				
	Assets/ (liabilities) measured at fair value	Amount measured at net asset value (4)	Fair value hierarchy level		
			Level 1	Level 2	Level 3
	(in millions)				
Assets					
Fixed maturities, available-for-sale:					
U.S. government and agencies	$ 1,739.8	$ —	$ 1,359.1	$ 380.7	$ —
Non-U.S. governments	567.3	—	1.4	565.9	—
States and political subdivisions	6,232.3	—	—	6,161.4	70.9
Corporate	36,183.2	—	26.6	34,588.3	1,568.3
Residential mortgage-backed pass-through securities	2,228.7	—	—	2,228.7	—
Commercial mortgage-backed securities	4,864.6	—	—	4,861.2	3.4
Collateralized debt obligations (1)	4,566.4	—	—	4,510.2	56.2
Other debt obligations	6,507.6	—	—	6,039.8	467.8
Total fixed maturities, available-for-sale	62,889.9	—	1,387.1	59,336.2	2,166.6
Fixed maturities, trading	760.7	—	78.6	548.1	134.0
Equity securities	1,708.6	—	492.4	1,216.2	—
Derivative assets (2)	321.6	—	—	320.9	0.7
Other investments	701.1	81.4	311.7	306.1	1.9
Cash equivalents	3,604.1	—	973.5	2,630.6	—
Sub-total excluding separate account assets	69,986.0	81.4	3,243.3	64,358.1	2,303.2
Separate account assets	155,375.1	9,120.9	92,010.7	53,208.6	1,034.9
Total assets	$225,361.1	$9,202.3	$95,254.0	$117,566.7	$3,338.1
Liabilities					
Investment and universal life contracts (3)	$ 31.8	$ —	$ —	$ —	$ 31.8
Funds withheld payable embedded derivative (3)	3,652.8	—	—	—	3,652.8
Derivative liabilities (2)	(634.2)	—	—	(630.1)	(4.1)
Other liabilities	(0.4)	—	—	(0.4)	—
Total liabilities	$ 3,050.0	$ —	$ —	$ (630.5)	$3,680.5
Net assets	$228,411.1	$9,202.3	$95,254.0	$116,936.2	$7,018.6

15. Fair Value Measurements — (continued)

	December 31, 2021				
	Assets/ (liabilities) measured at fair value	Amount measured at net asset value (4)	Fair value hierarchy level		
			Level 1	Level 2	Level 3
	(in millions)				
Assets					
Fixed maturities, available-for-sale:					
U.S. government and agencies	$ 2,088.6	$ —	$ 1,716.5	$ 372.1	$ —
Non-U.S. governments	982.0	—	0.6	981.4	—
States and political subdivisions	9,304.4	—	—	9,209.6	94.8
Corporate	45,944.4	—	41.5	45,068.6	834.3
Residential mortgage-backed pass-through securities	3,152.9	—	—	3,152.9	—
Commercial mortgage-backed securities	5,562.2	—	—	5,543.0	19.2
Collateralized debt obligations (1)	3,559.6	—	—	3,473.8	85.8
Other debt obligations	7,560.4	—	—	7,518.3	42.1
Total fixed maturities, available-for-sale	78,154.5	—	1,758.6	75,319.7	1,076.2
Fixed maturities, trading	422.2	—	0.5	416.8	4.9
Equity securities	2,347.2	—	1,027.5	1,319.7	—
Derivative assets (2)	337.1	—	—	336.5	0.6
Other investments	896.2	92.7	395.3	406.1	2.1
Cash equivalents	1,117.8	—	14.2	1,103.6	—
Sub-total excluding separate account assets	83,275.0	92.7	3,196.1	78,902.4	1,083.8
Separate account assets	182,345.4	8,942.9	115,261.7	57,195.5	945.3
Total assets	$265,620.4	$9,035.6	$118,457.8	$136,097.9	$2,029.1
Liabilities					
Investment and universal life contracts (3)	$ (356.3)	$ —	$ —	$ —	$ (356.3)
Derivative liabilities (2)	(226.0)	—	—	(225.4)	(0.6)
Other liabilities	(0.7)	—	—	(0.7)	—
Total liabilities	$ (583.0)	$ —	$ —	$ (226.1)	$ (356.9)
Net assets	$265,037.4	$9,035.6	$118,457.8	$135,871.8	$1,672.2

(1) Primarily consists of collateralized loan obligations backed by secured corporate loans.

(2) Within the consolidated statements of financial position, derivative assets are reported with other investments and derivative liabilities are reported with other liabilities. The amounts are presented gross in the tables above to reflect the presentation on the consolidated statements of financial position; however, are presented net for purposes of the rollforward in the Changes in Level 3 Fair Value Measurements tables. Refer to Note 5, Derivative Financial Instruments, for further information on fair value by class of derivative instruments.

(3) Includes bifurcated embedded derivatives that are reported at net asset (liability) fair value within the same line item in the consolidated statements of financial position in which the host contract is reported. The funds withheld payable embedded derivative could be in either an asset or (liability) position.

(4) Certain investments are measured at fair value using the NAV per share (or its equivalent) practical expedient and have not been classified in the fair value hierarchy. Other investments using the NAV practical expedient consist of certain fund interests that are restricted until maturity with unfunded commitments totaling $7.8 million and $10.2 million as of December 31, 2022 and December 31, 2021, respectively. Separate account assets using the NAV practical expedient consist of hedge funds and a real estate fund with varying investment strategies that also have a variety of redemption terms and conditions. We do not have unfunded commitments associated with these funds.

15. Fair Value Measurements — (continued)

Changes in Level 3 Fair Value Measurements

The reconciliation for all assets and liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3) was as follows:

	For the year ended December 31, 2022						
	Beginning asset/ (liability) balance as of January 1, 2022	Total realized/unrealized gains (losses)		Net purchases, sales, issuances and settlements (4)	Transfers into Level 3	Transfers out of Level 3	Ending asset/ (liability) balance as of December 31, 2022
		Included in net income (2)	Included in other comprehensive income (3)				
				(in millions)			
Assets							
Fixed maturities, available-for-sale:							
States and political subdivisions	$ 94.8	$ —	$(24.1)	$ (1.6)	$ 12.0	$ (10.2)	$ 70.9
Corporate	834.3	(4.8)	(28.6)	626.3	176.3	(35.2)	1,568.3
Commercial mortgage-backed securities	19.2	—	(1.0)	(4.6)	—	(10.2)	3.4
Collateralized debt obligations	85.8	—	(1.0)	151.8	—	(180.4)	56.2
Other debt obligations	42.1	(0.3)	(20.4)	474.2	—	(27.8)	467.8
Total fixed maturities, available-for-sale	1,076.2	(5.1)	(75.1)	1,246.1	188.3	(263.8)	2,166.6
Fixed maturities, trading	4.9	(0.6)	—	100.7	29.0	—	134.0
Other investments	2.1	—	(0.6)	0.4	—	—	1.9
Separate account assets (1)	945.3	113.5	—	(23.9)	—	—	1,034.9
Liabilities							
Investment and universal life contracts	(356.3)	369.0	0.1	19.0	—	—	31.8
Funds withheld payable embedded derivative	—	3,652.8	—	—	—	—	3,652.8
Derivatives							
Net derivative assets (liabilities)	—	(5.4)	(0.3)	2.6	—	(0.3)	(3.4)

15. Fair Value Measurements — (continued)

	For the year ended December 31, 2021						
	Beginning asset/ (liability) balance as of January 1, 2021	Total realized/unrealized gains (losses)		Net purchases, sales, issuances and settlements (4)	Transfers into Level 3	Transfers out of Level 3	Ending asset/ (liability) balance as of December 31, 2021
		Included in net income (2)	Included in other comprehensive income (3)				
				(in millions)			
Assets							
Fixed maturities, available-for-sale:							
States and political subdivisions	$ —	$ —	$12.8	$ (0.4)	$ 82.4	$ —	$ 94.8
Corporate	290.8	(21.9)	7.8	381.8	175.8	—	834.3
Commercial mortgage-backed securities	13.2	(1.0)	(0.4)	7.4	—	—	19.2
Collateralized debt obligations	27.2	(2.0)	1.6	420.7	74.1	(435.8)	85.8
Other debt obligations	29.2	—	0.4	16.9	20.6	(25.0)	42.1
Total fixed maturities, available-for-sale	360.4	(24.9)	22.2	826.4	352.9	(460.8)	1,076.2
Fixed maturities, trading	—	—	—	4.9	—	—	4.9
Other investments	31.9	12.5	(1.3)	(41.0)	—	—	2.1
Separate account assets (1)	8,893.2	313.1	—	(8,261.0)	—	—	945.3
Liabilities							
Investment and universal life contracts	(467.8)	81.7	0.2	29.6	—	—	(356.3)
Derivatives							
Net derivative assets (liabilities)	(5.1)	(6.9)	—	12.0	—	—	—

	For the year ended December 31, 2020						
	Beginning asset/ (liability) balance as of January 1, 2020	Total realized/unrealized gains (losses)		Net purchases, sales, issuances and settlements (4)	Transfers into Level 3	Transfers out of Level 3	Ending asset/ (liability) balance as of December 31, 2020
		Included in net income (2)	Included in other comprehensive income (3)				
				(in millions)			
Assets							
Fixed maturities, available-for-sale:							
Corporate	$ 81.7	$ (0.9)	$ 5.2	$ 118.0	$342.0	$(255.2)	$ 290.8
Commercial mortgage-backed securities	12.9	(1.3)	1.4	(0.1)	0.3	—	13.2
Collateralized debt obligations	199.0	(2.3)	(21.9)	183.0	—	(330.6)	27.2
Other debt obligations	91.3	—	(1.4)	(37.9)	46.1	(68.9)	29.2
Total fixed maturities, available-for-sale	384.9	(4.5)	(16.7)	263.0	388.4	(654.7)	360.4
Fixed maturities, trading	0.3	—	—	—	—	(0.3)	—
Other investments	39.0	6.3	(2.9)	(10.5)	—	—	31.9
Separate account assets (1)	8,968.0	463.7	—	(538.5)	—	—	8,893.2
Liabilities							
Investment and universal life contracts	(214.2)	(254.9)	(0.3)	1.6	—	—	(467.8)
Derivatives							
Net derivative assets (liabilities)	13.0	11.8	—	(3.4)	—	(26.5)	(5.1)

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(1) Gains and losses for separate account assets do not impact net income as the change in value of separate account assets is offset by a change in value of separate account liabilities. Foreign currency translation adjustments related to the Principal International

15. Fair Value Measurements — (continued)

segment separate account assets are recorded in AOCI and are offset by foreign currency translation adjustments of the corresponding separate account liabilities.

(2) Both realized gains (losses) and mark-to-market unrealized gains (losses) are generally reported in net realized capital gains (losses), net realized capital gains (losses) on funds withheld assets or change in fair value of funds withheld embedded derivative within the consolidated statements of operations. Realized and unrealized gains (losses) on certain securities with an investment objective to realize economic value through mark-to-market changes are reported in net investment income within the consolidated statements of operations. Changes in unrealized gains (losses) included in net income relating to positions still held were:

	For the year ended December 31,		
	2022	2021	2020
		(in millions)	
Assets			
Fixed maturities, available-for-sale:			
Corporate	**$ (1.3)**	$ (4.6)	$ —
Commercial mortgage-backed securities	—	(1.0)	(1.2)
Collateralized debt obligations	—	(2.0)	(2.2)
Total fixed maturities, available-for-sale	**(1.3)**	(7.6)	(3.4)
Fixed maturities, trading	**(0.6)**	—	—
Other investments	—	12.5	5.3
Separate account assets	**89.8**	90.5	385.5
Liabilities			
Investment and universal life contracts	**354.7**	80.3	(262.1)
Funds withheld payable embedded derivative	**3,652.8**	—	—
Derivatives			
Net derivative assets (liabilities)	**(3.4)**	(0.6)	9.9

(3) Changes in unrealized gains (losses) included in OCI, including foreign currency translation adjustments related to our Principal International segment, relating to positions still held were:

	For the year ended December 31,		
	2022	2021	2020
		(in millions)	
Assets			
Fixed maturities, available-for-sale:			
States and political subdivisions	**$(22.3)**	$12.8	$ —
Corporate	**(19.8)**	(0.7)	11.9
Commercial mortgage-backed securities	**(0.5)**	(0.4)	1.5
Collateralized debt obligations	—	1.9	(0.3)
Other debt obligations	**(18.5)**	—	—
Total fixed maturities, available-for-sale	**(61.1)**	13.6	13.1
Other investments	—	(1.3)	(2.9)
Liabilities			
Investment and universal life contracts	**0.1**	0.2	(0.3)
Derivatives			
Net derivative assets (liabilities)	**(0.2)**	—	—

(4) Gross purchases, sales, issuances and settlements were:

15. Fair Value Measurements — (continued)

	For the year ended December 31, 2022				
	Purchases	Sales	Issuances	Settlements	Net purchases, sales, issuances and settlements
	(in millions)				
Assets					
Fixed maturities, available-for-sale:					
States and political subdivisions	**$ —**	**$ —**	**$ —**	**$ (1.6)**	**$ (1.6)**
Corporate	**817.3**	**(50.4)**	**—**	**(140.6)**	**626.3**
Commercial mortgage-backed securities	**—**	**(4.1)**	**—**	**(0.5)**	**(4.6)**
Collateralized debt obligations	**151.9**	**—**	**—**	**(0.1)**	**151.8**
Other debt obligations	**487.4**	**(8.2)**	**—**	**(5.0)**	**474.2**
Total fixed maturities, available-for-sale	**1,456.6**	**(62.7)**	**—**	**(147.8)**	**1,246.1**
Fixed maturities, trading	**134.7**	**(32.6)**	**—**	**(1.4)**	**100.7**
Other investments	**0.4**	**—**	**—**	**—**	**0.4**
Separate account assets (5)	**11.8**	**(4.5)**	**(50.0)**	**18.8**	**(23.9)**
Liabilities					
Investment and universal life contracts	**—**	**—**	**(7.4)**	**26.4**	**19.0**
Derivatives					
Net derivative assets (liabilities)	**—**	**2.6**	**—**	**—**	**2.6**

	For the year ended December 31, 2021				
	Purchases	Sales	Issuances	Settlements	Net purchases, sales, issuances and settlements
	(in millions)				
Assets					
Fixed maturities, available-for-sale:					
States and political subdivisions	$ —	$ —	$ —	$ (0.4)	$ (0.4)
Corporate	626.6	(84.3)	—	(160.5)	381.8
Commercial mortgage-backed securities	7.7	—	—	(0.3)	7.4
Collateralized debt obligations	446.0	—	—	(25.3)	420.7
Other debt obligations	45.1	—	—	(28.2)	16.9
Total fixed maturities, available-for-sale	1,125.4	(84.3)	—	(214.7)	826.4
Fixed maturities, trading	4.9	—	—	—	4.9
Other investments	—	(41.0)	—	—	(41.0)
Separate account assets (5)	38.5	(8,206.2)	(191.5)	98.2	(8,261.0)
Liabilities					
Investment and universal life contracts	—	—	(16.4)	46.0	29.6
Derivatives					
Net derivative assets (liabilities)	—	12.0	—	—	12.0

15. Fair Value Measurements — (continued)

	For the year ended December 31, 2020				
	Purchases	Sales	Issuances	Settlements	Net purchases, sales, issuances and settlements
	(in millions)				
Assets					
Fixed maturities, available-for-sale:					
Corporate	$169.2	$ (5.5)	$ —	$ (45.7)	$ 118.0
Commercial mortgage-backed securities	—	—	—	(0.1)	(0.1)
Collateralized debt obligations	182.5	—	—	0.5	183.0
Other debt obligations	14.3	—	—	(52.2)	(37.9)
Total fixed maturities, available-for-sale	366.0	(5.5)	—	(97.5)	263.0
Other investments	0.5	(11.0)	—	—	(10.5)
Separate account assets (5)	309.2	(658.2)	(396.1)	206.6	(538.5)
Liabilities					
Investment and universal life contracts	—	—	(23.0)	24.6	1.6
Derivatives					
Net derivative assets (liabilities)	—	(3.4)	—	—	(3.4)

(5) Issuances and settlements include amounts related to mortgage encumbrances associated with real estate in our separate accounts.

Transfers

Transfers of assets and liabilities measured at fair value on a recurring basis between fair value hierarchy levels were as follows:

	For the year ended December 31, 2022			
	Transfers out of Level 1 into Level 3	Transfers out of Level 2 into Level 3	Transfers out of Level 3 into Level 1	Transfers out of Level 3 into Level 2
	(in millions)			
Assets				
Fixed maturities, available-for-sale:				
States and political subdivisions	**$—**	**$ 12.0**	**$—**	**$ 10.2**
Corporate	**—**	**176.3**	**—**	**35.2**
Commercial mortgage-backed securities	**—**	**—**	**—**	**10.2**
Collateralized debt obligations	**—**	**—**	**—**	**180.4**
Other debt obligations	**—**	**—**	**—**	**27.8**
Total fixed maturities, available-for-sale	**—**	**188.3**	**—**	**263.8**
Fixed maturities, trading	**—**	**29.0**	**—**	**—**
Derivatives				
Net derivative assets (liabilities)	**—**	**—**	**—**	**0.3**

15. Fair Value Measurements — (continued)

	For the year ended December 31, 2021			
	Transfers out of Level 1 into Level 3	Transfers out of Level 2 into Level 3	Transfers out of Level 3 into Level 1	Transfers out of Level 3 into Level 2
	(in millions)			
Assets				
Fixed maturities, available-for-sale:				
States and political subdivisions	$—	$ 82.4	$—	$ —
Corporate	—	175.8	—	—
Collateralized debt obligations	—	74.1	—	435.8
Other debt obligations	—	20.6	—	25.0
Total fixed maturities, available-for-sale	—	352.9	—	460.8

	For the year ended December 31, 2020			
	Transfers out of Level 1 into Level 3	Transfers out of Level 2 into Level 3	Transfers out of Level 3 into Level 1	Transfers out of Level 3 into Level 2
	(in millions)			
Assets				
Fixed maturities, available-for- sale:				
Corporate	$—	$342.0	$—	$255.2
Commercial mortgage-backed securities	—	0.3	—	—
Collateralized debt obligations	—	—	—	330.6
Other debt obligations	—	46.1	—	68.9
Total fixed maturities, available-for-sale	—	388.4	—	654.7
Fixed maturities, trading	—	—	—	0.3
Derivatives				
Net derivative assets (liabilities)	—	—	—	26.5

Assets transferred into Level 3 during 2022, 2021 and 2020, primarily included those assets for which we are now unable to obtain pricing from a recognized third party pricing vendor as well as assets that were previously priced using a matrix valuation approach that may no longer be relevant when applied to asset-specific situations.

Assets transferred out of Level 3 during 2022, 2021 and 2020, included those for which we are now able to obtain pricing from a recognized third party pricing vendor or from internal models using substantially all market observable information.

Quantitative Information about Level 3 Fair Value Measurements

The following table provides quantitative information about the significant unobservable inputs used for recurring fair value measurements categorized within Level 3, excluding assets and liabilities for which significant quantitative unobservable inputs are not developed internally, which primarily consists of those valued using broker quotes. The funds withheld payable embedded derivative is excluded from the table as the determination of its fair value incorporates the fair value of the invested assets supporting the reinsurance agreement. Refer to "Assets and liabilities measured at fair value on a recurring basis" for a complete valuation hierarchy summary.

15. Fair Value Measurements — (continued)

	December 31, 2022				
	Assets / (liabilities) measured at fair value	Valuation technique(s)	Unobservable input description	Input/range of inputs	Weighted average
	(in millions)				
Assets					
Fixed maturities, available-for-sale:					
Corporate	**$1,479.9**	Discounted cash flow	Discount rate (1)	2.7% - 33.1%	11.0%
			Illiquidity premium	0 basis points (“bps”) - 467 bps	50 bps
			Comparability adjustment	(16) bps - 0 bps	(11) bps
Collateralized debt obligations	**39.5**	Discounted cash flow	Discount rate (1)	4.4%	4.4%
			Comparability adjustment	55 bps	55 bps
Other debt obligations . .	**467.8**	Discounted cash flow	Discount rate (1)	5.6% - 8.2%	7.6%
			Illiquidity premium	0 bps - 260 bps	220 bps
			Comparability adjustment	1 bps - 139 bps	77 bps
Fixed maturities, trading . .	**119.7**	Discounted cash flow	Discount rate (1)	9.6% - 15.2%	11.0%
Separate account assets . . .	**1,034.1**	Discounted cash flow — real estate	Discount rate (1)	5.5% - 10.0%	7.0%
			Terminal capitalization rate	4.5% - 9.5%	5.8%
			Average market rent growth rate	2.0% - 3.8%	3.0%
		Discounted cash flow — real estate debt	Loan to value	43.6% - 62.2%	50.6%
			Market interest rate	5.3% - 8.6%	6.6%
Liabilities					
Investment and universal life contracts (6)	**31.8**	Discounted cash flow	Long duration interest rate	2.4% - 4.1% (3)	3.7%
			Long-term equity market volatility	17.8% - 36.9%	21.8%
			Nonperformance risk	0.9% - 2.0%	1.6%
			Utilization rate	See note (4)	
			Lapse rate	0.0% - 19.4%	6.1%
			Mortality rate	See note (5)	

15. Fair Value Measurements — (continued)

	December 31, 2021				
	Assets / (liabilities) measured at fair value	Valuation technique(s)	Unobservable input description	Input/range of inputs	Weighted average
	(in millions)				
Assets					
Fixed maturities, available-for-sale:					
Corporate	$ 829.9	Discounted cash flow	Discount rate (1)	0.9% - 15.5%	6.8%
			Illiquidity premium	0 bps - 70 bps	6 bps
		Market comparables	Potential loss severity	39.4%	39.4%
			Probability of default	100.0%	100.0%
Commercial mortgage-backed securities	3.5	Discounted cash flow	Discount rate (1)	3.7%	3.7%
Collateralized debt obligations	45.9	Discounted cash flow	Discount rate (1)	3.0% - 5.3%	4.0%
			Illiquidity premium	0 bps - 385 bps	255 bps
Other debt obligations	22.1	Discounted cash flow	Discount rate (1)	3.0% - 10.0%	3.3%
			Illiquidity premium	225 bps - 500 bps	237 bps
Fixed maturities, trading	4.9	Discounted cash flow	Discount rate (1)	7.5%	7.5%
Other investments	0.6	Market comparables — other investments	Revenue multiples (2)	6.8 x - 9.1 x	8.0 x
Separate account assets	946.0	Discounted cash flow — mortgage loans	Discount rate (1)	1.4%	1.4%
			Credit spread rate	120 bps	120 bps
		Discounted cash flow — real estate	Discount rate (1)	5.3% - 10.0%	6.6%
			Terminal capitalization rate	4.3% - 9.3%	5.6%
			Average market rent growth rate	1.6% - 3.6%	2.7%
		Discounted cash flow — real estate debt	Loan to value	40.1% - 58.5%	46.0%
			Market interest rate	2.5% - 3.1%	2.7%
Liabilities					
Investment and universal life contracts (6)	(356.3)	Discounted cash flow	Long duration interest rate	1.8% - 1.9% (3)	1.9%
			Long-term equity market volatility	18.0% - 32.5%	22.1%
			Nonperformance risk	0.3% - 1.1%	0.9%
			Utilization rate	See note (4)	
			Lapse rate	0.0% - 17.0%	5.1%
			Mortality rate	See note (5)	

(1) Represents market comparable interest rate or an index adjusted rate used as the base rate in the discounted cash flow analysis prior to any illiquidity or other adjustments, where applicable.

(2) Revenue multiples are amounts used when we have determined market participants would use such multiples to value the investments.

15. Fair Value Measurements — (continued)

(3) Represents the range of rate curves used in the valuation analysis that we have determined market participants would use when pricing the instrument. Derived from interpolation between various observable swap rates.

(4) This input factor is the number of contractholders taking withdrawals as well as the amount and timing of the withdrawals and a range does not provide a meaningful presentation.

(5) This input is based on an appropriate industry mortality table and a range does not provide a meaningful presentation.

(6) Includes bifurcated embedded derivatives that are reported at net asset (liability) fair value within the same line item in the consolidated statements of financial position in which the host contract is reported.

Market comparable discount rates are used as the base rate in the discounted cash flows used to determine the fair value of certain assets. The use of a higher or lower discount rate would have caused the fair value of the assets to significantly decrease or increase, respectively. Additionally, we may adjust the base discount rate or the modeled price by applying an illiquidity premium given the highly structured nature of certain assets. The use of a higher or lower illiquidity premium would have caused significant decreases or increases, respectively, in the fair value of the asset.

Embedded derivatives within our investment and universal life contracts liability can be in either an asset or liability position, depending on certain inputs at the reporting date. Increases to an asset or decreases to a liability are described as increases to fair value. The use of a higher or lower market volatility would have caused significant decreases or increases, respectively, in the fair value of embedded derivatives in investment and universal life contracts. Long duration interest rates are used as the mean return when projecting the growth in the value of associated account value and impact the discount rate used in the discounted future cash flows valuation. The amount of claims will increase if account value is not sufficient to cover guaranteed withdrawals. The use of higher or lower risk-free rates would have caused the fair value of the embedded derivative to significantly increase or decrease, respectively. The use of a higher or lower rate for our own credit risks, which impact the rates used to discount future cash flows, would have significantly increased or decreased, respectively, the fair value of the embedded derivative.

The use of a lower or higher mortality rate assumption would have caused the fair value of the embedded derivative to decrease or increase, respectively. The use of a lower or higher overall lapse rate assumption would have caused the fair value of the embedded derivative to decrease or increase, respectively. The lapse rate assumption may vary dynamically based on the relationship of the guarantee and associated account value. A stronger or weaker dynamic lapse rate assumption would have caused the fair value of the embedded derivative to decrease or increase, respectively. The utilization rate assumption includes how many contractholders will take withdrawals, when they will take them and how much of their benefit they will take. The use of a higher or lower assumption of the number of contractholders taking withdrawals would have caused the fair value of the embedded derivative to decrease or increase, respectively. Assuming contractholders take withdrawals earlier or later would have caused the fair value of the embedded derivative to decrease or increase, respectively. Assuming contractholders take more or less of their benefit would have caused the fair value of the embedded derivative to decrease or increase, respectively.

Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis

No significant assets and liabilities were measured at fair value on a nonrecurring basis for the years ended December 31, 2022, 2021 and 2020.

Fair Value Option

We elected fair value accounting for:

- Certain real estate ventures that were subject to the equity method of accounting because the nature of the investments was to add value to the properties and generate income from the operations of the properties. Other equity method real estate investments were not fair valued because the investments

15. Fair Value Measurements — (continued)

mainly generated income from the operations of the underlying properties. The last equity method real estate investment for which the fair value option was elected was sold in the third quarter of 2021.

The following table presents information regarding the consolidated statements of operations impact of assets for which the fair value option was elected.

	For the year ended December 31,		
	2022	2021	2020
		(in millions)	
Real estate ventures			
Change in fair value pre-tax gain (1)	$—	$12.5	$5.3

(1) Reported in net investment income on the consolidated statements of operations.

Financial Instruments Not Reported at Fair Value

The carrying value and estimated fair value of financial instruments not recorded at fair value on a recurring basis but required to be disclosed at fair value were as follows:

	December 31, 2022				
	Carrying amount	Fair value	Fair value hierarchy level		
			Level 1	Level 2	Level 3
		(in millions)			
Assets (liabilities)					
Mortgage loans	**$ 20,629.8**	**$ 18,754.5**	**$ —**	**$ —**	**$ 18,754.5**
Policy loans	**784.7**	**804.0**	**—**	**—**	**804.0**
Other investments	**250.6**	**238.0**	**—**	**133.5**	**104.5**
Cash and cash equivalents	**1,243.9**	**1,243.9**	**1,232.5**	**11.4**	**—**
Reinsurance deposit receivable	**7,900.9**	**6,859.9**	**—**	**—**	**6,859.9**
Cash collateral receivable	**281.0**	**281.0**	**281.0**	**—**	**—**
Investment contracts	**(35,380.1)**	**(32,367.4)**	**—**	**(7,279.0)**	**(25,088.4)**
Short-term debt	**(80.7)**	**(80.7)**	**—**	**(80.7)**	**—**
Long-term debt	**(3,997.0)**	**(3,680.6)**	**—**	**(3,620.1)**	**(60.5)**
Separate account liabilities	**(141,459.3)**	**(140,533.9)**	**—**	**—**	**(140,533.9)**
Bank deposits (1)	**(352.4)**	**(336.3)**	**—**	**(336.3)**	**—**
Cash collateral payable	**(291.3)**	**(291.3)**	**(291.3)**	**—**	**—**

15. Fair Value Measurements — (continued)

	December 31, 2021				
			Fair value hierarchy level		
	Carrying amount	Fair value	Level 1	Level 2	Level 3
		(in millions)			
Assets (liabilities)					
Mortgage loans	$ 19,668.7	$ 20,602.7	$ —	$ —	$ 20,602.7
Policy loans	759.6	952.9	—	—	952.9
Other investments	304.0	294.8	—	198.6	96.2
Cash and cash equivalents	1,214.2	1,214.2	1,197.8	16.4	—
Cash collateral receivable	2.2	2.2	2.2	—	—
Investment contracts	(35,810.4)	(36,088.6)	—	(7,454.3)	(28,634.3)
Short-term debt	(79.8)	(79.8)	—	(79.8)	—
Long-term debt	(4,280.2)	(4,793.1)	—	(4,755.1)	(38.0)
Separate account liabilities	(165,098.7)	(164,028.9)	—	—	(164,028.9)
Bank deposits (1)	(373.3)	(372.8)	—	(372.8)	—
Cash collateral payable	(214.9)	(214.9)	(214.9)	—	—

(1) Excludes deposit liabilities without defined or contractual maturities.

16. Statutory Insurance Financial Information

Principal Life, the largest indirect subsidiary of PFG, prepares statutory financial statements in accordance with the accounting practices prescribed or permitted by the Insurance Division of the Department of Commerce of the State of Iowa (the "Iowa Insurance Division"). The Iowa Insurance Division recognizes only statutory accounting practices prescribed or permitted by the State of Iowa for determining and reporting the financial condition and results of operations of an insurance company to determine its solvency under the Iowa Insurance Law. The National Association of Insurance Commissioners' ("NAIC") Accounting Practices and Procedures Manual has been adopted as a component of prescribed practices by the State of Iowa. The Commissioner has the right to permit other specific practices that deviate from prescribed practices. Statutory accounting practices differ from U.S. GAAP primarily due to charging policy acquisition costs to expense as incurred, establishing reserves using different actuarial assumptions, valuing investments on a different basis and not admitting certain assets, including certain net deferred income tax assets.

Principal Life cedes certain term, universal life and Closed Block life insurance statutory reserves to our affiliated reinsurance subsidiaries on a funds withheld coinsurance basis. The reserves are secured by cash, invested assets and financing provided by highly rated third parties. As of December 31, 2022 and 2021, our affiliated reinsurance subsidiaries assumed statutory reserves of $17,815.1 million and $10,085.7 million from Principal Life, respectively. In the states of Vermont and Delaware, the affiliated reinsurers had permitted and prescribed practices allowing for the admissibility of certain assets backing these reserves. As of December 31, 2022 and 2021, assets admitted under these practices totaled $3,748.4 million and $4,146.0 million, respectively. Additionally, one of our affiliated reinsurance subsidiaries in Vermont ceded $9,956.9 million of the ULSG reserves it assumed from Principal Life to Talcott Life & Annuity Re as of December 31, 2022.

Life and health insurance companies are subject to certain risk-based capital ("RBC") requirements as specified by the NAIC. Under those requirements, the amount of capital and surplus maintained by a life and health insurance company is to be determined based on the various risk factors related to it. As of December 31, 2022, Principal Life met the minimum RBC requirements.

16. Statutory Insurance Financial Information — (continued)

Statutory net income (loss) and statutory capital and surplus of Principal Life were as follows:

	As of or for the year ended December 31,		
	2022	**2021**	**2020**
		(in millions)	
Statutory net income (loss)	**$(1,563.1)**	$ 864.0	$ 915.9
Statutory capital and surplus	**4,304.4**	5,375.2	5,682.4

17. Segment Information

We provide financial products and services through the following segments: Retirement and Income Solutions, Principal Global Investors, Principal International and U.S. Insurance Solutions. In addition, we have a Corporate segment. The segments are managed and reported separately because they provide different products and services, have different strategies or have different markets and distribution channels.

The Retirement and Income Solutions segment provides retirement and related financial products and services primarily to businesses, their employees and other individuals. The segment is organized into Retirement and Income Solutions — Fee, which includes workplace savings and retirement solutions (formerly known as "full service accumulation"), trust and custody services, individual variable annuities and the acquisition, integration and migration expenses associated with the purchase of the Acquired Business; and Retirement and Income Solutions — Spread, which includes investment only, pension risk transfer, banking services and our exited retail fixed annuities business.

The Principal Global Investors segment provides asset management services to our asset accumulation business, our insurance operations, the Corporate segment and third party institutional clients. This segment also includes our mutual fund business.

The Principal International segment has operations in Latin America (Brazil, Chile and Mexico) and Asia (China, Hong Kong Special Administrative Region and Southeast Asia). We focus on locations with large middle classes, favorable demographics and growing long-term savings, ideally with voluntary or mandatory pension markets. We entered these locations through acquisitions, start-up operations and joint ventures.

The U.S. Insurance Solutions segment focuses on solutions for small-to-mid sized businesses and their employees. The segment is organized into Specialty Benefits insurance, which provides group dental and vision insurance, individual and group disability insurance, group life insurance, critical illness, accident, paid family and medical leave and non-medical fee-for-service claims administration; and Individual Life insurance, which includes universal life, variable universal life, indexed universal life, traditional life insurance and our exited ULSG business.

Our Corporate segment manages the assets representing capital that has not been allocated to any other segment. Financial results of the Corporate segment primarily reflect our financing activities (including financing costs), income on capital not allocated to other segments, inter-segment eliminations, income tax risks and certain income, expenses and other adjustments not allocated to the segments based on the nature of such items. Results of Principal Securities, Inc. ("PSI"), our retail broker-dealer and registered investment advisor ("RIA"); and our exited group medical and long-term care insurance businesses are reported in this segment.

Management uses segment pre-tax operating earnings in evaluating performance, which is consistent with the financial results provided to and discussed with securities analysts. We determine segment pre-tax operating earnings by adjusting U.S. GAAP income before income taxes for pre-tax net realized capital gains (losses), as adjusted, pre-tax income (loss) from exited business, pre-tax other adjustments that management

17. Segment Information — (continued)

believes are not indicative of overall operating trends and certain adjustments related to equity method investments and noncontrolling interest. While these items may be significant components in understanding and assessing the consolidated financial performance, management believes the presentation of pre-tax operating earnings enhances the understanding of our results of operations by highlighting pre-tax earnings attributable to the normal, ongoing operations of the business.

The pre-tax net realized capital gains (losses), as adjusted, excluded from pre-tax operating earnings reflects consolidated U.S. GAAP pre-tax net realized capital gains (losses) excluding the following items that are included in pre-tax operating earnings:

- Periodic settlements and accruals on derivative instruments not designated as hedging instruments,
- Certain market value adjustments of derivatives and embedded derivatives and
- Certain market value adjustments of derivative instruments used to economically hedge embedded derivatives.

Pre-tax income (loss) from exited business includes amounts associated with our exited U.S. retail fixed annuity and ULSG businesses, including strategic review costs and impacts, amortization of reinsurance gain (loss), impacts to actuarial balances of reinsured businesses, net realized capital gains (losses) on funds withheld assets and the change in fair value of the funds withheld embedded derivative. The strategic review costs and impacts primarily include actuarial balance re-cohorting impacts resulting from the Strategic Review and costs to close the Reinsurance Transaction. Impacts to actuarial balances of reinsured business primarily include DAC amortization.

Pre-tax net realized capital gains (losses), as adjusted, are further adjusted for:

- Amortization of hedge accounting book value adjustments for certain discontinued hedges,
- Certain hedge accounting market value revenue adjustments,
- Certain market value adjustments to fee revenues,
- Pre-tax net realized capital gains (losses) adjustments related to equity method investments,
- Pre-tax net realized capital gains (losses) adjustments related to sponsored investment funds,
- Recognition of deferred front-end fee revenues for sales charges on retirement and life insurance products and services,
- Related changes in the amortization pattern of DAC and related actuarial balances,
- Certain hedge accounting market value expense adjustments and
- Net realized capital gains (losses) distributed.

Segment operating revenues reflect consolidated U.S. GAAP total revenues excluding:

- Net realized capital gains (losses), except periodic settlements and accruals on derivatives not designated as hedging instruments and certain market value adjustments of derivative instruments used to economically hedge embedded derivatives, and their impact on:
  - Amortization of hedge accounting book value adjustments for certain discontinued hedges,
  - Certain hedge accounting market value revenue adjustments,
  - Certain market value adjustments to fee revenues,
  - Pre-tax net realized capital gains (losses) adjustments related to equity method investments,

17. Segment Information — (continued)

- Pre-tax net realized capital gains (losses) adjustments related to sponsored investment funds and
- Recognition of deferred front-end fee revenues for sales charges on retirement and life insurance products and services.

- Pre-tax revenues from exited business,
- Pre-tax other adjustments and income taxes of equity method investments and
- Pre-tax other adjustments management believes are not indicative of overall operating trends.

The accounting policies of the segments are consistent with the accounting policies for the consolidated financial statements, with the exception of: (1) pension and OPEB cost allocations, (2) certain expenses deemed to benefit the entire organization and (3) income tax allocations. For purposes of determining pre-tax operating earnings, the segments are allocated the service component of pension and other postretirement benefit costs. The Corporate segment reflects the non-service components of pension and other postretirement benefit costs as assumptions are established and funding decisions are managed from a company-wide perspective. Additionally, the Corporate segment reflects expenses that benefit the entire organization for which the segments are not able to influence the spend. This includes expenses such as public company costs, executive management costs, acquisition and disposition costs, among others. The Corporate segment functions to absorb the risk inherent in interpreting and applying tax law. For purposes of determining non-GAAP operating earnings, the segments are allocated tax adjustments consistent with the positions we took on tax returns. The Corporate segment results reflect any differences between the tax returns and the estimated resolution of any disputes.

The following tables summarize select financial information by segment, including operating revenues for our products and services, and reconcile segment totals to those reported in the consolidated financial statements:

	December 31, 2022	December 31, 2021
	(in millions)	
Assets:		
Retirement and Income Solutions	**$203,646.8**	$221,993.8
Principal Global Investors	**2,348.2**	2,445.1
Principal International	**43,373.6**	42,812.4
U.S. Insurance Solutions	**40,653.8**	33,222.6
Corporate	**2,217.2**	4,183.3
Total consolidated assets	**$292,239.6**	$304,657.2

17. Segment Information — (continued)

	For the year ended December 31,		
	2022	2021	2020
		(in millions)	
Operating revenues by segment:			
Retirement and Income Solutions:			
Retirement and Income Solutions — Fee	**$ 2,253.9**	$ 2,322.7	$ 2,149.8
Retirement and Income Solutions — Spread	**3,721.3**	4,187.3	5,353.7
Total Retirement and Income Solutions (1)	**5,975.2**	6,510.0	7,503.5
Principal Global Investors (2)	**1,715.5**	1,828.0	1,539.1
Principal International	**1,475.9**	1,351.8	1,096.8
U.S. Insurance Solutions:			
Specialty Benefits insurance	**2,984.6**	2,709.6	2,525.4
Individual Life insurance	**1,330.9**	2,057.2	1,955.0
Eliminations	**(0.6)**	(0.2)	(0.2)
Total U.S. Insurance Solutions	**4,314.9**	4,766.6	4,480.2
Corporate	**(6.5)**	1.8	(39.7)
Total segment operating revenues	**13,475.0**	14,458.2	14,579.9
Net realized capital gains (losses), net of related revenue adjustments	**(381.5)**	(164.0)	195.3
Revenues from exited business (3)	**4,447.2**	—	—
Adjustments related to equity method investments	**(49.1)**	(31.5)	(33.5)
Total revenues per consolidated statements of operations	**$17,491.6**	$14,262.7	$14,741.7
Pre-tax operating earnings (losses) by segment:			
Retirement and Income Solutions	**$ 1,090.4**	$ 1,141.2	$ 966.9
Principal Global Investors	**604.0**	708.4	512.9
Principal International	**308.6**	309.0	243.6
U.S. Insurance Solutions	**531.7**	470.8	239.9
Corporate	**(469.4)**	(368.0)	(326.4)
Total segment pre-tax operating earnings	**2,065.3**	2,261.4	1,636.9
Pre-tax net realized capital gains (losses), as adjusted (4)	**(286.7)**	(179.8)	63.6
Pre-tax income from exited business (5)	**4,260.5**	—	—
Adjustments related to equity method investments and noncontrolling interest	**21.0**	2.0	(7.0)
Income before income taxes per consolidated statements of operations	**$ 6,060.1**	$ 2,083.6	$ 1,693.5

(1) Reflects inter-segment revenues of $364.4 million, $413.1 million and $342.6 million for the years ended December 31, 2022, 2021 and 2020, respectively.

(2) Reflects inter-segment revenues of $323.4 million, $308.9 million and $273.8 million for the years ended December 31, 2022, 2021 and 2020, respectively.

(3) Revenues from exited business is derived as follows:

17. Segment Information — (continued)

	For the year ended December 31,		
	2022	2021	2020
	(in millions)		
Revenues from exited business:			
Change in fair value of funds withheld embedded derivative	**$3,652.8**	$—	$—
Net realized capital gains on funds withheld assets	**749.4**	—	—
Strategic review costs and impacts	**32.4**	—	—
Amortization of reinsurance gain	**12.6**	—	—
Total revenues from exited business	**$4,447.2**	$—	$—

(4) Pre-tax net realized capital gains (losses), as adjusted, is derived as follows:

	For the year ended December 31,		
	2022	2021	2020
	(in millions)		
Net realized capital gains (losses)	**$(258.4)**	$ 2.5	$ 302.6
Derivative and hedging-related revenue adjustments	**(126.3)**	(160.3)	(132.9)
Market value adjustments to fee revenues	**0.7**	(0.6)	(1.6)
Adjustments related to equity method investments	**(15.0)**	(24.0)	(1.5)
Adjustments related to sponsored investment funds	**22.2**	21.3	17.3
Recognition of front-end fee revenue	**(4.7)**	(2.9)	11.4
Net realized capital gains (losses), net of related revenue adjustments	**(381.5)**	(164.0)	195.3
Amortization of deferred acquisition costs and other actuarial balances	**2.5**	11.1	(26.8)
Capital (gains) losses distributed	**136.4**	(106.7)	(49.9)
Market value adjustments of embedded derivatives	**(44.1)**	79.8	(55.0)
Pre-tax net realized capital gains (losses), as adjusted (a)	**$(286.7)**	$(179.8)	$ 63.6

(a) As adjusted before noncontrolling interest capital gains (losses).

(5) Pre-tax income (loss) from exited business included:

	For the year ended December 31,		
	2022	2021	2020
	(in millions)		
Pre-tax income from exited business			
Change in fair value of funds withheld embedded derivative	**$3,652.8**	$—	$—
Net realized capital gains on funds withheld assets	**749.4**	—	—
Strategic review costs and impacts	**(91.0)**	—	—
Amortization of reinsurance loss	**(82.5)**	—	—
Impacts to actuarial balances of reinsured business	**31.8**	—	—
Total pre-tax income from exited business	**$4,260.5**	$—	$—

The following is a summary of income tax expense (benefit) allocated to our segments for purposes of determining non-GAAP operating earnings. Segment income taxes are reconciled to income taxes reported on our consolidated statements of operations.

17. Segment Information — (continued)

	For the year ended December 31,		
	2022	2021	2020
	(in millions)		
Income tax expense (benefit) by segment:			
Retirement and Income Solutions	**$ 118.2**	$130.1	$106.6
Principal Global Investors	**161.8**	192.3	141.9
Principal International	**52.4**	69.8	62.0
U.S. Insurance Solutions	**101.1**	92.3	47.9
Corporate	**(69.1)**	(70.7)	(87.9)
Total segment income taxes from operating earnings	**364.4**	413.8	270.5
Tax expense (benefit) related to net realized capital losses, as adjusted	**(64.2)**	(56.2)	28.2
Tax expense related to exited business (1)	**956.5**	—	—
Certain adjustments related to equity method investments and noncontrolling interest	**(48.8)**	(31.4)	(33.7)
Total income taxes per consolidated statements of operations	**$1,207.9**	$326.2	$265.0

(1) Income tax expense related to exited business is derived as follows:

	For the year ended December 31,		
	2022	2021	2020
	(in millions)		
Income tax expense related to exited business:			
Change in fair value of funds withheld embedded derivative	**$767.1**	$—	$—
Net realized capital gains on funds withheld assets	**157.4**	—	—
Strategic review costs and impacts (a)	**42.8**	—	—
Amortization of reinsurance gain	**(17.4)**	—	—
Impacts to actuarial balances of reinsured business	**6.6**	—	—
Total income tax expense related to exited business	**$956.5**	$—	$—

(a) Includes Global Intangible Low-Taxed Income allocated to exited business.

The following is a summary of depreciation and amortization expense allocated to our segments for purposes of determining pre-tax operating earnings. Segment depreciation and amortization is reconciled to depreciation and amortization included in operating expenses in our consolidated statements of operations.

	For the year ended December 31,		
	2022	2021	2020
	(in millions)		
Depreciation and amortization expense by segment:			
Retirement and Income Solutions	**$ 86.2**	$ 81.7	$ 69.1
Principal Global Investors	**20.7**	21.1	21.6
Principal International	**53.9**	57.3	56.0
U.S. Insurance Solutions	**23.7**	24.2	25.1
Corporate	**18.4**	23.7	14.8
Total segment depreciation and amortization expense included in pre-tax operating earnings	**202.9**	208.0	186.6
Depreciation and amortization expense related to exited business	**27.1**	—	—
Total depreciation and amortization expense included in our consolidated statements of operations	**$230.0**	$208.0	$186.6

18. Revenues from Contracts with Customers

The following tables summarize disaggregation of revenues from contracts with customers, including select financial information by segment, and reconcile totals to those reported in the consolidated financial

18. Revenues from Contracts with Customers — (continued)

statements. Revenues from contracts with customers are included in fees and other revenues on the consolidated statements of operations.

	For the year ended December 31,		
	2022	2021	2020
	(in millions)		
Revenue from contracts with customers by segment:			
Retirement and Income Solutions:			
Retirement and Income Solutions — Fee	**$ 540.0**	$ 580.2	$ 591.2
Retirement and Income Solutions — Spread	**11.4**	9.9	8.6
Total Retirement and Income Solutions	**551.4**	590.1	599.8
Principal Global Investors	**1,675.0**	1,787.9	1,511.2
Principal International	**426.3**	492.7	439.2
U.S. Insurance Solutions:			
Specialty Benefits insurance	**15.1**	14.9	14.8
Individual Life insurance	**65.1**	60.6	48.6
Eliminations	**(0.1)**	(0.2)	(0.2)
Total U.S. Insurance Solutions	**80.1**	75.3	63.2
Corporate	**148.1**	204.1	154.9
Total segment revenue from contracts with customers	**2,880.9**	3,150.1	2,768.3
Adjustments for fees and other revenues not within the scope of revenue recognition guidance (1)	**1,255.8**	1,866.0	1,733.0
Pre-tax other adjustments (2)	**41.0**	(3.5)	9.8
Total fees and other revenues per consolidated statements of operations	**$4,177.7**	$5,012.6	$4,511.1

(1) Fees and other revenues not within the scope of the revenue recognition guidance primarily represent revenue on contracts accounted for under the financial instruments or insurance contracts standards.

(2) Pre-tax other adjustments relate to revenues from exited business and the recognition of deferred front-end fee revenues for sales charges on retirement and life insurance products and certain market value adjustments to fee revenues.

Retirement and Income Solutions — Fee

Retirement and Income Solutions — Fee offers service and trust agreements for defined contribution retirement plans, including 401(k) plans, 403(b) plans, and employee stock ownership plans. The investment components of these service agreements are in the form of mutual fund offerings. In addition, plan sponsor retirement plan trust and custody services are also available through our trust company. Furthermore, services and trust agreements are offered to non-retirement customers including insurance companies, endowments and other financial institutions.

Fees and other revenues are earned for administrative activities performed for the defined contribution retirement plans including recordkeeping and reporting as well as trust and custody, asset management and investment services. Fees and other revenues are earned for administrative activities performed for non-retirement plan customers including trust and custody services, defined benefit administration and investment management activities. The majority of these activities are performed daily over time. Fee-for-service transactions are also provided upon client request. These services are considered distinct or grouped into a bundle until a distinct performance obligation is identified. Some performance obligations are considered a series of distinct services, which are substantially the same and have the same pattern of transfer to the customer.

18. Revenues from Contracts with Customers — (continued)

Fees and other revenues can be based on a fixed contractual rate for these services or can be variable based upon contractual rates applied to the market value of the client's investment portfolio each day. If the consideration for this series of performance obligations is based on daily market value, it is considered variable each day as the services are performed over time. The consideration becomes unconstrained and thus recognized as revenue for each day's series of distinct services once the market value of the clients' investment portfolios is determined at market close or carried over at the end of the day for days when the market is closed. Additionally, fixed fees and other revenues are recognized point-in-time as fee-for-service transactions upon completion.

The types of revenues from contracts with customers were as follows:

	For the year ended December 31,		
	2022	**2021**	**2020**
		(in millions)	
Administrative service fee revenue	**$ 537.0**	$ 576.7	$ 589.2
Other fee revenue	**3.0**	3.5	2.0
Total revenues from contracts with customers	**540.0**	580.2	591.2
Fees and other revenues not within the scope of revenue recognition guidance	**1,187.1**	1,299.6	1,130.4
Total fees and other revenues	**1,727.1**	1,879.8	1,721.6
Premiums and other considerations	**—**	0.5	5.0
Net investment income	**526.8**	442.4	423.2
Total operating revenues	**$2,253.9**	$2,322.7	$2,149.8

Retirement and Income Solutions — Spread

Retirement and Income Solutions — Spread offers individual retirement accounts ("IRAs") through Principal Bank, which are primarily funded by retirement savings rolled over from qualified retirement plans. The IRAs are held in savings accounts, money market accounts and certificates of deposit. Revenues are earned through fees as the performance of establishing and maintaining IRA accounts is completed. Fee-for-service transactions are also provided upon client request. The establishment fees and annual maintenance fees are accrued into earnings over a period of time using the average account life. Upfront and recurring bank fees are related to performance obligations that have the same pattern of transfer to the customer and are recognized in income over time with control transferred to the customers utilizing the output method. These fees are based on a fixed contractual rate. Fixed fees and other revenues are also recognized point-in-time as fee-for-service transactions upon completion. Additionally, commission income is earned on advisory services provided to customers. The revenues are earned over time as the service is performed based upon contractual rates applied to the market value of the clients' portfolios.

The types of revenues from contracts with customers were as follows:

	For the year ended December 31,		
	2022	**2021**	**2020**
		(in millions)	
Deposit account fee revenue	**$ 10.2**	$ 9.2	$ 8.4
Commission income	**1.2**	0.7	0.2
Total revenues from contracts with customers	**11.4**	9.9	8.6
Fees and other revenues not within the scope of revenue recognition guidance	**2.9**	7.9	9.5
Total fees and other revenues	**14.3**	17.8	18.1
Premiums and other considerations	**1,959.7**	1,883.1	3,216.0
Net investment income	**1,747.3**	2,286.4	2,119.6
Total operating revenues	**$3,721.3**	$4,187.3	$5,353.7

18. Revenues from Contracts with Customers — (continued)

Principal Global Investors

Fees and other revenues earned for asset management, investment advisory and distribution services provided to institutional and retail clients are based largely upon contractual rates applied to the specified amounts of the clients' portfolios. Each service is a distinct performance obligation, or a series of distinct services that are a single performance obligation in that the services are substantially the same and have the same pattern of transfer to the customer. Fees and other revenues received for performance obligations such as asset management and other services are typically recognized over time utilizing the output method as the service is performed. Performance fees and transaction fees on certain accounts are recognized in income when the probability of significant reversal will not occur upon resolution of the uncertainty, which could be based on a variety of factors such as market performance or other internal metrics. Asset management fees are accrued each month based on the fee terms within the applicable agreement and are generally billed quarterly when values used for the calculation are available. Management fees and performance fees are variable consideration as they are subject to fluctuation based on assets under management ("AUM") and other constraints. These fees are not recognized until unconstrained at the end of each reporting period.

The types of revenues from contracts with customers were as follows:

	For the year ended December 31,		
	2022	2021	2020
		(in millions)	
Management fee revenue	**$1,434.6**	$1,514.1	$1,298.4
Other fee revenue	**240.4**	273.8	212.8
Total revenues from contracts with customers	**1,675.0**	1,787.9	1,511.2
Fees and other revenues not within the scope of revenue recognition guidance	**27.4**	36.2	22.3
Total fees and other revenues	**1,702.4**	1,824.1	1,533.5
Net investment income	**13.1**	3.9	5.6
Total operating revenues	**$1,715.5**	$1,828.0	$1,539.1

Principal International

Fees and other revenues are earned for asset management and distribution services provided to retail and institutional clients in addition to trustee and/or administrative services performed for retirement savings plans. Each service is considered a distinct performance obligation; however, if the services are not distinct on their own, we combine them into a distinct bundle or we have a series of distinct services that are substantially the same and have the same pattern of transfer to the customer. Fees and other revenues are typically based upon contractual rates applied to the market value of the clients' investment portfolios and are considered variable consideration. The transaction price generally includes the amount determined at the end of the reporting period, whereby fees are deducted from the clients' investment portfolios and are recognized as revenue when no longer constrained and satisfied as the services are performed over time utilizing the output method. In addition, payments to customers can take the form of an incentive given by us to entice the customer to purchase its goods or services. Incentives offered to customers are recognized as part of the transaction price as a reduction of revenue either over the period the customer remains in order to receive the incentive or monthly throughout the life of the contract.

Incentive-based fees are recognized in income when the probability of significant reversal will not occur upon the resolution of the uncertainty, which is based on market performance.

Fees for managing customers' mandatory retirement savings accounts in Chile are collected with each monthly deposit made by our customers. If a customer stops contributing before retirement age, we collect no

18. Revenues from Contracts with Customers — (continued)

fees but services are still provided. We recognize revenue from these contracts as services are performed over the life of the contract and review annually.

The types of revenues from contracts with customers were as follows:

	For the year ended December 31,		
	2022	**2021**	**2020**
		(in millions)	
Management fee revenue	**$ 417.1**	$ 484.4	$ 435.3
Other fee revenue	**9.2**	8.3	3.9
Total revenues from contracts with customers	**426.3**	492.7	439.2
Fees and other revenues not within the scope of revenue recognition guidance	**4.5**	4.1	5.6
Total fees and other revenues	**430.8**	496.8	444.8
Premiums and other considerations	**77.7**	127.5	156.6
Net investment income	**967.4**	727.5	495.4
Total operating revenues	**$1,475.9**	$1,351.8	$1,096.8
Revenues from contracts with customers by region:			
Latin America	**$ 314.4**	$ 362.6	$ 323.5
Asia	**111.9**	128.8	115.9
Principal International corporate / regional offices	**2.0**	2.6	0.9
Eliminations	**(2.0)**	(1.3)	(1.1)
Total revenues from contracts with customers	**$ 426.3**	$ 492.7	$ 439.2

U.S. Insurance Solutions

Fees and other revenues are earned for administrative services performed including recordkeeping and reporting services for fee-for-service products, nonqualified benefit plans, separate accounts and dental networks. Services within contracts are not distinct on their own; however, we combine the services into a distinct bundle and account for the bundle as a single performance obligation, which is satisfied over time utilizing the output method as services are rendered. The transaction price corresponds with the performance completed to date, for which the value is recognized as revenue during the period. Variability of consideration is resolved at the end of each period and payments are due when billed.

Commission income is earned through sponsored brokerage services. Performance obligations are satisfied at a point in time, upon delivery of a placed case, and the transaction price calculated per the compensation schedule is recognized as revenue.

18. Revenues from Contracts with Customers — (continued)

The types of revenues from contracts with customers were as follows:

	For the year ended December 31,		
	2022	2021	2020
		(in millions)	
Specialty Benefits insurance:			
Administrative service fees	**$ 15.1**	$ 14.9	$ 14.8
Total revenues from contracts with customers	**15.1**	14.9	14.8
Fees and other revenues not within the scope of revenue recognition guidance	**18.6**	19.0	19.3
Total fees and other revenues	**33.7**	33.9	34.1
Premiums and other considerations	**2,771.1**	2,496.4	2,330.7
Net investment income	**179.8**	179.3	160.6
Total operating revenues	**$2,984.6**	$2,709.6	$2,525.4
Individual Life insurance:			
Administrative service fees	**$ 27.6**	$ 26.7	$ 21.8
Commission income	**37.5**	33.9	26.8
Total revenues from contracts with customers	**65.1**	60.6	48.6
Fees and other revenues not within the scope of revenue recognition guidance	**333.6**	859.2	849.8
Total fees and other revenues	**398.7**	919.8	898.4
Premiums and other considerations	**535.9**	334.0	329.1
Net investment income	**396.3**	803.4	727.5
Total operating revenues	**$1,330.9**	$2,057.2	$1,955.0

Corporate

Fees and other revenues are earned on the performance of selling and servicing of securities and related products offered through PSI, an introducing broker-dealer registered with the FINRA.

PSI enters into selling and distribution agreements with the obligation to sell or distribute the securities products, such as mutual funds, annuities and products sold through RIAs, to individual clients in return for front-end sales charges, 12b-1 service fees, annuity fees and asset-based fees. Front-end sales charges, 12b-1 fees and annuity fees are related to a single sale and are earned at the time of sale. PSI also enters into agreements with individual customers to provide securities trade execution and custody through a brokerage services platform in return for ticket charge and other service fee revenue. These services are bundled as one single distinct service referred to as brokerage services. This revenue is related to distinct transactions and is earned at a point in time.

PSI also enters into agreements with individual customers to provide trade execution, clearing services, custody services and investment research services through our proprietary offered fee-based products. These services are bundled as one single distinct service referred to as advisory services. In addition, for outside RIA business PSI performs sales and distribution services only. The revenues are earned over time as the service is performed utilizing the output method.

A majority of our revenue is based upon contractual rates applied to the market value of the clients' portfolios and considered variable consideration.

The Corporate segment also includes inter-segment eliminations of fees and other revenues. The types of revenues from contracts with customers were as follows:

18. Revenues from Contracts with Customers — (continued)

	For the year ended December 31,		
	2022	**2021**	**2020**
		(in millions)	
Commission income	**$ 366.2**	$ 388.9	$ 316.6
Other fee revenue	**79.7**	68.8	59.1
Eliminations	**(297.8)**	(253.6)	(220.8)
Total revenues from contracts with customers	**148.1**	204.1	154.9
Fees and other revenues not within the scope of revenue recognition guidance	**(318.3)**	(360.0)	(303.9)
Total fees and other revenues	**(170.2)**	(155.9)	(149.0)
Premiums and other considerations	**(4.2)**	—	—
Net investment income	**167.9**	157.7	109.3
Total operating revenues	**$ (6.5)**	$ 1.8	$ (39.7)

Contract Costs

Sales compensation and other incremental costs of obtaining a contract are capitalized and amortized over the period of contract benefit if the costs are expected to be recovered. The contract cost asset, which is included in other assets on the consolidated statements of financial position, was $204.9 million and $193.1 million as of December 31, 2022 and December 31, 2021, respectively.

We apply the practical expedient for certain costs where we recognize the incremental costs of obtaining these contracts as an expense when incurred if the amortization period of the assets is one year or less. These costs, along with costs that are not deferrable, are included in operating expenses on the consolidated statements of operations.

Deferred contract costs consist primarily of commissions and variable compensation. We amortize capitalized contract costs on a straight-line basis over the expected contract life, reflecting lapses as they are incurred. Deferred contract costs are subject to impairment testing on an annual basis, or when a triggering event occurs that could warrant an impairment. To the extent future revenues less future maintenance expenses are not adequate to cover the asset balance, an impairment is recognized. For the years ended December 31, 2022, 2021 and 2020, $35.6 million, $32.4 million and $24.8 million, respectively, of amortization expense was recorded in operating expenses on the consolidated statements of operations and no impairment loss was recognized in relation to the costs capitalized.

19. Stock-Based Compensation Plans

As of December 31, 2022, we had the 2021 Stock Incentive Plan, the 2020 Directors Stock Plan, the 2014 Stock Incentive Plan, the Employee Stock Purchase Plan, the 2014 Directors Stock Plan, the Amended and Restated 2010 Stock Incentive Plan, the 2005 Directors Stock Plan, the Stock Incentive Plan and the Directors Stock Plan ("Stock-Based Compensation Plans"). No new grants will be made under the 2020 Directors Stock Plan, the 2014 Stock Incentive Plan, the 2014 Directors Stock Plan, the Amended and Restated 2010 Stock Incentive Plan, the 2005 Directors Stock Plan, the Stock Incentive Plan or the Directors Stock Plan. Under the terms of the 2021 Stock Incentive Plan, grants may be nonqualified stock options, incentive stock options qualifying under Section 422 of the Internal Revenue Code, restricted stock, restricted stock units, stock appreciation rights, performance shares, performance units or other stock-based awards. To date, we have not granted any incentive stock options, restricted stock or performance units under any plans. As part of our fair value process, we assess the impact of material nonpublic information on our share price or expected volatility, as applicable, at the time of grant. No awards in 2022 required a fair value adjustment.

19. Stock-Based Compensation Plans — (continued)

As of December 31, 2022, the maximum number of new shares of common stock available for grant under the 2021 Stock Incentive Plan was 23.0 million.

For awards with graded vesting, we use an accelerated expense attribution method. The compensation cost that was charged against net income for stock-based awards granted under the Stock-Based Compensation Plans was as follows:

	For the year ended December 31,		
	2022	2021	2020
		(in millions)	
Compensation cost	**$89.9**	$95.2	$86.7
Related income tax benefit	**20.3**	19.9	17.1
Capitalized as part of an asset	**1.3**	1.4	1.5

Nonqualified Stock Options

No nonqualified stock options were granted to employees during 2022. Previously, nonqualified stock options were granted to certain employees under the 2014 Stock Incentive Plan, the Amended and Restated 2010 Stock Incentive Plan and the Stock Incentive Plan. Options outstanding were granted at an exercise price equal to the fair market value of our common stock on the date of grant and expire ten years after the grant date. Total options granted were 0.0 million, 0.8 million and 1.4 million during 2022, 2021 and 2020, respectively.

The following is a summary of the status of all of our stock option plans:

	Number of options	Weighted-average exercise price	Intrinsic value
	(in millions)		(in millions)
Options outstanding as of January 1, 2022	**6.2**	**$51.89**	
Exercised	**2.9**	**49.06**	
Options outstanding as of December 31, 2022	**3.3**	**$54.36**	**$98.2**
Options vested or expected to vest as of December 31, 2022	**3.3**	**$54.35**	**$98.1**
Options exercisable as of December 31, 2022	**2.5**	**$53.85**	**$76.1**

The total intrinsic value of stock options exercised was $92.0 million, $23.5 million and $3.4 million during 2022, 2021, and 2020, respectively.

The following is a summary of weighted-average remaining contractual lives for stock options outstanding and the range of exercise prices on the stock options as of December 31, 2022:

Range of exercise prices	Number of options outstanding	Weighted-average remaining contractual life
	(in millions)	
$27.46 - $48.11	**0.5**	**2.0**
$48.12 - $52.41	**0.9**	**6.0**
$52.42 - $55.89	**0.4**	**6.2**
$55.90 - $62.75	**0.7**	**8.2**
$62.76 - $63.98	**0.8**	**4.9**
$27.46 - $63.98	**3.3**	

19. Stock-Based Compensation Plans — (continued)

The weighted-average remaining contractual lives for stock options exercisable is approximately 5.6 years as of December 31, 2022.

The fair value of stock options is estimated using the Black-Scholes option pricing model. The following is a summary of the assumptions used in this model for the stock options granted during the period:

Options	For the year ended December 31, 2022	2021	2020
Expected volatility	—%	34.2%	25.7%
Expected term (in years)	—	7.0	7.0
Risk-free interest rate	—%	1.2%	1.3%
Expected dividend yield	—%	3.82%	4.33%
Weighted average estimated fair value	$—	$15.67	$9.64

We determine expected volatility based on a combination of historical volatility using daily price observations and implied volatility from traded options on our common stock. We believe that incorporating both historical and implied volatility into our expected volatility assumption calculation better reflects market expectations. The expected term represents the period of time that options granted are expected to be outstanding. We determine expected term using historical exercise and employee termination data. The risk-free rate for periods within the expected term of the option is based on the U.S. Treasury risk-free interest rate in effect at the time of grant. The dividend yield is based on historical dividend distributions compared to the closing price of our common shares on the grant date.

As of December 31, 2022, we had $0.8 million of total unrecognized compensation cost related to nonvested stock options. The cost is expected to be recognized over a weighted-average service period of approximately 1.0 years.

Cash received from stock options exercised under these share-based payment arrangements during 2022, 2021 and 2020 was $141.6 million, $42.2 million and $4.4 million, respectively. The actual tax benefits realized for the tax deductions for options exercised under these share-based payment arrangements during 2022, 2021 and 2020 was $37.7 million, $9.1 million and $1.4 million, respectively.

Performance Share Awards

We granted performance share awards to certain employees under the 2021 Stock Incentive Plan, the 2014 Stock Incentive Plan and the Amended and Restated 2010 Stock Incentive Plan. The performance share awards are treated as an equity award and are paid in shares. Effective in 2022, we added a relative total shareholder return modifier to the performance share awards under which the number of shares ultimately granted is also impacted by our actual shareholder return relative to our S&P 500 Financial Sector Index peer group. The fair value of performance share awards is determined using a Monte Carlo simulation model. Whether the performance shares are earned depends upon the participant's continued employment through the performance period (except in the case of specific types of terminations) and our performance against three-year goals set at the beginning of the performance period. Performance goals based on various factors must be achieved for any of the performance shares to be earned. If the performance requirements are not met, the performance shares will be forfeited, no compensation cost will be recognized and any previously recognized compensation cost will be reversed. These awards have no maximum contractual term. Dividend equivalents are credited on performance shares outstanding as of the record date. These dividend equivalents are only paid on the shares released. Total performance share awards granted were 0.3 million, 0.2 million and 0.3 million in 2022, 2021 and 2020, respectively.

19. Stock-Based Compensation Plans — (continued)

The following is a summary of activity for the nonvested performance share awards:

	Number of performance share awards	Weighted-average grant-date fair value
	(in millions)	
Nonvested performance share awards as of January 1, 2022	**0.7**	**$54.37**
Granted	**0.3**	**66.62**
Vested	**0.2**	**52.75**
Nonvested performance share awards as of December 31, 2022	**0.8**	**$59.19**

The total intrinsic value of performance share awards vested was $11.6 million, $4.7 million and $8.7 million during 2022, 2021 and 2020, respectively.

Performance share awards above represent initial target awards and do not reflect potential increases or decreases resulting from the final performance results to be determined at the end of the respective performance period. The actual number of common shares to be awarded at the end of each performance period will range between 0% and 180% (0% and 150% prior to 2022) of the initial target awards.

The fair value of performance share awards is determined using a Monte Carlo simulation model of our common shares on the grant date. The weighted-average grant-date fair value of performance share awards granted during 2022, 2021 and 2020 was $66.62, $58.68 and $51.73, respectively.

As of December 31, 2022, we had $9.4 million of total unrecognized compensation cost related to nonvested performance share awards granted. The cost is expected to be recognized over a weighted-average service period of approximately 1.8 years.

Actual tax benefits realized for the tax deductions for performance share awards paid out under these share-based payment arrangements for 2022, 2021 and 2020 was $6.4 million, $1.8 million and $3.0 million, respectively.

Restricted Stock Units

We issue restricted stock units under the 2021 Stock Incentive Plan, 2020 Directors Stock Plan, 2014 Stock Incentive Plan, the 2014 Directors Stock Plan, the Amended and Restated 2010 Stock Incentive Plan, the 2005 Directors Stock Plan, the Stock Incentive Plan, and the Directors Stock Plan. Restricted stock units are treated as an equity award and are paid in shares. These awards have no maximum contractual term. Dividend equivalents are credited on restricted stock units outstanding as of the record date. These dividend equivalents are only paid on the shares released. Restricted stock units granted were 1.3 million, 1.1 million and 1.1 million in 2022, 2021 and 2020, respectively.

Restricted stock units were issued to certain employees and agents pursuant to the 2021 Stock Incentive Plan, 2014 Stock Incentive Plan, the Amended and Restated 2010 Stock Incentive Plan and Stock Incentive Plan. Under these plans, awards have graded or cliff vesting over a three-year service period. When service for PFG ceases (except in the case of specific types of terminations), all vesting stops and unvested units are forfeited.

Pursuant to the 2021 Stock Incentive Plan, 2020 Directors Stock Plan, 2014 Directors Stock Plan and the 2005 Directors Stock Plan, restricted stock units are granted to each non-employee director in office immediately following each annual meeting of stockholders and, at the discretion of the Nominating and Governance Committee, to each person who becomes a member of the Board other than on the date of the

19. Stock-Based Compensation Plans — (continued)

annual meeting of stockholders. Under these plans, awards are granted on an annual basis and cliff vest after a one-year service period. When service to PFG ceases, all vesting stops and unvested units are forfeited.

The following is a summary of activity for the nonvested restricted stock units:

	Number of restricted stock units	Weighted-average grant-date fair value
	(in millions)	
Nonvested restricted stock units as of January 1, 2022	3.0	$54.50
Granted	1.3	70.29
Vested	1.0	53.48
Canceled	0.1	61.48
Nonvested restricted stock units as of December 31, 2022	3.2	$60.69

The total intrinsic value of restricted stock units vested was $81.1 million, $51.7 million and $41.2 during 2022, 2021 and 2020, respectively.

The fair value of restricted stock units is determined based on the closing stock price of our common shares on the grant date. The weighted-average grant-date fair value of restricted stock units granted during 2022, 2021 and 2020 was $70.29, $59.17 and $50.49, respectively.

As of December 31, 2022, we had $68.1 million of total unrecognized compensation cost related to nonvested restricted stock unit awards granted under these plans. The cost is expected to be recognized over a weighted-average period of approximately 1.7 years.

The actual tax benefits realized for the tax deductions for restricted stock unit payouts under these share-based payment arrangements for 2022, 2021 and 2020 was $27.0 million, $17.8 million and $14.6 million, respectively.

Employee Stock Purchase Plan

Under our Employee Stock Purchase Plan, participating employees have the opportunity to purchase shares of our common stock on a quarterly basis. Employees may purchase up to $25,000 in stock value annually. Employees may purchase shares of our common stock at a price equal to 90% of the shares' fair market value as of the end of the purchase period. Prior to 2022, employees were able to purchase shares of our common stock at a price equal to 85% of the shares' fair market value as of the beginning or end of the purchase period, whichever was lower. Under the Employee Stock Purchase Plan, employees purchased 0.6 million, 1.0 million and 1.4 million shares during 2022, 2021 and 2020, respectively.

We recognize compensation expense for the fair value of the discount granted to employees participating in the employee stock purchase plan in the period of grant. Shares of the Employee Stock Purchase Plan are treated as an equity award. The weighted-average fair value of the discount on the stock purchased was $7.31, $15.64 and $11.33 during 2022, 2021 and 2020, respectively. The total intrinsic value of the Employee Stock Purchase Plan shares settled was $4.1 million, $15.3 million and $15.5 million during 2022, 2021 and 2020, respectively.

Cash received from shares issued under these share-based payment arrangements for 2022, 2021 and 2020 was $37.3 million, $46.5 million and $37.8 million, respectively. The actual tax benefit realized for the tax deductions for the settlement of the share-based payment arrangements for 2022, 2021 and 2020 was $0.8 million, $1.3 million and $0.9 million, respectively.

19. Stock-Based Compensation Plans — (continued)

As of December 31, 2022, a total of 3.5 million of new shares were available to be made issuable by us for this plan.

20. Earnings Per Common Share

The computations of the basic and diluted per share amounts were as follows:

	For the year ended December 31,		
	2022	2021	2020
	(in millions, except per share data)		
Net income	**$4,852.2**	$1,757.4	$1,428.5
Subtract:			
Net income attributable to noncontrolling interest	**40.6**	46.8	32.7
Total	**$4,811.6**	$1,710.6	$1,395.8
Weighted-average shares outstanding:			
Basic	**251.1**	269.0	274.7
Dilutive effects:			
Stock options	**1.5**	1.3	0.3
Restricted stock units	**2.2**	2.1	1.5
Performance share awards	**0.5**	0.5	0.1
Diluted	**255.3**	272.9	276.6
Net income per common share:			
Basic	**$ 19.16**	$ 6.36	$ 5.08
Diluted	**$ 18.85**	$ 6.27	$ 5.05

The calculation of diluted earnings per share for the years ended December 31, 2022, 2021 and 2020, excludes the incremental effect related to certain outstanding stock-based compensation grants due to their anti-dilutive effect.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Disclosure Controls and Procedures

In order to ensure the information we must disclose in our filings with the SEC is recorded, processed, summarized and reported on a timely basis, we have adopted disclosure controls and procedures. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure information required to be disclosed by us in the reports we file with or submit to the SEC is accumulated and communicated to our management, including our Chief Executive Officer and our Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Our Chief Executive Officer, Daniel J. Houston, and our Chief Financial Officer, Deanna D. Strable-Soethout, have reviewed and evaluated our disclosure controls and procedures as of December 31, 2022, and have concluded our disclosure controls and procedures are effective.

Management's Report on Internal Control Over Financial Reporting

Management of Principal Financial Group, Inc. is responsible for establishing and maintaining adequate 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 U.S. generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Under the supervision and with the participation of management, including our Chief Executive Officer, Daniel J. Houston, and our Chief Financial Officer, Deanna D. Strable-Soethout, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on criteria established in the *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework). Based on our evaluation, management has concluded that Principal Financial Group, Inc.'s internal control over financial reporting was effective as of December 31, 2022.

Ernst & Young LLP, the independent registered public accounting firm that audited our financial statements included in this annual report on Form 10-K, has issued its report on the effectiveness of our internal control over financial reporting. The report is included in Item 8. "Financial Statements and Supplementary Data."

Changes in Internal Control Over Financial Reporting

We had no change in our internal control over financial reporting during our last fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information called for by Item 10 pertaining to directors is set forth in Principal Financial Group, Inc.'s proxy statement relating to the 2023 annual stockholders meeting (the "Proxy Statement"), which will be filed with the SEC on or about April 3, 2023, under the captions, "Election of Directors," "Corporate Governance," and "Security Ownership of Certain Beneficial Owners and Management — Delinquent Section 16(a) Reports." Such information is incorporated herein by reference. The information called for by Item 10 pertaining to executive officers can be found in Part I of this Form 10-K under the caption, "Information about our Executive Officers." The Company has adopted a code of ethics that applies to our principal executive officer, principal financial officer and principal accounting officer. The code of ethics has been posted on our internet website, found at *www.principal.com*. We intend to satisfy disclosure requirements regarding amendments to, or waivers from, any provision of our code of ethics on our website.

Item 11. Executive Compensation

The information called for by Item 11 pertaining to executive compensation is set forth in the Proxy Statement under the caption, "Executive Compensation," and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information called for by Item 12 pertaining to security ownership of certain beneficial owners and management is set forth in the Proxy Statement under the caption, "Security Ownership of Certain Beneficial Owners and Management," and is incorporated herein by reference.

Equity Compensation Plan Information

In general, we have two compensation plans under which our equity securities are authorized for issuance to employees or directors (not including our tax qualified pension plans): the Principal Financial Group, Inc. 2021 Stock Incentive Plan and the Principal Financial Group, Inc. Employee Stock Purchase Plan. The following table shows the number of shares of common stock issuable upon exercise of options outstanding as of December 31, 2022, the weighted average exercise price of those options and the number of shares of common stock remaining available for future issuance as of December 31, 2022, excluding shares issuable upon exercise of outstanding options.

	(a)	(b)	(c)
Plan Category	**Number of securities to be issued upon exercise of outstanding options, warrants and rights**	**Weighted-average exercise price of outstanding options, warrants and rights**	**Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))**
Equity compensation plans approved by our stockholders (1)	**7,964,890 (2)**	**$54.36 (3)**	**26,465,720 (4)**
Equity compensation plans not approved by our stockholders	**—**	**n/a**	**—**

(1) The Principal Financial Group, Inc. Employee Stock Purchase Plan, the Principal Financial Group, Inc. Stock Incentive Plan and the Principal Financial Group, Inc. Directors Stock Plan were each approved by our sole stockholder, Principal Mutual Holding Company, prior to our initial public offering of common stock on October 22, 2001. Subsequently, the Principal Financial Group, Inc. 2005 Stock Incentive Plan and the Principal Financial Group, Inc. 2005 Directors Stock Plan were each approved by our stockholders on May 17, 2005. An amendment to the Principal Financial Group, Inc. Employee Stock Purchase Plan to increase the number of shares available for issuance under the plan was approved on May 19, 2009. On May 18, 2010, our shareholders approved the 2010 Stock Incentive Plan, which replaced the 2005 Stock Incentive Plan. The 2010 Stock Incentive Plan was subsequently renamed the Amended and Restated 2010 Stock Incentive Plan. On May 20, 2014, our shareholders approved the Principal Financial Group, Inc. 2014 Stock Incentive Plan and the Principal Financial Group, Inc. 2014 Directors Stock Plan. On May 19, 2020, our shareholders approved the Principal Financial Group, Inc. 2020 Directors Stock Plan. On May 18, 2021, our shareholders approved the Principal Financial Group, Inc. 2021 Stock Incentive Plan.

(2) Includes 3,322,841 options outstanding under the employee stock incentive plans, 817,684 performance shares under the employee stock incentive plans, 3,515,438 restricted stock units under the employee stock incentive plans, 241,037 restricted stock units under the directors stock plans and 67,890 other stock-based awards under the director stock plans for obligations under the Deferred Compensation Plan for Non-Employee Directors of Principal Financial Group, Inc.

(3) The weighted-average exercise price relates only to outstanding stock options, not to outstanding performance shares, restricted stock units or other stock-based awards.

(4) This number includes 3,458,225 shares remaining for issuance under the Employee Stock Purchase Plan and 23,007,495 shares available for issuance in respect of future awards of stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares, performance units and other stock-based awards under the 2021 Stock Incentive Plan.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information called for by Item 13 pertaining to certain relationships and related transactions is set forth in the Proxy Statement under the captions, "Corporate Governance — Director Independence," and "Corporate Governance — Certain Relationships and Related Transactions," and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The information called for by Item 14 pertaining to principal accounting fees and services is set forth in the Proxy Statement under the caption, "Ratification of Appointment of Independent Registered Public Accountants," and is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

a. Documents filed as part of this report.

1. Financial Statements (see Item 8. Financial Statements and Supplementary Data)
   Report of Independent Registered Public Accounting Firm on Internal Control over Financial Reporting
   Report of Independent Registered Public Accounting Firm
   Audited Consolidated Financial Statements
   - Consolidated Statements of Financial Position
   - Consolidated Statements of Operations
   - Consolidated Statements of Comprehensive Income
   - Consolidated Statements of Stockholders' Equity
   - Consolidated Statements of Cash Flows
   - Notes to Consolidated Financial Statements

2. Schedule I — Summary of Investments — Other Than Investments in Related Parties
   Schedule II — Condensed Financial Information of Registrant (Parent Only)
   Schedule III — Supplementary Insurance Information
   Schedule IV — Reinsurance

   All other schedules for which provision is made in the applicable accounting regulation of the Securities and Exchange Commission are not required under the related instructions or are inapplicable and therefore have been omitted.

3. Exhibits

Index of Exhibits
(Item 15.a.3.)

Exhibit Number	Description	Incorporated by reference herein Form	File Date
2.1	Sale and Purchase Promise Agreement, dated October 5, 2012, among Principal Financial Services, Inc., Empresas Penta S.A. and Inversiones Banpenta Limitada	8-K	November 13, 2012
2.2	Purchase Agreement, dated as of April 9, 2019, by and between Wells Fargo Bank, N.A., Principal Financial Services, Inc. and (for certain limited purposes) Wells Fargo & Company	10-Q	May 2, 2019
3.1	Amended and Restated Certificate of Incorporation of Principal Financial Group, Inc.	8-K	June 17, 2005
3.2	Amended and Restated By-Laws of Principal Financial Group, Inc.	8-K	March 2, 2018
4.1	Form of Certificate for the Common Stock of Principal Financial Group, Inc., par value $0.01 per share	S-1/A	August 2, 2001
4.2	Senior Indenture, dated as of October 11, 2006, between Principal Financial Group, Inc. and The Bank of New York, as Trustee	8-K	October 17, 2006
4.2.1	First Supplemental Indenture, dated as of October 16, 2006, among Principal Financial Group, Inc., Principal Financial Services, Inc. and The Bank of New York, as Trustee	8-K	October 17, 2006
4.2.2	6.05% Senior Note ($500,000,000) due October 15, 2036	8-K	October 17, 2006
4.2.3	6.05% Senior Note ($100,000,000) due October 15, 2036	8-K	December 6, 2006
4.2.4	Guarantee from Principal Financial Services, Inc. with respect to the 6.05% Senior Notes due 2036	8-K	October 17, 2006
4.3	Senior Indenture, dated as of May 21, 2009, among Principal Financial Group, Inc., as issuer, Principal Financial Services, Inc., as guarantor, and The Bank of New York, as Trustee	8-K	May 21, 2009
4.3.1	Third Supplemental Indenture (including the form of 2022 Notes), dated as of September 10, 2012, among Principal Financial Group, Inc., as issuer, Principal Financial Services, Inc., as guarantor, and The Bank of New York Mellon Trust Company, as trustee	8-K	September 10, 2012
4.3.2	Fourth Supplemental Indenture (including the form of 2042 Notes), dated as of September 10, 2012, among Principal Financial Group, Inc., as issuer, Principal Financial Services, Inc., as guarantor, and The Bank of New York Mellon Trust Company, as trustee	8-K	September 10, 2012
4.3.3	Sixth Supplemental Indenture (including the form of 2023 Notes), dated as of November 16, 2012, among Principal Financial Group, Inc., as issuer, Principal Financial Services, Inc., as guarantor, and The Bank of New York Mellon Trust Company, as trustee	8-K	November 16, 2012
4.3.4	Seventh Supplemental Indenture (including the form of 2043 Notes), dated as of November 16, 2012, among Principal Financial Group, Inc., as issuer, Principal Financial Services, Inc., as guarantor, and The Bank of New York Mellon Trust Company, as trustee	8-K	November 16, 2012
4.3.5	Eighth Supplemental Indenture (including the form of 3.400% Senior Note due 2025), dated as of May 7, 2015, among Principal Financial Group, Inc., as issuer, Principal Financial Services, Inc., as guarantor, and The Bank of New York Mellon Trust Company, as trustee, relating to the 3.400% Senior Notes due 2025	8-K	May 7, 2015
4.3.6	Ninth Supplemental Indenture (including the form of 3.100% Senior Note due 2026), dated as of November 10, 2016, among Principal Financial Group, Inc., as issuer, Principal Financial Services, Inc., as guarantor, and The Bank of New York Mellon Trust Company, as trustee, relating to the 3.100% Senior Notes due 2026	8-K	November 10, 2016
4.3.7	Tenth Supplemental Indenture (including the form of 4.300% Senior Note due 2046), dated as of November 10, 2016, among Principal Financial Group, Inc., as issuer, Principal Financial Services, Inc., as guarantor, and The Bank of New York Mellon Trust Company, as trustee, relating to the 4.300% Senior Notes due 2046	8-K	November 10, 2016
4.3.8	Guarantee from Principal Financial Services, Inc. with respect to the 3.300% Senior Notes due 2022	8-K	September 10, 2012
4.3.9	Guarantee from Principal Financial Services, Inc. with respect to the 4.625% Senior Notes due 2042	8-K	September 10, 2012

Exhibit Number	Description	Incorporated by reference herein Form	File Date
4.3.10	Guarantee from Principal Financial Services, Inc. with respect to the 3.125% Senior Notes due 2023	8-K	November 16, 2012
4.3.11	Guarantee from Principal Financial Services, Inc. with respect to the 4.350% Senior Notes due 2043	8-K	November 16, 2012
4.3.12	Guarantee from Principal Financial Services, Inc. with respect to the 3.400% Senior Notes due 2025	8-K	May 7, 2015
4.3.13	Guarantee from Principal Financial Services, Inc. with respect to the 3.100% Senior Notes due 2026	8-K	November 10, 2016
4.3.14	Guarantee from Principal Financial Services, Inc. with respect to the 4.300% Senior Notes due 2046	8-K	November 10, 2016
4.3.15	Thirteenth Supplemental Indenture (including the form of 3.700% Senior Note due 2029), dated as of May 10, 2019, among Principal Financial Group, Inc., as issuer, Principal Financial Services, Inc., as guarantor, and The Bank of New York Mellon Trust Company, as trustee, relating to the 3.700% Senior Notes due 2029	8-K	May 10, 2019
4.3.16	Guarantee from Principal Financial Services, Inc. with respect to the 3.700% Senior Notes due 2029	8-K	May 10, 2019
4.3.17	Fourteenth Supplemental Indenture (including the form of 2.125% Senior Note due 2030), dated as of June 12, 2020, among Principal Financial Group, Inc., as issuer, Principal Financial Services, Inc., as guarantor, and The Bank of New York Mellon Trust Company, as trustee, relating to the 2.125% Senior Notes due 2030	8-K	June 12, 2020
4.3.18	Guarantee of Principal Financial Services, Inc. with respect to the 2.125% Senior Notes due 2030	8-K	June 12, 2020
4.4	Junior Subordinated Indenture, dated as of May 7, 2015, among Principal Financial Group, Inc., as issuer, Principal Financial Services, Inc., as guarantor, and The Bank of New York Mellon Trust Company, as trustee	8-K	May 7, 2015
4.4.1	First Supplemental Indenture (including the form of 4.700% Fixed-to-Floating Rate Junior Subordinated Note due 2055), dated as of May 7, 2015, among Principal Financial Group, Inc., as issuer, Principal Financial Services, Inc., as guarantor, and The Bank of New York Mellon Trust Company, as trustee, relating to the 4.700% Fixed-to-Floating Rate Junior Subordinated Notes due 2055	8-K	May 7, 2015
4.4.2	Guarantee from Principal Financial Services, Inc. with respect to the 4.700% Fixed-to-Floating Rate Junior Subordinated Notes due 2055	8-K	May 7, 2015
10.1	Principal Financial Group, Inc. Stock Incentive Plan	10-Q	August 6, 2003
10.1.1	Form of Restricted Stock Unit Award Agreement	8-K	March 7, 2005
10.1.2	Form of Stock Option Award Agreement	8-K	March 7, 2005
10.1.3	Principal Financial Group, Inc. 2005 Stock Incentive Plan	10-Q	August 3, 2005
10.1.4	Principal Financial Group, Inc. 2010 Stock Incentive Plan	DEF14A	April 6, 2010
10.1.5	Amended and Restated Principal Financial Group, Inc. 2010 Stock Incentive Plan	10-Q	May 2, 2012
10.1.6	Principal Financial Group, Inc. 2014 Stock Incentive Plan	DEF14A	April 7, 2014
10.1.7	Principal Financial Group, Inc. 2021 Stock Incentive Plan	DEF14A	April 5, 2021
10.2	Principal Financial Group Long-Term Performance Plan	S-1	June 8, 2001
10.3	Resolution of Human Resources Committee of the Board of Directors of Principal Financial Group, Inc. amending the Principal Financial Group Long-Term Performance Plan as of October 31, 2002	10-K	March 5, 2003
10.4	Principal Financial Group Incentive Pay Plan (PrinPay), amended and restated effective January 1, 2003	10-Q	May 7, 2003
10.5	Principal Financial Group, Inc. Annual Incentive Plan	10-K	March 4, 2005
10.6	Revised Summary of Standard Compensatory Arrangement for Non-Employee Directors of the Principal Financial Group, Inc. Board of Directors	10-Q	November 5, 2008
10.6.1	Revised Summary of Standard Compensatory Arrangement for Non-Employee Directors, effective March 28, 2009	10-Q	May 6, 2009
10.6.2	Revised Summary of Standard Compensatory Arrangement for Non-Employee Directors of the Principal Financial Group, Inc., effective May 17, 2010	10-K	February 16, 2011

Exhibit Number	Description	Incorporated by reference herein Form	File Date
10.6.3	Revised Summary of Standard Compensatory Arrangement for Non-Employee Directors of the Principal Financial Group, Inc., effective January 1, 2012	10-K	February 15, 2012
10.6.4	Revised Summary of Standard Compensatory Arrangement for Non-Employee Directors of Principal Financial Group, Inc., effective January 1, 2015	10-K	February 11, 2015
10.6.5	Revised Summary of Standard Compensatory Arrangement for Non-Employee Directors of the Principal Financial Group, Inc., effective November 28, 2017	10-K	February 9, 2018
10.7	Principal Financial Group, Inc. Directors Stock Plan	S-1	June 8, 2001
10.7.1	Principal Financial Group, Inc. 2005 Directors Stock Plan	10-Q	August 3, 2005
10.7.2	Principal Financial Group, Inc. 2014 Directors Stock Plan	DEF14A	April 7, 2014
10.7.3	Principal Financial Group, Inc. 2020 Directors Stock Plan	DEF14A	April 6, 2020
10.8	Deferred Compensation Plan for Non-Employee Directors of Principal Financial Group, Inc.	10-K	March 2, 2006
10.9	Principal Select Savings Excess Plan, restated as of January 1, 2004	10-Q	May 5, 2004
10.9.1	Amendment No. 1 to Principal Select Savings Excess Plan	10-K	March 2, 2006
10.9.2	Principal Select Savings Excess Plan for Employees, amended and restated effective January 1, 2016	10-K	February 10, 2016
10.9.3	Principal Select Savings Excess Plan for Individual Field, amended and restated effective January 1, 2016	10-K	February 10, 2016
10.9.4	Nonqualified Deferred Compensation Plan for Select Investment Professions of Principal Financial Group, Inc. and Affiliates, effective January 1, 2016	10-K	February 10, 2016
10.10	Supplemental Executive Retirement Plan for Employees, restated as of January 1, 2003	10-Q	May 5, 2004
10.10.1	Amendment No. 1 to the Principal Supplemental Executive Retirement Plan for Employees	10-K	March 2, 2006
10.11	Form of Principal Financial Group, Inc. and Principal Life Insurance Company Change-of-Control Employment Agreement (Tier One Executives), dated as of February 28, 2006, by and among Principal Financial Group, Inc., Principal Financial Services, Inc., Principal Life Insurance Company and an Executive	10-Q	May 4, 2006
10.11.1	Form of Principal Financial Group, Inc. and Principal Life Insurance Company Change-of-Control Employment Agreement (Tier One Executives)	8-K	December 2, 2008
10.11.2	Form of Principal Financial Group, Inc. and Principal Life Insurance Company Change of Control Employment Agreement (Tier One Executives), effective December 31, 2010	10-K	February 16, 2011
10.12	Form of Principal Financial Group, Inc. Indemnification Agreement	8-K	December 2, 2008
10.12.1	Form of Principal Financial Group, Inc. Indemnification Agreement dated as of June 9, 2016.	10-Q	August 3, 2016
10.13	Compensatory Arrangement, dated as of March 14, 2002, between Principal Life Insurance Company and James P. McCaughan	10-Q	May 10, 2002
10.14	The Principal Severance Plan for Senior Executives, restated effective March 1, 2009	10-Q	May 6, 2009
10.14.1	The Principal Financial Group, Inc. Executive Severance Plan effective September 1, 2021	10-Q	October 28, 2021
10.15	The Principal Financial Group Nonqualified Defined Benefit Plan for Employees.	10-Q	August 3, 2016
4.5	Description of the Registrant's Securities Registered Under Section 12 of the Securities Exchange Act of 1934		
21	Principal Financial Group, Inc. Member Companies as of December 31, 2022		
23	Consent of Independent Registered Public Accounting Firm		
31.1	Certification of Daniel J. Houston		
31.2	Certification of Deanna D. Strable-Soethout		

Exhibit Number	Description	Incorporated by reference herein Form	File Date
32.1	Certification Pursuant to Section 1350 of Chapter 63 of Title 18 of the United States Code — Daniel J. Houston		
32.2	Certification Pursuant to Section 1350 of Chapter 63 of Title 18 of the United States Code — Deanna D. Strable-Soethout		
101	The following materials from Principal Financial Group, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2022, formatted in iXBRL (Inline eXtensible Business Reporting Language): (i) the Consolidated Statements of Financial Position, (ii) the Consolidated Statements of Operations, (iii) the Consolidated Statements of Comprehensive Income, (iv) the Consolidated Statements of Stockholders' Equity, (v) the Consolidated Statements of Cash Flows, (vi) the Notes to Consolidated Financial Statements, (vii) Schedule I — Summary of Investments — Other Than Investments in Related Parties, (viii) Schedule II — Condensed Financial Information of Registrant (Parent Only), (ix) Schedule III — Supplementary Insurance Information and (x) Schedule IV — Reinsurance		
104	The cover page from Principal Financial Group, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2022 formatted in iXBRL and contained in Exhibit 101.		

Paper copies of exhibits will be provided to shareholders upon reasonable request and upon payment of reasonable copying and mailing expenses.

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

PRINCIPAL FINANCIAL GROUP, INC.

Dated: February 16, 2023

By /s/ DEANNA D. STRABLE-SOETHOUT

Deanna D. Strable-Soethout
Executive Vice President and Chief Financial 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 registrant and in the capacities and on the date indicated.

Dated: February 16, 2023

By /s/ DANIEL J. HOUSTON

Daniel J. Houston
Chairman, President, Chief Executive Officer and Director

By /s/ SCOTT M. MILLS

Scott M. Mills
Director

By /s/ DEANNA D. STRABLE-SOETHOUT

Deanna D. Strable-Soethout
Executive Vice President and Chief
Financial Officer (Principal Financial Officer and Principal Accounting Officer)

By /s/ H. ELIZABETH MITCHELL

H. Elizabeth Mitchell
Director

By /s/ JONATHAN S. AUERBACH

Jonathan S. Auerbach
Director

By /s/ CLAUDIO N. MURUZABAL

Claudio N. Muruzabal
Director

By /s/ MARY E. BEAMS

Mary E. Beams
Director

By /s/ DIANE C. NORDIN

Diane C. Nordin
Director

By /s/ JOCELYN CARTER-MILLER

Jocelyn Carter-Miller
Director

By /s/ BLAIR C. PICKERELL

Blair C. Pickerell
Director

By /s/ MICHAEL T. DAN

Michael T. Dan
Director

By /s/ CLARE S. RICHER

Clare S. Richer
Director

By /s/ ROGER C. HOCHSCHILD

Roger C. Hochschild
Director

By /s/ ALFREDO RIVERA

Alfredo Rivera
Director

Schedule I — Summary of Investments — Other Than Investments in Related Parties

December 31, 2022

Type of Investment	Cost	Fair value	Amount as shown in the consolidated statement of financial position
		(in millions)	
Fixed maturities, available-for-sale:			
U.S. Treasury securities and obligations of U.S. government corporations and agencies	**$ 1,990.9**	**$ 1,739.8**	**$ 1,739.8**
States, municipalities and political subdivisions	**7,355.4**	**6,232.3**	**6,232.3**
Foreign governments	**611.2**	**567.3**	**567.3**
Public utilities	**5,442.8**	**4,783.0**	**4,783.0**
Redeemable preferred stock	**157.6**	**128.1**	**128.1**
All other corporate bonds	**34,770.0**	**31,272.1**	**31,272.1**
Residential mortgage-backed pass-through securities	**2,420.6**	**2,228.7**	**2,228.7**
Commercial mortgage-backed securities	**5,572.2**	**4,864.6**	**4,864.6**
Collateralized debt obligations	**4,705.6**	**4,566.4**	**4,566.4**
Other debt obligations	**7,236.8**	**6,507.6**	**6,507.6**
Total fixed maturities, available-for-sale	**70,263.1**	**62,889.9**	**62,889.9**
Fixed maturities, trading	**760.7**	**760.7**	**760.7**
Equity securities:			
Banks, trust and insurance companies	**363.7**	**363.7**	**363.7**
Public utilities	**0.2**	**0.2**	**0.2**
Industrial, miscellaneous and all other	**809.8**	**809.8**	**809.8**
Other corporate	**420.1**	**420.1**	**420.1**
Non-redeemable preferred stock	**114.8**	**114.8**	**114.8**
Total equity securities	**1,708.6**	**1,708.6**	**1,708.6**
Mortgage loans	**20,629.8**	**XXXX**	**20,629.8**
Real estate, net:			
Real estate acquired in satisfaction of debt	**2.3**	**XXXX**	**2.3**
Other real estate	**2,237.4**	**XXXX**	**2,237.4**
Policy loans	**784.7**	**XXXX**	**784.7**
Other investments	**6,075.9**	**XXXX**	**6,075.9**
Total investments	**$102,462.5**	**XXXX**	**$95,089.3**

Schedule II — Condensed Financial Information of Registrant (Parent Only)

Statements of Financial Position

	December 31, 2022	December 31, 2021
	(in millions)	
Assets		
Fixed maturities, available-for-sale	**$ 17.1**	$ 1,051.9
Fixed maturities, trading	**—**	109.0
Other investments	**12.0**	10.4
Cash and cash equivalents	**492.5**	320.3
Income taxes receivable	**—**	20.4
Deferred income taxes	**297.1**	320.9
Amounts receivable from subsidiaries	**5.4**	5.5
Other assets	**21.8**	27.1
Investment in unconsolidated entities	**13,448.7**	18,932.4
Total assets	**$ 14,294.6**	$20,797.9
Liabilities		
Long-term debt	**$ 3,929.2**	$ 4,226.2
Accrued investment payable	**24.7**	25.3
Income taxes currently payable	**2.4**	—
Pension liability	**332.7**	473.2
Other liabilities	**3.9**	3.8
Total liabilities	**4,292.9**	4,728.5
Stockholders' equity		
Common stock, par value $0.01 per share; 2,500 million shares authorized; 489.8 million and 484.9 million shares issued as of 2022 and 2021; 243.5 million and 261.7 million shares outstanding as of 2022 and 2021	**4.9**	4.8
Additional paid-in capital	**10,740.4**	10,495.0
Retained earnings	**17,042.3**	12,884.5
Accumulated other comprehensive income (loss)	**(7,199.0)**	1,610.9
Treasury stock, at cost (246.3 million and 223.2 million shares as of 2022 and 2021)	**(10,586.9)**	(8,925.8)
Total stockholders' equity attributable to Principal Financial Group, Inc.	**10,001.7**	16,069.4
Total liabilities and stockholders' equity	**$ 14,294.6**	$20,797.9

See accompanying notes.

Statements of Operations

	For the year ended December 31,		
	2022	2021	2020
		(in millions)	
Revenues			
Net investment income	**$ 16.8**	$ 18.6	$ 13.3
Net realized capital gains (losses)	**(53.6)**	(14.9)	7.0
Total revenues	**(36.8)**	3.7	20.3
Expenses			
Other operating costs and expenses	**188.8**	160.9	200.0
Total expenses	**188.8**	160.9	200.0
Loss before income taxes	**(225.6)**	(157.2)	(179.7)
Income tax benefits	**(33.8)**	(35.6)	(46.1)
Equity in the net income of subsidiaries	**5,003.4**	1,832.2	1,529.4
Net income attributable to Principal Financial Group, Inc.	**$4,811.6**	$1,710.6	$1,395.8

See accompanying notes.

Statements of Cash Flows

	For the year ended December 31,		
	2022	2021	2020
		(in millions)	
Operating activities			
Net income	**$ 4,811.6**	$ 1,710.6	$ 1,395.8
Adjustments to reconcile net income to net cash used in operating activities:			
Net realized capital (gains) losses	**53.6**	14.9	(7.0)
Stock-based compensation	**1.7**	1.6	1.4
Equity in the net income of subsidiaries	**(5,003.4)**	(1,832.2)	(1,529.4)
Changes in:			
Net cash flows for trading securities and equity securities with operating intent	**99.9**	66.1	88.4
Current and deferred income tax benefits	**(2.5)**	(4.8)	(13.5)
Other	**(30.2)**	(34.5)	49.1
Net cash used in operating activities	**(69.3)**	(78.3)	(15.2)
Investing activities			
Fixed maturities available-for-sale and equity securities with intent to hold:			
Purchases	**—**	(462.3)	(736.5)
Sales	**935.9**	—	—
Maturities	**52.7**	190.2	193.7
Net purchases of property and equipment	**(0.1)**	(0.1)	(0.1)
Net change in other investments	**14.3**	46.7	(50.0)
Dividends and returns of capital received from unconsolidated entities	**1,660.3**	1,826.3	799.1
Net cash provided by investing activities	**2,663.1**	1,600.8	206.2
Financing activities			
Issuance of common stock	**181.7**	86.7	42.8
Acquisition of treasury stock	**(1,661.0)**	(937.2)	(307.0)
Dividends to common stockholders	**(642.3)**	(654.1)	(614.5)
Principal repayments of long-term debt	**(300.0)**	—	—
Issuance of long-term debt	**—**	—	595.2
Net cash used in financing activities	**(2,421.6)**	(1,504.6)	(283.5)
Net increase (decrease) in cash and cash equivalents	**172.2**	17.9	(92.5)
Cash and cash equivalents at beginning of year	**320.3**	302.4	394.9
Cash and cash equivalents at end of year	**$ 492.5**	$ 320.3	$ 302.4

See accompanying notes.

(1) Basis of Presentation

The accompanying condensed financial information should be read in conjunction with the consolidated financial statements and notes thereto of Principal Financial Group, Inc.

In the parent company only financial statements, our investment in unconsolidated entities is stated at cost plus equity in undistributed earnings of subsidiaries.

Principal Financial Group, Inc. sponsors nonqualified benefit plans for select employees and agents and is responsible for the obligations of these plans. Nonqualified plan assets are held in Rabbi trusts for the benefit of all nonqualified plan participants. The invested assets and benefit plan liabilities reported in the statements of financial position exclude amounts held in these trusts. The Rabbi trusts had $852.3 million and $889.0 million of plan assets and $691.8 million and $732.9 million of benefit plan liabilities as of December 31, 2022 and 2021, respectively.

(2) Dividends and Returns of Capital Received from Unconsolidated Entities

The parent company received cash dividends and returns of capital totaling $1,660.3 million, $1,826.3 million and $799.1 million from subsidiaries in 2022, 2021 and 2020, respectively.

Schedule III — Supplementary Insurance Information
As of December 31, 2022 and 2021 and for each of the years ended December 31, 2022, 2021 and 2020

Segment	Deferred acquisition costs	Future policy benefits and claims	Contractholder and other policyholder funds
		(in millions)	
2022:			
Retirement and Income Solutions	**$1,271.5**	**$28,322.9**	**$35,262.8**
Principal Global Investors	**—**	**—**	**—**
Principal International	**7.5**	**4,275.1**	**942.3**
U.S. Insurance Solutions	**3,407.9**	**12,128.2**	**7,943.3**
Corporate	**—**	**148.7**	**(360.6)**
Total	**$4,686.9**	**$44,874.9**	**$43,787.8**
2021:			
Retirement and Income Solutions	$ 819.4	$27,716.5	$35,941.4
Principal Global Investors	—	—	—
Principal International	8.4	3,813.5	1,047.2
U.S. Insurance Solutions	2,929.7	12,262.1	8,039.6
Corporate	—	156.0	(359.2)
Total	$3,757.5	$43,948.1	$44,669.0

Schedule III — Supplementary Insurance Information — (continued)
As of December 31, 2022 and 2021 and for each of the years ended December 31, 2022, 2021 and 2020

Segment	Premiums and other considerations	Net investment income (1)	Benefits, claims and settlement expenses	Amortization of deferred acquisition costs	Other operating expenses (1)
			(in millions)		
2022:					
Retirement and Income Solutions	**$1,959.7**	**$2,252.2**	**$3,228.6**	**$134.2**	**$1,606.8**
Principal Global Investors	**—**	**13.1**	**—**	**—**	**1,093.5**
Principal International	**77.7**	**818.7**	**697.5**	**1.0**	**432.6**
U.S. Insurance Solutions	**3,306.5**	**564.2**	**2,421.1**	**249.2**	**1,027.9**
Corporate	**(4.2)**	**182.2**	**23.6**	**—**	**420.7**
Total	**$5,339.7**	**$3,830.4**	**$6,370.8**	**$384.4**	**$4,581.5**
2021:					
Retirement and Income Solutions	$1,883.6	$2,674.4	$3,450.1	$116.7	$1,715.2
Principal Global Investors	—	3.9	—	—	1,128.6
Principal International	127.5	631.1	610.0	1.2	469.1
U.S. Insurance Solutions	2,830.4	917.1	3,031.7	167.5	998.2
Corporate	—	179.6	5.2	—	390.8
Total	$4,841.5	$4,406.1	$7,097.0	$285.4	$4,701.9
2020:					
Retirement and Income Solutions	$3,221.0	$2,457.9	$4,899.4	$ 82.2	$1,578.2
Principal Global Investors	—	5.6	—	—	1,029.6
Principal International	156.6	446.8	440.7	1.2	416.8
U.S. Insurance Solutions	2,659.8	850.6	2,937.2	304.7	936.9
Corporate	—	129.7	4.2	—	296.9
Total	$6,037.4	$3,890.6	$8,281.5	$388.1	$4,258.4

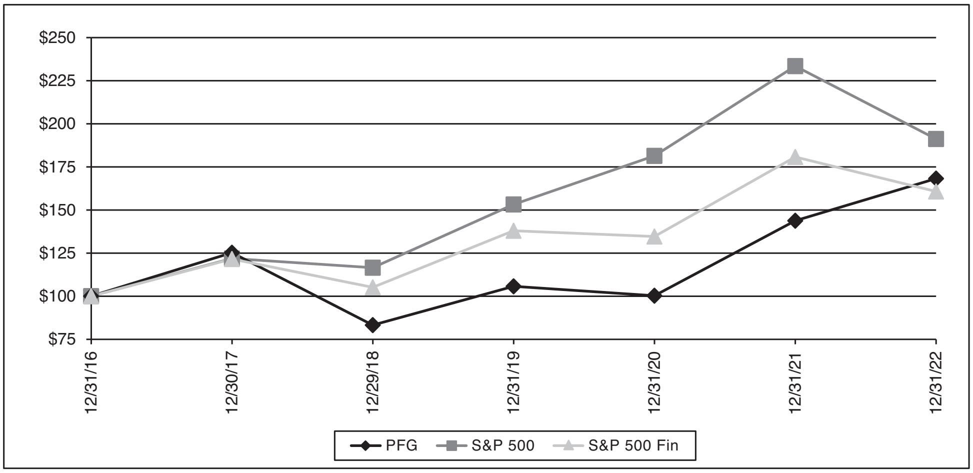
(1) Allocations of net investment income and certain operating expenses are based on a number of assumptions and estimates. Reported operating results would change by segment if different methods were applied.

Schedule IV — Reinsurance
As of December 31, 2022, 2021 and 2020 and for each of the years then ended

	Gross amount	Ceded to other companies	Assumed from other companies	Net amount	Percentage of amount assumed to net
			($ in millions)		
2022:					
Life insurance in force	**$692,200.8**	**$223,416.6**	**$627.4**	**$469,411.6**	**0.1%**
Premiums:					
Life insurance and annuities	**$ 3,414.2**	**$ 298.6**	**$ 1.0**	**$ 3,116.6**	**—%**
Accident and health insurance	**2,380.9**	**157.8**	**—**	**2,223.1**	**—%**
Total	**$ 5,795.1**	**$ 456.4**	**$ 1.0**	**$ 5,339.7**	**—%**
2021:					
Life insurance in force	$667,509.8	$383,937.7	$787.8	$284,359.9	0.3%
Premiums:					
Life insurance and annuities	$ 3,323.3	$ 494.9	$ 1.5	$ 2,829.9	0.1%
Accident and health insurance	2,167.3	155.7	—	2,011.6	—%
Total	$ 5,490.6	$ 650.6	$ 1.5	$ 4,841.5	—%
2020:					
Life insurance in force	$626,155.6	$377,308.2	$904.1	$249,751.5	0.4%
Premiums:					
Life insurance and annuities	$ 4,608.7	$ 453.1	$ 1.7	$ 4,157.3	—%
Accident and health insurance	2,036.7	156.6	—	1,880.1	—%
Total	$ 6,645.4	$ 609.7	$ 1.7	$ 6,037.4	—%

Performance Graph

The following graph sets forth a comparison of cumulative total return for Principal Financial Group, Inc.'s common stock, the Standard & Poor's 500 Index ("S&P 500"), and the Standard & Poor's 500 Financials Index ("S&P 500 Financials"), adjusted to assume the reinvestment of dividends for the past five calendar years. It assumes $100 invested in each of the Company's common stock, the S&P 500 and the S&P 500 Financials.



Year	PFG	S&P 500	S&P 500 Fin
12/31/2016	100.00	100.00	100.00
12/30/2017	125.18	121.83	121.53
12/29/2018	83.20	116.49	105.10
12/31/2019	105.69	153.17	137.92
12/31/2020	100.24	181.35	134.58
12/31/2021	143.73	233.41	180.72
12/31/2022	168.18	191.14	160.70

Principal®

Principal Financial Group®
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principal.com

PFG | **Nasdaq** Listed

Common stock of the Principal Financial Group, Inc. is traded on Nasdaq under the ticker symbol “PFG.”