UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

	FORM 10-Q						
QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 For the quarterly period ended September 30, 2022 OR							
☐ TRANSITION REPORT PURSUANT TO	SECTION 13 OR 15(d)	OF THE SECURITIES EXCHANGE ACT OF 1934					
	1-16725 (Commission file numbe	r)					
	FINANCIAL ne of registrant as specified	GROUP, INC. in its charter)					
Delaware (State or other jurisdiction of incorporation or organization)	anization)	42-1520346 (I.R.S. Employer Identification Number)					
	gh Street, Des Moines, Io ress of principal executive						
(Registrant [*]	(515) 247-5111 's telephone number, includ	ling area code)					
Securities registered pursuant to Section 12(b) of the A	Act:						
Title of each class Common Stock	Trading symbol(s) PFG	Name of each exchange on which registered Nasdaq Global Select Market					
Indicate by check mark whether the Registrant (1) has Exchange Act of 1934 during the preceding 12 months and (2) has been subject to such filing requirements for	s (or for such shorter perio	d that the Registrant was required to file such reports)					
Indicate by check mark whether the registrant has subto Rule 405 of Regulation S-T ($\S232.405$ of this chapt was required to submit such files). Yes \boxtimes No \square		Interactive Data File required to be submitted pursuant 2 months (or for such shorter period that the registrant					
Indicate by check mark whether the registrant is a larg company or an emerging growth company. See the decompany" and "emerging growth company" in Rule 1	finitions of "large accelera						
Large accelerated filer \boxtimes Accelerated filer \square Non-	accelerated filer Small	er reporting company \square Emerging growth company \square					
If an emerging growth company, indicate by check material complying with any new or revised financial accounting							
Indicate by check mark whether the registrant is a shell	Il company (as defined in l	Rule 12b-2 of the Exchange Act). Yes \square No \boxtimes					
The total number of shares of the registrant's Common	n Stock, \$0.01 par value, o	utstanding as of October 26, 2022, was 244,682,790.					

PRINCIPAL FINANCIAL GROUP, INC.

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PART I — FINANCIAL INFORMATION

Item 1. Financial Statements

Principal Financial Group, Inc. Condensed Consolidated Statements of Financial Position

		ptember 30, 2022 Unaudited)	De	cember 31, 2021
	,		illions)	
Assets		50 100 1		50.454.5
Fixed maturities, available-for-sale	\$	62,409.1	\$	78,154.5
Fixed maturities, trading		702.7		422.2
Equity securities (2022 and 2021 include \$685.9 million and \$783.7 million related to consolidated variable interest entities)		1,616.2		2,347.2
Mortgage loans (2022 and 2021 include \$1,494,7 million and \$1,260.1 million related to consolidated variable interest entities)		20,602.6		19,668.7
Real estate (2022 and 2021 include \$608.8 million and \$672.0 million related to consolidated variable interest entities)		2,136.8		2,075.4
Policy loans		766.2		759.6
Other investments (2022 and 2021 include \$365.4 million and \$522.8 million related to consolidated variable interest entities)		5,609.8		5,478.3
Total investments		93,843.4		108,905.9
Cash and cash equivalents (2022 and 2021 include \$33.4 million and \$49.6 million related to consolidated variable interest		4 220 6		2 222 0
entities)		4,239.6		2,332.0
Accrued investment income		762.0		695.8
Reinsurance recoverable and deposit receivable		22,893.0		1,186.5
Premiums due and other receivables		4,336.6		655.9
Deferred acquisition costs		4,834.0 1,006.1		3,757.5
Property and equipment Goodwill		1,548.3		1,038.0 1.627.6
				1,627.6
Other intangibles Separate account assets (2022 and 2021 include \$29,357.8 million and \$33,957.7 million related to consolidated variable interest		1,524.6		1,000.0
separate account assets (2022 and 2021 include \$29,557.8 million and \$55,957.7 million related to consolidated variable interest entities)		146 571 4		102 245 4
entities) Other assets		146,571.4 1,021.6		182,345.4 512.0
Oner assets Total assets	\$		d.	
	2	282,580.6	\$	304,657.2
Liabilities				
Contractholder funds (2022 and 2021 include \$332.9 million and \$344.0 million related to consolidated variable interest entities)	\$	43,618.5	\$	43,598.0
Future policy benefits and claims		43,577.0		43,948.1
Other policyholder funds		1,007.4		1,071.0
Short-term debt		66.5		79.8
Long-term debt		3,981.0		4,280.2
Income taxes currently payable		18.5		15.5
Deferred income taxes		1,079.3		2,320.2
Separate account liabilities (2022 and 2021 include \$29,357.8 million and \$33,957.7 million related to consolidated variable		146 551 4		102 245 4
interest entities)		146,571.4		182,345.4
Funds withheld payable		20,669.7		10.540.5
Other liabilities (2022 and 2021 include \$99.1 million and \$58.7 million related to consolidated variable interest entities)		12,247.9		10,540.7
Total liabilities		272,837.2		288,198.9
D. I I				
Redeemable noncontrolling interest (2022 and 2021 include \$228.2 million and \$304.0 million related to consolidated variable		255.1		222.5
interest entities)		255.1		332.5
Stockholders' equity				
Common stock, par value \$0.01 per share; 2.500.0 million shares authorized; 488.2 million and 484.9 million shares issued as of				
2022 and 2021: 244.9 million and 261.7 million shares outstanding as of 2022 and 2021		4.9		4.8
Additional paid-in capital		10,637.5		10.495.0
Additional patern capital Retained earnings		17,210.9		12.884.5
Accumulated other comprehensive income (loss)		(8,070.6)		1.610.9
Treasury stock, at cost (243.3 million and 223.2 million shares as of 2022 and 2021)		(10,336.5)		(8,925.8)
Total stockholders' equity attributable to Principal Financial Group, Inc.		9,446.2		16,069.4
Noncontrolling interest		42.1		56.4
Total stockholders' equity		9,488.3	_	16,125.8
Total liabilities and stockholders' equity	\$	282,580.6	\$	304,657.2
Total Informacional Stockholders equity	Φ	202,300.0	Ф	304,037.2

Principal Financial Group, Inc. Condensed Consolidated Statements of Operations (Unaudited)

		months ended iber 30,	For the nine m Septemb	
	2022	2021	2022	2021
D		(in millions, exc	ept per share data)	
Revenues	D 4 40 6	A 1 220 5	0 0 7 40 4	Φ 22252
Premiums and other considerations	\$ 1,486.5	\$ 1,230.5	4 - 7	\$ 3,335.3
Fees and other revenues	1,015.7	1,251.8	3,178.3	3,711.0
Net investment income	908.2	1,093.4	2,842.8	3,167.0
Net realized capital losses (1)	(55.7)	(152.0)	(394.1)	(41.7)
Net realized capital gains on funds withheld assets	8.5		697.5	_
Change in fair value of funds withheld embedded derivative	1,237.7	_	4,305.0	_
Total revenues	4,600.9	3,423.7	14,369.6	10,171.6
Expenses				
Benefits, claims and settlement expenses	1,734.8	1,770.9	4,473.3	4,958.4
Dividends to policyholders	24.5	28.2	72.1	75.3
Operating expenses	1,111.5	1,196.5	3,769.0	3,663.3
Total expenses	2,870.8	2,995.6	8,314.4	8,697.0
Income before income taxes	1,730.1	428.1	6,055.2	1,474.6
Income taxes	348.7	63.8	1,218.5	222.4
Net income	1,381.4	364.3	4,836.7	1,252.2
Net income (loss) attributable to noncontrolling interest	(4.1)	4.4	15.6	13.4
Net income attributable to Principal Financial Group, Inc.	\$ 1,385.5	\$ 359.9	\$ 4,821.1	\$ 1,238.8
	<u> </u>			
Earnings per common share				
Basic earnings per common share	\$ 5.59	\$ 1.34	\$ 19.03	\$ 4.58
Diluted earnings per common share	\$ 5.50	\$ 1.32	\$ 18.74	\$ 4.51

⁽¹⁾ Includes realized and unrealized gains (losses). See Note 3, Investments, for further details.

Principal Financial Group, Inc. Condensed Consolidated Statements of Comprehensive Income (Unaudited)

	For the three Septem	months ended ber 30,	For the nine months end September 30,				
	2022	2021	2022	2021			
		(in mi					
Net income	\$ 1,381.4	\$ 364.3	\$ 4,836.7	\$ 1,252.2			
Other comprehensive loss, net:							
Net unrealized losses on available-for-sale securities	(2,471.1)	(23.6)	(9,712.7)	(606.1)			
Net unrealized gains on derivative instruments	78.4	20.7	50.7	32.4			
Foreign currency translation adjustment	(54.1)	(193.3)	(174.8)	(214.1)			
Net unrecognized postretirement benefit obligation	7.0	9.3	22.0	21.2			
Other comprehensive loss	(2,439.8)	(186.9)	(9,814.8)	(766.6)			
Comprehensive income (loss)	(1,058.4)	177.4	(4,978.1)	485.6			
Comprehensive income (loss) attributable to noncontrolling interest	(3.4)	2.1	14.1	10.7			
Comprehensive income (loss) attributable to Principal Financial Group, Inc.	\$ (1,055.0)	\$ 175.3	\$ (4,992.2)	\$ 474.9			

Principal Financial Group, Inc. Condensed Consolidated Statements of Stockholders' Equity (Unaudited)

		mmon tock	Additional paid-in capital	Retained earnings	Accumulate other comprehensi income (loss	ve	Treasury stock	Noncontrolling interest	sto	Total ockholders' equity
D		4.0	# 40 2 00 5		(in milli		(0.050.0)		ф	160015
Balances as of July 1, 2021	\$	4.8	\$ 10,399.7	\$ 12,395.0	\$ 1,803.	8 \$	8 (8,370.2)	\$ 58.4	\$	16,291.5
Common stock issued		_	14.4	(2.0)		_				14.4
Stock-based compensation		_	23.5	(2.8)	-	_	(202.5)	0.1		20.8
Treasury stock acquired, common		_		(1.60.0)		_	(203.5)			(203.5)
Dividends to common stockholders		_	_	(168.2)	-	_	_			(168.2)
Distributions to noncontrolling interest			_		_		_	(1.4)		(1.4)
Contributions from noncontrolling interest		_	_	_	-	_	_	1.6		1.6
Purchase of subsidiary shares from noncontrolling										
interest (1)		_	(1.1)		_	_	_	_		(1.1)
Net income (1)		_	_	359.9	-	_	_	1.7		361.6
Other comprehensive loss (1)					(184.	.6)		(1.9)		(186.5)
Balances as of September 30, 2021	\$	4.8	\$ 10,436.5	\$ 12,583.9	\$ 1,619.	2 \$	(8,573.7)	\$ 58.5	\$	16,129.2
Balances as of July 1, 2022	\$	4.9	\$ 10,553.5	\$ 15,985.6	\$ (5,630.	.1) \$	(9,877.1)	\$ 41.8	\$	11,078.6
Common stock issued		_	53.0	_	_			_		53.0
Stock-based compensation		_	23.1	(2.8)	_	_	_	_		20.3
Treasury stock acquired, common		_	_	`—´	_	_	(459.4)	_		(459.4)
Accelerated share repurchase		_	8.9	_	_	_	`′	_		8.9
Dividends to common stockholders		_	_	(157.4)	_	_	_	_		(157.4)
Distributions to noncontrolling interest		_	_	` —	_	_	_	(1.4)		(1.4)
Contributions from noncontrolling interest		_	_	_	_	_	_	1.5		1.5
Purchase of subsidiary shares from noncontrolling										
interest (1)		_	(1.4)	_	_	_	_	_		(1.4)
Adjustments to redemption amount of redeemable			(111)							(111)
noncontrolling interest		_	0.4	_	_	_	_	0.1		0.5
Net income (1)		_		1,385,5	_	_	_	0.5		1,386.0
Other comprehensive loss (1)			_	-,50515	(2,440.	5)	_	(0.4)		(2,440.9)
Balances as of September 30, 2022	2	4.9	\$ 10,637.5	\$ 17,210.9	\$ (8,070.		(10,336.5)	\$ 42.1	S	9,488.3
Damineto ao or September 00, 2022	Φ	7,7	ψ 10,037.3	Φ 17,210.7	Φ (0,070.	. <u></u>	(10,330.3)	72.1	Ψ	7,700.3

⁽¹⁾ Excludes amounts attributable to redeemable noncontrolling interest. See Note 11, Stockholders' Equity, for further details.

Principal Financial Group, Inc. Condensed Consolidated Statements of Stockholders' Equity - continued (Unaudited)

	Common stock		Common pai		ditional paid-in Retained papital earnings		Accumulated other comprehensive income (loss) (in millions)		Treasury stock		Noncontrolling interest		Total stockholders equity	
Balances as of January 1, 2021	\$	4.8	\$	10,321.6	\$	11,838.0	\$	2,383.1	\$	(7,988.6)	\$	58.4	\$	16,617.3
Common stock issued		_		57.3		´ —						_		57.3
Stock-based compensation		_		82.2		(7.3)		_		_		0.1		75.0
Treasury stock acquired, common		_		_		_		_		(585.1)		_		(585.1)
Dividends to common stockholders		_		_		(485.6)		_				_		(485.6)
Distributions to noncontrolling interest		_		_		· —		_		_		(4.8)		(4.8)
Contributions from noncontrolling interest		_		_		_		_		_		5.4		5.4
Purchase of subsidiary shares from noncontrolling														
interest (1)				(16.4)		_		_		_		(1.7)		(18.1)
Adjustments to redemption amount of redeemable				()								()		
noncontrolling interest		_		(8.2)		_		_		_		(0.4)		(8.6)
Net income (1)		_		_		1,238.8		_		_		3.9		1,242.7
Other comprehensive loss (1)		_		_		´ —		(763.9)		_		(2.4)		(766.3)
Balances as of September 30, 2021	S	4.8	\$	10,436.5	\$	12,583.9	\$	1,619.2	\$	(8,573.7)	\$	58.5	\$	16,129.2
• •	_ 		=		Ξ				÷	(-)/	÷			,
Balances as of January 1, 2022	\$	4.8	S	10,495.0	\$	12,884.5	\$	1,610.9	\$	(8,925.8)	\$	56.4	S	16,125.8
Common stock issued		0.1	_	101.9	Ψ.				Ψ	(0,>20.0)	Ψ	_	Ψ	102.0
Stock-based compensation		_		79.6		(8.6)		_		_		0.2		71.2
Treasury stock acquired, common		_						_		(1,410.7)				(1,410.7)
Accelerated share repurchase		_		(33.9)		_		_				_		(33.9)
Dividends to common stockholders		_		_		(486.1)		_		_		_		(486.1)
Distributions to noncontrolling interest		_		_				_		_		(68.4)		(68.4)
Contributions from noncontrolling interest		_		_		_		_		_		5.2		5.2
Purchase of subsidiary shares from noncontrolling														
interest (1)		_		(5.7)								(2.4)		(8.1)
Adjustments to redemption amount of redeemable				. ,								` ′		` ,
noncontrolling interest		_		0.6		_		_		_		(0.5)		0.1
Adjustment for reinsurance		_		_		_		131.8		_		<u> </u>		131.8
Net income (1)		_		_		4,821.1		_		_		53.6		4,874.7
Other comprehensive loss (1)		_		_		_		(9,813.3)		_		(2.0)		(9,815.3)
Balances as of September 30, 2022	\$	4.9	\$	10,637.5	\$	17,210.9	\$	(8,070.6)	\$	(10,336.5)	\$	42.1	\$	9,488.3

⁽¹⁾ Excludes amounts attributable to redeemable noncontrolling interest. See Note 11, Stockholders' Equity, for further details.

Principal Financial Group, Inc. Condensed Consolidated Statements of Cash Flows (Unaudited)

	For the nine months ended September 30.			
		Septem 2022	ber 30.	2021
		(in mi	llions)	2021
Net cash provided by operating activities	S	2,009.7	\$	2.107.0
Investing activities	Ψ	2,000.7	Ψ	2,107.0
Fixed maturities available-for-sale and equity securities with intent to hold:				
Purchases		(15,369.6)		(11,065.1)
Sales		11,491.8		2,383.5
Maturities		5,223.5		8,162.3
Mortgage loans acquired or originated		(3,183.9)		(4,277.1)
Mortgage loans sold or repaid		2,248.3		2,142.3
Real estate acquired		(138.9)		(187.8)
Real estate sold		288.4		43.5
Net purchases of property and equipment		(86.3)		(108.9)
Net change in other investments		16.7		40.0
Net cash provided by (used in) investing activities		490.0		(2,867.3)
Financing activities				
Issuance of common stock		102.0		57.3
Accelerated share repurchase		(33.9)		_
Acquisition of treasury stock		(1,410.7)		(585.1)
Payments for financing element derivatives		(38.9)		(27.6)
Purchase of subsidiary shares from noncontrolling interest		(9.2)		(24.2)
Dividends to common stockholders		(486.1)		(485.6)
Principal repayments of long-term debt		(301.4)		(1.4)
Net proceeds from (repayments of) short-term borrowings		(4.9)		0.2
Investment contract deposits		5,921.7		7,341.8
Investment contract withdrawals		(5,435.0)		(6,566.4)
Net increase in banking operation deposits		1,104.7		1,346.9
Other		(0.4)		
Net cash provided by (used in) financing activities		(592.1)		1,055.9
Net increase in cash and cash equivalents		1,907.6		295.6
Cash and cash equivalents at beginning of period		2,332.0		2,849.8
Cash and cash equivalents at end of period	\$	4,239.6	\$	3,145.4
Supplemental disclosure of non-cash activities:				
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 transaction		_		109.5
Assets transferred in kind for settlement to reinsurer		(428.5)		_

1. Nature of Operations and Significant Accounting Policies

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements of Principal Financial Group, Inc. ("PFG") have been prepared in conformity with accounting principles generally accepted in the U.S. ("U.S. GAAP") for interim financial statements and with the instructions to Form 10-Q and Article 10 of Regulation S-X. In the opinion of management, all adjustments (consisting of normal recurring accruals) considered necessary for a fair presentation have been included. Operating results for the three and nine months ended September 30, 2022, are not necessarily indicative of the results that may be expected for the year ended December 31, 2022, especially when considering risks and uncertainties, including those associated with the novel coronavirus ("COVID-19"), that 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.

These interim unaudited condensed consolidated financial statements should be read in conjunction with our annual audited financial statements as of December 31, 2021, included in our Form 10-K for the year ended December 31, 2021, filed with the United States Securities and Exchange Commission ("SEC"). The accompanying condensed consolidated statement of financial position as of December 31, 2021, has been derived from the audited consolidated statement of financial position but does not include all of the information and footnotes required by U.S. GAAP for complete financial statements.

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 7, 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.

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 variable interest entity ("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 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 2, 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

	Date of	Effect on our consolidated financial statements or other
Description	adoption	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 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.	January 1, 2023	We have created a governance framework and a plan to support implementation of the standard. Our implementation and evaluation process to date includes, but is 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.

Description	Date of adoption	Effect on our consolidated financial statements or other significant matters
		We currently estimate that the transition date impact from adoption of this standard is a decrease to our total stockholders' equity between approximately \$5.0 billion and \$5.6 billion. The most significant driver of this 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. This estimate is subject to change as we continue to refine aspects of the underlying models, our assumptions, methodologies and controls. As we progress through our implementation, we will be able to better assess the impact to our consolidated
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	financial statements. 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	We are currently assessing the impact of this guidance on our consolidated financial statements.

Description	Date of adoption	Effect on our consolidated financial statements or other significant matters
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 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.		This guidance did not have a material impact on our consolidated financial statements.

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.

Investments

Loan modifications related to COVID-19

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 on 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 3, Investments, under the caption "Mortgage Loan Modifications" for further details.

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 7, Reinsurance. For further information about the financing receivables valuation allowance on the reinsurance recoverable and deposit receivable, refer to Note 3, Investments.

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 September 30, 2022 and December 31, 2021, the separate accounts included a separate account valued at \$89.7 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.

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.

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:

	8	For the nine months ended September 30, 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. 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 September 30, 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 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 asset-backed securities ("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.

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:

Septembe	r 30, 2022	Decembe	er 31, 2021
Total assets	Total liabilities	Total assets	Total liabilities
	(in m	illions)	
\$ 29,985.2	\$ 29,691.3	\$ 34,687.0	\$ 34,301.8
651.1	48.3	709.6	36.1
434.7	6.2	609.4	2.5
1,498.3	44.2	1,263.2	20.3
\$ 32,569.3	\$ 29,790.0	\$ 37,269.2	\$ 34,360.7
	Total assets \$ 29,985.2 651.1 434.7 1,498.3	assets liabilities \$ 29,985.2 \$ 29,691.3 651.1 48.3 434.7 6.2 1,498.3 44.2	Total assets Total liabilities Total assets (in millions) \$ 29,985.2 \$ 29,691.3 \$ 34,687.0 651.1 48.3 709.6 434.7 6.2 609.4 1,498.3 44.2 1,263.2

- (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 \$228.2 million and \$304.0 million redeemable noncontrolling interest for sponsored investment funds as of September 30, 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.

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 o	arrying value		num exposure to loss (1)
Soutombox 20, 2022		(in m	illions)	
September 30, 2022 Fixed maturities, available-for-sale:				
	ø	240.1	C	7(0.0
Corporate Providential montanes hashed asset through consisting	\$	1,737.8	\$	768.8 1,959.9
Residential mortgage-backed pass-through securities		,		
Commercial mortgage-backed securities		4,988.3		5,642.9
Collateralized debt obligations (2)		3,994.7		4,128.9
Other debt obligations		6,040.5		6,750.3
Fixed maturities, trading:		4.0		
Residential mortgage-backed pass-through securities		4.8		4.8
Commercial mortgage-backed securities		84.7		84.7
Collateralized debt obligations (2)		6.2		6.2
Other debt obligations		80.7		80.7
Equity securities		91.9		91.9
Other investments:				
Other limited partnership and fund interests (3)		1,400.7		2,317.7
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 · · · · · · · · · · · · · · · · · · ·		,		,

- (1) Our risk of loss is limited to our initial investment measured at amortized cost for fixed maturities, available-for-sale. Our risk of 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 September 30, 2022 and December 31, 2021, the maximum exposure to loss for other limited partnership and fund interests includes \$102.2 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 September 30, 2022 and December 31, 2021, money market mutual funds we manage held \$4.6 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.

3. 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 7, Reinsurance, for more information on the funds withheld invested assets.

Fixed Maturities and Equity Securities

Fixed maturities include bonds, 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 12, 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. 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.

The amortized cost, gross unrealized gains and losses, allowance for credit loss and fair value of fixed maturities, available-forsale were as follows:

	Amortized cost (1)			Gross unrealized gains	_	Gross unrealized losses (in millions)	_	Allowance for credit loss		Fair value
September 30, 2022										
Fixed maturities, available-for-sale:										
U.S. government and agencies	\$	2,300.1	\$	_	\$	254.6	\$	_	\$	2,045.5
Non-U.S. governments		635.1		24.7		84.3				575.5
States and political subdivisions		7,598.0		13.0		1,194.3		_		6,416.7
Corporate		41,897.2		318.5		5,598.8		6.8		36,610.1
Residential mortgage-backed pass-through										
securities		1,959.9		0.9		223.0		_		1,737.8
Commercial mortgage-backed securities		5,642.9		1.4		656.0		_		4,988.3
Collateralized debt obligations (2)		4,128.9		1.9		136.1		_		3,994.7
Other debt obligations		6,750.3		1.9		711.6		0.1		6,040.5
Total fixed maturities, available-for-sale	\$	70,912.4	\$	362.3	\$	8,858.7	\$	6.9	\$	62,409.1
		Amortized cost (1)		Gross unrealized gains		Gross unrealized losses (in millions)		Allowance for credit loss		Fair value
December 31, 2021				unrealized		unrealized losses	_	for credit	_	Fair value
December 31, 2021 Fixed maturities, available-for-sale:				unrealized	_	unrealized losses	_	for credit	_	Fair value
,	\$		\$	unrealized	\$	unrealized losses	\$	for credit	\$	Fair value 2,088.6
Fixed maturities, available-for-sale: U.S. government and agencies Non-U.S. governments	_	cost (1)		unrealized gains	\$	unrealized losses (in millions)	\$	for credit	\$	
Fixed maturities, available-for-sale: U.S. government and agencies Non-U.S. governments States and political subdivisions	_	1,978.0		unrealized gains	\$	unrealized losses (in millions)	\$	for credit	\$	2,088.6
Fixed maturities, available-for-sale: U.S. government and agencies Non-U.S. governments	_	1,978.0 851.0		unrealized gains 148.0 133.1	\$	unrealized losses (in millions) 37.4 2.1	\$	for credit	\$	2,088.6 982.0
Fixed maturities, available-for-sale: U.S. government and agencies Non-U.S. governments States and political subdivisions	_	1,978.0 851.0 8,290.7		148.0 133.1 1,030.3	\$	unrealized losses (in millions) 37.4 2.1 16.6	\$	for credit loss	\$	2,088.6 982.0 9,304.4
Fixed maturities, available-for-sale: U.S. government and agencies Non-U.S. governments States and political subdivisions Corporate	_	1,978.0 851.0 8,290.7		148.0 133.1 1,030.3	\$	unrealized losses (in millions) 37.4 2.1 16.6	\$	for credit loss	\$	2,088.6 982.0 9,304.4
Fixed maturities, available-for-sale: U.S. government and agencies Non-U.S. governments States and political subdivisions Corporate Residential mortgage-backed pass-through	_	1,978.0 851.0 8,290.7 42,139.2		148.0 133.1 1,030.3 4,044.8	\$	### Comparison of Comparison o	\$	for credit loss	\$	2,088.6 982.0 9,304.4 45,944.4
Fixed maturities, available-for-sale: U.S. government and agencies Non-U.S. governments States and political subdivisions Corporate Residential mortgage-backed pass-through securities	_	1,978.0 851.0 8,290.7 42,139.2 3,122.3 5,436.2 3,564.7		148.0 133.1 1,030.3 4,044.8	\$	### Comparison of Comparison o	\$		\$	2,088.6 982.0 9,304.4 45,944.4 3,152.9
Fixed maturities, available-for-sale: U.S. government and agencies Non-U.S. governments States and political subdivisions Corporate Residential mortgage-backed pass-through securities Commercial mortgage-backed securities	_	1,978.0 851.0 8,290.7 42,139.2 3,122.3 5,436.2		148.0 133.1 1,030.3 4,044.8 59.0 157.8	\$	### Comparison of Control of Cont	\$		\$	2,088.6 982.0 9,304.4 45,944.4 3,152.9 5,562.2

⁽¹⁾ Amortized cost excludes accrued interest receivable of \$594.2 million and \$542.6 million as of September 30, 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 September 30, 2022, by expected maturity, were as follows:

	An	nortized cost		Fair value
		(in m	illions)	
Due in one year or less	\$	2,021.5	\$	2,005.8
Due after one year through five years		9,355.6		8,905.8
Due after five years through ten years		12,967.0		11,592.6
Due after ten years		28,086.3		23,143.6
Subtotal		52,430.4		45,647.8
Mortgage-backed and other asset-backed securities		18,482.0		16,761.3
Total	\$	70,912.4	\$	62,409.1

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.

Net Realized Capital Gains and Losses

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 on 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).

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. 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

	F	or the three Septem	 	I	For the nine i Septem	
		2022	2021	.11:	2022	 2021
Fixed maturities, available-for-sale:			(in mi	illons)	
Gross gains	\$	20.0	\$ 13.0	\$	26.0	\$ 61.2
Gross losses		(50.7)	(0.9)		(163.3)	(29.0)
Net credit recoveries (losses)		4.3	(9.6)		(5.8)	(27.4)
Hedging, net (1)		_	_		(0.7)	(1.0)
Fixed maturities, trading (2)		(16.6)	(4.0)		(39.1)	(28.7)
Equity securities (3)		(37.1)	31.2		(187.5)	85.5
Mortgage loans		(2.5)	2.6		(19.3)	14.2
Derivatives (1)		50.2	(173.7)		155.3	(153.9)
Other		(23.3)	(10.6)		(159.7)	37.4
Net realized capital losses	\$	(55.7)	\$ (152.0)	\$	(394.1)	\$ (41.7)

- (1) The change in fair value of fixed maturities, available-for-sale and the change in fair value of derivative hedging instruments in fair value hedging relationships are reported in net investment income with the earnings effect of fixed maturities, available-for-sale. Gains (losses) for fixed maturities, available-for-sale related to terminated cash flow hedges continue to be reflected in net realized capital gains (losses).
- (2) Unrealized gains (losses) on fixed maturities, trading still held at the reporting date were \$(10.1) million and \$(4.0) million for the three months ended September 30, 2022 and 2021, respectively, and \$(29.3) million and \$(27.6) million for the nine months ended September 30, 2022 and 2021, respectively.
- (3) Unrealized gains (losses) on equity securities still held at the reporting date were \$(37.1) million and \$21.5 million for the three months ended September 30, 2022 and 2021, respectively, and \$(184.0) million and \$54.0 million for the nine months ended September 30, 2022 and 2021, respectively. This excludes \$(7.2) million and \$3.7 million for the three months ended September 30, 2022 and 2021, respectively, and \$(17.7) million and \$9.6 million for the nine months ended September 30, 2022 and 2021, respectively, of unrealized gains (losses) on equity securities still held at the reporting date that were reported in net investment income.

Proceeds from sales of investments (excluding call and maturity proceeds) in fixed maturities, available-for-sale were \$2,989.7 million and \$273.6 million for the three months ended September 30, 2022 and 2021, and \$10,531.0 million and \$1,870.7 million for the nine months ended September 30, 2022 and 2021, 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.

A rollforward of the allowance for credit loss by major security type was as follows.

						For tl	he thi	ree mon	ths end	led Sep	tember	30, 2022	2				
	gover	.S. nment gencies		-U.S. nments	poli	s and tical visions	Cor	porate	mort bac pa thre	lential tgage- cked ass- ough rities	mor ba	nercial tgage- cked irities	d obli	teralized lebt gations (1)	d	ther ebt gations	<u>Total</u>
Beginning balance	\$	_	\$	_	\$	_	\$	12.5	\$	_	\$	_	\$	_	\$	_	\$ 12.5
Additions for credit losses not previously recorded		_		_		_		1.8		_		_		_		0.1	1.9
Reductions for securities sold																	
during the period Additional increases (decreases) for		_		_		_		(1.2)		_		_		_		_	(1.2)
credit losses on securities with an allowance recorded in the																	
previous period		_		_				(6.4)				0.2				_	(6.2)
Write-offs charged against allowance		_		_		_		_		_		(0.2)		_		_	(0.2)
Foreign currency translation adjustment								0.1									0.1
Ending balance	•		•		•		•	6.8	•		\$		•		•	0.1	\$ 6.9
Enamy bulance	Ф		Φ		Φ	_=	Φ	0.0	Φ	_	Φ	_=	Φ		Φ	0.1	\$ 0.7
						For tl	he thi	ree mon		led Sep	tember	30, 2021	<u>l</u>				
	gover	.S. enment gencies		-U.S. nments	poli	s and tical visions	Cor	porate	mort bac pa thre	gage- eked iss- ough rities	mor ba	nercial tgage- cked irities	d obli	teralized lebt gations (1)	d	ther ebt gations	Total
Beginning balance	\$	_	\$	_	\$	_	\$	8.5	\$	—	\$	0.2	\$	_	\$	_	\$ 8.7
Additions for credit losses not																	
previously recorded								7.8				0.1				0.1	8.0
Foreign currency translation adjustment								(0.4)									(0.4)
Ending balance	\$		\$		\$		\$	15.9	\$		\$	0.3	\$		\$	0.1	\$ 16.3

						For t	he ni	ine mont	ths end	ed Sept	tember	· 30, 2022					
									Resid	lential							
									mor	tgage-							
	gove	J.S. rnment igencies		-U.S. nments	State poli subdiv		Con	rporate	pa thr	cked nss- ough rities	moi ba	mercial rtgage- icked urities		ateralized debt ligations (1)	(other lebt gations	Total
Beginning balance	\$	_	\$	_	\$	_	\$	15.1	\$		\$	0.3	\$	_	\$	0.1	\$ 15.5
Additions for credit losses not								5.0								0.1	5.1
previously recorded		_		_		_		5.0		_		_				0.1	5.1
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		_		_		_		(3.4)		_		_		_		_	(3.4)
Write-offs charged against allowance		_		_		_		_		_		(0.3)		_		(0.1)	(0.4)
Foreign currency translation adjustment								(1.2)									(1.2)
Ending balance	Φ.		0		0		•		0		Φ.		<u> </u>		•		(1.2)
Ending balance	D)		3		3		D	6.8	ð		3		3		3	0.1	\$ 6.9

					For t	he ni	ne mon	ths en	ded Sept	embe	r 30, 2021				
	gove	U.S. rnment igencies	-U.S. nments	pol	es and litical ivisions	Cor	rporate	mor ba p the sec	idential rtgage- icked pass- rough urities	mo b:	nmercial rtgage- acked urities	lateralized debt bligations (1)	d	ther ebt gations	<u>Total</u>
Beginning balance	\$	_	\$ _	\$	_	\$	0.9	\$	<u></u>	\$	4.3	\$ 2.2	\$	_	\$ 7.4
Additions for credit losses not previously recorded Additional increases (decreases) for			_		_		15.4		_		0.4	_		0.1	15.9
credit losses on securities with an allowance recorded in the											2.4	0.4			20
previous period Write-offs charged against		_	_		_		_		_		2.4	0.4		_	2.8
allowance		_	_		_		_		_		(6.8)	(2.6)		_	(9.4)
Foreign currency translation adjustment		_	_		_		(0.4)		_		_	_		_	(0.4)
Ending balance	\$		\$ 	\$		\$	15.9	\$		\$	0.3	\$ 	\$	0.1	\$ 16.3
Accrued interest written off to net investment income	\$		\$ 	\$		\$	0.2	\$		\$		\$ 	\$		\$ 0.2

⁽¹⁾ Primarily consists of collateralized loan obligations backed by secured corporate loans.

During 2022, 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:

	September 30, 2022											
			s than			Greater equal to tw				Т	otal	
	twelve months Gross Fair unrealized value losses					Fair value		Gross nrealized losses	_	Fair value		Gross nrealized losses
Fixed maturities, available-for-sale (1):												
U.S. government and agencies	\$	1,922.3	\$	215.0	\$	123.1	\$	39.6	\$	2,045.4	\$	254.6
Non-U.S. governments	413.6 79.7					11.0		4.5		424.6		84.2
States and political subdivisions		5,740.2		1,126.9		257.3	257.3 67.4			5,997.5		1,194.3
Corporate		29,578.7		4,984.1		2,443.8		617.4		32,022.5		5,601.5
Residential mortgage-backed pass-through												
securities		1,253.5		139.1		434.0		84.0		1,687.5		223.1
Commercial mortgage-backed securities		4,132.0		509.6		779.9		144.9		4,911.9		654.5
Collateralized debt obligations (2)		2,791.0		98.0		981.3		38.1		3,772.3		136.1
Other debt obligations	4,086.7 372.6			1,864.9			338.7		5,951.6		711.3	
Total fixed maturities, available-for-sale	\$	49,918.0	\$	7,525.0	<u> </u>					56,813.3	\$	8,859.6

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

Of the total amounts, Principal Life Insurance Company's ("Principal Life") consolidated portfolio represented \$55,164.1 million in available-for-sale fixed maturities with gross unrealized losses of \$8,686.6 million. Of the available-for-sale fixed maturities within Principal Life's consolidated portfolio in a gross unrealized loss position, 95% were investment grade (rated AAA through BBB-) with an average price of 86 (carrying value/amortized cost) as of September 30, 2022. Gross unrealized losses in our fixed maturities portfolio increased during the nine months ended September 30, 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 8,037 securities with a carrying value of \$48,764.6 million and unrealized losses of \$7,422.5 million reflecting an average price of 87 as of September 30, 2022. Of this portfolio, 95% was investment grade (rated AAA through BBB-) as of September 30, 2022, with associated unrealized losses of \$7,171.8 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 1,304 securities with a carrying value of \$6,399.5 million and unrealized losses of \$1,264.1 million as of September 30, 2022. The average credit rating of this portfolio was AA- with an average price of 84 as of September 30, 2022. Of the \$1,264.1 million in unrealized losses, the corporate sector accounts for \$553.7 million in unrealized losses with an average price of 78 and an average credit rating of BBB+. Furthermore, unrealized losses include \$228.1 million within the collateralized mortgage obligation security sector with an average price of 82 and an average credit rating of AAA; \$143.5 million within the CMBS sector with an average price of 84 and an average credit rating of AA+; and \$107.3 million within the ABS sector with an average price of 88 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.

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

Because we expected to recover our amortized cost, we did not record an allowance for credit loss on these securities as of September 30, 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.

						Decemb	er 31, i	2021			
		Less twelve	than mon			Greate equal to tw			To	otal	
	Gross Fair unrealized value losses					Fair value	u n	Gross prealized losses	 Fair value	u	Gross nrealized losses
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

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

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.

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

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 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:

	Sept	ember 30, 2022		ember 31, 2021
			llions)	
Net unrealized gains (losses) on fixed maturities, available-for-sale (1)	\$	(8,675.5)	\$	5,289.9
Net unrealized gains on derivative instruments		142.5		80.1
Adjustments for assumed changes in amortization patterns		847.9		(266.1)
Adjustments for assumed changes in policyholder liabilities		3.7		(689.2)
Net unrealized gains on other investments and noncontrolling interest adjustments		43.0		40.5
Provision for deferred income tax benefits (taxes)		1,627.6		(936.0)
Net unrealized gains (losses) on available-for-sale securities and derivative instruments	\$	(6,010.8)	\$	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.

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:

							Sept	ember 30, 20)22					
	_	2022	-	2021	_	2020	_	(in millions)	_	2018	_	Prior		Total
Commercial mortgage loans:								(in millions)						
A- and above	\$	1,028.5	\$	2,263.6	\$	1,789.7	\$	2,240.9	\$	2,243.8	\$	4,919.7	\$	14,486.2
BBB+ thru BBB-		190.3		353.2		206.7		387.5		198.4		563.8		1,899.9
BB+ thru BB-		8.1		53.4		5.1		_		_		57.0		123.6
B+ and below		_		_		_		_		8.5		39.1		47.6
Total	\$	1,226.9	\$	2,670.2	\$	2,001.5	\$	2,628.4	\$	2,450.7	\$	5,579.6	\$	16,557.3
					_		_						_	
Direct financing leases:														
A- and above	\$	91.2	\$	1.0	\$	35.0	\$	1.3	\$	37.7	\$	163.1	\$	329.3
BBB+ thru BBB-		29.7		19.1		55.6		10.4		10.2		61.7		186.7
BB+ thru BB-		_		49.8		12.8		1.8		_		1.9		66.3
B+ and below		_		1.3		_		_		_		_		1.3
Total	\$	120.9	\$	71.2	\$	103.4	\$	13.5	\$	47.9	\$	226.7	\$	583.6
Residential mortgage loans:														
Performing	\$	978.7	\$	2,054.6	\$	444.6	\$	130.9	\$	73.0	\$	416.0	\$	4,097.8
Non-performing				3.6		3.1		1.3		1.6		6.0		15.6
Total	\$	978.7	\$	2,058.2	\$	447.7	\$	132.2	\$	74.6	\$	422.0	\$	4,113.4
Reinsurance recoverable and deposit receivable													\$	22,895.6

]	Dec	ember 31, 20	21				
	_	2021	 2020	_	2019	_	(in millions)	_	2017	_	Prior	 Total
Commercial mortgage loans:						(in millions)					
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												4 400 2
receivable												\$ 1,189.3

The amortized cost of commercial mortgage loans, direct financing leases and residential mortgage loans excluded accrued interest receivable of \$56.5 million, \$1.1 million and \$18.5 million, respectively, as of September 30, 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.

The amortized cost of financing receivables on non-accrual status was as follows:

			September 30, 2022				
	amor on no	ginning tized cost onaccrual status	amor on no	Ending rtized cost onaccrual status n millions)	of nor assets a val	tized cost naccrual without luation wance	
Commercial mortgage loans	\$	13.2	\$	50.2	\$		
Residential mortgage loans		4.0		8.8		0.7	
Total	\$	17.2	\$	59.0	\$	0.7	
			Decem	ber 31, 2021			
	amor on no	ginning tized cost onaccrual status	amor on no	conding crized cost conaccrual status millions)	Amort of not assets a val	cized cost naccrual without luation wance	
Commercial mortgage loans	amor on no	rtized cost onaccrual	amor on no	Ending rtized cost onaccrual status	Amort of not assets a val	naccrual without luation	
Commercial mortgage loans Residential mortgage loans	amor on no	rtized cost onaccrual status	amoi on no (ir	Ending rtized cost onaccrual status n millions)	Amort of nor assets a val allo	naccrual without luation	
	amor on no	rtized cost onaccrual status	amoi on no (ir	Ending retized cost conaccrual status a millions)	Amort of nor assets a val allo	naccrual without luation wance	

Interest income recognized on non-accrual financing receivables was as follows:

	Fo	r the three Septen	months iber 30,		For the nine months ended September 30,			
	_	2022		2021 (in mil.		2022		2021
Commercial mortgage loans	\$	_	\$		\$	0.8	\$	_
Total	\$	_	\$		\$	0.8	\$	

The aging of our financing receivables, based on amortized cost, was as follows:

						:	Septer	nber 30, 20)22				
		59 days st due		89 days ast due		days or ore past due		otal past due n millions)	_	Current	 Total (1)	90 mo	ortized cost days or re and cruing
Commercial mortgage loans	\$	8.8	\$	0.8	\$	15.9	\$	25.5	\$	16,531.8	\$ 16,557.3	\$	0.7
Direct financing leases		11.7		1.8		1.3		14.8		568.8	583.6		1.3
Residential mortgage loans		42.0		11.7		13.8		67.5		4,045.9	4,113.4		6.8
Total	\$	62.5	\$	14.3	\$	31.0	\$	107.8	\$	21,146.5	\$ 21,254.3	\$	8.8
							Decen	nber 31, 20	21				
		59 days st due		89 days ist due		days or ore past due	To	otal past due	21	Current	Total (1)	90 mo	ortized cost days or re and cruing
Commercial mortgage loans						days or	To	otal past		Current 16,386.9	\$ Total (1) 16,394.7	90 mo	cost days or re and
Commercial mortgage loans Direct financing leases	<u>pa</u>	st due	pa		mo	days or ore past due	To (ir	otal past due n millions)		_	\$ 	90 mo ac	cost days or re and cruing
8 8	<u>pa</u>	st due	pa	st due	mo	days or ore past due	To (ir	otal past due n millions) 7.8		16,386.9	\$ 16,394.7	90 mo ac	cost days or re and cruing

⁽¹⁾ As of both September 30, 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 receivable or residential mortgage loan accrued interest receivable.

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, 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 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 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 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 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 based on past due payments and changes in reinsurer risk ratings. The change in the valuation allowance for reinsurance recoverables is included in benefits, claims and settlement expenses on the consolidated statements of operations.

For the three months ended September 30, 2022

A rollforward of our valuation allowance was as follows:

			rort	me mree n	ionuis e	naea Septe	mber 30, 2022		
		nmercial gage loans	fin	Direct nancing leases	mortg	dential age loans nillions)	Reinsurance recoverables	_	Total
Beginning balance	\$	63.6	\$	0.3	\$	1.7	\$ 2.6	\$	68.2
Provision		2.0		0.3		0.5	_		2.8
Recoveries		_		_		0.5	_		0.5
Foreign currency translation adjustment		(0.1)		_		(0.1)	_		(0.2)
Ending balance	\$	65.5	\$	0.6	\$	2.6	\$ 2.6	\$	71.3
	morts	nmercial gage loans	I fin	Direct nancing leases	Resi mortg	dential age loans nillions)	Reinsurance recoverables		Total
Beginning balance	\$	36.6	\$	0.3	\$	3.2	\$ 2.6	\$	42.7
Provision (1)		(2.1)		_		(1.4)	0.1		(3.4)
Charge-offs		_		_		(0.2)	_		(0.2)
Recoveries		_		_		1.0	_		1.0
Foreign currency translation adjustment		(0.1)							(0.1)
Ending balance	\$	34.4	\$	0.3	\$	2.6	\$ 2.7	\$	40.0
		nmercial gage loans	I fin	the nine m Direct nancing leases	Resi mortg	nded Septe dential age loans millions)	Reinsurance recoverables		Total
Beginning balance	\$	43.9	\$	0.4	\$	2.0	\$ 2.7	\$	49.0
Provision		21.9		0.2		(1.1)	(0.1)		20.9
Charge-offs		_		_		(0.1)	_		(0.1)
Recoveries		_		_		1.9			1.9
Foreign currency translation adjustment		(0.3)				(0.1)			(0.4)
Ending balance	\$	65.5	\$	0.6	\$	2.6	\$ 2.6	\$	71.3
					onths e	ided Septe	mber 30, 2021		
		nmercial gage loans	fin	Direct nancing leases	mortg	dential age loans nillions)	Reinsurance recoverables	. <u>-</u>	Total
Beginning balance	\$	43.2	\$	0.1	\$	6.9	\$ 2.7	\$	52.9
	Ψ								
Provision (1)	Ψ	(8.6)		0.2		(6.5)	_		(14.9)
Charge-offs Charge-offs	Ψ					(0.5)	_ _		(0.5)
Charge-offs Recoveries	Ψ	(8.6) — —		0.2		()	_ _ _		. ,
Charge-offs Charge-offs	<u> </u>		\$	0.2	\$	(0.5)		<u> </u>	(0.5)

⁽¹⁾ During the three and nine months ended September 30, 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.

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 three Septen		F		e months ended mber 30,		
		2022	_	2021 (in m)	nillions)		_	2021
Commercial mortgage loans:				(
Purchased	\$	98.2	\$	1.5	\$	144.4	\$	106.3
Sold		0.1		_		0.1		66.3
Residential mortgage loans:								
Purchased (1)		476.1		1,142.0		1,657.5		1,955.0
Sold		4.8		29.5		490.8		73.1

⁽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:

	September 30, 2022 Amortized Percent of total			Percent of total
Geographic distribution		(\$ in mill	ions)	
New England	\$ 519.3	3.1 %	\$ 585.6	3.6 %
Middle Atlantic	4,594.6	27.7	4,536.5	27.7
East North Central	625.7	3.8	623.9	3.8
West North Central	366.5	2.2	338.6	2.1
South Atlantic	2,482.9	15.0	2,464.9	15.0
East South Central	330.3	2.0	378.9	2.3
West South Central	1,136.3	6.9	1,243.7	7.6
Mountain	927.0	5.6	925.6	5.6
Pacific	5,113.0	30.9	4,864.4	29.7
International	461.7	2.8	432.6	2.6
Total	\$ 16,557.3	100.0 %	\$ 16,394.7	100.0 %
		·		,
Property type distribution				
Office	\$ 4,309.4	26.0 %	\$ 4,789.8	29.3 %
Retail	1,553.2	9.4	1,622.1	9.9
Industrial	3,220.9	19.5	2,966.4	18.1
Apartments	6,696.2	40.4	6,234.3	38.0
Hotel	73.6	0.4	85.7	0.5
Mixed use/other	704.0	4.3	696.4	4.2
Total	\$ 16,557.3	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 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 three and nine months ended September 30, 2021.

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.

	Fo	r the n	ine months	s ended September 30,				
	2	022		2021				
	Number of Recorded investment			Number of contracts	Recorded investment			
		(in	millions)		(in millions)			
Commercial mortgage loans	1	\$	34.9	_	\$ —			
Total	1	\$	34.9		<u>\$</u>			

We did not have any significant loans that were modified and met the criteria of a TDR for the three months ended September 30, 2022 and 2021.

Securities Posted as Collateral

As of September 30, 2022 and December 31, 2021, we posted \$6,118.3 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 September 30, 2022 and December 31, 2021, we posted \$3,369.3 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 September 30, 2022 and December 31, 2021, \$583.4 million and \$186.0 million, respectively, could be sold or repledged by the secured party.

Balance Sheet Offsetting

Financial assets subject to master netting agreements or similar agreements were as follows:

			G	consolidated of financi				
				Financial ruments (2) (in mi	llions	Net amount		
September 30, 2022								
Derivative assets	\$	373.0	\$	(133.5)	\$	(224.6)	\$	14.9
Reverse repurchase agreements		25.1		_		(25.1)		_
Total	\$	398.1	\$	(133.5)	\$	(249.7)	\$	14.9
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.

Financial liabilities subject to master netting agreements or similar agreements were as follows:

	Gross amounts not offset in the consolidated statements of financial position							
	of rec	amount cognized lities (1)	unt ed Financial			Collateral pledged	N	et amount
September 30, 2022								
Derivative liabilities	\$	716.2	\$	(133.5)	\$	(511.7)	\$	71.0
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 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.

⁽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 or variation margin provisions, which are generally settled daily with each counterparty. See Note 4, 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 September 30, 2022 and December 31, 2021.

4. 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.

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.

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 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.

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 \$738.8 million and \$240.8 million in cash and securities under collateral arrangements as of September 30, 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 September 30, 2022 and December 31, 2021, was \$646.5 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 \$738.8 million and \$240.8 million as of September 30, 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 September 30, 2022, we would be required to post an additional \$119.1 million of collateral to our counterparties.

As of September 30, 2022 and December 31, 2021, we had received \$238.2 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.

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:

Interest rate swaps \$ 51,120.9 \$ 47,927.4 Interest rate options 3,705.9 2,373.9 Interest rate forwards 2,709.3 2,181.6 Interest rate futures 935.5 1,774.5 Foreign exchange contracts: Currency swaps 1,535.5 1,242.7 Currency forwards 1,133.1 1,043.6 Equity contracts: Equity contracts: 600.1 150.4 Credit default swaps 400.0 295.0 Other contracts: Embedded derivative instruments Embedded derivative instruments Interest rate contracts: Interest rate contracts: Interest rate swaps \$ 67.9 \$ 205.9 Interest rate options 40.1 24.5 Interest rate forwards \$ 25.7 35.3 Foreign exchange contracts: 221.0 51.1 Currency swaps 221.0 51.1 Currency forwards 24.1 11.3 Equi		_Se	otember 30, 2022 (in m	De illions)	cember 31, 2021
Interest rate swaps \$ 51,120.9 \$ 47,927.4 Interest rate options 3,705.9 2,373.9 Interest rate forwards 2,709.3 2,181.6 Interest rate futures 935.5 1,774.5 Foreign exchange contracts: Currency swaps 1,535.5 1,242.7 Currency forwards 1,133.1 1,043.6 Equity contracts: Equity contracts: 600.1 150.4 Credit default swaps 400.0 295.0 Other contracts: Embedded derivative instruments Embedded derivative instruments Interest rate contracts: Interest rate contracts: Interest rate swaps \$ 67.9 \$ 205.9 Interest rate options 40.1 24.5 Interest rate forwards \$ 25.7 35.3 Foreign exchange contracts: 221.0 51.1 Currency swaps 221.0 51.1 Currency forwards 24.1 11.3 Equi	Notional amounts of derivative instruments		(1.1.		
Interest rate options 3,705.9 2,373.9 Interest rate forwards 2,709.3 2,181.6 Interest rate futures 935.5 1,774.5 Foreign exchange contracts: Currency swaps 1,535.5 1,242.7 Currency forwards 1,133.1 1,043.6 Equity options 2,286.2 2,378.2 Equity futures 600.1 150.4 Credit contracts:	Interest rate contracts:				
Interest rate forwards 2,709.3 2,181.6 Interest rate futures 935.5 1,774.5 Foreign exchange contracts: Currency swaps 1,535.5 1,242.7 Currency forwards 1,133.1 1,043.6 Equity contracts: 2,286.2 2,378.2 Equity options 2,286.2 2,378.2 Equity futures 600.1 150.4 Credit contracts:	Interest rate swaps	\$	51,120.9	\$	47,927.4
Interest rate futures 935.5 1,774.5 Foreign exchange contracts: 1,535.5 1,242.7 Currency swaps 1,535.5 1,242.7 Currency forwards 1,133.1 1,043.6 Equity contracts: 2,286.2 2,378.2 Equity putures 600.1 150.4 Credit contracts: Credit contracts: Total family swaps 400.0 295.0 Other contracts: 2 1,060.8 5,068.8 69,428.1 Total notional amounts at end of period \$ 96,889.1 \$ 69,428.1 Interest rate contracts: Interest rate contracts: Interest rate options 40.1 24.5 Interest rate options \$ 67.9 \$ 205.9 16.3 Foreign exchange contracts: Total gross contracts: Total gross credit exposure \$ 5.1 1.1 1.1 2.5 1.1 1.1 2.5 3.1 2.5 3.7 3.7 3.7 3.7 3.2 3.2 3.1 2.7 3.7 3.2 3.2 3.2 3.2 3.2 3.2	Interest rate options		3,705.9		2,373.9
Foreign exchange contracts: Currency swaps 1,535.5 1,242.7 Currency forwards 1,133.1 1,043.6 Equity contracts: 2,286.2 2,378.2 Equity options 2,286.2 2,378.2 Equity futures 600.1 150.4 Credit default swaps 400.0 295.0 Other contracts: Embedded derivatives 32,462.6 10,060.8 Total notional amounts at end of period \$ 96,889.1 \$ 69,428.1 Credit exposure of derivative instruments Interest rate contracts: Interest rate swaps \$ 67.9 \$ 205.9 Interest rate swaps \$ 67.9 \$ 205.9 Interest rate options 40.1 24.5 Interest rate forwards - 15.3 Foreign exchange contracts: Currency swaps 221.0 51.1 Currency forwards 24.1 11.3 Equity contracts: 25.7 37.3 Credit default swaps 3.1 2.7 <td>Interest rate forwards</td> <td></td> <td>2,709.3</td> <td></td> <td>2,181.6</td>	Interest rate forwards		2,709.3		2,181.6
Currency swaps 1,535.5 1,242.7 Currency forwards 1,133.1 1,043.6 Equity contracts: Equity options 2,286.2 2,378.2 Equity futures 600.1 150.4 Credit default swaps 400.0 295.0 Other contracts: Embedded derivatives 32,462.6 10,060.8 Total notional amounts at end of period \$ 68.89.1 \$ 69,428.1 Credit exposure of derivative instruments Interest rate contracts: Interest rate contracts: \$ 67.9 \$ 205.9 Interest rate options 40.1 24.5 Interest rate forwards - 15.3 Foreign exchange contracts: Currency swaps 221.0 51.1 Currency forwards 24.1 11.3 Equity contracts: 2 25.7 37.3 Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.	Interest rate futures		935.5		1,774.5
Currency forwards 1,133.1 1,043.6 Equity contracts: Equity options 2,286.2 2,378.2 Equity futures 600.1 150.4 Credit default swaps 400.0 295.0 Other contracts: Embedded derivatives 32,462.6 10,060.8 Total notional amounts at end of period \$ 96,889.1 \$ 69,428.1 Credit exposure of derivative instruments Interest rate contracts: Interest rate swaps \$ 67.9 \$ 205.9 Interest rate options 40.1 24.5 Interest rate forwards — 15.3 Foreign exchange contracts: Currency swaps 21.0 51.1 Currency forwards 24.1 11.3 Equity contracts: 25.7 37.3 Credit contracts: 25.7 37.3 Credit contracts: 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6	Foreign exchange contracts:				
Equity contracts: Equity options 2,286.2 2,378.2 Equity futures 600.1 150.4 Credit contracts: Credit default swaps 400.0 295.0 Other contracts: Embedded derivatives 32,462.6 10,660.8 Total notional amounts at end of period \$ 96,889.1 \$ 69,428.1 Credit exposure of derivative instruments Interest rate contracts: Interest rate swaps \$ 67.9 \$ 205.9 Interest rate options 40.1 24.5 Interest rate forwards - 15.3 Foreign exchange contracts: Currency swaps 221.0 51.1 Currency forwards 24.1 11.3 Equity contracts: Equity options 25.7 37.3 Credit contracts: Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6	Currency swaps		1,535.5		1,242.7
Equity options 2,286.2 2,378.2 Equity futures 600.1 150.4 Credit contracts: Credit default swaps 400.0 295.0 Other contracts: Embedded derivatives 32,462.6 10,060.8 Total notional amounts at end of period 8 96,889.1 69,428.1 Credit exposure of derivative instruments Interest rate contracts: Interest rate swaps 8 67.9 205.9 Interest rate options 40.1 24.5 Interest rate forwards - 15.3 Foreign exchange contracts: Currency swaps 221.0 51.1 Currency forwards 221.0 51.1 Equity contracts: Equity options 25.7 37.3 Credit contracts: Credit contracts: Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received	Currency forwards		1,133.1		1,043.6
Equity futures 600.1 150.4 Credit contracts: Credit default swaps 400.0 295.0 Other contracts: Embedded derivatives 32,462.6 10,060.8 Total notional amounts at end of period \$ 96,889.1 \$ 69,428.1 Credit exposure of derivative instruments Interest rate contracts: Interest rate swaps \$ 67.9 \$ 205.9 Interest rate options 40.1 24.5 Interest rate forwards — 15.3 Foreign exchange contracts: Currency swaps 221.0 51.1 Currency forwards 24.1 11.3 Equity contracts: Equity options 25.7 37.3 Credit contracts: Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6	Equity contracts:				
Credit contracts: Credit default swaps 400.0 295.0 Other contracts: Embedded derivatives 32,462.6 10,060.8 Total notional amounts at end of period \$ 96,889.1 \$ 69,428.1 Credit exposure of derivative instruments Interest rate contracts: Interest rate swaps \$ 67.9 \$ 205.9 Interest rate options 40.1 24.5 Interest rate forwards — 15.3 Foreign exchange contracts: Currency swaps 221.0 51.1 Currency forwards 24.1 11.3 Equity contracts: 25.7 37.3 Equity contracts: 25.7 37.3 Credit contracts: 25.7 37.3 Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6	Equity options		2,286.2		2,378.2
Credit default swaps 400.0 295.0 Other contracts: Embedded derivatives Embedded derivatives 32,462.6 10,060.8 Total notional amounts at end of period \$ 96,889.1 \$ 69,428.1 Credit exposure of derivative instruments Interest rate contracts: Interest rate swaps \$ 67.9 \$ 205.9 Interest rate options 40.1 24.5 Interest rate forwards — 15.3 Foreign exchange contracts: 221.0 51.1 Currency forwards 24.1 11.3 Equity contracts: 25.7 37.3 Equity contracts: 25.7 37.3 Credit contracts: 2 2.7 Credit contracts: 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6	Equity futures		600.1		150.4
Other contracts: Embedded derivatives 32,462.6 10,060.8 Total notional amounts at end of period \$ 96,889.1 \$ 69,428.1 Credit exposure of derivative instruments Interest rate contracts: Interest rate swaps \$ 67.9 \$ 205.9 Interest rate options 40.1 24.5 Interest rate forwards — 15.3 Foreign exchange contracts: Currency swaps 221.0 51.1 Currency forwards 24.1 11.3 Equity contracts: Equity contracts: 25.7 37.3 Credit contracts: Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6	Credit contracts:				
Embedded derivatives 32,462.6 10,060.8 Total notional amounts at end of period 96,889.1 69,428.1 Credit exposure of derivative instruments Interest rate contracts: Interest rate swaps 67.9 205.9 Interest rate options 40.1 24.5 Interest rate forwards — 15.3 Foreign exchange contracts: Currency swaps 221.0 51.1 Currency forwards 24.1 11.3 Equity contracts: Equity contracts: 25.7 37.3 Credit contracts: 2.7 37.3 Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6	Credit default swaps		400.0		295.0
Credit exposure of derivative instruments 69,428.1 Interest rate contracts: 8 67.9 \$ 205.9 Interest rate swaps \$ 67.9 \$ 205.9 Interest rate options 40.1 24.5 Interest rate forwards — 15.3 Foreign exchange contracts: 221.0 51.1 Currency swaps 221.0 51.1 Currency forwards 24.1 11.3 Equity contracts: 25.7 37.3 Credit contracts: 25.7 37.3 Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6	Other contracts:				
Credit exposure of derivative instruments Interest rate contracts: Interest rate swaps \$ 67.9 \$ 205.9 Interest rate options 40.1 24.5 Interest rate forwards — 15.3 Foreign exchange contracts: Currency swaps 221.0 51.1 Currency forwards 24.1 11.3 Equity contracts: Equity options 25.7 37.3 Credit contracts: Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6	Embedded derivatives		32,462.6		10,060.8
Interest rate contracts: Interest rate swaps \$ 67.9 \$ 205.9 Interest rate options 40.1 24.5 Interest rate forwards — 15.3 Foreign exchange contracts: Currency swaps Currency forwards 221.0 51.1 Currency forwards 24.1 11.3 Equity contracts: Equity options 25.7 37.3 Credit contracts: Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6	Total notional amounts at end of period	\$	96,889.1	\$	69,428.1
Interest rate contracts: Interest rate swaps \$ 67.9 \$ 205.9 Interest rate options 40.1 24.5 Interest rate forwards — 15.3 Foreign exchange contracts: Currency swaps Currency forwards 221.0 51.1 Currency forwards 24.1 11.3 Equity contracts: Equity options 25.7 37.3 Credit contracts: Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6	Credit exposure of derivative instruments				
Interest rate options 40.1 24.5 Interest rate forwards - 15.3 Foreign exchange contracts: Currency swaps 221.0 51.1 Currency forwards 24.1 11.3 Equity contracts: Equity options 25.7 37.3 Credit contracts: Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6	Interest rate contracts:				
Interest rate options 40.1 24.5 Interest rate forwards — 15.3 Foreign exchange contracts: Currency swaps 221.0 51.1 Currency forwards 24.1 11.3 Equity contracts: Equity options 25.7 37.3 Credit contracts: Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6	Interest rate swaps	\$	67.9	\$	205.9
Interest rate forwards — 15.3 Foreign exchange contracts: Currency swaps 221.0 51.1 Currency forwards 24.1 11.3 Equity contracts: Equity options 25.7 37.3 Credit contracts: Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6			40.1		24.5
Currency swaps 221.0 51.1 Currency forwards 24.1 11.3 Equity contracts: Equity options 25.7 37.3 Credit contracts: Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6			_		15.3
Currency forwards 24.1 11.3 Equity contracts: Equity options 25.7 37.3 Credit contracts: Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6	Foreign exchange contracts:				
Equity contracts: Equity options 25.7 37.3 Credit contracts: Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6	Currency swaps		221.0		51.1
Equity options 25.7 37.3 Credit contracts: 3.1 2.7 Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6	Currency forwards		24.1		11.3
Credit contracts: 3.1 2.7 Credit default swaps 381.9 348.1 Less: collateral received 265.3 244.6	Equity contracts:				
Credit default swaps 3.1 2.7 Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6	Equity options		25.7		37.3
Total gross credit exposure 381.9 348.1 Less: collateral received 265.3 244.6	Credit contracts:				
Less: collateral received 265.3 244.6	Credit default swaps		3.1		2.7
	Total gross credit exposure		381.9		348.1
Net credit exposure \$ 116.6 \$ 103.5	Less: collateral received		265.3		244.6
	Net credit exposure	\$	116.6	\$	103.5

The fair value of our derivative instruments classified as assets and liabilities was as follows:

		Derivative	(1)		Derivative liabilities (2)				
	Septen	nber 30, 2022	Dece	mber 31, 2021	Sept (llions)	tember 30, 2022	Dec	ember 31, 2021	
Derivatives designated as hedging instruments				(in mi	uuons)				
Interest rate contracts	\$	21.0	\$	4.1	\$	120.2	\$	19.0	
Foreign exchange contracts		217.4		48.4		2.0		17.6	
Total derivatives designated as hedging instruments	\$	238.4	\$	52.5	\$	122.2	\$	36.6	
Derivatives not designated as hedging instruments									
Interest rate contracts	\$	81.1	\$	233.4	\$	486.3	\$	13.0	
Foreign exchange contracts		24.7		11.3		67.2		83.3	
Equity contracts		25.8		37.3		36.9		90.9	
Credit contracts		3.0		2.6		3.9		2.2	
Other contracts		_		_		(4,279.1)		356.3	
Total derivatives not designated as hedging instruments		134.6		284.6		(3,684.8)		545.7	
						· · · · ·			
Total derivative instruments	\$	373.0	\$	337.1	\$	(3,562.6)	\$	582.3	

⁽¹⁾ The fair value of derivative assets is reported with other investments 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 September 30, 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.

⁽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 \$25.9 million and \$356.3 million as of September 30, 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 \$(4,305.0) million as of September 30, 2022, are reported with funds withheld payable on the consolidated statements of financial position.

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.

					September	30, 20	22	
	_	Notional amount		Fair value (in millions)		Maximum future payments		Weighted average expected life (in years)
Single name credit default swaps				(
Corporate debt								
A	\$		50.0	\$	_	\$	50.0	3.0
BBB			180.0		1.0		180.0	3.3
BB			20.0		(0.9)		20.0	4.7
Sovereign								
A			20.0		0.2		20.0	2.7
Total credit default swap protection sold	\$		270.0	\$	0.3	\$	270.0	3.3
					December	31, 20	21	
	Notional amount			Fair value millions)		laximum future ayments	Weighted average expected life (in years)	
Single name credit default swaps				,	ĺ			
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.

Line item in the consolidated statements of financial position in which the		Amortized cos	t of hedg	ged item		value hedging b increase/(decrease amortized cost of	asis adju e) include	stment ed in the
hedged item is included	Septe	mber 30, 2022	Dec	ember 31, 2021		mber 30, 2022	Decer	nber 31, 2021
				(in mi	llions)			
Fixed maturities, available-for-sale (1):								
Active hedging relationships	\$	3,598.5	\$	1,859.9	\$	(171.7)	\$	(7.1)
Discontinued hedging relationships		64.1		79.7		1.5		2.8
Total fixed maturities, available-for-sale in active								
or discontinued hedging relationships	\$	3,662.6	\$	1,939.6	\$	(170.2)	\$	(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 September 30, 2022 and December 31, 2021, the amortized cost basis of the closed portfolios used in these hedging relationships was \$3,313.0 million and \$1,390.4 million, respectively, the cumulative basis adjustments associated with these hedging relationships was \$(109.8) 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 4.4 years. As of September 30, 2022, we had \$117.3 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.

		Amount of gain (loss) recognized in AOCI on derivatives							
Derivatives in cash		For the three months ended September 30,					For the nine Septem		
flow hedging relationships	Related hedged item		2022		2021	.11:	2022		2021
					(ın m	illions	/		
Interest rate contracts	Fixed maturities, available-for-sale	\$	(17.5)	\$	_	\$	(117.2)	\$	_
Interest rate contracts	Investment contracts		4.9		0.6		16.9		0.6
Foreign exchange contracts	Fixed maturities, available-for-sale		117.4		30.5		183.9		52.3
Total		\$	104.8	\$	31.1	\$	83.6	\$	52.9

We expect to reclassify net gains of \$8.0 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 thre	e moi	nths ended Septen	nber	30, 2022
	Net investment income related to hedges of fixed maturities, available-for-sale			Net realized capital gains obsess) related to ledges of fixed maturities, available-for-sale (in millions)		Benefits, claims and settlement expenses related to hedges of investment contracts
Total amounts of consolidated statement of operations line items in which the	_					
effects of fair value and cash flow hedges are reported	\$	908.2	\$	(55.7)	\$	1,734.8
Gains on fair value hedging relationships:						
Interest rate contracts:						
Loss recognized on hedged item	S	(58.2)	\$	_	\$	_
Gain recognized on derivatives	Ψ	57.7	Ψ	_	Ψ	_
Amortization of hedged item basis adjustments		(0.3)		_		_
Amounts related to periodic settlements on derivatives		2.9		_		_
Total gain recognized for fair value hedging relationships	\$	2.1	\$	_	\$	
Gains on cash flow hedging relationships:						
Interest rate contracts:						
Gain reclassified from AOCI on derivatives	\$	1.7	\$	_	\$	_
Gain reclassified from AOCI as a result that a forecasted transaction is no						
longer probable of occurring		_		2.7		_
Amounts related to periodic settlements on derivatives		_				1.3
Foreign exchange contracts:						
Amounts related to periodic settlements on derivatives		3.7	_		_	
Total gain recognized for cash flow hedging relationships	\$	5.4	\$	2.7	\$	1.3

	For the three months ended September 30, 2021								
		et investment acome related to hedges of fixed maturities, available- for-sale	(lo	Net realized capital gains osses) related to nedges of fixed maturities, available- for-sale (in millions)	Benefits, claims and settlement expenses related to hedges of investment contracts				
Total amounts of consolidated statement of operations line items in which the				(111 1111110110)					
effects of fair value and cash flow hedges are reported	\$	1,093.4	\$	(152.0)	\$	1,770.9			
Losses on fair value hedging relationships:									
Interest rate contracts:									
Loss recognized on hedged item	\$	(4.0)	\$	_	\$	_			
Gain recognized on derivatives		5.4		_		_			
Amortization of hedged item basis adjustments		(0.5)		_		_			
Amounts related to periodic settlements on derivatives		(2.4)		_		(0.1)			
Total loss recognized for fair value hedging relationships	\$	(1.5)	\$	<u> </u>	\$	(0.1)			
Gains on cash flow hedging relationships:									
Interest rate contracts:									
Gain reclassified from AOCI on derivatives	\$	3.8	\$	_	\$	_			
Gain reclassified from AOCI as a result that a forecasted transaction is no longer probable of occurring		_		0.1		_			
Foreign exchange contracts:									
Amounts related to periodic settlements on derivatives		2.6							
Total gain recognized for cash flow hedging relationships	\$	6.4	\$	0.1	\$	_			

Net investment income related to hedges of fixed maturities, available for-sale of fixed savailable for-sale of fixed maturities, available for-sale (in millions) Total amounts of consolidated statement of operations line items in which the effects of fair value and cash flow hedges are reported \$2,842.8 \$3,94.1 \$4,473.3 Losses on fair value hedging relationships:			For the nine	e mon	ths ended Septem	ber :	30, 2022
Losses on fair value and cash flow hedges are reported S. 2,842.8 S. (394.1) S. 4,473.3 Losses on fair value hedging relationships: Interest rate contracts: Loss recognized on hedged item S. (164.6) S. — S. — Gain recognized on derivatives 160.7 — — Amounts related to periodic settlements on derivatives (4.0) — — Total loss recognized for fair value hedging relationships S. (8.9) S. — S. — Gains on cash flow hedging relationships: Interest rate contracts: Gain (loss) reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives S. 7.7 S. — S. (0.1) Gain reclassified from AOCI as a result that a forecasted transaction is no longer probable of occurring Amounts related to periodic settlements on derivatives Foreign exchange contracts: Gain reclassified from AOCI on derivatives Gain reclassified from AOCI on derivatives Foreign exchange contracts: Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives Gain reclassified from AOCI on derivatives Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives Gain reclassified from AOCI on derivatives Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives		inc	income related capital gains to hedges (losses) related to of fixed hedges of fixed maturities, maturities, available- available- for-sale for-sale		capital gains (losses) related to hedges of fixed maturities, available- for-sale		claims and settlement expenses related to hedges of investment
Losses on fair value hedging relationships: Interest rate contracts: Loss recognized on hedged item \$ (164.6) \$ - \$ - Gain recognized on derivatives 160.7	Total amounts of consolidated statement of operations line items in which the						
Interest rate contracts: Loss recognized on hedged item Gain recognized on derivatives 160.7 — — Amortization of hedged item basis adjustments Amounts related to periodic settlements on derivatives Total loss recognized for fair value hedging relationships (4.0) — — Total loss recognized for fair value hedging relationships (8.9) — — Gains on cash flow hedging relationships: Interest rate contracts: Gain (loss) reclassified from AOCI on derivatives Gain reclassified from AOCI as a result that a forecasted transaction is no longer probable of occurring Amounts related to periodic settlements on derivatives Foreign exchange contracts: Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives - — Amounts related to periodic settlements on derivatives - — Amounts related to periodic settlements on derivatives - — Amounts related to periodic settlements on derivatives - — Amounts related to periodic settlements on derivatives - — Amounts related to periodic settlements on derivatives - — Amounts related to periodic settlements on derivatives - — Amounts related to periodic settlements on derivatives	effects of fair value and cash flow hedges are reported	\$	2,842.8	\$	(394.1)	\$	4,473.3
Interest rate contracts: Loss recognized on hedged item Gain recognized on derivatives 160.7 — — Amortization of hedged item basis adjustments Amounts related to periodic settlements on derivatives Total loss recognized for fair value hedging relationships (4.0) — — Total loss recognized for fair value hedging relationships (8.9) — — Gains on cash flow hedging relationships: Interest rate contracts: Gain (loss) reclassified from AOCI on derivatives Gain reclassified from AOCI as a result that a forecasted transaction is no longer probable of occurring Amounts related to periodic settlements on derivatives Foreign exchange contracts: Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives - — Amounts related to periodic settlements on derivatives - — Amounts related to periodic settlements on derivatives - — Amounts related to periodic settlements on derivatives - — Amounts related to periodic settlements on derivatives - — Amounts related to periodic settlements on derivatives - — Amounts related to periodic settlements on derivatives - — Amounts related to periodic settlements on derivatives	Losses on fair value hedging relationships						
Loss recognized on hedged item Gain recognized on derivatives 160.7 Amortization of hedged item basis adjustments (1.0) Amounts related to periodic settlements on derivatives (4.0) Total loss recognized for fair value hedging relationships Gains on cash flow hedging relationships: Interest rate contracts: Gain (loss) reclassified from AOCI on derivatives Sain reclassified from AOCI as a result that a forecasted transaction is no longer probable of occurring Amounts related to periodic settlements on derivatives Foreign exchange contracts: Gain reclassified from AOCI on derivatives Foreign exchange contracts: Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives Amounts related to periodic settlements on derivatives Amounts related to periodic settlements on derivatives Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives Amounts related to periodic settlements on derivatives Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives Amounts related to periodic settlements on derivatives Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives	* *						
Gain recognized on derivatives Amounts related to periodic settlements on derivatives (1.0) Amounts related to periodic settlements on derivatives (4.0) Total loss recognized for fair value hedging relationships \$ (8.9) \$ — \$ — Gains on cash flow hedging relationships: Interest rate contracts: Gain (loss) reclassified from AOCI on derivatives Gain reclassified from AOCI as a result that a forecasted transaction is no longer probable of occurring Amounts related to periodic settlements on derivatives Foreign exchange contracts: Gain reclassified from AOCI on derivatives Foreign exchange contracts: Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives - 0.7 Amounts related to periodic settlements on derivatives 9.4 — —		S	(164.6)	\$	_	\$	
Amounts related to periodic settlements on derivatives (4.0) — — — — — — — — — — — — — — — — — — —	e	Ψ	` ,	Ψ	_	Ψ	_
Amounts related to periodic settlements on derivatives (4.0) — — — Total loss recognized for fair value hedging relationships					_		
Total loss recognized for fair value hedging relationships S (8.9) S — S — Gains on cash flow hedging relationships: Interest rate contracts: Gain (loss) reclassified from AOCI on derivatives Gain reclassified from AOCI as a result that a forecasted transaction is no longer probable of occurring Amounts related to periodic settlements on derivatives Foreign exchange contracts: Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives - 0.7 — Amounts related to periodic settlements on derivatives 9.4 —	•		()		_		_
Gains on cash flow hedging relationships: Interest rate contracts: Gain (loss) reclassified from AOCI on derivatives Gain reclassified from AOCI as a result that a forecasted transaction is no longer probable of occurring Amounts related to periodic settlements on derivatives Foreign exchange contracts: Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives - 0.7 - Amounts related to periodic settlements on derivatives 9.4 -			(111)				
Gains on cash flow hedging relationships: Interest rate contracts: Gain (loss) reclassified from AOCI on derivatives Gain reclassified from AOCI as a result that a forecasted transaction is no longer probable of occurring Amounts related to periodic settlements on derivatives Foreign exchange contracts: Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives 9.4 —	Total loss recognized for fair value hedging relationships	\$	(8.9)	\$		\$	
Interest rate contracts: Gain (loss) reclassified from AOCI on derivatives Gain reclassified from AOCI as a result that a forecasted transaction is no longer probable of occurring Amounts related to periodic settlements on derivatives Foreign exchange contracts: Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives - 0.7 - Amounts related to periodic settlements on derivatives 9.4		<u> </u>		÷			
Gain (loss) reclassified from AOCI on derivatives \$ 7.7 \$ — \$ (0.1) Gain reclassified from AOCI as a result that a forecasted transaction is no longer probable of occurring — 13.5 — Amounts related to periodic settlements on derivatives — — 1.3 Foreign exchange contracts: Gain reclassified from AOCI on derivatives — — 0.7 — Amounts related to periodic settlements on derivatives — 9.4 — —	Gains on cash flow hedging relationships:						
Gain reclassified from AOCI as a result that a forecasted transaction is no longer probable of occurring — 13.5 — Amounts related to periodic settlements on derivatives — — 1.3 Foreign exchange contracts: Gain reclassified from AOCI on derivatives — 0.7 — Amounts related to periodic settlements on derivatives — 9.4 — —	Interest rate contracts:						
longer probable of occurring Amounts related to periodic settlements on derivatives Foreign exchange contracts: Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives 9.4 — —	Gain (loss) reclassified from AOCI on derivatives	\$	7.7	\$	_	\$	(0.1)
Amounts related to periodic settlements on derivatives — — — 1.3 Foreign exchange contracts: Gain reclassified from AOCI on derivatives — 0.7 — — — — — — — — — — — — — — — — — — —	Gain reclassified from AOCI as a result that a forecasted transaction is no						
Foreign exchange contracts: Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives 9.4 — — —	longer probable of occurring		_		13.5		_
Gain reclassified from AOCI on derivatives — 0.7 — Amounts related to periodic settlements on derivatives 9.4 — —	Amounts related to periodic settlements on derivatives						1.3
Gain reclassified from AOCI on derivatives — 0.7 — Amounts related to periodic settlements on derivatives 9.4 — —							
Amounts related to periodic settlements on derivatives 9.4 — —							
			_		0.7		_
Total gain recognized for cash flow hedging relationships \$ 17.1 \$ 14.2 \$ 1.2					<u> </u>		
	Total gain recognized for cash flow hedging relationships	\$	17.1	\$	14.2	\$	1.2

	For the nine months ended September 30, 2021									
	Net investment income related to hedges of fixed maturities, available-for-sale (in millions) Net investment income related capital gains (losses) related to hedges of fixed maturities, available-for-sale (in millions)				Benefits, claims and settlement expenses related to hedges of investment contracts					
Total amounts of consolidated statement of operations line items in which the										
effects of fair value and cash flow hedges are reported	\$	3,167.0	\$	(41.7)	\$	4,958.4				
Losses on fair value hedging relationships:										
Interest rate contracts:										
Loss recognized on hedged item	\$	(20.5)	\$	_	\$	_				
Gain recognized on derivatives	•	22.2		_	•	_				
Amortization of hedged item basis adjustments		(1.5)		_		_				
Amounts related to periodic settlements on derivatives		(6.8)		_		(0.1)				
Total loss recognized for fair value hedging relationships	\$	(6.6)	\$		\$	(0.1)				
Gains (losses) on cash flow hedging relationships:										
Interest rate contracts:										
Gain (loss) reclassified from AOCI on derivatives	\$	11.9	\$	_	\$	(0.1)				
Gain reclassified from AOCI as a result that a forecasted transaction is no	_					(***)				
longer probable of occurring		_		0.5		_				
Foreign exchange contracts:										
Gain reclassified from AOCI on derivatives		_		0.7		_				
Amounts related to periodic settlements on derivatives		7.0			_					
Total gain (loss) recognized for cash flow hedging relationships	\$	18.9	\$	1.2	\$	(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 three months ended September 30,				Amount of gain recognized reclass in AOCI on derivatives net realiz for the three months ended September 30,					at of loss om AOCI ital gains months en aber 30,	(losses)
Derivatives in net investment hedging relationships		2022		2021		.022		2021				
Foreign ayahanga cantracta	ø	2.0	\$		illions) \$		Φ					
Foreign exchange contracts	Þ		Þ	1.3			Э					
Total	\$	2.0	\$	1.3	\$		\$					
	: 		n derivat months e aber 30,	ves nded	net	Amoun classified fr realized cap or the nine i Septem	ital gains months er iber 30,	(losses) ided				
Derivatives in net investment hedging relationships		2022		2021		022		2021				
					nillions)							
Foreign exchange contracts	\$	3.6	\$	2.3	\$		\$	_				
Total	\$	3.6	\$	2.3	\$	_	\$	_				

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.

	net i	loss) re erivati ed Sep	net	income on do	loss) recognized in lerivatives for the led September 30,			
Derivatives not designated as hedging instruments		2022		2021		2022		2021
				(in mi	llions)			
Interest rate contracts	\$	(0.4)	\$	(29.7)	\$	(282.3)	\$	(131.4)
Foreign exchange contracts		(14.4)		(91.9)		10.0		(117.9)
Equity contracts		16.9		18.9		99.1		(26.8)
Credit contracts		0.7		0.1		(2.9)		_
Other contracts (1)		1,285.2		(75.2)		4,629.7		106.5
Total	\$	1,288.0	\$	(177.8)	\$	4,453.6	\$	(169.6)

⁽¹⁾ Includes the change in fair value of the funds withheld embedded derivative.

5. Deferred Acquisition Costs

Acquisition costs deferred and amortized were as follows:

		months ended iber 30,	For the nine i Septem		
	2022	2021	2022	2021	
Balance at beginning of year	\$ 4,340.3	\$ 3,581.2	illions) \$ 3,757.5	\$ 3,409.7	
Costs deferred during the year	87.5	118.0	285.5	355.1	
Amortized to expense during the year (1)	4.0	(34.3)	(326.5)	(192.8)	
Adjustment related to unrealized losses on available-for-sale securities and					
derivative instruments (2)	402.2	32.0	1,117.5	124.9	
Balance at end of year	\$ 4,834.0	\$ 3,696.9	\$ 4,834.0	\$ 3,696.9	

⁽¹⁾ Includes adjustments for revisions to estimated gross profits. Amortization for the nine months ended September 30, 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.

6. Insurance Liabilities

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 nine months ended September				
		2022	illions)	2021	
Balance at beginning of period	\$	2,659.4	\$	2,534.9	
Less: reinsurance recoverable		442.1		436.9	
Net balance at beginning of period		2,217.3		2,098.0	
Incurred:					
Current year		1,232.2		736.0	
Prior years		37.1		441.7	
Total incurred		1,269.3		1,177.7	
Payments:					
Current year		791.1		313.6	
Prior years		384.6		773.2	
Total payments		1,175.7		1,086.8	
Net balance at end of period		2,310.9	-	2,188.9	
Plus: reinsurance recoverable		477.5		437.9	
Balance at end of period	\$	2,788.4	\$	2,626.8	
Amounts not included in the rollforward above:					
Claim adjustment expense liabilities	\$	60.2	\$	59.5	

Incurred liability adjustments relating to prior years, which affected current operations during 2022 and 2021, 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.

⁽²⁾ The adjustment for the nine months ended September 30, 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.

7. 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 September 30, 2022, and December 31, 2021, we had \$14,082.2 million and \$1,186.5 million of net ceded reinsurance recoverables, respectively, which does not reflect potentially offsetting impacts of collateral. As of September 30, 2022, and December 31, 2021, \$13,588.3 million, or 99.8%, 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 t	he three months	ended	September 30,	For	eptember 30,		
		2022		2021		2022		2021
				(in mi	llions)			
Premiums and other considerations:								
Direct	\$	1,591.7	\$	1,395.7	\$	4,068.9	\$	3,803.2
Ceded		(105.2)		(165.2)		(328.8)		(467.9)
Net premiums and other considerations	\$	1,486.5	\$	1,230.5	\$	3,740.1	\$	3,335.3
Benefits, claims and settlement expenses:								
Direct	\$	2,117.0	\$	1,924.5	\$	5,639.9	\$	5,418.4
Ceded		(382.2)		(153.6)		(1,166.6)		(460.0)
Net benefits, claims and settlement expenses	\$	1,734.8	\$	1,770.9	\$	4,473.3	\$	4,958.4

As of September 30, 2022, we had a \$8,810.8 million reinsurance deposit receivable.

Refer to Note 3, 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:

	<u>Sep</u>	tember 30, 2022	Dece	mber 31, 2021
		(in mi	llions)	
Cost of reinsurance asset	\$	3,710.8	\$	46.5
Cost of reinsurance liability	\$	80.2	\$	22.1

Cost of reinsurance amortization of \$15.8 million and \$(3.5) million for the three months ended September 30, 2022 and 2021, and \$59.5 million and \$(11.1) million for the nine months ended September 30, 2022 and 2021, respectively, was reported in benefits, claims and settlement expenses on the consolidated statements of operations.

Funds Withheld

The following assets were held in support of our reserves associated with our coinsurance with funds withheld agreement.

	Ser	ptember 30, 2022 (in millions)
Fixed maturities, available-for-sale	\$	16,808.9
Fixed maturities, trading		59.4
Equity securities		10.3
Mortgage loans		2,766.2
Other investments		32.6
Cash and cash equivalents		989.6
Accrued interest income		182.0
Net other liabilities		(58.2)
Net assets	\$	20,790.8

Certain assets are reported at amortized cost while the fair value of those assets is reflected in the funds withheld payable. We had a \$20,669.7 million funds withheld payable as of September 30, 2022, which was net of a \$4,305.0 million embedded derivative asset. The change in fair value of the embedded derivative was a gain of \$1,237.7 million and \$4,305.0 million for the three and nine months ended September 30, 2022, 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.

8. Income Taxes

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 three mo Septembe		For the nine mor	
	2022	2021	2022	2021
U.S. corporate income tax rate	21 %	21 %	21 %	21 %
Dividends received deduction	(1)	(4)	(1)	(4)
Tax credits	(1)	(3)	(1)	(2)
Interest exclusion from taxable income	_	(1)	_	(1)
Foreign country statutory rate differential	_	(1)	_	_
Impact of equity method presentation	_	_	_	(1)
State income taxes	1	1	_	1
Low income housing tax credit amortization	_	1	_	1
Other	_	1	1	_
Effective income tax rate	20 %	15 %	20 %	15 %

Inflation Reduction Act of 2022

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.

9. Employee and Agent Benefits

Components of Net Periodic Benefit Cost

	 For the three	benefits months			For the three	efits	s ended
	 2022 2021				2022		2021
	 		(in m	illions)			
Service cost	\$ 19.7	\$	20.8	\$	_	\$	_
Interest cost	28.2		25.8		0.6		0.5
Expected return on plan assets	(44.8)		(45.7)		(1.3)		(1.1)
Amortization of prior service benefit	(4.2)		(4.2)		(0.3)		(0.3)
Recognized net actuarial (gain) loss	13.9		17.5		(0.2)		(0.2)
Net periodic benefit cost (income)	\$ 12.8	\$	14.2	\$	(1.2)	\$	(1.1)

		Pension For the nine Septem				Other postretirement benefits For the nine months ended September 30,					
	2022			2021 2022						2021	
				(in m	illions)						
Service cost	\$	58.8	\$	62.4	\$	_	\$	_			
Interest cost		84.6		77.4		1.7		1.6			
Expected return on plan assets		(134.2)		(137.0)		(3.7)		(3.5)			
Amortization of prior service benefit		(12.6)		(12.6)		(0.8)		(0.8)			
Recognized net actuarial (gain) loss		41.8		52.6		(0.8)		(0.4)			
Net periodic benefit cost (income)	\$	38.4	\$	42.8	\$	(3.6)	\$	(3.1)			

The components of net periodic benefit cost including the service cost component are included in operating expenses on the consolidated statements of operations.

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 the Employee Retirement Income Security Act ("ERISA") and, generally, not greater than the maximum amount that can be deducted for federal income tax purposes. It is too early to determine, but we do not anticipate that we will be required to fund a minimum required contribution under ERISA. Regardless, it is possible that we may fund the qualified and nonqualified pension plans in 2022 for a combined total of up to \$75.0 million. During the three and nine months ended September 30, 2022, we contributed \$13.4 million and \$58.1 million to these plans, respectively.

10. Contingencies, Guarantees and Indemnifications

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 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. Principal Life will continue to aggressively defend the case.

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 September 30, 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 September 30, 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 September 30, 2022, was approximately \$78.0 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 September 30, 2022, was \$750.0 million.

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 financial position. While the likelihood is remote, performance under these indemnifications could materially affect net income in a particular quarter or annual period.

11. Stockholders' Equity

Common Stock Dividends

	Fo	r the three Septem			I	For the nine months ended September 30,			
		2022	2021			2022	2021		
Dividends declared per common share	\$	0.64	\$	0.63	\$	1.92	\$	1.80	

Reconciliation of Outstanding Common Shares

	For the three me September		For the nine mo Septembe	
	2022	2021	2022	2021
		(in mili	lions)	
Beginning balance	249.9	269.0	261.7	273.3
Shares issued	1.0	0.3	3.3	2.4
Treasury stock acquired	(6.0)	(3.2)	(20.1)	(9.6)
Ending balance	244.9	266.1	244.9	266.1

In February 2020, our Board of Directors ("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.

Other Comprehensive Loss

		three month		For the nine months ended September 30, 2022				
	Pre-Tax	Tax	After-Tax	Pre-Tax millions)	Tax	After-Tax		
Net unrealized losses on available-for-sale securities			(in	millions)				
during the period	\$ (3,653.1)	\$ 778.1	\$ (2,875.0)	\$ (14,046.9)	\$ 2,978.5	\$ (11,068.4)		
Reclassification adjustment for losses included in net	,		,	,	,	,		
income (1)	76.3	(15.6)	60.7	83.8	(21.0)	62.8		
Adjustments for assumed changes in amortization patterns	379.8	(79.8)	300.0	1,127.2	(236.7)	890.5		
Adjustments for assumed changes in policyholder								
liabilities	58.9	(15.7)	43.2	510.9	(108.5)	402.4		
Net unrealized losses on available-for-sale securities	(3,138.1)	667.0	(2,471.1)	(12,325.0)	2,612.3	(9,712.7)		
Net unrealized gains on derivative instruments during the								
period	104.6	(22.0)	82.6	84.2	(17.7)	66.5		
Reclassification adjustment for gains included in net								
income (2)	(4.4)	1.0	(3.4)	(21.8)	4.6	(17.2)		
Adjustments for assumed changes in amortization patterns	(0.7)	0.1	(0.6)	4.9	(1.1)	3.8		
Adjustments for assumed changes in policyholder								
liabilities	(0.2)		(0.2)	(3.0)	0.6	(2.4)		
Net unrealized gains on derivative instruments	99.3	(20.9)	78.4	64.3	(13.6)	50.7		
Foreign currency translation adjustment	(63.6)	9.5	(54.1)	(179.3)	4.5	(174.8)		
Unrecognized postretirement benefit obligation during the								
period	0.1	(0.1)	_	2.2	(0.6)	1.6		
Amortization of amounts included in net periodic benefit								
cost (3)	9.2	(2.2)	7.0	27.6	(7.2)	20.4		
Net unrecognized postretirement benefit obligation	9.3	(2.3)	7.0	29.8	(7.8)	22.0		
Other comprehensive loss	\$ (3,093.1)	\$ 653.3	\$ (2,439.8)	<u>\$ (12,410.2)</u>	\$ 2,595.4	\$ (9,814.8)		

	For the three months ended September 30, 2021				s ended 021	
	Pre-Tax	Tax	After-Tax	Pre-Tax millions)	Tax	After-Tax
Net unrealized losses on available-for-sale securities during the			(in	millions)		
period	\$ (546.4)	\$ 127.4	\$ (419.0)	\$ (2,461.6)	\$ 554.9	\$ (1,906.7)
Reclassification adjustment for gains included in net income (1)	(2.6)	0.2	(2.4)	(3.8)	0.2	(3.6)
Adjustments for assumed changes in amortization patterns	32.2	(6.8)	25.4	121.3	(25.5)	95.8
Adjustments for assumed changes in policyholder liabilities	477.2	(104.8)	372.4	1,573.7	(365.3)	1,208.4
Net unrealized losses on available-for-sale securities	(39.6)	16.0	(23.6)	(770.4)	164.3	(606.1)
Net unrealized gains on derivative instruments during the						
period	31.2	(6.6)	24.6	53.7	(11.3)	42.4
Reclassification adjustment for gains included in net income (2)	(3.9)	0.8	(3.1)	(13.0)	2.7	(10.3)
Adjustments for assumed changes in amortization patterns	(0.5)	0.1	(0.4)	(0.5)	0.1	(0.4)
Adjustments for assumed changes in policyholder liabilities	(0.4)	_	(0.4)	1.0	(0.3)	0.7
Net unrealized gains on derivative instruments	26.4	(5.7)	20.7	41.2	(8.8)	32.4
Foreign currency translation adjustment	(189.3)	(4.0)	(193.3)	(209.5)	(4.6)	(214.1)
Unrecognized postretirement benefit obligation during the						
period	_	_	_	(9.1)	1.9	(7.2)
Amortization of amounts included in net periodic benefit						
cost (3)	12.8	(3.5)	9.3	38.8	(10.4)	28.4
Net unrecognized postretirement benefit obligation	12.8	(3.5)	9.3	29.7	(8.5)	21.2
	A (100 =)		A (1063)	A (000 **	.	• (- (•)
Other comprehensive loss	\$ (189.7)	\$ 2.8	\$ (186.9)	\$ (909.0)	\$ 142.4	\$ (766.6)

⁽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 4, Derivative Financial Instruments, under the caption "Effect of Fair Value and Cash Flow Hedges on Consolidated Statements of Operations" for further details.

⁽³⁾ 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 9, Employee and Agent Benefits, under the caption "Components of Net Periodic Benefit Cost" for further details.

Accumulated Other Comprehensive Income (Loss)

	gains availa	unrealized (losses) on ble-for-sale urities (1)	s) on gains currency translation (1) instruments adjustment (in millions)		po	Unrecognized postretirement benefit obligation		ccumulated other nprehensive come (loss)		
Balances as of July 1, 2021	\$	3,555.8	\$	29.9			\$	(448.6)	\$	1,803.8
Other comprehensive loss during the period, net of adjustments	Ψ	(21.2)	Ψ	23.8	Ψ	(191.0)	Ψ	(110.0)	Ψ	(188.4)
Amounts reclassified from AOCI		(2.4)		(3.1)		(1)1.0)		9.3		3.8
Other comprehensive loss		(23.6)		20.7	_	(191.0)	_	9.3		(184.6)
Balances as of September 30, 2021	\$	3,532.2	\$	50.6	\$	(1,524.3)	\$	(439.3)	\$	1,619.2
Balances as of September 30, 2021	Ψ	3,332.2	Ψ	30.0	Ψ	(1,324.3)	Ψ	(437.3)	Ψ	1,017.2
Balances as of July 1, 2022	\$	(3,649.7)	\$	31.5	\$	(1,682.2)	\$	(329.7)	\$	(5,630.1)
Other comprehensive loss during the period, net of adjustments		(2,531.7)		81.8		(54.9)				(2,504.8)
Amounts reclassified from AOCI		60.7		(3.4)				7.0		64.3
Other comprehensive loss		(2,471.0)		78.4		(54.9)		7.0		(2,440.5)
Balances as of September 30, 2022	\$	(6,120.7)	\$	109.9	\$	(1,737.1)	\$	(322.7)	\$	(8,070.6)
		Net unrealized gains (losses) on available-for-sale on		Net unrealized gains on derivative instruments						
	gains availa secu	(losses) on ble-for-sale irities (1)	on de instr	ains rivative uments		Foreign currency translation adjustment (in millions)	po	nrecognized ostretirement benefit obligation	con	ccumulated other nprehensive come (loss)
Balances as of January 1, 2021	gains availa	(losses) on ble-for-sale irities (1) 4,138.3	on de	ains erivative uments		currency translation adjustment (in millions) (1,312.9)	po	ostretirement benefit obligation (460.5)	con	other nprehensive come (loss)
Other comprehensive loss during the period, net of adjustments	gains availa secu	(losses) on ble-for-sale irities (1) 4,138.3 (602.5)	on de instr	ains erivative uments 18.2 42.7		translation adjustment (in millions)	po	ostretirement benefit obligation (460.5) (7.2)	con	other nprehensive come (loss) 2,383.1 (778.4)
Other comprehensive loss during the period, net of adjustments Amounts reclassified from AOCI	gains availa secu	(losses) on ble-for-sale irities (1) 4,138.3 (602.5) (3.6)	on de instr	ains erivative uments 18.2 42.7 (10.3)		currency translation adjustment (in millions) (1,312.9) (211.4)	po	ostretirement benefit obligation (460.5) (7.2) 28.4	con	other nprehensive come (loss) 2,383.1 (778.4) 14.5
Other comprehensive loss during the period, net of adjustments Amounts reclassified from AOCI Other comprehensive loss	gains availa secu	(losses) on ble-for-sale trities (1) 4,138.3 (602.5) (3.6) (606.1)	on de instr	ains crivative uments 18.2 42.7 (10.3) 32.4		currency translation adjustment (in millions) (1,312.9) (211.4)	\$	ostretirement benefit obligation (460.5) (7.2) 28.4 21.2	con in	other nprehensive come (loss) 2,383.1 (778.4) 14.5 (763.9)
Other comprehensive loss during the period, net of adjustments Amounts reclassified from AOCI	gains availa secu	(losses) on ble-for-sale irities (1) 4,138.3 (602.5) (3.6)	on de instr	ains erivative uments 18.2 42.7 (10.3)		currency translation adjustment (in millions) (1,312.9) (211.4)	po	ostretirement benefit obligation (460.5) (7.2) 28.4	con	other nprehensive come (loss) 2,383.1 (778.4) 14.5
Other comprehensive loss during the period, net of adjustments Amounts reclassified from AOCI Other comprehensive loss	gains availa secu	(losses) on ble-for-sale trities (1) 4,138.3 (602.5) (3.6) (606.1)	on de instr	18.2 42.7 (10.3) 32.4		currency translation adjustment (in millions) (1,312.9) (211.4)	\$	ostretirement benefit obligation (460.5) (7.2) 28.4 21.2	con in	other nprehensive come (loss) 2,383.1 (778.4) 14.5 (763.9)
Other comprehensive loss during the period, net of adjustments Amounts reclassified from AOCI Other comprehensive loss Balances as of September 30, 2021 Balances as of January 1, 2022 Other comprehensive loss during the period, net of adjustments	gains availa secu \$	(losses) on ble-for-sale irities (1) 4,138.3 (602.5) (3.6) (606.1) 3,532.2 3,467.4 (9,775.3)	on de instr	18.2 42.7 (10.3) 32.4 50.6	\$	currency translation adjustment (in millions) (211.4) — (211.4) (1,524.3) (1,563.6)	\$ \$	stretirement benefit obligation (460.5) (7.2) 28.4 21.2 (439.3) (344.7) 1.6	\$ \$	other nprehensive come (loss) 2,383.1 (778.4) 14.5 (763.9) 1,619.2 1,610.9 (9,879.3)
Other comprehensive loss during the period, net of adjustments Amounts reclassified from AOCI Other comprehensive loss Balances as of September 30, 2021 Balances as of January 1, 2022 Other comprehensive loss during the period, net of adjustments Amounts reclassified from AOCI	gains availa secu \$	(losses) on ble-for-sale prities (1) 4,138.3 (602.5) (3.6) (606.1) 3,532.2 3,467.4 (9,775.3) 62.8	on de instr	18.2 42.7 (10.3) 32.4 50.6 51.8 67.9 (17.2)	\$	currency translation adjustment (in millions) (211.4) (1,524.3) (1,563.6) (173.5)	\$ \$ <u>\$</u>	(460.5) (7.2) 28.4 21.2 (439.3) (344.7) 1.6 20.4	\$ \$	other nprehensive come (loss) 2,383.1 (778.4) 14.5 (763.9) 1,619.2 1,610.9 (9,879.3) 66.0

⁽¹⁾ Net unrealized gains (losses) on available-for-sale securities for which an allowance for credit loss has been recorded were \$0.9 million and \$(16.2) million as of September 30, 2022 and 2021, respectively.

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.

⁽²⁾ Reflects the January 1, 2022, balance associated with our ULSG business that was ceded to Talcott Life & Annuity Re.

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 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 three months ended September 30,					For the nine months en September 30,			
	2022 2021 (in m.			million.	2022 s)		2021		
Balance at beginning of period	\$	268.5	\$	330.6	\$	332.5	\$	255.6	
Net income (loss) attributable to redeemable noncontrolling interest		(4.6)		2.7		(38.0)		9.5	
Redeemable noncontrolling interest of deconsolidated entities (1)		(2.8)		(37.4)		(2.8)		(37.4)	
Contributions from redeemable noncontrolling interest		17.2		60.2		48.2		148.2	
Distributions to redeemable noncontrolling interest		(22.7)		(11.7)		(84.1)		(34.8)	
Purchase of subsidiary shares from redeemable noncontrolling interest (2)		(1.1)		(0.7)		(1.1)		(6.1)	
Change in redemption value of redeemable noncontrolling interest		(0.5)		_		(0.1)		8.6	
Other comprehensive income (loss) attributable to redeemable noncontrolling									
interest		1.1		(0.4)		0.5		(0.3)	
Balance at end of period	\$	255.1	\$	343.3	\$	255.1	\$	343.3	

⁽¹⁾ We deconsolidated certain sponsored investment funds as they no longer met the requirements for consolidation.

12. 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.

⁽²⁾ In third quarter 2022, we acquired an additional interest in Origin Asset Management. In second quarter 2021, we acquired the remaining interest in Principal Innovations, Inc. and its wholly owned subsidiary, RobustWealth, Inc.

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.

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 September 30, 2022, approximately 3% 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 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.

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 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.

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:

						September 30, 2022							
		Assets/ (liabilities) measured at	1	Amount measured at net asset	Fair value hierarchy level								
		fair value		value (4)	_	Level 1	air va	Level 2	vei	Level 3			
Assets				_		(in millions)		_					
Fixed maturities, available-for-sale:	\$	2,045.5	\$		\$	1,671.3	\$	374.2	\$				
U.S. government and agencies	Ф	2,045.5 575.5	Ф	-	Ф	1,071.3	Ф	573.6	Ф	_			
Non-U.S. governments		6,416.7				1.9		6,345.1		71.6			
States and political subdivisions		,		_		28.8							
Corporate Residential mentages healted ness through		36,610.1		_		28.8		35,101.8		1,479.5			
Residential mortgage-backed pass-through securities		1 727 9						1 727 9					
Commercial mortgage-backed securities		1,737.8		-		_		1,737.8 4,984.9		3.4			
Collateralized debt obligations (1)		4,988.3 3,994.7						3,952.0		42.7			
Other debt obligations (1)		6,040.5				_		5,793.1		247.4			
Total fixed maturities, available-for-sale	_		_		_	1,702.0			_				
		62,409.1		_				58,862.5		1,844.6			
Fixed maturities, trading		702.7				78.5		500.3		123.9			
Equity securities		1,616.2		_		487.7		1,128.5		_			
Derivative assets (2)		373.0				222.4		373.0					
Other investments		686.5		90.0		223.4		371.7		1.4			
Cash equivalents		2,798.9				22.9		2,776.0					
Sub-total excluding separate account assets		68,586.4		90.0		2,514.5		64,012.0		1,969.9			
Separate account assets		146,571.4		9,707.6		87,723.2		48,059.2		1,081.4			
Total assets	\$	215,157.8	\$	9,797.6	\$	90,237.7	\$	112,071.2	\$	3,051.3			
Liabilities													
Investment and universal life contracts (3)	\$	(25.9)	\$		\$	_	\$	_	\$	(25.9)			
Funds withheld payable embedded													
derivative (3)		4,305.0		_		_		_		4,305.0			
Derivative liabilities (2)		(716.6)		_		_		(699.2)		(17.4)			
Other liabilities		(2.2)				_		(2.2)		_			
Total liabilities	\$	3,560.3	\$	_	\$	_	\$	(701.4)	\$	4,261.7			
	_		_		_		_						
Net assets	\$	218,718.1	\$	9,797.6	\$	90,237.7	\$	111,369.8	\$	7,313.0			

	December 31, 2021									
		Assets/ (liabilities) measured at fair value	r	Amount neasured at net asset value (4)	_	Level 1	air va	lue hierarchy le Level 2	vel	Level 3
Assets						(in millions)				
Fixed maturities, available-for-sale:										
U.S. government and agencies	\$	2,088.6	\$		\$	1,716.5	\$	372.1	\$	
Non-U.S. governments	Ψ	982.0	Ψ		Ψ	0.6	Ψ	981.4	Ψ	_
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
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- (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 4, 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 September 30, 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.

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 three n	nonths ended Sep	tember 30, 2022		
	Beginning asset/ (liability) balance as of July 1, 2022		ed/unrealized (losses) Included in other comprehensive income (3)	Net purchases, sales, issuances and settlements (4) (in millions)	Transfers into Level 3	Transfers out of Level 3	Ending asset/ (liability) balance as of September 30, 2022
Assets				(in millions)			
Fixed maturities, available-for-sale:							
States and political subdivisions	\$ 86.7	s —	\$ (4.5)	\$ (0.4)	s _	\$ (10.2)	\$ 71.6
Corporate	1,248.7	_	(1.5)	232.3	_	(10.2)	1,479.5
Commercial mortgage-backed securities	3.8	_	(0.3)	(0.1)	_	_	3.4
Collateralized debt obligations	1.3	_	(0.7)	42.1	_	_	42.7
Other debt obligations	20.8	_	(11.5)	239.1	_	(1.0)	247.4
Total fixed maturities, available-for-sale	1,361.3		(18.5)	513.0		(11.2)	1,844.6
Fixed maturities, trading	85.7	0.1	(10.3)	38.1	_	(11.2)	123.9
Other investments	1.4	0.1	_	36.1			1.4
Separate account assets (1)	1,058.6	23.1		(0.3)			1.081.4
Separate account assets (1)	1,030.0	23.1		(0.5)	_	-	1,001.4
Liabilities							
Investment and universal life contracts	(75.5)	46.2	_	3.4	_	_	(25.9)
Funds withheld payable embedded	(10.0)	10.2		J.1			(23.5)
derivative	3,067.3	1,237.7	_				4,305.0
derivative	3,007.3	1,237.7					4,505.0
Derivatives							
Net derivative assets (liabilities)	(0.2)	(17.7)	_	0.5	_		(17.4)
rect derivative assets (natimies)	(0.2)	(17.77)		0.0			(17.1)
			For the three n	nonths ended Sep	tember 30, 2021		
	Beginning			Net	•		
	asset/ (liability)		ed/unrealized (losses)	purchases, sales,			Ending asset/ (liability)
	(liability) balance as of July 1,	gains Included in net income	(losses) Included in other comprehensive	purchases, sales, issuances and settlements	Transfers into Level 3	Transfers out of Level 3	asset/ (liability) balance as of September 30,
	(liability) balance as of	gains Included in	(losses) Included in other	purchases, sales, issuances and settlements (4)			asset/ (liability) balance as of
Assets	(liability) balance as of July 1,	gains Included in net income	(losses) Included in other comprehensive	purchases, sales, issuances and settlements	into	out of	asset/ (liability) balance as of September 30,
Assets Fixed maturities, available-for-sale:	(liability) balance as of July 1,	gains Included in net income	(losses) Included in other comprehensive	purchases, sales, issuances and settlements (4)	into	out of	asset/ (liability) balance as of September 30,
	(liability) balance as of July 1,	Included in net income (2)	(losses) Included in other comprehensive	purchases, sales, issuances and settlements (4)	into	out of	asset/ (liability) balance as of September 30,
Fixed maturities, available-for-sale: Corporate	(liability) balance as of July 1, 2021	gains Included in net income (2)	Included in other comprehensive income (3)	purchases, sales, issuances and settlements (4) (in millions)	into Level 3	out of Level 3	asset/ (liability) balance as of September 30, 2021
Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities	(liability) balance as of July 1, 2021	Included in net income (2)	Included in other comprehensive income (3)	purchases, sales, issuances and settlements (4) (in millions)	into Level 3 \$ 25.1	out of Level 3	asset/ (liability) balance as of September 30, 2021
Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities Collateralized debt obligations	(liability) balance as of July 1, 2021 \$ 549.0 11.6 195.6	Included in net income (2)	Included in other comprehensive income (3) \$ 10.5 (0.1)	purchases, sales, issuances and settlements (4) (in millions) \$ 229.0 2.7 27.6	into Level 3 \$ 25.1	s	asset/ (liability) balance as of September 30, 2021 \$ 805.8 14.2 50.4
Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations	(liability) balance as of July 1, 2021 \$ 549.0 11.6 195.6 61.4	gains Included in net income (2) \$ (7.8)	Included in other comprehensive income (3) \$ 10.5 (0.1) (0.2)	purchases, sales, issuances and settlements (4) (in millions) \$ 229.0 2.7 27.6 (14.0)	\$ 25.1	s	asset/ (liability) balance as of September 30, 2021 \$ 805.8 14.2 50.4 22.2
Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale	(liability) balance as of July 1, 2021 \$ 549.0 11.6 195.6 61.4 817.6	gains Included in net income (2) \$ (7.8) (7.8) (7.8) (7.8)	Included in other comprehensive income (3)	purchases, sales, issuances and settlements (4) (in millions) \$ 229.0 2.7 27.6 (14.0) 245.3	into Level 3 \$ 25.1	s	asset/ (liability) balance as of September 30, 2021 \$ 805.8 14.2 50.4 22.2 892.6
Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale Other investments	(liability) balance as of July 1, 2021 \$ 549.0 11.6 195.6 61.4 817.6 44.5	gains Included in net income (2) \$ (7.8)	Included in other comprehensive income (3) \$ 10.5 (0.1) (0.2)	purchases, sales, issuances and settlements (4) (in millions) \$ 229.0 2.7 27.6 (14.0) 245.3 (41.1)	\$ 25.1	s	asset/ (liability) balance as of September 30, 2021 \$ 805.8 14.2 50.4 22.2
Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale	(liability) balance as of July 1, 2021 \$ 549.0 11.6 195.6 61.4 817.6	gains Included in net income (2)	Included in other comprehensive income (3)	purchases, sales, issuances and settlements (4) (in millions) \$ 229.0 2.7 27.6 (14.0) 245.3	\$ 25.1	s	**asset/**(liability)**balance as of September 30, 2021 **\$805.8
Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale Other investments Separate account assets (1) Liabilities	(liability) balance as of July 1, 2021 \$ 549.0 11.6 195.6 61.4 817.6 44.5 1,217.4	\$ (7.8)	Included in other comprehensive income (3)	purchases, sales, issuances and settlements (4) (in millions) \$ 229.0 2.7 27.6 (14.0) 245.3 (41.1) (21.1)	\$ 25.1	s	**asset/**(liability)**balance as of September 30, 2021 \$ 805.8
Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale Other investments Separate account assets (1)	(liability) balance as of July 1, 2021 \$ 549.0 11.6 195.6 61.4 817.6 44.5	\$ (7.8)	Included in other comprehensive income (3)	purchases, sales, issuances and settlements (4) (in millions) \$ 229.0 2.7 27.6 (14.0) 245.3 (41.1)	\$ 25.1	s	asset/ (liability) balance as of September 30, 2021 \$ 805.8 14.2 50.4 22.2 892.6
Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale Other investments Separate account assets (1) Liabilities Investment and universal life contracts	(liability) balance as of July 1, 2021 \$ 549.0 11.6 195.6 61.4 817.6 44.5 1,217.4	\$ (7.8)	Included in other comprehensive income (3)	purchases, sales, issuances and settlements (4) (in millions) \$ 229.0 2.7 27.6 (14.0) 245.3 (41.1) (21.1)	\$ 25.1	s	** 805.8 ** 14.2 ** 50.4 ** 22.2 ** 892.6 ** 2.7 ** 1,267.3
Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale Other investments Separate account assets (1) Liabilities Investment and universal life contracts Derivatives	(liability) balance as of July 1, 2021 \$ 549.0 11.6 195.6 61.4 817.6 44.5 1,217.4 (281.6)	\$ (7.8)	Included in other comprehensive income (3)	purchases, sales, issuances and settlements (4) (in millions) \$ 229.0 2.7 27.6 (14.0) 245.3 (41.1) (21.1) 6.6	\$ 25.1	s	** 805.8 ** 14.2 ** 50.4 ** 22.2 ** 892.6 ** 2.7 ** 1,267.3
Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale Other investments Separate account assets (1) Liabilities Investment and universal life contracts	(liability) balance as of July 1, 2021 \$ 549.0 11.6 195.6 61.4 817.6 44.5 1,217.4	\$ (7.8)	Included in other comprehensive income (3)	purchases, sales, issuances and settlements (4) (in millions) \$ 229.0 2.7 27.6 (14.0) 245.3 (41.1) (21.1)	\$ 25.1	s	** 805.8 14.2 50.4 22.2 892.6 2.7 1,267.3

					For the nine	mont	ths ended Sept	temb	er 30, 2022				
	Beginnin asset/ (liability balance as of January 2022	y)			ed/unrealized (losses) Included in other comprehensive income (3)	-	Net purchases, sales, issuances and settlements (4)		Transfers into Level 3		Transfers out of Level 3		Ending asset/ liability) balance as of tember 30, 2022
Assets							(in millions)						
Fixed maturities, available-for-sale:													
States and political subdivisions	s 9	4.8	\$	_	\$ (23.8)	\$	(1.2)	\$	12.0	\$	(10.2)	\$	71.6
Corporate		4.3	Ψ	(3.4)	(28.1		500.4	Ψ	176.3	Ψ	(10.2)	Ψ	1,479.5
Commercial mortgage-backed securities		9.2		(3.4)	(1.0		(4.6)				(10.2)		3.4
Collateralized debt obligations		5.8		_	(1.4		97.6		_		(139.3)		42.7
Other debt obligations		2.1			(12.1)		238.4		_		(21.0)		247.4
Total fixed maturities, available-for-sale	1.07			(3.4)	(66.4		830.6	-	188.3	-	(180.7)	_	1.844.6
Fixed maturities, trading	, .	0.2 4.9		(0.4)	(00.4	'	90.4		29.0		(160.7)		1,844.0
		4.9 2.1		(0.4)			90.4		29.0		_		1.4
Other investments				120.0	(0.7	,	(2.7)				_		
Separate account assets (1)	94	5.3		138.8	_		(2.7)		_		_		1,081.4
Liabilities													
Investment and universal life contracts	(35	6.3)		314.4	0.2		15.8		_		_		(25.9)
Funds withheld payable embedded derivative		_		4,305.0	_		_		_		_		4,305.0
Derivatives													
Net derivative assets (liabilities)		_		(19.7)	(0.3))	2.9				(0.3)		(17.4)
					For the nine	mont	ths ended Sept	temb	er 30, 2021				
	Beginnir	ıg					Net						Ending
	asset/				ed/unrealized		purchases,						asset/
	(liability				(losses)	-	sales,						liability)
	balance	•]	Included	Included in		issuances				TF 6		balance
	as of January	1		in net income	other comprehensive		and settlements	1	Transfers into		Transfers out of	Com	as of tember 30,
	2021	1,		(2)	income (3)	;	(4)		Level 3		Level 3	sep	2021
				(-)	meome (c)		(in millions)		<u> </u>	_	<u> Levere</u>		
Assets													
Fixed maturities, available-for-sale:													
Corporate	\$ 29	0.8	\$	(12.7)	\$ 5.8	\$		\$	167.6	\$	_	\$	805.8
Commercial mortgage-backed securities	1	3.2		(1.0)	(0.6)	2.6		_		_		14.2
Collateralized debt obligations	2	7.2		(2.0)	1.8		337.5		84.1		(398.2)		50.4
Other debt obligations		1.2		(2.0)	1.6		337.0						22.2
		9.2		`—	0.6		(3.2)		20.6		(25.0)		22.2
Total fixed maturities, available-for-sale	2		_	` ′		_			20.6 272.3		(25.0) (423.2)		892.6
Total fixed maturities, available-for-sale Other investments	<u>2</u> 36	9.2		`—	0.6	_	(3.2)	_		_			
	<u>2</u> 36	9.2 0.4 1.9		(15.7)	<u>0.6</u> 7.6)	(3.2) 691.2		272.3	_	(423.2)		892.6
Other investments Separate account assets (1)	2 36 3	9.2 0.4 1.9	_	(15.7) 12.5	0.6 7.6 (0.6)	(3.2) 691.2 (41.1)		272.3		(423.2)		892.6 2.7
Other investments Separate account assets (1) Liabilities	2 36 3 8,89	9.2 0.4 1.9 3.2		(15.7) 12.5 215.6	0.6 7.6 (0.6)	(3.2) 691.2 (41.1) (7,841.5)		272.3		(423.2)		892.6 2.7 1,267.3
Other investments Separate account assets (1)	2 36 3 8,89	9.2 0.4 1.9		(15.7) 12.5	0.6 7.6 (0.6)	(3.2) 691.2 (41.1)		272.3		(423.2)		892.6 2.7
Other investments Separate account assets (1) Liabilities Investment and universal life contracts	2 36 3 8,89	9.2 0.4 1.9 3.2		(15.7) 12.5 215.6	0.6 7.6 (0.6)	(3.2) 691.2 (41.1) (7,841.5)		272.3		(423.2)		892.6 2.7 1,267.3
Other investments Separate account assets (1) Liabilities	2 36 3 8,89 (46	9.2 0.4 1.9 3.2		(15.7) 12.5 215.6	0.6 7.6 (0.6)	(3.2) 691.2 (41.1) (7,841.5)		272.3		(423.2)		892.6 2.7 1,267.3

⁽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 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 th Sep	ee mon ember 3			months ended iber 30,
	2022		2021	2022	2021
Assets			(in mi	itions)	
Fixed maturities, available-for-sale:					
Corporate	\$ -	- \$	(7.8)	s —	\$ (12.6)
Collateralized debt obligations	_	-	_	_	(2.0)
Total fixed maturities, available-for-sale			(7.8)		(14.6)
Fixed maturities, trading	(0.	4)	_	(0.4)	_
Other investments	-	-	(0.1)	_	12.6
Separate account assets	13.	1	71.5	126.0	215.6
Liabilities					
Investment and universal life contracts	44.	7	(76.4)	303.8	86.1
Funds withheld payable embedded derivative	1,237.	7		4,305.0	_
Derivatives					
Net derivative assets (liabilities)	(22.	9)	(0.7)	(17.3)	(0.6)

(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 three Septem	nded	For the nine months September 30,				
		2022	202		2022	2		2021
				(in mi	llions)	ons)		
Assets								
Fixed maturities, available-for-sale:								
States and political subdivisions	\$	(4.4)	\$	_	\$ (2	2.0)	\$	_
Corporate		(1.7)		10.6	(2	9.8)		4.4
Commercial mortgage-backed securities		(0.3)		(0.2)	((0.6)		(0.6)
Collateralized debt obligations		(0.8)		_	((1.3)		2.1
Other debt obligations		(11.5)		_	(1	1.5)		_
Total fixed maturities, available-for-sale		(18.7)		10.4	(6	5.2)	-	5.9
Other investments		_		(0.6)		_		(0.6)
Liabilities								
Investment and universal life contracts		_		0.1		0.2		0.2
Derivatives								
Net derivative assets (liabilities)		_		_	((0.2)		_

(4) Gross purchases, sales, issuances and settlements were:

	For the three months ended September 30, 2022									
	Pur	chases		Sales	Issua	nces		ments	Net p sales,	issuances ettlements
Assets					,	,				
Fixed maturities, available-for-sale:										
States and political subdivisions	\$	_	\$	_	\$	_	\$	(0.4)	\$	(0.4)
Corporate		308.2		(11.2)		_	((64.7)		232.3
Commercial mortgage-backed securities		_		_		_		(0.1)		(0.1)
Collateralized debt obligations		42.1		_		_		_		42.1
Other debt obligations		242.0						(2.9)		239.1
Total fixed maturities, available-for-sale		592.3		(11.2)		_		(68.1)		513.0
Fixed maturities, trading		38.1		_		_		_		38.1
Separate account assets (5)		_		_		(0.1)		(0.2)		(0.3)
Liabilities										
Investment and universal life contracts		_		_		0.1		3.3		3.4
Derivatives										
Net derivative assets (liabilities)				0.5						0.5
				0.3						0.5
(_	F		41	1.16.	4b	20. 20		0.3
			For	the three r	nonths e	ended Se	ptembe	er 30, 202		ourchases,
			For		months e	ended Se	ptembe	er 30, 202	Net p sales,	ourchases, issuances
(Pure	chases			Issua	nces		er 30, 202	Net p sales,	ourchases,
Assets	Pure	chases		the three r	Issua				Net p sales,	ourchases, issuances
	Pure	chases		the three r	Issua	nces			Net p sales,	ourchases, issuances
Assets		chases		the three r	Issua	nces	Settle		Net p sales, and so	ourchases, issuances
Assets Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities		268.5 2.7		the three r	Issua (in n	nces	Settle	ments_	Net p sales, and so	ourchases, issuances ettlements 229.0 2.7
Assets Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities Collateralized debt obligations		268.5		the three r	Issua (in n	nces	Settle	ments_	Net p sales, and so	229.0 2.7 27.6
Assets Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities		268.5 2.7		Sales (3.4)	Issua (in n	nces	Settle \$	(36.1)	Net p sales, and so	ourchases, issuances ettlements 229.0 2.7
Assets Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities Collateralized debt obligations	\$	268.5 2.7		Sales (3.4)	Issua (in n	nces	Settle \$	(36.1) —	Net p sales, and so	229.0 2.7 27.6
Assets Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations	\$	268.5 2.7 27.6		(3.4) ————————————————————————————————————	Issua (in n	nces	Settle \$	(36.1) ————————————————————————————————————	Net p sales, and so	229.0 2.7 27.6 (14.0) 245.3 (41.1)
Assets Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale	\$	268.5 2.7 27.6		(3.4) ————————————————————————————————————	Issuz (in n	nces	Settle \$	(36.1) — — (14.0)	Net p sales, and so	229.0 2.7 27.6 (14.0) 245.3
Assets Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale Other investments	\$	268.5 2.7 27.6 — 298.8		(3.4) ————————————————————————————————————	Issuz (in n	ances nillions)	Settle \$	(36.1) ————————————————————————————————————	Net p sales, and so	229.0 2.7 27.6 (14.0) 245.3 (41.1)
Assets Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale Other investments Separate account assets (5)	\$	268.5 2.7 27.6 — 298.8		(3.4) ————————————————————————————————————	Issuz (in n	ances nillions)	Settle \$	(36.1) ————————————————————————————————————	Net p sales, and so	229.0 2.7 27.6 (14.0) 245.3 (41.1)
Assets Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale Other investments Separate account assets (5) Liabilities Investment and universal life contracts	\$	268.5 2.7 27.6 — 298.8		(3.4) ————————————————————————————————————	Issuz (in n		Settle \$	(36.1) — (14.0) (50.1) — 15.3	Net p sales, and so	229.0 2.7 27.6 (14.0) 245.3 (41.1) (21.1)
Assets Fixed maturities, available-for-sale: Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale Other investments Separate account assets (5) Liabilities	\$	268.5 2.7 27.6 — 298.8		(3.4) ————————————————————————————————————	Issuz (in n		Settle \$	(36.1) — (14.0) (50.1) — 15.3	Net p sales, and so	229.0 2.7 27.6 (14.0) 245.3 (41.1) (21.1)

	For the nine months ended September 30, 2022								
	Pt	ırchases		Sales	Issuances (in millions		ettlements	sale	purchases, s, issuances settlements
Assets									
Fixed maturities, available-for-sale:									
States and political subdivisions	\$	_	\$	_	\$ —	\$	(1.2)	\$	(1.2)
Corporate		659.1		(36.5)			(122.2)		500.4
Commercial mortgage-backed securities		_		(4.2)	_		(0.4)		(4.6)
Collateralized debt obligations		97.6		_	_		_		97.6
Other debt obligations		242.0		_	_		(3.6)		238.4
Total fixed maturities, available-for-sale		998.7		(40.7)	_		(127.4)		830.6
Fixed maturities, trading		90.6		· —	_		(0.2)		90.4
Separate account assets (5)		_		_	(2.0)		(0.7)		(2.7)
Liabilities									
Investment and universal life contracts					(7.0)		22.8		15.8
investment and universal me contracts		_		_	(7.0)		22.0		13.0
Derivatives									
Net derivative assets (liabilities)		_		2.9	_		_		2.9
			For	r the nine n	onths ended S	epter	mber 30, 202	21	
									purchases, s, issuances
	<u></u>	ırchases		Sales	Issuances (in millions		ettlements		settlements
Assets					(in millions)				
Fixed maturities, available-for-sale:									
Corporate	\$	469.3	\$	(14.3)	\$ —	\$	(100.7)	\$	354.3
Commercial mortgage-backed securities		2.7		_	_		(0.1)		2.6
Collateralized debt obligations		362.0		_	_		(24.5)		337.5
Other debt obligations		25.1		_	_		(28.3)		(3.2)
Total fixed maturities, available-for-sale		859.1		(14.3)	_		(153.6)		691.2
Other investments		_		(41.1)	_		_		(41.1)
Separate account assets (5)		36.7	((7,795.2)	(175.4)		92.4		(7,841.5)
Liabilities									
Investment and universal life contracts									
investment and universal file contracts		_		_	(11.7)		34.7		23.0
		_		_	(11.7)		34.7		23.0
Derivatives Net derivative assets (liabilities)		_		11.3	(11.7)		34.7		23.0

⁽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 thre	e months e	nded Septem	her 30 2022		
	of Le	evel 1 into	Transfe of Level	ers out l 2 into el 3	Trans of Lev Lev	fers out el 3 into vel 1	of I	ensfers out Level 3 into Level 2
Assets				(ın m	illions)			
Fixed maturities, available-for-sale:								
States and political subdivisions	\$	_	\$	_	\$	_	\$	10.2
Other debt obligations	Ψ	_	Ψ	_	Ψ	_	Ψ	1.0
Total fixed maturities, available-for-sale								11.2
Total Initial materials, a variable for sure								1112
	For the three months ended September 30, 2021							
	of Le	sfers out evel 1 into evel 3	Transfe of Level Leve	l 2 into el 3	of Lev Lev	fers out el 3 into vel 1	of I	nsfers out Level 3 into Level 2
A				(in m	illions)			
Assets								
Fixed maturities, available-for-sale: Corporate	\$		\$	25.1	\$		\$	
Collateralized debt obligations	Φ		Ф	23.1	Φ		Ф	172.8
Other debt obligations								25.0
Total fixed maturities, available-for-sale				25.1				197.8
Total fixed materities, available for sale				23.1				177.0
					ided Septeml			
	of Le	evel 3	Transfe of Level Leve	l 2 into el 3	of Lev	fers out el 3 into vel 1	of I	insfers out Level 3 into Level 2
Assets				(in m	iiiions)			
Fixed maturities, available-for-sale:								
States and political subdivisions	\$	_	\$	12.0	\$	_	\$	10.2
Corporate		_		176.3		_		_
Commercial mortgage-backed securities		_		_		_		10.2
Collateralized debt obligations		_		_		_		139.3
Other debt obligations								21.0
Total fixed maturities, available-for-sale		_		188.3		_		180.7
Fixed maturities, trading		_		29.0		_		_
Derivatives								
Net derivative assets (liabilities)				_		_		0.3
inci delivative assets (matimes)								0.5

	For the nine months ended September 30, 2021										
	of Le	sfers out vel 1 into evel 3		ransfers out f Level 2 into Level 3	of I	nnsfers out Level 3 into Level 1		ransfers out f Level 3 into Level 2			
Assets				(in mi	iiions)						
Fixed maturities, available-for-sale:											
Corporate	\$	_	\$	167.6	\$	_	\$	_			
Collateralized debt obligations		_		84.1		_		398.2			
Other debt obligations		_		20.6		_		25.0			
Total fixed maturities, available-for-sale				272.3				423.2			

Assets transferred into Level 3 during the nine months ended September 30, 2022 and the three and nine months ended September 30, 2021, 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 the three and nine months ended September 30, 2022 and 2021, primarily included those assets 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.

			September 30, 202	22		
	Assets / (liabilities measured fair value (in million	at Valuation e technique(s)	Unobservable input description	Input/range of inputs		Weighted average
Assets	(~)				
Fixed maturities, availabl	e-for-sale:					
Corporate	\$ 1,474	4.0 Discounted cash flow	Discount rate (1)	5.7 % -	17.6 %	9.8 %
•	ĺ		Illiquidity premium	0 basis points ("bps")-	517 bps	53 bps
Other debt obligations	24	Discounted cash flow 7.4	Discount rate (1)	6.2 % -	9.5 %	8.0 %
			Illiquidity premium	0 bps-	361 bps	229 bps
			Comparability adjustment		35 bps	35 bps
Fixed maturities, trading	123	Discounted cash flow 3.9	Discount rate (1)	7.5 % -	15.7 %	10.3 %
Separate account assets	1,08	1.7 Discounted cash flow - mortgage loans	Discount rate (1)		4.9 %	4.9 %
			Credit spread rate		143 bps	143 bps
		Discounted cash flow - real estate	Discount rate (1)	5.5 % -	10.0 %	6.8 %
			Terminal capitalization rate	4.3 % -	9.3 %	5.5 %
			Average market rent growth rate	2.0 % -	3.9 %	3.0 %
		Discounted cash flow - real estate debt	Loan to value	40.3 % -	56.3 %	45.2 %
			Market interest rate	4.6 % -	7.0 %	5.8 %
Liabilities Investment and universal life contracts (6)	(22	5.9) Discounted cash flow	Long duration interest rate	2.0 % -	4.1 % (3)	3.3 %
. ,			Long-term equity market volatility	18.1 % -	41.1 %	22.0 %
			Nonperformance risk	0.8 % -	2.1 %	1.6 %
			Utilization rate	See note (4)		
			Lapse rate	0.0 % -	19.4 %	7.9 %
			Mortality rate	See note (5)		
			,	577 (1)		

				December 31, 2021			
	(liab meas fair	sets / pilities) sured at value pillions)	Valuation technique(s)	Unobservable input description	Input/rang inputs		Weighted average
Assets	(111 11)	illionsy					
Fixed maturities, available-for-sale:							
Corporate	\$	829.9	Discounted cash flow	Discount rate (1)	0.9 % -	15.5 %	6.8 %
Po-mi	-			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		(256.2)	D: (1 1 0	- t	1.0.0/	1.0.0/ (2)	10.0/
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		ote (4)	
				Lapse rate	0.0 % -	17.0 %	5.1 %
				Mortality rate	See n	ote (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.
- (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 three and nine months ended September 30, 2022 and 2021.

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 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 thi	ree months	ended September 3	0, For th	e nine months	ended S	September 30,
	202	22	2021		2022		2021
			(ir	n millions)			
Real estate ventures							
Change in fair value pre-tax gain (1)	\$	_	\$ (0.	.1) \$	_	\$	12.6

⁽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:

				Sej	ptember 30, 2022				
					J	air va	lue hierarchy lev	el	<u> </u>
	Car	rying amount	 Fair value				Level 2		Level 3
					(in millions)				
Assets (liabilities)									
Mortgage loans	\$	20,602.6	\$ 18,553.9	\$		\$		\$	18,553.9
Policy loans		766.2	788.5		_		_		788.5
Other investments		132.6	121.7		_		24.1		97.6
Cash and cash equivalents		1,440.7	1,440.7		1,415.6		25.1		
Reinsurance deposit receivable		8,810.8	7,662.4		_		_		7,662.4
Investment contracts		(36,144.4)	(32,896.7)		_		(7,202.2)		(25,694.5)
Short-term debt		(66.5)	(66.5)				(66.5)		_
Long-term debt		(3,981.0)	(3,590.3)		_		(3,553.0)		(37.3)
Separate account liabilities		(133,400.3)	(132,520.1)						(132,520.1)
Bank deposits (1)		(348.8)	(331.2)		_		(331.2)		_
Cash collateral payable		(388.2)	(388.2)		(388.2)		_		_

					Dec	cember 31, 2021				
						F	air va	lue hierarchy lev	el	
	Car	Carrying amount		Fair value		Level 1		Level 2		Level 3
A 4 (1° -1. 11°4°)						(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		_
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.

13. 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 full service accumulation, trust and custody services, individual variable annuities and the acquisition, integration and migration expenses associated with the purchase of the Institutional Retirement & Trust business of Wells Fargo Bank, N.A.; 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 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,
 - 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:

	Sept	tember 30, 2022		December 31, 2021						
		(in millions)								
Assets:										
Retirement and Income Solutions	\$	201,000.7	\$	221,993.8						
Principal Global Investors		2,239.1		2,445.1						
Principal International		37,535.1		42,812.4						
U.S. Insurance Solutions		39,969.5		33,222.6						
Corporate		1,836.2		4,183.3						
Total consolidated assets	\$	282,580.6	\$	304,657.2						

	1	For the three Septem				For the nine i		
		2022	_	2021		2022		2021
Operating revenues by segment:				(in mi	llion.	s)		
Retirement and Income Solutions:								
Retirement and Income Solutions – Fee	\$	551.5	\$	580.9	S	1,693.8	\$	1,723.9
Retirement and Income Solutions – Spread	Ψ	1,031.1	Ψ	1,072.0	Ψ	2,508.7	Ψ	2,823.9
Total Retirement and Income Solutions (1)	_	1,582.6		1.652.9	_	4,202.5		4,547.8
Principal Global Investors (2)		406.0		465.2		1,304.9		1,334.1
Principal International		376.9		328.1		1,130.9		942.3
U.S. Insurance Solutions:		370.9		320.1		1,130.9		942.3
Specialty Benefits insurance		749.0		684.4		2,218.3		2,007.9
Individual Life insurance		344.0		505.7		1,024.6		1,539.1
Eliminations		(0.1)		303.7		(0.4)		(0.1)
Total U.S. Insurance Solutions		1,092.9	_	1,190.1	_	3,242.5	_	3,546.9
Corporate		(15.9)		(14.3)		(23.2)		(21.8)
Total segment operating revenues		3,442.5		3,622.0	_	9,857.6		10,349.3
Net realized capital losses, net of related revenue adjustments		(76.6)		(188.2)		(493.0)		(157.0)
Revenues from exited business (3)		1,249.6		(100.2)		5,043.2		(137.0)
Adjustments related to equity method investments		(14.6)		(10.1)		(38.2)		(20.7)
Total revenues per consolidated statements of operations	\$	4,600.9	\$	3,423.7	\$	14,369.6	\$	10.171.6
Total revenues per consolidated statements of operations	Ψ	7,000.7	Ψ	3,723.7	Ψ	14,507.0	Ψ	10,171.0
Pre-tax operating earnings (losses) by segment:								
Retirement and Income Solutions	\$	278.6	\$	243.2	\$	852.4	\$	811.4
Principal Global Investors	Ф	142.0	Ф	190.1	Ф	465.4	Ф	515.6
Principal International		66.7		81.0		216.9		203.8
U.S. Insurance Solutions		135.7		151.6		403.2		373.4
Corporate		(100.8)		(97.1)		(382.7)		(273.6)
Total segment pre-tax operating earnings	_	522.2	_	568.8	_	1,555.2	_	1,630.6
Pre-tax net realized capital losses, as adjusted (4)		(47.4)		(133.5)		(405.2)		(141.7)
Pre-tax income from exited business (5)		1,268.6		(133.3)		4,887.1		(111.7)
Adjustments related to equity method investments and noncontrolling		1,20010				1,007.12		
interest		(13.3)		(7.2)		18.1		(14.3)
Income before income taxes per consolidated statements of operations	\$	1,730.1	\$	428.1	\$	6,055,2	\$	1.474.6
media cersic media unes per consolidades satisfications of operations	_	,	_		_	-,	_	-,

⁽¹⁾ Reflects inter-segment revenues of \$89.9 million and \$106.0 million for the three months ended September 30, 2022 and 2021, respectively, \$275.9 million and \$307.7 million for the nine months ended September 30, 2022 and 2021, respectively.

⁽²⁾ Reflects inter-segment revenues of \$73.7 million and \$79.7 million for the three months ended September 30, 2022 and 2021, respectively, \$244.5 million and \$223.9 million for the nine months ended September 30, 2022 and 2021, respectively.

(3) Revenues from exited business is derived as follows:

	F	or the three Septem				For the nine Septem		
	2022			2021 (in m	illion	2022		2021
Revenues from exited business:				(in m	uuons	5)		
Change in fair value of funds withheld embedded derivative	\$	1,237.7	\$	_	\$	4,305.0	\$	_
Net realized capital gains on funds withheld assets		8.5		_		697.5		_
Strategic review costs and impacts		_		_		32.4		_
Amortization of reinsurance gain		3.4		_		8.3		_
Total revenues from exited business	\$	1,249.6	\$	_	\$	5,043.2	\$	

(4) Pre-tax net realized capital gains (losses), as adjusted, is derived as follows:

	For the three months ended September 30,					For the nine months end September 30,				
	2022			2021		2022		2021		
				(in mi	llions)				
Net realized capital losses:										
Net realized capital losses	\$	(55.7)	\$	(152.0)	\$	(394.1)	\$	(41.7)		
Derivative and hedging-related revenue adjustments		(32.9)		(30.6)		(106.7)		(108.4)		
Market value adjustments to fee revenues		_		(0.2)		0.1		(0.6)		
Adjustments related to equity method investments		6.6		(10.8)		(6.0)		(18.3)		
Adjustments related to sponsored investment funds		5.2		5.8		16.9		15.9		
Recognition of front-end fee revenue		0.2		(0.4)		(3.2)		(3.9)		
Net realized capital losses, net of related revenue adjustments		(76.6)		(188.2)		(493.0)		(157.0)		
Amortization of deferred acquisition costs and other actuarial balances		7.7		9.9		(13.0)		22.8		
Capital (gains) losses distributed		25.5		(33.0)		146.1		(86.3)		
Market value adjustments of embedded derivatives		(4.0)		77.8		(45.3)		78.8		
Pre-tax net realized capital losses, as adjusted (a)	\$	(47.4)	\$	(133.5)	\$	(405.2)	\$	(141.7)		

⁽a) As adjusted before noncontrolling interest capital gains (losses).

(5) Pre-tax income (loss) from exited business included:

	I	For the three Septem				For the nine Septem		
	2022			2021 (in mi	llion	2022		2021
Pre-tax income from exited business				(in mi	mon.	·/		
Change in fair value of funds withheld embedded derivative	\$	1,237.7	\$	_	\$	4,305.0	\$	_
Net realized capital gains on funds withheld assets		8.5		_		697.5		_
Strategic review costs and impacts		(27.6)		_		(95.0)		_
Amortization of reinsurance loss		(18.8)		_		(60.2)		
Impacts to actuarial balances of reinsured business		68.8		_		39.8		_
Total pre-tax income from exited business	\$	1,268.6	\$		\$	4,887.1	\$	_

14. 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 statements. Revenues from contracts with customers are included in fees and other revenues on the consolidated statements of operations.

	For the three months ended September 30,					For the nine Septem	 	
	_	2022		2021	:11:	2022	 2021	
Revenue from contracts with customers by segment:	(in millions)							
Retirement and Income Solutions:								
Retirement and Income Solutions – Fee	\$	130.8	\$	144.2	\$	411.0	\$ 433.8	
Retirement and Income Solutions – Spread	-	3.0	•	2.4		8.5	7.2	
Total Retirement and Income Solutions		133.8		146.6		419.5	 441.0	
Principal Global Investors		395.8		453.5		1,277.0	1,303.6	
Principal International		102.3		125.1		321.9	373.5	
U.S. Insurance Solutions:								
Specialty Benefits insurance		3.7		3.9		11.4	11.4	
Individual Life insurance		17.0		15.8		48.6	44.5	
Eliminations		_		_		(0.1)	(0.1)	
Total U.S. Insurance Solutions		20.7		19.7		59.9	55.8	
Corporate		40.3		51.6		115.9	155.9	
Total segment revenue from contracts with customers		692.9		796.5		2,194.2	2,329.8	
Adjustments for fees and other revenues not within the scope of revenue						,	,	
recognition guidance (1)		319.2		455.9		946.5	1,385.7	
Pre-tax other adjustments (2)		3.6		(0.6)		37.6	(4.5)	
Total fees and other revenues per consolidated statements of operations	\$	1,015.7	\$	1,251.8	\$	3,178.3	\$ 3,711.0	

⁽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.

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.

⁽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.

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 three months ended September 30,]	ıs ended 0,		
	2022			2021	=	2022		2021
				(in m	illions,			
Administrative service fee revenue	\$	129.9	\$	144.2	\$	408.9	\$	431.4
Other fee revenue		0.9		_		2.1		2.4
Total revenues from contracts with customers		130.8		144.2		411.0		433.8
Fees and other revenues not within the scope of revenue recognition								
guidance		291.3		324.1		900.5		964.3
Total fees and other revenues		422.1		468.3		1,311.5		1,398.1
Premiums and other considerations		_		_		_		0.5
Net investment income		129.4		112.6		382.3		325.3
Total operating revenues	\$	551.5	\$	580.9	\$	1,693.8	\$	1,723.9

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 three months ended September 30,					For the nine months ended September 30,			
	2022			2021		2022		2021	
				(in mill	ions)				
Deposit account fee revenue	\$	2.6	\$	2.2	\$	7.6	\$	6.7	
Commission income		0.4		0.2		0.9		0.5	
Total revenues from contracts with customers		3.0		2.4		8.5		7.2	
Fees and other revenues not within the scope of revenue recognition									
guidance		0.9		2.1		2.1		6.8	
Total fees and other revenues		3.9		4.5		10.6		14.0	
Premiums and other considerations		607.3		482.1		1,197.6		1,111.9	
Net investment income		419.9		585.4		1,300.5		1,698.0	
Total operating revenues	\$	1,031.1	\$	1,072.0	\$	2,508.7	\$	2,823.9	

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 three months ended September 30,					hs ended 0,		
		2022		2021		2022	2021	
				(in m	illions	5)		
Management fee revenue	\$	351.7	\$	389.9	\$	1,095.2	\$	1,119.9
Other fee revenue		44.1		63.6		181.8		183.7
Total revenues from contracts with customers		395.8		453.5		1,277.0		1,303.6
Fees and other revenues not within the scope of revenue recognition								
guidance		6.4		11.0		20.6		27.1
Total fees and other revenues		402.2		464.5		1,297.6		1,330.7
Net investment income		3.8		0.7		7.3		3.4
Total operating revenues	\$	406.0	\$	465.2	\$	1,304.9	\$	1,334.1

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 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 three months ended September 30,					ns ended 0,		
		2022		2021	.11:	2022		2021
Management fee revenue	\$	100.1	\$	123.0	illions \$	314.6	\$	367.8
Other fee revenue		2.2		2.1		7.3		5.7
Total revenues from contracts with customers		102.3		125.1	_	321.9		373.5
Fees and other revenues not within the scope of revenue recognition								
guidance		1.1		1.0		3.4		3.1
Total fees and other revenues		103.4		126.1		325.3		376.6
Premiums and other considerations		33.8		36.6		74.2		105.8
Net investment income		239.7		165.4		731.4		459.9
Total operating revenues	\$	376.9	\$	328.1	\$	1,130.9	\$	942.3
Revenues from contracts with customers by region:								
Latin America	\$	74.6	\$	91.5	\$	238.3	\$	273.3
Asia		27.5		33.5		83.1		99.3
Principal International corporate / regional offices		0.5		0.5		1.4		2.0
Eliminations		(0.3)		(0.4)		(0.9)		(1.1)
Total revenues from contracts with customers	\$	102.3	\$	125.1	\$	321.9	\$	373.5

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.

The types of revenues from contracts with customers were as follows:

	For the three months ended September 30,					hs ended 0,		
		2022		2021	illions	2022		2021
Specialty Benefits insurance:				(in m	iiions	,,		
Administrative service fees	\$	3.7	\$	3.9	\$	11.4	\$	11.4
Total revenues from contracts with customers		3.7		3.9		11.4		11.4
Fees and other revenues not within the scope of revenue recognition								
guidance		4.8		5.4		14.0		14.9
Total fees and other revenues		8.5		9.3		25.4		26.3
Premiums and other considerations		704.0		629.6		2,056.4		1,851.7
Net investment income		36.5		45.5		136.5		129.9
Total operating revenues	\$	749.0	\$	684.4	\$	2,218.3	\$	2,007.9

	For the three months ended September 30,				For the nine months ended September 30,			
		2022		2021	illions	2022		2021
Individual Life insurance:				(in m	iiions	9		
Administrative service fees	\$	7.0	\$	6.8	\$	20.9	\$	19.3
Commission income		10.0		9.0		27.7		25.2
Total revenues from contracts with customers		17.0		15.8		48.6		44.5
Fees and other revenues not within the scope of revenue recognition								
guidance		91.3		204.1		253.3		635.8
Total fees and other revenues		108.3		219.9		301.9		680.3
Premiums and other considerations		142.7		82.2		415.1		265.4
Net investment income		93.0		203.6		307.6		593.4
Total operating revenues	\$	344.0	\$	505.7	\$	1,024.6	\$	1,539.1

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:

	For the three months ended September 30,				For the nine months ended September 30,				
		2022	202			2022		2021	
				(in m	illions)				
Commission income	\$	89.5	\$	99.8	\$	280.1	\$	287.5	
Other fee revenue		20.4		17.3		59.1		51.0	
Eliminations		(69.6)		(65.5)		(223.3)		(182.6)	
Total revenues from contracts with customers		40.3		51.6	-	115.9		155.9	
Fees and other revenues not within the scope of revenue recognition									
guidance		(76.6)		(91.8)		(247.4)		(266.3)	
Total fees and other revenues		(36.3)		(40.2)		(131.5)		(110.4)	
Premiums and other considerations		(1.2)		_		(2.9)		_	
Net investment income		21.6		25.9		111.2		88.6	
Total operating revenues	\$	(15.9)	\$	(14.3)	\$	(23.2)	\$	(21.8)	

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 \$201.3 million and \$193.1 million as of September 30, 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. Amortization expense of \$8.4 million and \$8.0 million for the three months ended September 30, 2022 and 2021 and \$26.6 million and \$24.1 million for the nine months ended September 30, 2022 and 2021, respectively, was recorded in operating expenses on the consolidated statements of operations and no impairment loss was recognized in relation to the costs capitalized.

15. Stock-Based Compensation Plans

As of September 30, 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.

As of September 30, 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 nine	For the nine months ended September 3				
	2022		2021			
	-	(in millions)				
Compensation cost	\$	70.3 \$	74.1			
Related income tax benefit		15.7	15.3			
Capitalized as part of an asset		1.1	1.1			

Nonqualified Stock Options

No nonqualified stock options were granted to employees during the nine months ended September 30, 2022.

As of September 30, 2022, we had \$1.3 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 1.2 years.

Performance Share Awards

Performance share awards were granted to certain employees under the 2021 Stock Incentive Plan. Total performance share awards granted were 0.3 million for the nine months ended September 30, 2022. The performance share awards granted 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 performance period. The actual number of common shares to be awarded at the end of each performance period will range between 0% and 180% of the initial target awards. 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. The weighted-average grant date fair value of these performance share awards granted was \$66.62 per common share.

As of September 30, 2022, we had \$13.7 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 1.7 years.

Restricted Stock Units

Restricted stock units were issued to certain employees and non-employee directors pursuant to the 2021 Stock Incentive Plan. Total restricted stock units granted were 1.2 million for the nine months ended September 30, 2022. 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 these restricted stock units granted was \$70.18 per common share.

As of September 30, 2022, we had \$78.0 million of total unrecognized compensation cost related to nonvested restricted stock unit awards granted. The cost is expected to be recognized over a weighted-average period of approximately 2.0 years.

Employee Stock Purchase Plan

Under the Employee Stock Purchase Plan, employees purchased 0.5 million shares for the nine months ended September 30, 2022. The weighted average fair value of the discount on the stock purchased was \$7.14 per share.

As of September 30, 2022, a total of 3.5 million of new shares were available to be made issuable by us for this plan.

16. Earnings Per Common Share

The computations of the basic and diluted per share amounts were as follows:

	For the three months ended September 30,				For the nine months ended September 30,					
		2022		2021		2022		2021		
	_					per share data)				
Net income	\$	1,381.4	\$	364.3	\$	4,836.7	\$	1,252.2		
Subtract:										
Net income (loss) attributable to noncontrolling interest		(4.1)		4.4		15.6		13.4		
Total	\$	1,385.5	\$	359.9	\$	4,821.1	\$	1,238.8		
Weighted-average shares outstanding:										
Basic		248.0		268.0		253.3		270.7		
Dilutive effects:										
Stock options		1.4		1.3		1.5		1.2		
Restricted stock units		2.1		2.2		2.1		2.0		
Performance share awards		0.4		0.4		0.4		0.5		
Diluted		251.9		271.9		257.3		274.4		
Net income per common share:										
Basic	\$	5.59	\$	1.34	\$	19.03	\$	4.58		
Diluted	\$	5.50	\$	1.32	\$	18.74	\$	4.51		

The calculation of diluted earnings per share for the three and nine months ended September 30, 2022 and 2021, excludes the incremental effect related to certain outstanding stock-based compensation grants due to their anti-dilutive effect.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following analysis discusses our financial condition as of September 30, 2022, compared with December 31, 2021, and our consolidated results of operations for the three and nine months ended September 30, 2022 and 2021, prepared in conformity with U.S. GAAP. The discussion and analysis includes, where appropriate, factors that may affect our future financial performance. The discussion should be read in conjunction with our Form 10-K, for the year ended December 31, 2021, filed with the SEC and the unaudited condensed consolidated financial statements and the related notes to the financial statements and the other financial information included elsewhere in this Form 10-Q.

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 including, but not limited to, the following: (1) 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; (2) conditions in the global capital markets and the economy generally may materially and adversely affect our business and results of operations; (3) 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; (4) changes in interest rates or credit spreads or a sustained 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; (5) the elimination of 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; (6) 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; (7) 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; (8) any impairments of or valuation allowances against our deferred tax assets could adversely affect our results of operations and financial condition; (9) we may face losses on our insurance and annuity products if our actual experience differs significantly from our pricing and reserving assumptions; (10) the pattern of amortizing our DAC asset and other actuarial balances on our universal life-type insurance contracts, participating life insurance policies and certain investment contracts may change, impacting both the level of our DAC asset and other actuarial balances and the timing of our net income; (11) changes in laws or regulations may reduce our profitability or impact how we do business; (12) 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; (13) changes in accounting standards may adversely affect our reported results of operations and financial condition; (14) litigation and regulatory investigations may affect our financial strength or reduce our profitability; (15) 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; (16) 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; (17) 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; (18) 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; (19) client terminations or withdrawals or changes in investor preferences may lead to a reduction in revenues for our asset management and accumulation businesses; (20) 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; (21) our international businesses face political, legal, operational and other risks that could reduce our profitability in those businesses; (22) we face risks arising from fraudulent activities; (23) we face risks arising from our participation in joint ventures; (24) we may need to fund deficiencies in our Closed Block assets; (25) the ongoing COVID-19 pandemic and the resulting financial market impacts could adversely affect our business, results of operations, financial condition and liquidity; (26) our reinsurers could default on their obligations or increase their rates, which could adversely impact our net income and financial condition; (27) we face risks related to our acquisition of Wells Fargo Bank, N.A.'s Institutional Retirement & Trust ("IRT") business; (28) we face risks arising from future acquisitions of businesses; (29) we face risks in completing the Reinsurance Transaction within the terms or timing contemplated; (30) a pandemic, terrorist attack, military action or other catastrophic event could adversely affect our operations, net income or financial condition; (31) our financial results may be adversely impacted by global climate changes; (32) technological and societal changes may disrupt our business model and impair our ability to retain existing customers, attract new customers and maintain our profitability; (33) damage to our reputation may adversely affect our revenues and profitability; (34) we may not be able to protect our intellectual property and may be subject to infringement claims; (35) 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; (36) 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; (37) 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 and (38) our enterprise risk management framework may not be fully effective in identifying or mitigating all of the risks to which we are exposed.

Overview

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

- Retirement and Income Solutions is organized into Retirement and Income Solutions Fee, which includes full service
 accumulation, individual variable annuities, trust and custody services and the acquisition, integration and migration
 expenses associated with the purchase of the IRT business of Wells Fargo Bank, N.A.; and Retirement and Income
 Solutions Spread, which includes investment only, pension risk transfer, banking services and our exited retail fixed
 annuities business. We offer a comprehensive portfolio of products and services for retirement savings and 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 pension plans, nonqualified executive benefit plans, employee stock ownership plan services and pension closeout services. For more basic retirement services, we offer SIMPLE IRAs and payroll deduction plans;
 - To large institutional clients, we also offer investment only products, including investment only guaranteed investment contracts ("GICs");
 - To employees of businesses and other individuals, we offer the ability to accumulate savings for retirement and
 other purposes through mutual funds, individual variable annuities and bank products, along with retirement
 income options; and
 - To non-retirement businesses, we offer trust and custody services.
- Principal Global Investors provides asset management solutions using focused investment teams and U.S. and global fund
 platforms to deliver diverse investment capabilities including equity, fixed income, multi-asset, real estate and alternatives.
 Services are provided to clients in our retirement businesses in the U.S. and select emerging markets, U.S. benefits and
 protection, to our Corporate segment and for third-party clients.
- Principal International, which offers pension accumulation products and services, mutual funds, asset management, income
 annuities and life insurance accumulation products through operations in Latin America (Brazil, Chile and Mexico) and
 Asia (China, Hong Kong Special Administrative Region and Southeast Asia).
- U.S. Insurance Solutions 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. We focus our solutions on small-to-mid sized businesses and their employees with an emphasis on business owners, executives and key employees.
- Corporate, which 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 PSI, our retail broker-dealer and
 RIA, and our exited group medical and long-term care insurance businesses are reported in this segment.

Transactions Affecting Comparability of Results of Operations

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 were made during the third quarter of 2022 and 2021, which 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 three months ended September 30, 2022 and 2021, respectively.

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

		For the three Septer	months mber 30,	ended
		2022		2021
	•	(in m	illions)	
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 of Results of Operations

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 \$7.8 million and \$16.4 million for the three and nine months ended September 30, 2022, respectively, 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 3. "Quantitative and Qualitative Disclosures About Market Risk — Foreign Currency Risk."

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 1. "Financial Statements, Notes to Unaudited Condensed 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 periods indicated:

	For the three	months ended S	September 30,	For the nine months ended September 30,					
	2022	2021	Increase (decrease)	2022	2021	Increase (decrease)			
			(in mi	llions)					
Revenues:									
Premiums and other considerations	\$ 1,486.5	\$ 1,230.5	\$ 256.0	\$ 3,740.1	\$ 3,335.3	\$ 404.8			
Fees and other revenues	1,015.7	1,251.8	(236.1)	3,178.3	3,711.0	(532.7)			
Net investment income	908.2	1,093.4	(185.2)	2,842.8	3,167.0	(324.2)			
Net realized capital losses	(55.7)	(152.0)	96.3	(394.1)	(41.7)	(352.4)			
Net realized capital gains on funds withheld assets	8.5	_	8.5	697.5	_	697.5			
Change in fair value of funds withheld embedded									
derivative	1,237.7	_	1,237.7	4,305.0	_	4,305.0			
Total revenues	4,600.9	3,423.7	1,177.2	14,369.6	10,171.6	4,198.0			
Expenses:									
Benefits, claims and settlement expenses	1,734.8	1,770.9	(36.1)	4,473.3	4,958.4	(485.1)			
Dividends to policyholders	24.5	28.2	(3.7)	72.1	75.3	(3.2)			
Operating expenses	1,111.5	1,196.5	(85.0)	3,769.0	3,663.3	105.7			
Total expenses	2,870.8	2,995.6	(124.8)	8,314.4	8,697.0	(382.6)			
Income before income taxes	1,730.1	428.1	1,302.0	6,055.2	1,474.6	4,580.6			
Income taxes	348.7	63.8	284.9	1,218.5	222.4	996.1			
Net income	1,381.4	364.3	1,017.1	4,836.7	1,252.2	3,584.5			
Net income (loss) attributable to noncontrolling									
interest	(4.1)	4.4	(8.5)	15.6	13.4	2.2			
Net income attributable to Principal Financial									
Group, Inc.	\$ 1,385.5	\$ 359.9	\$ 1,025.6	\$ 4,821.1	\$ 1,238.8	\$ 3,582.3			

Three Months Ended September 30, 2022 Compared to Three Months Ended September 30, 2021

Net Income Attributable to Principal Financial Group, Inc.

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

Total Revenues

Premiums increased for the U.S. Insurance Solutions segment primarily due to a \$74.4 million increase in growth in the Specialty Benefits insurance business, as well as a \$60.5 million increase in Individual Life insurance premiums related to the retrocession of ceded premiums as a result of the Reinsurance Transaction. Premiums increased \$125.2 million for the Retirement and Income Solutions segment primarily due to higher sales of single premium group annuities with life contingencies. The single premium group annuity product, which is typically used to fund defined benefit plan terminations, can generate large premiums from very few customers and therefore premiums tend to vary from period to period.

Fees and other revenues decreased \$111.8 million for the U.S. Insurance Solutions segment primarily due to the Reinsurance Transaction. Fees and other revenues decreased for the Principal Global Investors segment primarily due to \$38.2 million lower management fee revenue as a result of decreased average AUM and a \$13.3 million decrease in performance fee revenue primarily in our real estate business. Fees and other revenues decreased \$43.2 million for the Retirement and Income Solutions segment primarily resulting from declining financial markets.

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 an increase in interest rates.

Total Expenses

Benefits, claims and settlement expenses decreased in the U.S. Insurance Solutions segment primarily due to a \$139.4 million reduction in our Individual Life insurance business, primarily due to the Reinsurance Transaction, offset by \$47.8 million due to growth in our Specialty Benefits insurance business. Benefits, claims and settlement expenses increased \$52.4 million for the Principal International segment primarily due to higher cost of interest credited to customers partially offset by foreign currency headwinds in Latin America. Benefits, claims and settlement expenses increased \$20.8 million for the Retirement and Income Solutions segment primarily due to an increase in reserves, stemming from higher sales of single premium group annuities with life contingencies.

Operating expenses decreased primarily due to a \$43.3 million more favorable impact associated with actuarial assumption updates and model refinements in 2022 and a \$34.9 million decrease in amounts credited to employee accounts in a nonqualified defined contribution pension plan.

Income Taxes

The effective income tax rate increased to 20% for the three months ended September 30, 2022, from 15% for the three months ended 2021, primarily due to a 3% impact of an increase in pre-tax income with no proportionate increase in permanent tax differences and a 3% impact related to a decrease of available foreign tax credits on the U.S. taxation of international operations. See Item 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 8, Income Taxes" for a reconciliation between the U.S. corporate income tax rate and the effective income tax rate.

Nine Months Ended September 30, 2022 Compared to Nine Months Ended September 30, 2021

Net Income Attributable to Principal Financial Group, Inc.

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

Total Revenues

Premiums increased for the U.S. Insurance Solutions segment primarily due to \$204.7 million from growth in the Specialty Benefits business and \$149.7 million in our Individual Life insurance business, primarily related to the Reinsurance Transaction.

Fees and other revenues decreased \$346.2 million for the U.S. Insurance Solutions segment primarily due to the Reinsurance Transaction. Fees and other revenues decreased \$81.0 million for the Retirement and Income Solutions segment primarily resulting from declining financial markets.

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 \$452.7 million for the U.S. Insurance Solutions segment primarily due to the Reinsurance Transaction. Benefits, claims and settlement expenses decreased \$194.0 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. Partially offsetting these decreases was a \$143.0 million increase in the Principal International segment primarily due to higher cost of interest credited to customers partially offset by foreign currency headwinds in Latin America.

Operating expenses increased primarily due to \$271.4 million of strategic review costs and impacts related to our exited business. This increase was partially offset by a \$153.2 million decrease in amounts credited to employee accounts in a nonqualified defined contribution pension plan and a \$43.3 million more favorable impact associated with actuarial assumption updates and model refinements in 2022.

Income Taxes

The effective income tax rate increased to 20% for the nine months ended September 30, 2022 from 15% for the nine months ended 2021, primarily due to a 3% impact of an increase in pre-tax income with no proportionate increase in permanent tax differences and a 3% impact related to a decrease of available foreign tax credits on the U.S. taxation of international operations. See Item 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 8, Income Taxes" for a reconciliation between the U.S. corporate income tax rate and the effective income tax rate.

Results of Operations by Segment

For results of operations by segment see Item 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 13, 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 Segment Summary Financial Data

Net revenue is a key metric used to understand Retirement and Income Solutions earnings growth. Net revenue is defined as operating revenues less benefits, claims and settlement expenses less dividends to policyholders. Net revenue from Retirement and Income Solutions – Fee is primarily fee based and is also 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 net revenue for the periods indicated:

		e three month September 30		For the	ended	
	2022	2021	Increase (decrease)	2022	2021	Increase (decrease)
Retirement and Income Solutions – Fee	\$ 489.0	\$ 448.2		\$ 1,523.5	\$ 1,486.8	\$ 36.7
Retirement and Income Solutions – Spread	197.5	240.5	(43.0)	605.2	678.5	(73.3)
Total Retirement and Income Solutions	\$ 686.5	\$ 688.7	\$ (2.2)	\$ 2,128.7	\$ 2,165.3	\$ (36.6)

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

		e three months September 30,		For the nine months ended September 30,				
	2022	2021	Increase (decrease) (in mi	2022 Ilions)	2021	Increase (decrease)		
Operating revenues:								
Premiums and other considerations	\$ 607.3	\$ 482.1	\$ 125.2	\$ 1,197.6	\$ 1,112.4	\$ 85.2		
Fees and other revenues	426.0	472.8	(46.8)	1,322.1	1,412.1	(90.0)		
Net investment income	549.3	698.0	(148.7)	1,682.8	2,023.3	(340.5)		
Total operating revenues	1,582.6	1,652.9	(70.3)	4,202.5	4,547.8	(345.3)		
Expenses:								
Benefits, claims and settlement expenses, including dividends								
to policyholders	896.1	964.2	(68.1)	2,073.8	2,382.5	(308.7)		
Operating expenses	407.9	445.5	(37.6)	1,276.3	1,353.9	(77.6)		
Total expenses	1,304.0	1,409.7	(105.7)	3,350.1	3,736.4	(386.3)		
Pre-tax operating earnings	\$ 278.6	\$ 243.2	\$ 35.4	\$ 852.4	\$ 811.4	\$ 41.0		

Three Months Ended September 30, 2022 Compared to Three Months Ended September 30, 2021

Pre-Tax Operating Earnings

Pre-tax operating earnings increased in our Fee business due to an increase in net revenue along with a decrease in operating expenses as described below. Pre-tax operating earnings decreased in our Spread business primarily due to a decrease in net revenue as described below.

Net Revenue

Net revenue increased in our Fee business primarily due to a \$79.1 million impact associated with actuarial assumption updates and model refinements, which were favorable in 2022 as compared to unfavorable in 2021, and a \$12.9 million increase primarily stemming from revenue associated with our Principal Deposit Sweep program resulting from continued growth in the business. These increases were partially offset by a \$46.2 million decrease in fee revenue primarily resulting from declining financial markets and a \$10.4 million decrease in variable investment income. Net revenue decreased in our Spread business primarily due to a \$80.2 million decrease resulting from the impacts of our exited retail fixed annuity business and a \$54.4 million decrease in variable investment income. These decreases were partially offset by a \$54.7 million impact associated with actuarial assumption updates and model refinements, which were favorable in 2022 with no corresponding impact in 2021, and a \$36.6 million increase due to higher net yields.

Operating Expenses

Operating expenses decreased in our Fee business primarily due to a \$20.3 million decrease in expenses associated with the integration of the Institutional Retirement & Trust business of Wells Fargo Bank, N.A. ("Acquired Business") and a \$9.8 million decrease in nondeferrable asset-based commission expenses largely stemming from declining financial markets. Operating expenses did not materially change in our Spread business.

Nine Months Ended September 30, 2022 Compared to Nine Months Ended September 30, 2021

Pre-Tax Operating Earnings

Pre-tax operating earnings increased in our Fee business due to an increase in net revenue along with a decrease in operating expenses 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 increased in our Fee business primarily due to a \$79.1 million impact associated with actuarial assumption updates and model refinements, which were favorable in 2022 as compared to unfavorable in 2021, and a \$37.7 million increase primarily stemming from revenue associated with our Principal Deposit Sweep program resulting from continued growth in the business. These increases were partially offset by an \$86.6 million decrease in fee revenue primarily resulting from declining financial markets. Net revenue decreased in our Spread business primarily due to a \$228.4 million decrease resulting from the impacts of our exited retail fixed annuity business. This decrease was partially offset by a \$74.8 million increase related to higher net yields, a \$54.7 million impact associated with actuarial assumption updates and model refinements, which were favorable in 2022 with no corresponding impact in 2021, and a \$24.7 million increase in variable investment income.

Operating Expenses

Operating expenses decreased in our Fee business primarily due to a \$50.0 million decrease in expenses associated with the integration of the Acquired Business, partially offset by a \$33.1 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 a \$66.5 million impact from our exited retail fixed annuity business. This decrease was partially offset by a \$16.2 million increase primarily due to growth in our retained business.

Principal Global Investors Segment

Principal Global Investors Segment Summary Financial Data

AUM is the base by which we generate management fee revenues. Market performance and net cash flow are the two main drivers of AUM growth. Market performance reflects equity, fixed income, real estate and other alternative investment performance. Net cash flow reflects client deposits and withdrawals. The fee levels on these client deposits and withdrawals are increasingly becoming the more important factor to revenue growth and will vary widely based on business and/or product mix.

The following table presents the AUM rollforward for assets managed by Principal Global Investors for the periods indicated:

For the	three months	ended S	eptember 30,	For tl	he nine months	ended September 30		
	2022		2021		2022		2021	
			(in bi	llions)				
\$	469.8	\$	532.3	\$	546.5	\$	502.1	
	2.3		2.2		6.9		3.3	
	(21.6)		2.1		(98.8)		31.9	
	_				18.6		_	
	_		_		(23.1)		_	
	(1.1)		(1.2)		(0.7)		(1.9)	
\$	449.4	\$	535.4	\$	449.4	\$	535.4	
	•	\$ 469.8 2.3 (21.6) — — ————————————————————————————————	\$ 469.8 \$ 2.3 (21.6) (1.1)	\$ 469.8 \$ 532.3 2.3 2.2 (21.6) 2.1 (1.1) (1.2)	2022 2021 \$ 469.8 \$ 532.3 2.3 2.2 (21.6) 2.1 — — (1.1) (1.2)	2022 2021 2022 \$ 469.8 \$ 532.3 \$ 546.5 2.3 2.2 6.9 (21.6) 2.1 (98.8) — — 18.6 — — (23.1) (1.1) (1.2) (0.7)	2022 2021 2022 \$ 469.8 \$ 532.3 \$ 546.5 \$ 2.3 2.2 6.9 (21.6) 2.1 (98.8) — — 18.6 — — (23.1) (1.1) (1.2) (0.7)	

⁽¹⁾ Effective in the first quarter of 2022, includes the integration of Institutional Asset Advisory, which is associated with our IRT business.

⁽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.

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

	F	For the three months ended September 30,						For the nine	September 30,			
		2022		2021		ncrease lecrease) (in m	illior	2022 is)	_	2021		ncrease ecrease)
Operating revenues:												
Fees and other revenues	\$	402.2	\$	464.5	\$	(62.3)	\$	1,297.6	\$	1,330.7	\$	(33.1)
Net investment income		3.8		0.7		3.1		7.3		3.4		3.9
Total operating revenues		406.0		465.2		(59.2)		1,304.9		1,334.1		(29.2)
Expenses:												
Total expenses		262.9		273.3		(10.4)		835.7		813.7		22.0
Pre-tax operating earnings attributable to												
noncontrolling interest		1.1		1.8		(0.7)		3.8		4.8		(1.0)
Pre-tax operating earnings	\$	142.0	\$	190.1	\$	(48.1)	\$	465.4	\$	515.6	\$	(50.2)
1 0 0	_						_					

Three Months Ended September 30, 2022 Compared to Three Months Ended September 30, 2021

Pre-Tax Operating Earnings

Pre-tax operating earnings decreased primarily due to \$38.2 million lower management fee revenue as a result of decreased average AUM and a \$13.3 million decrease in performance fee revenue primarily in our real estate business.

Nine Months Ended September 30, 2022 Compared to Nine Months Ended September 30, 2021

Pre-Tax Operating Earnings

Pre-tax operating earnings decreased primarily due to \$24.7 million lower management fee revenue as a result of decreased average AUM and a \$22.5 million increase in non-variable staff costs.

Principal International Segment

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 periods indicated:

	For th	e three month	September 30,	For the nine months ended September 30,						
		2022		2021		2022		2021		
				(in bil	lions)					
AUM, beginning of period	\$	148.9	\$	167.1	\$	152.1	\$	165.2		
Net cash flow		(0.2)		0.4		(0.7)		1.8		
Market performance		_		(0.6)		(1.4)		1.8		
Effect of exchange rates		(4.0)		(10.8)		(4.9)		(10.7)		
Other		(0.1)		(0.3)		(0.5)		(2.3)		
AUM, end of period	\$	144.6	\$	155.8	\$	144.6	\$	155.8		

Net revenue 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 periods indicated:

	F	For the three months ended September 30,						for the nine	September 30,			
		Increase										crease
		2022		2021 (decrease)		—	2022		2021	(de	ecrease)	
						(in mil	llions	i)				
Net revenue	\$	174.7	\$	196.3	\$	(21.6)	\$	541.9	\$	548.6	\$	(6.7)

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

	For the three months ended September 30,							For the nine months ended September 30,						
	2022		2021		Increase (decrease)		2022			2021		ncrease ecrease)		
Operating revenues:						(in mi	illion	s)						
Premiums and other considerations	\$	33.8	\$	36.6	\$	(2.8)	\$	74.2	\$	105.8	\$	(31.6)		
Fees and other revenues		103.4		126.1		(22.7)		325.3		376.6		(51.3)		
Net investment income		239.7		165.4		74.3		731.4		459.9		271.5		
Total operating revenues		376.9		328.1		48.8		1,130.9		942.3		188.6		
Expenses:														
Benefits, claims and settlement expenses		202.2		131.8		70.4		589.0		393.7		195.3		
Operating expenses		107.3		114.7		(7.4)		322.9		342.5		(19.6)		
Total expenses		309.5		246.5		63.0		911.9		736.2		175.7		
Pre-tax operating earnings attributable to														
noncontrolling interest		0.7		0.6		0.1		2.1		2.3		(0.2)		
Pre-tax operating earnings	\$	66.7	\$	81.0	\$	(14.3)	\$	216.9	\$	203.8	\$	13.1		

Three Months Ended September 30, 2022 Compared to Three Months Ended September 30, 2021

Pre-Tax Operating Earnings

Pre-tax operating earnings decreased in Latin America primarily due to \$10.5 million unfavorable relative market performance on our required regulatory investments and \$6.9 million foreign currency headwinds.

Net Revenue

Net revenue decreased in Latin America primarily due to \$14.3 million foreign currency headwinds and \$5.0 million in Asia primarily due to lower fee revenue as a result of lower average AUM.

Nine Months Ended September 30, 2022 Compared to Nine Months Ended September 30, 2021

Pre-Tax Operating Earnings

Pre-tax operating earnings increased in Latin America primarily due to \$37.6 million higher earnings from our equity method investments in Brazil and partially offset by \$15.0 million foreign currency headwinds. In addition, pre-tax operating earnings decreased in \$7.0 million in Asia primarily due to lower fee revenue as a result of lower average AUM.

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 periods indicated:

	For the three months ended September 30,						For the nine months ended September 30,						
	_	2022		2021		ncrease ecrease) (in n	ni lli e	2022 ons)	_	2021		ncrease lecrease)	
Premium and fees:													
Specialty Benefits insurance	\$	712.5	\$	638.9	\$	73.6	\$	2,081.8	\$	1,878.0	\$	203.8	
Individual Life insurance		251.0		302.1		(51.1)		717.0		945.7		(228.7)	

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

	For the three months ended September 30,						For the nine months ended September 30,						
	2022		2021		Increase (decrease)		2022 n millions)		2021			Increase lecrease)	
Operating revenues:						,		,					
Premiums and other considerations	\$	846.6	\$	711.8	\$	134.8	\$	2,471.2	\$	2,117.1	\$	354.1	
Fees and other revenues		116.8		229.2		(112.4)		327.2		706.5		(379.3)	
Net investment income		129.5		249.1		(119.6)		444.1		723.3		(279.2)	
Total operating revenues	1	,092.9		1,190.1		(97.2)		3,242.5		3,546.9		(304.4)	
Expenses:													
Benefits, claims and settlement expenses		622.0		744.0		(122.0)		1,853.0		2,247.7		(394.7)	
Dividends to policyholders		24.3		28.2		(3.9)		71.9		75.1		(3.2)	
Operating expenses		310.9		266.3		44.6		914.4		850.7		63.7	
Total expenses		957.2	_	1,038.5		(81.3)		2,839.3	_	3,173.5		(334.2)	
·						Ì						ĺ	
Pre-tax operating earnings	\$	135.7	\$	151.6	\$	(15.9)	\$	403.2	\$	373.4	\$	29.8	

Three Months Ended September 30, 2022 Compared to Three Months Ended September 30, 2021

Pre-Tax Operating Earnings (Losses)

Pre-tax operating earnings in our Specialty Benefits insurance business increased \$11.1 million from improved claim experience, as well as \$7.0 million from a more favorable impact of actuarial assumption updates in the current quarter compared to the prior year quarter. Pre-tax operating earnings in our Individual Life insurance business decreased \$23.8 million due to lower variable investment income and \$22.8 million due to less favorable actuarial assumption updates in the current period compared to the prior year, partially offset by \$11.3 million in lower COVID claims.

Operating Revenues

Premium and fees in our Specialty Benefits Insurance business increased \$73.6 million, primarily due to growth in the business. Premium and fees in our Individual Life insurance business decreased \$51.1 million, primarily due to the impact of our exited ULSG business.

Net investment income in our Specialty Benefits insurance business decreased primarily due to \$7.6 million of lower variable investment income. Net investment income in our Individual Life insurance business decreased \$90.3 million due to the impact of our exited ULSG business and \$23.8 million due to lower variable investment income.

Total Expenses

Benefits, claims and settlement expenses in our Specialty Benefits insurance business increased \$47.8 million due to growth in the business, partially offset by \$11.1 million in lower claim costs and \$7.0 million associated with more favorable actuarial assumption updates in the current period compared to the prior period. Benefits, claims and settlement expenses decreased \$151.7 million in our Individual Life insurance business, primarily due to the impact of our exited ULSG business.

Operating expenses in our Specialty Benefits insurance business increased \$23.3 million from growth in the business, partially offset by \$5.1 million in strong expense management. Operating expenses in our Individual Life insurance business increased \$34.0 million due to the unfavorable impact from actuarial assumption updates and model refinements in the current period compared to favorable impacts in the prior year.

Nine Months Ended September 30, 2022 Compared to Nine Months Ended September 30, 2021

Pre-Tax Operating Earnings

Pre-tax operating earnings increased in our Specialty Benefits insurance business due to \$37.0 million in improved claim experience, \$14.4 million from growth in the business and \$13.9 million in strong expense management. Pre-tax operating earnings in our Individual Life insurance decreased primarily due to \$60.1 million in lower variable investment income and \$30.3 million of less favorable actuarial assumption updates and model refinements in the current period compared to favorable impacts in the prior year, partially offset by \$44.3 million in lower COVID claims.

Operating Revenues

Premiums and fees in our Specialty Benefits insurance business increased \$203.8 million, primarily due to growth in the business. Premium and fees in our Individual Life insurance business decreased \$228.7 million, primarily due to the impact of our exited ULSG business.

Net investment income in our Individual Life insurance business decreased \$193.0 million, primarily due to the impact of our exited ULSG business, \$60.1 million due to lower variable investment income and \$32.7 million due to losses on the indexed universal life derivatives in the current period as compared to gains in the previous period.

Total Expenses

Benefits claims and settlement expenses in our Specialty Benefits insurance business increased \$132.7 million due to growth in the business, offset by \$37.0 million from improved claim experience. Benefits, claims and settlement expenses in our Individual Life insurance business decreased \$483.5 million, primarily due to the impact of our exited ULSG business.

Operating expenses in our Specialty Benefits business increased \$64.7 million primarily due to growth in business, offset by \$13.9 million from expense management. Operating expenses in our Individual Life insurance business increased \$42.4 million from an unfavorable impact from actuarial assumption and model refinements in the current period compared to favorable impacts in the prior year, partially offset by \$29.2 million, primarily associated with the impact of our exited ULSG business.

Corporate Segment

Corporate Segment Summary Financial Data

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

For the three months ended September 30,					For the nine months ended September 30.						
	2022	_	2021		crease)	lion:	2022	_	2021		ncrease lecrease)
					,		•				
\$	(15.9)	\$	(14.3)	\$	(1.6)	\$	(23.2)	\$	(21.8)	\$	(1.4)
	85.4		82.3		3.1		309.1		252.5		56.6
	(0.5)		0.5		(1.0)		50.4		(0.7)		51.1
\$	(100.8)	\$	(97.1)	\$	(3.7)	\$	(382.7)	\$	(273.6)	\$	(109.1)
		\$ (15.9) 85.4 (0.5)	\$ (15.9) \$ 85.4 (0.5)	\$ (15.9) \$ (14.3) 85.4 82.3 (0.5) 0.5	2022 2021 Indeed (de state of the state of t	2022 2021 Increase (decrease) (in mill \$ (15.9) \$ (14.3) \$ (1.6) 85.4 82.3 3.1 (0.5) 0.5 (1.0)	2022 2021 Increase (decrease) (in million. \$ (15.9) \$ (14.3) \$ (1.6) \$ 85.4 82.3 3.1 (0.5) 0.5 (1.0)	2022 2021 Increase (decrease) 2022 (in millions) (15.9) \$ (14.3) \$ (1.6) \$ (23.2) 85.4 82.3 3.1 309.1 (0.5) 0.5 (1.0) 50.4	2022 2021 Increase (decrease) (in millions) \$ (15.9) \$ (14.3) \$ (1.6) \$ (23.2) \$ 85.4 82.3 3.1 309.1 (0.5) 0.5 (1.0) 50.4	2022 2021 Increase (decrease) (in millions) 2022 2021 \$ (15.9) \$ (14.3) \$ (1.6) \$ (23.2) \$ (21.8) 85.4 82.3 3.1 309.1 252.5 (0.5) 0.5 (1.0) 50.4 (0.7)	2022 2021 Increase (decrease) (in millions) 2022 2021 Identification (decrease) (in millions) \$ (15.9) \$ (14.3) \$ (1.6) \$ (23.2) \$ (21.8) \$ 85.4 82.3 3.1 309.1 252.5 (0.5) 0.5 (1.0) 50.4 (0.7)

Three Months Ended September 30, 2022 Compared to Three Months Ended September 30, 2021

Pre-Tax Operating Losses

Pre-tax operating losses increased primarily due to lower net investment income largely resulting from mark-to-market losses on investments.

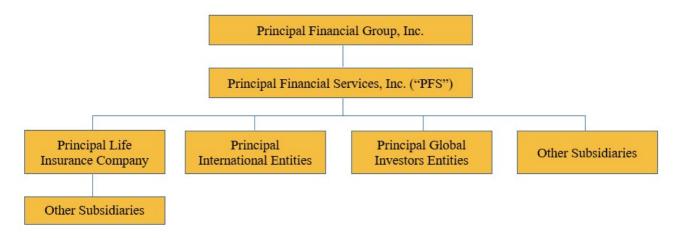
Nine Months Ended September 30, 2022 Compared to Nine Months Ended September 30, 2021

Pre-Tax Operating Losses

Pre-tax operating losses increased primarily due to \$81.9 million lower net investment income largely resulting from mark-to-market losses on investments and \$22.1 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 September 30, 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 September 30, 2022.

	 actholder funds in millions)	Percentage
Not subject to discretionary withdrawal	\$ 15,928.0	45.1 %
Subject to discretionary withdrawal with adjustments:		
Specified surrender charges	9,905.7	28.0
Market value adjustments	4,683.7	13.3
Subject to discretionary withdrawal without adjustments	4,815.7	13.6
Total domestic investment contracts	\$ 35,333.1	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 September 30, 2022:

Obligor/Applicant	Financing structure	Maturity	 apacity (in mi	 mount anding (3)
PFG, PFS and Principal Life as co-borrowers (1) (4)	Credit facility	November 2023	\$ 600.0	\$ _
PFG, PFS, Principal Life and Principal Financial				
Services V (UK) Ltd as co-borrowers (1) (4)	Credit facility	November 2023	200.0	_
Principal International Chile (2)	Unsecured lines of credit		118.6	66.5
Total			\$ 918.6	\$ 66.5

- (1) The credit facility is supported by eighteen 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.
- (4) As of October 18, 2022, the credit facilities have been extended to October 2027 and combined into one \$800.0 million credit facility. Terms of the renewed facility include Principal Life as the sole borrower with PFG and PFS as listed guarantors, with support from sixteen banks. Principal Financial Services V (UK) Ltd is no longer a party to the credit facility.

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 September 30, 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 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, 2021, the ordinary stockholder dividend limitation for Principal Life is approximately \$961.7 million in 2022. However, because the dividend test is based on dividends previously paid over rolling 12-month periods, if paid before a specified date during 2022, some or all of such dividends may be extraordinary and require regulatory approval.

Total stockholder dividends paid by Principal Life to its parent for the nine months ended September 30, 2022, were \$900.0 million, all of which was extraordinary and approved by the Commissioner. As of September 30, 2022, we had \$1,850.0 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.

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. All 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 \$2,009.7 million and \$2,107.0 million for the nine months ended September 30, 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 decrease 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 \$490.0 million for the nine months ended September 30, 2022, compared to net cash used in financing activities of \$2,867.3 million for the nine months ended September 30, 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 \$592.1 million for the nine months ended September 30, 2022, compared to net cash provided by financing activities of \$1,055.9 million for the nine months ended September 30, 2021. The increase in cash used in financing activities was primarily due to 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.

Shelf Registration. 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.

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 9, Debt" in our Annual Report on Form 10-K for the year ended December 31, 2021.

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.

	Septer	September 30, 2022 December 3				
Summary Statements of Financial Position Information:		(in m	illions)			
Total investments	\$	297.6	\$ 1,338.2			
Cash and cash equivalents		863.8	516.4			
Goodwill		618.5	618.5			
Other intangibles		454.4	475.5			
Other assets		365.4	385.7			
Due from non-obligor subsidiaries		33.4	208.2			
Total assets		2,666.6	3,593.8			
Long-term debt		3,928.5	4,226.1			
Other liabilities		507.5	563.6			
Due to non-obligor subsidiaries		838.6	904.7			
Total liabilities		5,303.7	5,741.2			

	e months ended per 30, 2022		year ended er 31, 2021
	(in millio	ons)	
Summary Statements of Operations Information:			
Total revenues	\$ 6.2	\$	223.7
Total expenses	416.8		649.7
Net loss	(349.7)		(335.3)

Short-Term Debt. The components of short-term debt were as follows:

	September 30,	2022	December 31, 2021		
	·	(in millions)			
Other recourse short-term debt	\$	66.5	\$	79.8	
Total short-term debt	\$	66.5	\$	79.8	

The short-term credit facilities are used for general corporate purposes and borrowings outstanding can fluctuate as part of working capital management.

Long-Term Debt. During the three months ended September 30, 2022, we paid off \$300.0 million of notes payable at maturity. No other significant changes have occurred to long-term debt since December 31, 2021.

Contingent Funding Agreements for Senior Debt Issuance. In March 2018, we entered into two contingent funding agreements that give us the right at any time over a ten-year or thirty-year period to issue up to \$400.0 million or \$350.0 million, respectively, of senior notes.

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

	For the nine months ended September 30, 2022		For the year ended December 31, 2021	
	(in million	ns)		
Dividends to stockholders	\$ 486.1	\$	654.1	
Repurchase of common stock (1)	1,410.7		937.2	
Total cash returned to common stockholders	\$ 1,896.8	\$	1,591.3	

⁽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.

For additional stockholders' equity information, see Item 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 11, Stockholders' Equity."

Capitalization

The following table summarizes our capital structure:

	Septe	September 30, 2022 December 31, 2021 (\$\\$ in millions)		
Debt:				
Short-term debt	\$	66.5	\$	79.8
Long-term debt		3,981.0		4,280.2
Total debt		4,047.5		4,360.0
Total stockholders' equity attributable to PFG (1)		9,446.2		16,069.4
Total capitalization	\$	13,493.7	\$	20,429.4
Debt to equity		43 %		27 %
Debt to capitalization		30 %		21 %

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

Contractual Obligations and Contractual Commitments

As of September 30, 2022, we had no unique material cash requirements from known contractual and other obligations.

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 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 2, Variable Interest Entities." We have made commitments to fund certain limited partnerships, some of which are classified as unconsolidated variable interest entities.

Guarantees and Indemnifications. As of September 30, 2022, no significant changes to guarantees and indemnifications have occurred since December 31, 2021. For guarantee and indemnification information, see Item 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 10, Contingencies, Guarantees and Indemnifications" 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 Principal National Life Insurance Company. 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+

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 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 12, Fair Value Measurements" for further details, including a reconciliation of changes in Level 3 fair value measurements.

As of September 30, 2022, 43% of our net assets (liabilities) were Level 1, 53% were Level 2 and 4% were Level 3. Excluding separate account assets as of September 30, 2022, 3% of our net assets (liabilities) were Level 1, 88% were Level 2 and 9% 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 September 30, 2022, were \$7,313.0 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 asset related to the funds withheld agreement and an increase in manually priced private corporate credit securities due to an increase in interest rates during the year.

Investments

We had total consolidated assets as of September 30, 2022, of \$282,580.6 million, of which \$93,843.4 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 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 7, 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 September 30, 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.

	September 30, 2022						
		nvestments					
		excluding	Funds				
	funds withheld		withheld	_	Total		
	•	1 < 0 10 =	(in millions)	_	(0.444.0		
Fixed maturities	\$	46,243.5	\$ 16,868.3	\$	63,111.8		
Equity securities		1,605.9	10.3		1,616.2		
Mortgage loans		17,836.4	2,766.2		20,602.6		
Real estate		2,136.8	_		2,136.8		
Policy loans		766.2	_		766.2		
Other investments		5,577.2	32.6		5,609.8		
Total invested assets		74,166.0	19,677.4		93,843.4		
Cash and cash equivalents		3,250.0	989.6		4,239.6		
Total invested assets and cash	\$	77,416.0	\$ 20,667.0	\$	98,083.0		

	December 31, 2021					
		nvestments excluding nds withheld	Funds withheld (in millions)			Total
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 periods 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 three months ended September 30,					For the nine months ended September 30,					
	20	022	2	2021	Increase ((decrease)	2	022	2021		Increase (decrease)	
	Yield	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield	Amount
						(\$ in n	nillions)					
Fixed maturities	4.0 %	\$ 518.9	4.0 %	\$ 706.2	— %	\$ (187.3)	5.9 %	\$ 1,528.4	3.9 %	\$ 2,071.4	2.0 %	\$ (543.0)
Equity securities (1)	(0.8)	(3.1)	1.5	9.2	(2.3)	(12.3)	(1.3)	(12.8)	2.2	34.2	(3.5)	(47.0)
Mortgage loans — commercial	3.8	131.9	3.9	159.7	(0.1)	(27.8)	6.1	408.5	4.0	475.1	2.1	(66.6)
Mortgage loans — residential	6.7	61.1	4.5	30.8	2.2	30.3	9.8	171.9	5.3	87.5	4.5	84.4
5 5												
Real estate	5.3	27.9	10.2	49.8	(4.9)	(21.9)	20.7	218.1	6.5	110.4	14.2	107.7
Policy loans	4.9	8.8	5.0	9.6	(0.1)	(0.8)	7.1	27.0	5.1	29.3	2.0	(2.3)
Cash and cash equivalents	2.2	16.7	0.1	1.0	2.1	15.7	1.7	24.2	0.1	2.8	1.6	21.4
Other investments	13.3	182.4	11.6	156.0	1.7	26.4	22.1	565.3	10.8	441.2	11.3	124.1
Total	4.6	944.6	4.3	1,122.3	0.3	(177.7)	7.2	2,930.6	4.2	3,251.9	3.0	(321.3)
Investment expenses	(0.2)	(36.4)	(0.1)	(28.9)	(0.1)	(7.5)	(0.2)	(87.8)	(0.1)	(84.9)	(0.1)	(2.9)
Net investment income	4.4 %	\$ 908.2	4.2 %	\$ 1,093.4	0.2 %	\$ (185.2)	7.0 %	\$ 2,842.8	4.1 %	\$ 3,167.0	2.9 %	\$ (324.2)

⁽¹⁾ Negative due to negative market performance on non-OPEB mutual funds and required regulatory investments.

Three Months Ended September 30, 2022 Compared to Three Months Ended September 30, 2021

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

Nine Months Ended September 30, 2022 Compared to Nine Months Ended September 30, 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 periods indicated. 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 three months ended September 30,]	For the nine months ended September 30,					
	2022		2021		Increase (decrease) (in		2022 n millions)		2021			ncrease lecrease)
Fixed maturities, available-for-sale – credit losses,												
including credit sales (1)	\$	(1.2)	\$	(9.6)	\$	8.4	\$	(24.0)	\$	(27.6)	\$	3.6
Commercial mortgage loans – credit gains (losses)		(1.3)		1.5		(2.8)		(23.0)		8.0		(31.0)
Other – credit gains (losses)		(1.2)		1.1		(2.3)		0.6		6.2		(5.6)
Fixed maturities, available-for-sale and trading –												
noncredit		(37.5)		9.2		(46.7)		(140.9)		7.3		(148.2)
Derivatives and related hedge activities (2)		52.9		(174.3)		227.2		153.4		(143.5)		296.9
Other gains (losses)		(67.4)		20.1		(87.5)		(360.2)		107.9		(468.1)
Net realized capital losses (3)	\$	(55.7)	\$	(152.0)	\$	96.3	\$	(394.1)	\$	(41.7)	\$	(352.4)

- (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 \$(4.3) million and \$(1.1) million for the three months ended September 30, 2022 and 2021, and \$(17.3) million and \$(3.6) million for the nine months ended September 30, 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.

Three Months Ended September 30, 2022 Compared to Three Months Ended September 30, 2021

Net realized capital losses decreased primarily due to a decrease in losses from GMWB embedded derivatives, including changes in the spread reflecting our own creditworthiness, and related hedging instruments; a decrease in losses on currency derivatives due to changes in rates and increased gains on interest rate swaps not designated as hedging instruments due to changes in interest rates. These decreases were partially offset by increased losses on equity securities and sponsored investment funds due to equity market declines and non-credit losses on available-for-sale fixed maturities.

Nine Months Ended September 30, 2022 Compared to Nine Months Ended September 30, 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 and a current year increase in our commercial mortgage valuation allowance. These increases were partially offset by a decrease in losses from GMWB embedded derivatives, including changes in the spread reflecting our own creditworthiness, and related hedging instruments; gains versus losses on currency derivatives due to changes in rates and increased gains on interest rate swaps not designated as hedging instruments due to changes in interest rates.

U.S. Investment Operations

In the following sections, we provide details about U.S. Investment Operations, excluding investments held as part of the funds withheld reinsurance 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 7, Reinsurance, for further information on the funds withheld assets.

Of our invested assets, \$67,751.1 million were held by our U.S. operations as of September 30, 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 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 September 30, 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 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 4, 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 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 3, 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 loa	n-to-value ratio	Debt service co	verage ratio
	September 30, 2022	December 31, 2021	September 30, 2022	December 31, 2021
New mortgages	50 %	50 %	2.3 x	3.2 x
Entire mortgage portfolio	45 %	46 %	2.5 x	2.5 x

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 \$2,988.3 million and 4.5%, respectively, as of September 30, 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 \$4,923.8 million and 2.6%, respectively, as of September 30, 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 3. "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. The following discussion analyzes the composition of U.S. invested assets, but excludes invested assets of the separate accounts.

September 30, 2022			December 31, 2021		
Car	rying amount	% of total	Carrying amount	% of total	
		(\$ in mil	lions)		
\$	43,544.7	64 %	\$ 75,553.4	74 %	
	528.2	1	1,051.5	1	
	17,003.2	25	18,862.7	19	
	2,122.3	3	2,060.6	2	
	753.3	1	745.7	1	
	3,799.4	6	3,671.7	3	
	67,751.1	100 %	101,945.6	100 %	
	3,011.8		2,074.8		
\$	70,762.9		\$ 104,020.4		
		Carrying amount \$ 43,544.7	Carrying amount % of total (\$\sin \text{mill.}\$] \$ 43,544.7 64 % 528.2 1 17,003.2 25 2,122.3 3 753.3 1 3,799.4 6 67,751.1 100 % 3,011.8	Carrying amount % of total (\$ in millions) Carrying amount millions \$ 43,544.7 64 % \$ 75,553.4 528.2 1 1,051.5 17,003.2 25 18,862.7 2,122.3 3 2,060.6 753.3 1 745.7 3,799.4 6 3,671.7 67,751.1 100 % 101,945.6 3,011.8 2,074.8	

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 periods indicated.

	September 30, 2022			December 31, 2021		
		Carrying amount	Percent of total (\$ in million	Carrying amount	Percent of total	
U.S. government and agencies	\$	1,267.3	3 % \$	/	3 %	
Non-U.S. governments		413.2	1	949.5	1	
States and political subdivisions		4,549.3	10	9,289.9	12	
Corporate - public		10,899.5	25	23,042.1	31	
Corporate - private		13,752.8	32	20,251.8	27	
Residential mortgage-backed pass-through securities		1,643.4	4	3,262.7	4	
Commercial mortgage-backed securities		3,900.1	9	5,556.1	7	
Residential collateralized mortgage obligations		2,572.1	6	3,834.8	5	
Asset-backed securities		4,547.0	10	7,299.4	10	
Total fixed maturities	\$	43,544.7	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 15% of total fixed maturities as of September 30, 2022, and 16% as of December 31, 2021. It is comprised of corporate and foreign government fixed maturities.

	Septe	ember 30, 2022	December 31, 202		
European Union	\$	1,552.5	\$	2,876.6	
United Kingdom		1,099.9		2,079.0	
Australia/New Zealand		1,304.9		2,060.3	
Latin America		991.3		1,578.6	
Asia-Pacific		646.7		1,364.3	
Middle East and Africa		431.7		920.7	
Europe, non-European Union		326.1		713.7	
Other (1)		133.5		253.7	
Total	\$	6,486.6	\$	11,846.9	

(1) Includes exposure from one country and various supranational organizations as of both September 30, 2022 and December 31, 2021.

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 September 30, 2022 and December 31, 2021, our investments in Canada totaled \$975.5 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 4.9% of single-name credit fixed maturity exposures as of September 30, 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 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 12, 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 National Association of Insurance Commissioners ("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 periods indicated as well as the percentage, based on fair value, that each designation comprises.

	Se	ptember 30, 2022	De	December 31, 2021		
NAIC designation	Amortized cost	Carrying amount	Percent of carrying amount	Amortized cost	Carrying amount	Percent of carrying amount
		0 4= 0.44 =	(\$ in milli		A 10.166A	C= 0/
l	\$ 31,447.8	\$ 27,942.5	64 %	\$ 46,117.2	\$ 49,166.2	65 %
2	14,340.5	12,660.3	29	20,140.8	22,094.8	29
3	2,869.2	2,584.0	6	3,909.7	4,016.5	6
4	285.8	270.9	1	245.2	242.2	_
5	75.4	74.3	_	34.4	28.9	_
6	20.2	12.7	_	3.6	4.8	_
Total fixed maturities	\$ 49,038.9	\$ 43,544.7	100 %	70,450.9	\$ 75,553.4	100 %

Fixed maturities included 56 securities with an amortized cost of \$739.7 million, gross gains of \$0.5 million, gross losses of \$78.4 million and a carrying amount of \$661.8 million as of September 30, 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 September 30, 2022, based on amortized cost, 95% 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 periods indicated.

			Septembe	r 30, 2022	Decembe	r 31, 2021	
	NAIC designation		Amortized	Carrying	Amortized	Carrying	
	NAIC designation		cost	amount	illions)	amount	
1		\$	4,206.6	\$ 3,726.0	\$ 5,169.9	\$ 5,285.8	
2			132.1	113.0	169.5	176.3	
3			64.7	54.6	84.2	87.4	
4			8.6	6.2	5.1	5.3	
5			_	_	_	_	
6			0.6	0.3	1.6	1.3	
Total (1)		\$	4,412.6	\$ 3,900.1	\$ 5,430.3	\$ 5,556.1	

⁽¹⁾ The CMBS portfolio included agency CMBS with a \$547.9 million amortized cost and a \$511.8 million carrying amount as of September 30, 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 periods indicated.

	Septe	ember 30, 2022 (\$ in n	December 31, 2021 millions)		
Total fixed maturities	\$	43,544.7	\$	75,553.4	
Problem fixed maturities (1)	\$	20.3	\$	20.5	
Potential problem fixed maturities		20.6		5.7	
Total problem, potential problem and restructured fixed maturities	\$	40.9	\$	26.2	
Total problem, potential problem and restructured fixed maturities as a percent of total					
fixed maturities		0.09 %	o	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 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 3, 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 \$7.0 million and \$9.6 million for the three months ended September 30, 2022 and 2021, respectively, and \$26.5 million and \$24.7 million for the nine months ended September 30, 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 periods indicated.

	September 30, 2022							
		Amortized		Gross nrealized	Gross unrealized	Allowance for credit	Carrying	
	P	cost	u	gains	losses	loss	amount	
P. 1:	Ф	2 400 0	Ф	• • •	(in millions)	Ф.	0 2210.2	
Finance — Banking	\$	2,490.8	\$	2.8	\$ 274.3	s —	\$ 2,219.3	
Finance — Brokerage		586.3		0.4	84.2	_	502.5	
Finance — Finance Companies		388.1		(0.4)	66.4	_	321.3	
Finance — Financial Other		1,166.2		0.2	186.4	_	980.0	
Finance — Insurance		1,965.2		25.5	206.5	_	1,784.2	
Finance — Real estate investment trusts ("REITs")		1,797.5		0.2	253.5	_	1,544.2	
Industrial — Basic Industry		1,218.2		4.4	147.4	_	1,075.2	
Industrial — Capital Goods		1,628.9		8.5	186.8	_	1,450.6	
Industrial — Communications		2,330.3		43.5	249.8	_	2,124.0	
Industrial — Consumer Cyclical		1,200.9		5.2	156.9		1,049.2	
Industrial — Consumer Non-Cyclical		3,184.0		12.4	345.7	_	2,850.7	
Industrial — Energy		1,918.0		26.1	201.2	_	1,742.9	
Industrial — Other		813.8		0.6	75.0	_	739.4	
Industrial — Technology		1,440.1		2.8	181.3	_	1,261.6	
Industrial — Transportation		1,621.8		5.3	196.5	_	1,430.6	
Utility — Electric		2,873.7		15.6	409.6	_	2,479.7	
Utility — Natural Gas		392.3		0.1	64.3	_	328.1	
Utility — Other		358.9		_	68.1	_	290.8	
Government guaranteed		181.9		9.3	20.9	_	170.3	
Total corporate securities		27,556.9	_	162.5	3,374.8		24,344.6	
1					,		ĺ	
Residential mortgage-backed pass-through securities		1,845.0		0.9	207.2	_	1,638.7	
Commercial mortgage-backed securities		4,327.9		0.3	512.8	_	3,815.4	
Residential collateralized mortgage obligations		2,996.2		0.9	424.9	0.1	2,572.1	
Asset-backed securities — Home equity (1)		76.4		3.2	4.0	_	75.6	
Asset-backed securities — All other		1,453.6		(2.3)	121.4	_	1,329.9	
Collateralized debt obligations — Credit		16.7		<u> </u>	5.2	_	11.5	
Collateralized debt obligations — CMBS		_		0.5	_	_	0.5	
Collateralized debt obligations — Loans		3,144.8		1.2	103.4	_	3,042.6	
Total mortgage-backed and other asset-backed securities		13,860.6	_	4.7	1,378.9	0.1	12,486.3	
U.S. government and agencies		1,284.6		_	95.7	_	1,188.9	
States and political subdivisions		5,321.5		9.0	785.8	_	4,544.7	
Non-U.S. governments		446.1		21.4	56.5	_	411.0	
Total fixed maturities, available-for-sale	\$	48,469.7	\$	197.6	\$ 5,691.7	\$ 0.1	\$ 42,975.5	
,	_		_					

⁽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	
Finance — Banking	\$ 4,746.3	\$ 333.3	(in millions) \$ 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 \$5,691.7 million in gross unrealized losses as of September 30, 2022, \$9.1 million in losses were attributed to securities scheduled to mature in one year or less, \$343.5 million attributed to securities scheduled to mature between one to five years, \$1,179.4 million attributed to securities scheduled to mature between five to ten years, \$2,780.8 million attributed to securities scheduled to mature after ten years and \$1,378.9 million related to mortgage-backed and other ABS that are not classified by maturity year. As of September 30, 2022, we were in a \$5,494.1 million net unrealized loss position as compared to a \$5,107.4 million net unrealized gain position as of December 31, 2021. The \$10,601.5 million decrease in net unrealized gains for the nine months ended September 30, 2022, can be attributed to an increase in interest rates plus 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 periods indicated.

	September 30, 2022				December 31, 2021					
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Allowance for credit loss			Gross unrealized gains	Gross unrealized losses	Allowance for credit loss	Carrying amount
Investment grade:					,	ĺ				
Public	\$ 26,254.6	\$ 150.1	\$ 3,195.0	\$ 0.1	\$ 23,209.6	\$ 41,401.6	\$ 4,000.6	\$ 179.3	\$ 0.2	\$ 45,222.7
Private	19,073.1	39.5	2,180.0	_	16,932.6	24,557.3	1,276.7	94.8	_	25,739.2
Below investment grade:										
Public	781.0	3.8	107.4	_	677.4	1,428.4	90.8	8.9	_	1,510.3
Private	2,361.0	4.2	209.3	_	2,155.9	2,719.3	48.6	26.3	4.7	2,736.9
Total fixed maturities, available-for-sale	\$ 48,469.7	\$ 197.6	\$ 5,691.7	\$ 0.1	\$ 42,975.5	\$ 70,106.6	\$ 5,416.7	\$ 309.3	\$ 4.9	\$ 75,209.1

Included in the privately placed category as of September 30, 2022 and December 31, 2021, were \$10.4 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 September 30, 2022 and December 31, 2021, respectively.

	September 30, 2022						
	Less than twelve months			r than or velve months	Та	tal	
	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	
Fixed maturities, available-for-sale (1):			,				
U.S. government and agencies	\$ 1,065.7	\$ 56.1	\$ 123.1	\$ 39.6	\$ 1,188.8	\$ 95.7	
Non-U.S. governments	260.6	52.1	10.8	4.4	271.4	56.5	
States and political subdivisions	3,957.1	721.4	240.8	64.4	4,197.9	785.8	
Corporate	19,288.0	2,865.0	1,757.5	509.8	21,045.5	3,374.8	
Residential mortgage-backed pass-through							
securities	1,161.6	124.6	433.9	82.7	1,595.5	207.3	
Commercial mortgage-backed securities	3,086.0	381.7	665.7	129.6	3,751.7	511.3	
Collateralized debt obligations (2)	2,102.3	74.2	873.3	34.3	2,975.6	108.5	
Other debt obligations	2,423.5	260.6	1,508.0	289.5	3,931.5	550.1	
Total fixed maturities, available-for-sale	\$ 33,344.8	\$ 4,535.7	\$ 5,613.1	\$ 1,154.3	\$ 38,957.9	\$ 5,690.0	

⁽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.

					Decembe						
	Less twelve	than montl	hs	Greater than or equal to twelve months				Total			
	 Fair value		Gross unrealized losses		Fair value (in milli		Gross unrealized losses uillions)		Fair value	un	Gross realized losses
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

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

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 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 3, 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 September 30, 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.

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

The typical borrower in our commercial mortgage loan portfolio is a single purpose entity or single asset entity. As of September 30, 2022 and December 31, 2021, the total number of commercial mortgage loans outstanding were 617 and 750, of which 71% and 41% were for loans with principal balances less than \$10.0 million as of September 30, 2022 and December 31, 2021, respectively. The average loan size of our commercial mortgage portfolio was \$22.1 million and \$21.3 million as of September 30, 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 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 3, 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 \$43.4 million for which we had a valuation allowance of \$28.5 million as of September 30, 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.

				ember 31, 2021
	(\$ in millions)			
Total commercial mortgage loans	\$	13,550.6	\$	15,920.1
Restructured problem commercial mortgage loans		14.9	_	
Total problem, potential problem and restructured commercial mortgage loans	\$	14.9	\$	_
Total problem, potential problem and restructured commercial mortgage loans as a percent				
of total commercial mortgage loans		0.11 %	, D	— %

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 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 3, Investments" under the caption, "Financing Receivables Valuation Allowance."

Real Estate

Real estate consists primarily of commercial equity real estate. As of September 30, 2022 and December 31, 2021, the carrying amount of our equity real estate investment was \$2,122.3 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 nine months ended September 30, 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 nine months ended September 30, 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 September 30, 2022, our largest equity real estate portfolio concentration was in the Pacific (40%) region of the United States. By property type, our largest concentrations were in Apartments (33%) and Industrial (27%) as of September 30, 2022.

Other Investments

Our other investments totaled \$3,799.4 million as of September 30, 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, \$6,414.9 million were held by our Principal International segment as of September 30, 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.

	Septe	mber 30, 2022	December 31, 2021		
	Carryin amount	of total	Carrying amount	Percent of total	
		(\$ in mill			
Fixed maturities	\$ 2,698	3.8 42 %	\$ 3,023.3	43 %	
Equity securities	1,077	7.7 17	1,295.7	20	
Mortgage loans	833	3.2 13	806.0	11	
Real estate	14	4.5 —	14.8	_	
Policy loans	12	2.9 —	13.9	_	
Other investments:					
Direct financing leases	583	3.0 9	609.5	9	
Investment in unconsolidated operating entities	836	5.5 13	849.9	12	
Derivative assets and other investments	358	3.3 6	347.2	5	
Total invested assets	6,414	1.9 100 %	6,960.3	100 %	
Cash and cash equivalents	238	3.2	257.2		
Total invested assets and cash	\$ 6,653	3.1	\$ 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 3. 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.

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 our Annual Report on Form 10-K for the year ended December 31, 2021.

In addition, we have implemented reinsurance transactions utilizing affiliated reinsurers and highly rated third parties to finance a portion of the statutory reserves for our term 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 15, Statutory Insurance Financial Information" in our Annual Report on Form 10-K for the year ended December 31, 2021.

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	An increase in investment income, which may be partially or
by a reduction in the interest we credit on contractholder account	fully offset by an increase in the interest we credit on
balances; however, our ability to lower crediting rates may be	contractholder account balances
constrained by guaranteed minimum interest rates and	
competitive pressures	
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	A true-up or unlocking of our DAC asset and other actuarial
DAC asset and other actuarial balances	balances
A reduction in the discount rate used in valuing our pension and	An increase in the discount rate used in valuing our pension and
OPEB obligations, leading to an increase in our Projected	OPEB obligations, leading to a decrease in our Projected Benefit
Benefit Obligation, Net Periodic Pension Cost, Accumulated	Obligation, Net Periodic Pension Cost, Accumulated
Postretirement Benefit Obligation and Net Periodic Benefit Cost	Postretirement Benefit Obligation and Net Periodic Benefit Cost
An increase in statutory capital we are required to hold as well as	A decrease in statutory capital we are required to hold as well as
the amount of assets we must maintain to support statutory	the amount of assets we must maintain to support statutory
reserves	reserves
An increase in prepayments or redemptions on mortgages and	A decrease in prepayments or redemptions on mortgages and
bonds we own, which would force us to reinvest the proceeds at lower interest rates	bonds we own, which would reduce our opportunity to reinvest
lower interest rates	the proceeds at higher interest rates
Positive Impacts:	Adverse Impacts:
An increase in the value of the fixed income assets we manage,	A decrease in the value of the fixed income assets we manage,
resulting in an increase in our fee revenue in the short-term	resulting in a decrease in our fee revenue in the short-term
A decrease in the interest expense on our long-term borrowings,	An increase in the interest expense on our long-term borrowings,
to the extent the borrowings have adjustable rates or we are able	to the extent the borrowings have adjustable rates or we refinance
to refinance our obligations at lower interest rates	our obligations at higher interest rates
An increase in the fair value of certain financial assets held at	A decrease in the fair value of certain financial assets held at fair
fair value on our consolidated statements of financial position	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 September 30, 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.

				nt values (1)		
				ng rates over GMIR:		
	A CMID	Up to 0.50%	0.51% to 1.00%	1.01% to 2.00%	2.01% or more	70 4 1
	At GMIR	above GMIR	above GMIR	above GMIR millions)	above GMIR	<u>Total</u>
Guaranteed minimum interest rate			(4.1.			
Retirement and Income Solutions						
Up to 1.00%	\$ 39.6	\$ 53.9	\$ 7,355.4	\$ 319.7	\$ 310.3	\$ 8,078.9
1.01% - 2.00%	4.0	567.7	1,194.4	_	137.6	1,903.7
2.01% - 3.00%	352.7	0.1	_	_	_	352.8
3.01% - 4.00%	7.9		_	_	_	7.9
4.01% and above	19.6	_	_	_	_	19.6
Subtotal	423.8	621.7	8,549.8	319.7	447.9	10,362.9
U.S. Insurance Solutions						
Up to 1.00%	_	8.5	10.3	_	0.6	19.4
1.01% - 2.00%	_		2.9	248.9	172.6	424.4
2.01% - 3.00%	68.1	189.9	189.3	59.8	0.4	507.5
3.01% - 4.00%	1,714.7	6.1	20.5	29.1	3.2	1,773.6
4.01% and above	47.5	4.0	3.5	1.6	_	56.6
Subtotal	1,830.3	208.5	226.5	339.4	176.8	2,781.5
Total	\$ 2,254.1	\$ 830.2	\$ 8,776.3	\$ 659.1	\$ 624.7	\$ 13,144.4
Percentage of total	17.1 %	6.3 %	66.8 %	% 5.0 %	4.8 %	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 \$582.2 million of account values with GMIRs in Brazil as of September 30, 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 \$2,773.4 million as of September 30, 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 14, Fair Value Measurements" in our Annual Report on Form 10-K for the year ended December 31, 2021.

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 September 30, 2022, decreased \$2,706.3 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, full service accumulation, 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 11, Employee and Agent Benefits" in our Annual Report on Form 10-K for the year ended December 31, 2021.

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, 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 September 30, 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 that a 10% immediate unfavorable change in each of the foreign currency exchange rates to which we were exposed would have resulted in a \$276.8 million, or 10.0%, reduction in the total equity excluding noncontrolling interests of our international operations as of September 30, 2022, as compared to an estimated \$302.9 million, or 10%, 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 an \$8.5 million, or 13.0%, reduction in segment pre-tax operating earnings of our international operations for the three months ended September 30, 2022, as compared to an estimated \$10.0 million, or 12.0%, reduction for the three months ended September 30, 2021. In addition, we estimate that 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 \$26.9 million, or 12.0%, reduction in segment pre-tax operating earnings of our international operations for the nine months ended September 30, 2022, as compared to an estimated \$26.0 million, or 13.0%, reduction for the nine months ended September 30, 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 September 30, 2022 and December 31, 2021. The notional amount of our currency swap agreements associated with foreign-denominated fixed maturities was \$1,265.0 million and \$958.9 million as of September 30, 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 \$270.5 million and \$283.8 million as of September 30, 2022 and December 31, 2021, respectively. Our Principal International operations also utilized currency forwards with a notional amount of \$706.3 million and \$721.7 million as of September 30, 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 \$426.8 million and \$321.9 million as of September 30, 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 September 30, 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 September 30, 2022 and December 31, 2021, the fair value of our equity securities was \$1,616.2 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 \$161.6 million as of September 30, 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" in our Annual Report on Form 10-K for the year ended December 31, 2021.

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" in our Annual Report on Form 10-K for the year ended December 31, 2021.

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 7%. 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 \$1,535.6 million, \$1,645.7 million, \$1,999.8 million, and \$4,280.1 million, respectively, as of September 30, 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 4. Controls and Procedures

Disclosure Controls and Procedures

In order to ensure that the information that 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 that information required to be disclosed by us in the reports that we file with or submit to the SEC is accumulated and communicated to our management, including our Chief Executive Officer and 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 September 30, 2022, and have concluded our disclosure controls and procedures are effective.

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.

PART II — OTHER INFORMATION

Item 1. Legal Proceedings

Disclosure concerning legal proceedings can be found in Part I, Item 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 10, Contingencies, Guarantees and Indemnifications" under the caption, "Litigation and Regulatory Contingencies," which is incorporated here by this reference.

Item 1A. Risk Factors

In addition to the other information set forth in this report, consideration should be given to the factors discussed in Part I, Item 1A. "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2021. If any of those factors were to occur, they could materially adversely affect our business, financial condition or future results, and could cause actual results to differ materially from those expressed in forward-looking statements in this report. While we have not had material changes with respect to the risk factors discussed in our Annual Report on Form 10-K for the year ended December 31, 2021, we are updating the risk factor set out below.

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 IRA 2022 was enacted by the U.S. government. IRA 2022 contains several provisions, including the implementation of the Book Minimum Tax and an excise tax on stock repurchases by certain corporations. 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 8, Income Taxes."

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Issuer Purchases of Equity Securities

The following table presents the amount of our common 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	val tha pur the	ue of shares t may yet be chased under programs (in tillions) (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
Total	20,129,755		19,707,843		

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

- (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.

⁽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.

Item 6. Exhibits

		Incorporated by	reference herein
Exhibit Number	Description	Form	File Date
31.1	<u>Certification of Daniel J. Houston</u>		
31.2	Certification of Deanna D. Strable-Soethout		
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 Quarterly Report on Form		
	10-Q for the period ended September 30, 2022 formatted in iXBRL (Inline eXtensible		
	Business Reporting Language): (i) the Condensed Consolidated Statements of Financial		
	Position, (ii) the Condensed Consolidated Statements of Operations, (iii) the Condensed		
	Consolidated Statements of Comprehensive Income, (iv) the Condensed Consolidated		
	Statements of Stockholders' Equity, (v) the Condensed Consolidated Statements of Cash		
	Flows and (vi) the Notes to Unaudited Condensed Consolidated Financial Statements.		
104	The cover page from Principal Financial Group, Inc.'s Quarterly Report on Form 10-Q for		
	the period ended September 30, 2022 formatted in iXBRL and contained in Exhibit 101.		

SIGNATURE

Pursuant to the requirements 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: November 2, 2022

By /s/ Deanna D. Strable-Soethout

Deanna D. Strable-Soethout

Executive Vice President and Chief Financial Officer

Duly Authorized Officer, Principal Financial Officer, and Principal Accounting Officer

CERTIFICATIONS

I, Daniel J. Houston, certify that:

- 1. I have reviewed this quarterly report on Form 10-Q of Principal Financial Group, Inc.;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our
 conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by
 this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting;
- 5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 2, 2022

/s/ Daniel J. Houston

Daniel J. Houston

Chairman, President and Chief Executive Officer

CERTIFICATIONS

- I, Deanna D. Strable-Soethout, certify that:
- 1. I have reviewed this quarterly report on Form 10-Q of Principal Financial Group, Inc.;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed
 under our supervision, to ensure that material information relating to the registrant, including its consolidated
 subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is
 being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting;
- 5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 2, 2022

/s/ Deanna D. Strable-Soethout
Deanna D. Strable-Soethout
Executive Vice President and Chief Financial Officer

Certification Pursuant to Section 1350 of Chapter 63 of Title 18 of the United States Code

I, Daniel J. Houston, Chairman, President and Chief Executive Officer of Principal Financial Group, Inc., certify that (i) the Form 10-Q for the period ended September 30, 2022, fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934 and (ii) the information contained in the Form 10-Q for the period ended September 30, 2022, fairly presents, in all material respects, the financial condition and results of operations of Principal Financial Group, Inc.

/s/ Daniel J. Houston

Daniel J. Houston

Chairman, President and Chief Executive Officer

Date: November 2, 2022

Certification Pursuant to Section 1350 of Chapter 63 of Title 18 of the United States Code

I, Deanna D. Strable-Soethout, Executive Vice President and Chief Financial Officer of Principal Financial Group, Inc., certify that (i) the Form 10-Q for the period ended September 30, 2022, fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934 and (ii) the information contained in the Form 10-Q for the period ended September 30, 2022, fairly presents, in all material respects, the financial condition and results of operations of Principal Financial Group, Inc.

/s/ Deanna D. Strable-Soethout

Deanna D. Strable-Soethout Executive Vice President and Chief Financial Officer

Date: November 2, 2022