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 June 30, 2020

OR

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

1-16725

(Commission file number)

PRINCIPAL FINANCIAL GROUP, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

42-1520346

(I.R.S. Employer Identification Number)

711 High Street, Des Moines, Iowa 50392 (Address of principal executive offices)

(515) 247-5111

(Registrant's telephone number, including area code)

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

Title of each classTrading symbol(s)Name of each exchange on which registeredCommon StockPFGNasdaq Global Select Market

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (222.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes \square No \square

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

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

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

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

The total number of shares of the registrant's Common Stock, \$0.01 par value, outstanding as of July 22, 2020, was 274,518,698.

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

		une 30, 2020	Dee	cember 31, 2019
	(U	naudited) (in m	illions)	
Assets Fixed maturities, available-for-sale (2019 includes \$99.4 million related to consolidated variable interest entities) Fixed maturities, trading	\$	74,269.2 583.8	\$	70,106.2 675.9
Equity securities (2020 and 2019 include \$837.6 million and \$810.9 million related to consolidated variable interest entities) Mortgage loans		1,778.5 16.696.6		1,879.4 16.486.9
Real estate (2020 and 2019 include \$428.0 million and \$457.6 million related to consolidated variable interest entities) Policy loans		1,699.7 796.4		1,714.8 798.0
Other investments (2020 and 2019 include \$294.2 million and \$263.7 million related to consolidated variable interest entities and \$25.4 million and \$22.8 million measured at fair value under the fair value option)		4,734.4		4,690.2
Total investments		100,558.6		96,351.4
Cash and cash equivalents Accrued investment income		3,150.4 702.1		2,515.9 686.6
Premiums due and other receivables		1,760.0		1.740.3
Deferred acquisition costs		3,487.7		3,521.3
Property and equipment		993.1		967.7
Goodwill		1,630.9		1,693.8
Other intangibles		1,709.3		1,786.7
Separate account assets (2020 and 2019 include \$36,058.8 million and \$39,130.3 million related to consolidated variable interest entities)		155,936.3		165,468.0
Other assets Total assets	<u>e</u>	1,381.0	¢	1,356.1
	\$	271,309.4	\$	276,087.8
Liabilities	\$	42,308.4	\$	41.367.5
Contractholder funds (2020 and 2019 include \$395.5 million and \$394.6 million related to consolidated variable interest entities) Future policy benefits and claims	Ф	42,308.4 42,896.1	Ф	40.838.2
Other policyholder funds		42,050.1 987.4		40,838.2 959.4
Short-term debt		76.3		93.4
Long-term debt (2019 includes \$64.2 million related to consolidated variable interest entities)		4,163.4		3,734.1
Income taxes currently payable		16.3		16.2
Deferred income taxes		2,061.5		1,796.6
Separate account liabilities (2020 and 2019 include \$36,058.8 million and \$39,130.3 million related to consolidated variable		155 000 0		105 400 0
interest entities) Other liabilities (2020 and 2019 include \$38.2 million and \$124.4 million related to consolidated variable interest entities)		155,936.3 7,280.0		165,468.0 6,863.7
Total liabilities		255,725.7		261,137.1
		255,725.7		201,137.1
Redeemable noncontrolling interest (2020 and 2019 include \$197.5 million and \$215.4 million related to consolidated variable				
interest entities)		272.7		264.9
Stockholders' equity				
Common stock, par value \$0.01 per share — 2,500.0 million shares authorized, 481.1 million and 479.3 million shares issued,				
and 274.0 million and 276.6 million shares outstanding in 2020 and 2019		4.8		4.8
Additional paid-in capital		10,259.6		10,182.6
Retained earnings Accumulated other comprehensive income		11,441.4 1,450.7		11,074.3 1.037.9
Treasury stock, at cost (207.1 million and 202.7 million shares in 2020 and 2019)		(7,913.4)		(7,681.6)
Total stockholders' equity attributable to Principal Financial Group, Inc.		15,243.1		14,618.0
Noncontrolling interest		67.9		67.8
Total stockholders' equity		15,311.0		14,685.8
Total liabilities and stockholders' equity	\$	271,309.4	\$	276,087.8
See accompanying notes.				

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

	For the three n June			nonths ended e 30,
	2020	2019	2020	2019
Revenues	((in millions, exce	pt per share data))
Premiums and other considerations	¢ 11501	¢ 1,022,0	¢ 74441	¢
	\$ 1,153.1	\$ 1,932.9	\$ 3,444.1	\$ 3,657.8
Fees and other revenues	1,044.3	1,006.6	2,189.6	1,980.1
Net investment income	944.6	1,037.1	1,928.2	1,998.1
Net realized capital gains (losses)	(27.4)	(4.0)	104.0	80.5
Total revenues	3,114.6	3,972.6	7,665.9	7,716.5
Expenses				
Benefits, claims and settlement expenses	1,601.3	2,446.1	4,460.0	4,641.2
Dividends to policyholders	31.4	29.9	60.3	60.0
Operating expenses	983.3	1,046.3	2,318.8	2,039.0
Total expenses	2,616.0	3,522.3	6,839.1	6,740.2
Income before income taxes	498.6	450.3	826.8	976.3
Income taxes	82.5	58.2	125.7	132.1
Net income	416.1	392.1	701.1	844.2
Net income attributable to noncontrolling interest	17.8	5.8	13.9	28.0
Net income attributable to Principal Financial Group, Inc.	\$ 398.3	\$ 386.3	\$ 687.2	\$ 816.2
	<u>+</u>		<u> </u>	<u> </u>
Earnings per common share				
Basic earnings per common share	\$ 1.45	\$ 1.38	\$ 2.50	\$ 2.93
01				
Diluted earnings per common share	\$ 1.45	\$ 1.37	\$ 2.49	\$ 2.90
	<u>+</u>			
See accompanying notes.				

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

	For the three months ended June 30,				F	hs ended		
		2020					2020 2	
				(in m	illions	s)		
Net income	\$	416.1	\$	392.1	\$	701.1	\$	844.2
Other comprehensive income, net:								
Net unrealized gains on available-for-sale securities		2,037.7		984.9		626.1		2,089.2
Noncredit component of impairment losses on fixed maturities, available-for-								
sale		_		(0.3)		—		(2.8)
Net unrealized gains (losses) on derivative instruments		(16.4)		1.6		32.2		(2.9)
Foreign currency translation adjustment		16.4		28.9		(277.9)		66.8
Net unrecognized postretirement benefit obligation		10.4		57.2		21.4		68.7
Other comprehensive income		2,048.1		1,072.3		401.8		2,219.0
Comprehensive income		2,464.2		1,464.4		1,102.9		3,063.2
Comprehensive income attributable to noncontrolling interest		16.0		11.5		2.9		34.2
Comprehensive income attributable to Principal Financial Group, Inc.	\$	2,448.2	\$	1,452.9	\$	1,100.0	\$	3,029.0

See accompanying notes.

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

	-	ommon stock	A	dditional paid-in capital	Retained earnings	cor	ccumulated other nprehensive come (loss) (in millions)	1	Freasury stock	N	oncontrolling interest	sto	Total ockholders' equity
Balances as of April 1, 2019 Common stock issued Stock-based compensation Treasury stock acquired, common Dividends to common stockholders Distributions to noncontrolling interest Contributions from noncontrolling interest Adjustments to redemption amount of redeemable	\$	4.8	\$	10,090.8 16.3 22.6 	\$ 10,571.9 (2.0) (150.4) —	\$	(418.9)	\$	(7,554.2) (0.1) 	\$	67.8 0.1 (3.4) 1.0	\$	12,762.2 16.3 20.7 (0.1) (150.4) (3.4) 1.0
noncontrolling interest Net income (1) Other comprehensive income (1) Balances as of June 30, 2019	\$	4.8	\$	1.0 10,130.7	\$ 386.3 10,805.8	\$	1,066.6 647.7	\$	(7,554.3)	\$	(0.2) 1.8 0.2 67.3	\$	0.8 388.1 <u>1,066.8</u> 14,102.0
Balances as of April 1, 2020 Common stock issued Stock-based compensation Dividends to common stockholders Distributions to noncontrolling interest Contributions from noncontrolling interest Adjustments to redemption amount of redeemable	\$	4.8 	\$	10,216.5 14.1 26.7 	\$ 11,198.8 (2.2) (153.5) —	\$	(599.2) — — — —	\$	(7,913.4) 	\$	65.1 — — (1.1) 1.1	\$	12,972.6 14.1 24.5 (153.5) (1.1) 1.1
noncontrolling interest Net income (1) Other comprehensive income (1) Balances as of June 30, 2020	\$	 4.8	\$	2.3 10,259.6	\$ 398.3 	\$	2,049.9 1,450.7	\$	 (7,913.4)	\$	2.1 0.7 67.9	\$	2.3 400.4 2,050.6 15,311.0

(1) Excludes amounts attributable to redeemable noncontrolling interest. See Note 10, Stockholders' Equity, for further details.

See accompanying notes.

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

	ommon stock	A	Additional paid-in capital	Retained earnings	co	Accumulated other omprehensive ncome (loss)	Freasury stock	N	oncontrolling interest	sto	Total ockholders' equity
Balances as of January 1, 2019 Common stock issued Stock-based compensation Treasury stock acquired, common Dividends to common stockholders Distributions to noncontrolling interest Contributions from noncontrolling interest Adjustments to redemption amount of redeemable	\$ 4.8 	\$	10,060.7 22.1 49.4 	\$ 10,290.2 (4.0) (300.6) —	\$	(in millions) (1,565.1) — — — — — — — —	\$ (7,400.6) (153.7) 	\$	66.0 0.1 (4.7) 1.8	\$	11,456.0 22.1 45.5 (153.7) (300.6) (4.7) 1.8
Adjustments to redefinition another of redefinition noncontrolling interest Effects of implementation of accounting change related to leases, net Net income (1) Other comprehensive income (1) Balances as of June 30, 2019	\$ 4.8	\$	(1.5)	\$ 4.0 816.2 — 10,805.8	\$	2,212.8	\$ (7,554.3)	\$	(0.2) 	\$	(1.7) 4.0 819.9 2,213.4 14,102.0
Balances as of January 1, 2020 Common stock issued Stock-based compensation Treasury stock acquired, common Dividends to common stockholders Distributions to noncontrolling interest Contributions from noncontrolling interest Purchase of subsidiary shares from noncontrolling	\$ 4.8 — — — —	\$	10,182.6 23.1 52.5 — — —	\$ 11,074.3 (4.6) (307.1) —	\$	1,037.9 — — — — — —	\$ (7,681.6) (231.8) 	\$	67.8 — — (23.2) 3.7	\$	14,685.8 23.1 47.9 (231.8) (307.1) (23.2) 3.7
Adjustments to redemption amount of redeemable noncontrolling interest Effects of implementation of accounting change	_		(0.6) 2.0	_		_	_		(0.3) (0.1)		(0.9) 1.9
related to credit losses, net Net income (1) Other comprehensive income (1) Balances as of June 30, 2020	\$ 	\$	 	\$ (8.4) 687.2 — 11,441.4	\$	412.8 1,450.7	\$ 	\$	21.9 (1.9) 67.9	\$	(8.4) 709.1 410.9 15,311.0

(1) Excludes amounts attributable to redeemable noncontrolling interest. See Note 10, Stockholders' Equity, for further details.

See accompanying notes.

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

		For the six months ended June 30,		
		2020		2019
			llions)	
Net cash provided by operating activities	\$	2,046.1	\$	2,678.4
Investing activities				
Fixed maturities available-for-sale and equity securities with intent to hold:				
Purchases		(7,717.3)		(5,771.8)
Sales		1,855.0		1,477.2
Maturities		4,059.2		3,025.9
Mortgage loans acquired or originated		(1,460.9)		(2,008.5)
Mortgage loans sold or repaid		1,198.6		1,243.9
Real estate acquired		(98.2)		(48.5)
Real estate sold		_		57.0
Net purchases of property and equipment		(46.4)		(65.4)
Net change in other investments		(11.1)		(253.8)
Net cash used in investing activities		(2,221.1)		(2,344.0)
Financing activities				
Issuance of common stock		23.1		22.1
Acquisition of treasury stock		(231.8)		(153.7)
Payments for financing element derivatives		(14.7)		(13.1)
Purchase of subsidiary shares from noncontrolling interest		(0.9)		_
Dividends to common stockholders		(307.1)		(300.6)
Issuance of long-term debt		493.1		502.7
Principal repayments of long-term debt		(64.9)		(0.7)
Net proceeds from (repayments of) short-term borrowings		(9.3)		33.1
Investment contract deposits		5,398.7		3,627.4
Investment contract withdrawals		(4,801.5)		(3,800.8)
Net increase in banking operation deposits		324.7		82.0
Other		0.1		5.6
Net cash provided by financing activities		809.5		4.0
Net increase in cash and cash equivalents		634.5		338.4
Cash and cash equivalents at beginning of period		2,515.9		2,977.5
Cash and cash equivalents at end of period	\$	3,150.4	\$	3,315.9
Supplemental disclosure of non-cash activities:				
Lease assets established upon adoption of accounting guidance	\$	_	\$	168.8
Lease liabilities established upon adoption of accounting guidance	\$	_	ŝ	164.0
Assets received in kind from pension risk transfer transaction	Š	1.062.4	ŝ	139.0
•				

See accompanying notes.

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 six months ended June 30, 2020, are not necessarily indicative of the results that may be expected for the year ended December 31, 2020, especially when considering the risks and uncertainties associated with the novel coronavirus ("COVID-19") and the impact it may have on our business, results of operations and financial condition. 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, 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 as more information becomes known about the impact of COVID-19. Our results of operations and financial condition may also be impacted by 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, 2019, included in our Form 10-K for the year ended December 31, 2019, filed with the United States Securities and Exchange Commission ("SEC"). The accompanying condensed consolidated statement of financial position as of December 31, 2019, 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.

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

Description	Date of adoption	Effect on our consolidated financial statements or other significant matters
Standards not yet adopted:		

Description	Date of adoption	financial statements or other significant matters
 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. 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"). Market risk benefits, which are certain market- based options or guarantees associated with deposit or account balance contracts, will be measured at fair value. The periodic change in fair value related to instrument-specific credit risk will be recognized in OCI while the remaining change in fair value will be recognized in net income. DAC for all insurance and annuity contracts will be amortized on a constant basis over the expected term of the related contracts. Additional disclosures are required, including disaggregated rollforwards of significant insurance liabilities and other account balances and 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 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. Early adoption is permitted. 	January 1, 2023, tentative	 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 our key accounting policies; assessing the impact to our chart of accounts; developing format and content of new disclosures; evaluating and establishing appropriate internal controls. As we progress through our implementation, we will be able to better assess the impact to our consolidated financial statements; however, we expect this guidance to significantly 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
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. Early adoption is permitted.	January 1, 2021	We are currently evaluating the impact this guidance will have on our consolidated financial statements.
Standards adopted:		
Facilitation of the effects of reference rate reform on financial reporting This authoritative guidance provides optional expedients and exceptions for contracts and hedging relationships affected by reference rate reform. An entity may elect not to apply certain modification accounting requirements to contracts affected by reference rate reform and instead account for the modified contract as a continuation of the existing contract. Also, an entity may apply optional expedients to continue hedge accounting for hedging relationships in which the critical terms change due to reference rate reform. This guidance eases the financial reporting impacts of reference rate reform on contracts and hedging relationships and is effective until December 31, 2022.	March 12, 2020	We adopted the guidance upon issuance prospectively and will continue to evaluate any effects on contracts and hedging relationships impacted by reference rate reform through December 31, 2022. The guidance did not have an impact on our consolidated financial statements upon adoption.

Description Goodwill impairment testing This authoritative guidance simplifies how an entity is required to test goodwill for impairment by eliminating Step 2 (which measures a goodwill impairment loss by comparing the implied fair value of a reporting unit's goodwill to the carrying amount of that goodwill) from the goodwill impairment test. A goodwill impairment loss will be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. Entities will continue to have the option to perform a qualitative assessment to determine if a quantitative impairment test is necessary. Early adoption is permitted.	Date of adoption January 1, 2020	Effect on our consolidated financial statements or other significant matters This guidance reduces complexity and costs associated with performing a Step 2 test, should one be needed in the future. However, the impact of eliminating the Step 2 test from any such future impairment assessment will be dependent on modeling factors that are not currently determinable. This guidance did not have a material impact on our consolidated financial statements at adoption.
Credit losses This authoritative guidance requires entities to use a current expected credit loss ("CECL") model to measure impairment for most financial assets that are not recorded at fair value through net income. Under the CECL model, an entity will estimate lifetime expected credit losses considering available relevant information about historical events, current conditions and reasonable and supportable forecasts. The CECL model does not apply to available- for-sale debt securities. This guidance also expands the required credit loss disclosures.	January 1, 2020	We adopted the guidance using the modified retrospective approach. A cumulative effect adjustment of \$8.4 million was recorded as a decrease to retained earnings. We recorded an offsetting increase in the allowance for credit loss for mortgage loans, reinsurance recoverables and commitments and a decrease for deferred tax impacts. See Note 3, Investments, for further details.
Implementation costs in a cloud computing arrangement that is a service contract This authoritative guidance aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. This guidance can be applied either retrospectively or prospectively and early adoption is permitted.	January 1, 2019	The effective date of the guidance is January 1, 2020; however, we elected to early-adopt this guidance on a prospective basis, effective January 1, 2019. This guidance did not have a material impact on our consolidated financial statements.

Description Nonemployee share-based payment accounting This authoritative guidance simplifies the accounting for share-based payments to nonemployees by generally aligning it with the accounting for share-based payments to employees. Under the guidance, the measurement of equity-classified nonemployee awards will be fixed at the grant date, where previously the measurement was fixed at performance completion date. The guidance will be applied to equity-classified nonemployee awards for which a measurement date has not been established as of the date of adoption.	Date of adoption January 1, 2019	Effect on our consolidated financial statements or other significant matters This guidance did not have a material impact on our consolidated financial statements.
Leases This authoritative guidance requires lessee recognition of lease assets and lease liabilities on the balance sheet. The concept of an operating lease, where the lease assets and liabilities are off balance sheet, is eliminated under the new guidance. For lessors, the guidance modifies lease classification criteria and accounting for certain types of leases. Other key aspects of the guidance relate to the removal of the current real estate-specific guidance and new presentation and disclosure requirements. Lessees and lessors are required to recognize and measure leases using a modified retrospective approach, which includes certain optional practical expedients that may be elected. We elected the alternative transition method, which allows entities to initially apply the new standard at the adoption date and recognize a cumulative effect adjustment to the opening balance of retained earnings in the period of adoption.	January 1, 2019	We adopted the guidance using the modified retrospective approach. A cumulative effect adjustment of \$4.0 million was recorded as an increase to retained earnings.

Description Targeted improvements to accounting for hedging activities This authoritative guidance updated certain recognition and measurement requirements for hedge accounting. The objective of the guidance is to more closely align the economics of a company's risk management activities in its financial results and reduce the complexity of applying hedge accounting. The updates included the expansion of hedging strategies that are eligible for hedge accounting, elimination of the separate measurement and reporting of hedge ineffectiveness, presentation of the changes in the fair value of the hedging instrument in the same consolidated statement of operations line as the earnings effect of the hedged item and simplification of hedge effectiveness assessments. This guidance also included new disclosures.	Date of adoption January 1, 2019	Effect on our consolidated financial statements or other significant matters This guidance did not have a material impact on our consolidated financial statements. See Note 4, Derivative Financial Instruments, for further details.
Premium amortization on purchased callable debt securities This authoritative guidance applies to entities that hold certain non-contingently callable debt securities, where the amortized cost basis is at a premium to the price repayable by the issuer at the earliest call date. Under the guidance the premium will be amortized to the first call date.	January 1, 2019	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 troubled debt restructuring ("TDR") has occurred. In response to COVID-19, the Coronavirus Aid, Relief and Economic Security Act ("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 December 31, 2020. 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. See Note 3, Investments, under the caption "Mortgage Loan Modifications" for further details.

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 June 30, 2020 and December 31, 2019, the separate accounts included a separate account valued at \$72.5 million and \$100.4 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.

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 June 30, 2020 and December 31, 2019.

Consolidated Variable Interest Entities

Grantor Trust

We contributed undated subordinated floating rate notes to a grantor trust. The trust separated its cash flows by issuing an interest-only certificate and a residual certificate related to each note contributed. Each interest-only certificate entitled the holder to interest on the stated note for a specified term, while the residual certificate entitled the holder to interest payments subsequent to the term of the interest-only certificate and to all principal payments. We retained the interest-only certificates and the residual certificates were subsequently sold to third parties. We determined the grantor trust was a VIE due to insufficient equity to sustain it. We determined we were the primary beneficiary as a result of our contribution of securities into the trust and our significant continuing interest in the trust. The certificates matured in the second quarter of 2020.

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.

We also invest in certain series of another investment fund. These series are VIEs as the equity holders of each series lack the power to direct the most significant activities of the VIE. We determined we are the primary beneficiary of these series as our interest is more than insignificant and collectively we have the power to direct the most significant activities of the fund.

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:

	June 3	0, 2020	Decembe	er 31, 2019
	Total	Total	Total	Total
	assets	liabilities	assets	liabilities
		(in mi	illions)	
Grantor trust (1)	\$ —	s —	\$ 99.9	\$ 98.6
Mandatory retirement savings funds (2)	36,849.1	36,454.6	39,891.1	39,524.9
Real estate (3)	452.8	29.8	479.7	88.0
Sponsored investment funds (4)	363.3	8.3	331.4	2.2
Total	\$ 37,665.2	\$ 36,492.7	\$ 40,802.1	\$ 39,713.7

(1) The assets of the grantor trust were primarily fixed maturities, available-for-sale. The liabilities were primarily other liabilities that reflected an embedded derivative of the forecasted transaction to deliver the underlying securities.

(2) 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.



- (3) The assets of the real estate VIEs primarily include real estate and cash. Liabilities primarily include other liabilities and included long-term debt as of December 31, 2019.
- (4) 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 \$197.5 million and \$215.4 million redeemable noncontrolling interest for sponsored investment funds as of June 30, 2020 and December 31, 2019, respectively.

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 passthrough securities ("RMBS") and other asset-backed securities ("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	carrying value		num exposure to loss (1)
June 30, 2020		(in m	illions)	
Fixed maturities, available-for-sale:				
Corporate	\$	188.2	\$	174.4
Residential mortgage-backed pass-through securities	Ψ	3,323.6	Ψ	3,164.1
Commercial mortgage-backed securities		4,706.5		4,785.7
Collateralized debt obligations (2)		3,506.0		3,592.9
Other debt obligations		7,549.6		7,377.9
Fixed maturities, trading:		7,01010		1,01110
Residential mortgage-backed pass-through securities		245.7		245.7
Commercial mortgage-backed securities		26.1		26.1
Collateralized debt obligations (2)		20.3		20.3
Other debt obligations		11.1		11.1
Equity securities		97.6		97.6
Other investments:				
Other limited partnership and fund interests (3)		931.9		1,481.4
December 31, 2019				
Fixed maturities, available-for-sale:				
Corporate	\$	238.2	\$	225.7
Residential mortgage-backed pass-through securities		2,982.4		2,913.9
Commercial mortgage-backed securities		4,850.2		4,746.6
Collateralized debt obligations (2)		3,215.3		3,226.7
Other debt obligations		8,191.1		8,076.4
Fixed maturities, trading:				
Residential mortgage-backed pass-through securities		282.3		282.3
Commercial mortgage-backed securities		28.2		28.2
Collateralized debt obligations (2)		20.9		20.9
Other debt obligations		13.2		13.2
Equity securities		123.2		123.2
Other investments:				
Other limited partnership and fund interests (3)		911.9		1,467.0

(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. 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 June 30, 2020 and December 31, 2019, the maximum exposure to loss for other limited partnership and fund interests includes \$128.8 million and \$129.1 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 June 30, 2020 and December 31, 2019, money market mutual funds we manage held \$4.5 billion and \$4.0 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

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 11, 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 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. Beginning in 2020, 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). Prior to 2020, the amortized cost of fixed maturities, available-for-sale was adjusted for declines in value that were other than temporary. Prior to 2020, impairments in value deemed to be other than temporary were primarily reported in net income as a component of net realized capital gains (losses), with noncredit impairment losses for certain fixed maturities, available-for-sale reported in OCI. 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.

Available-for-sale securities were as follows:

	 Amortized cost (1)	u 	Gross nrealized gains	 Gross unrealized losses in millions)	Allowance for credit loss	Fair value		
June 30, 2020								
Fixed maturities, available-for-sale:								
U.S. government and agencies	\$ 1,609.1	\$	266.1	\$ 0.2	\$ —	\$	1,875.0	
Non-U.S. governments	837.0		169.9	—	_		1,006.9	
States and political subdivisions	7,716.7		1,015.0	18.1	_		8,713.6	
Corporate	38,968.1		4,900.6	279.1	2.8		43,586.8	
Residential mortgage-backed pass-through								
securities	3,164.1		159.9	0.4	_		3,323.6	
Commercial mortgage-backed securities	4,785.7		74.4	150.2	3.4		4,706.5	
Collateralized debt obligations (2)	3,592.9		5.0	90.9	1.0		3,506.0	
Other debt obligations	7,379.1		246.6	74.9	_		7,550.8	
Total fixed maturities, available-for-sale	\$ 68,052.7	\$	6,837.5	\$ 613.8	\$ 7.2	\$	74,269.2	

December 31, 2019 Fixed maturities, available-for-sale:	 Amortized cost	u 	Gross mrealized gains	 Gross unrealized losses (in millions)	1	Fair value	Other-than- temporary npairments in OCI (3)
U.S. government and agencies	\$ 1,627.0	\$	100.2	\$ 3.0	\$	1,724.2	\$ _
Non-U.S. governments	852.3		144.1	0.2		996.2	_
States and political subdivisions	6,857.1		644.5	11.6		7,490.0	_
Corporate	36,993.1		3,706.5	52.2		40,647.4	_
Residential mortgage-backed pass-through							
securities	2,913.9		72.3	3.8		2,982.4	_
Commercial mortgage-backed securities	4,746.6		127.6	24.0		4,850.2	15.8
Collateralized debt obligations (2)	3,226.7		2.9	14.3		3,215.3	0.9
Other debt obligations	8,085.8		129.6	14.9		8,200.5	31.7
Total fixed maturities, available-for-sale	\$ 65,302.5	\$	4,927.7	\$ 124.0	\$	70,106.2	\$ 48.4

(1) Amortized cost excludes accrued interest receivable of \$548.8 million as of June 30, 2020.

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

(3) Excludes \$62.3 million as of December 31, 2019, of net unrealized gains on impaired fixed maturities, available-for-sale related to changes in fair value subsequent to the impairment date, which are included in gross unrealized gains and gross unrealized losses.

The amortized cost and fair value of fixed maturities, available-for-sale as of June 30, 2020, by expected maturity, were as follows:

	An	nortized cost	l illions)	Fair value
Due in one year or less	\$	2,180.1	\$	2,204.1
Due after one year through five years		10,883.5		11,404.4
Due after five years through ten years		12,643.7		13,692.8
Due after ten years		23,423.6		27,881.0
Subtotal		49,130.9		55,182.3
Mortgage-backed and other asset-backed securities		18,921.8		19,086.9
Total	\$	68,052.7	\$	74,269.2

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): mark-to-market adjustments on 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, impairments on equity method investments and, prior to 2020, other-than-temporary impairments of securities and subsequent realized recoveries. 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 were as follows:

	For the three months ended June 30,					or the six n June	s ended
		2020		2019		2020	 2019
				(in m	illions)	
Fixed maturities, available-for-sale:							
Gross gains	\$	83.2	\$	6.2	\$	106.3	\$ 8.7
Gross losses		(21.6)		(7.9)		(25.8)	(9.4)
Net credit losses (1)		(8.3)		(17.3)		(16.2)	(24.1)
Hedging, net (2)		(8.1)		(9.3)		(9.6)	(9.3)
Fixed maturities, trading (3)		25.1		17.5		8.7	31.7
Equity securities (4)		39.3		14.7		(24.4)	35.7
Mortgage loans		0.7		0.3		(15.0)	0.6
Derivatives		(195.7)		4.6		94.8	9.6
Other		58.0		(12.8)		(14.8)	37.0
Net realized capital gains (losses)	\$	(27.4)	\$	(4.0)	\$	104.0	\$ 80.5

(1) Upon adoption of authoritative guidance effective January 1, 2020, net credit losses include adjustments to the credit loss valuation allowance, write-offs and recoveries on available-for-sale securities. Prior to 2020, net credit losses included net other-thantemporary impairment losses and recoveries on available-for-sale securities.

(2) 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).

- (3) Unrealized gains (losses) on fixed maturities, trading still held at the reporting date were \$24.4 million and \$17.6 million for the three months ended June 30, 2020 and 2019, respectively, and \$10.2 million and \$31.8 million for the six months ended June 30, 2020 and 2019, respectively.
- (4) Unrealized gains (losses) on equity securities still held at the reporting date were \$42.3 million and \$9.7 million for the three months ended June 30, 2020 and 2019, respectively, and \$(20.7) million and \$29.7 million for the six months ended June 30, 2020 and 2019, respectively. This excludes \$49.0 million and \$18.7 million for the three months ended June 30, 2020 and 2019, respectively, and \$10.5 million and \$41.3 million for the six months ended June 30, 2020 and 2019, respectively, and 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 \$1,006.0 million and \$1,028.0 million for the three months ended June 30, 2020 and 2019, and \$1,547.6 million and \$1,191.0 million for the six months ended June 30, 2020 and 2019, 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.

						Fe	or the	e three n	nonths	ended	June 3	0, 2020					
	gove	J.S. rnment igencies		n-U.S mments	pol	es and itical ivisions		rporate	Resi mor ba p thr	dential tgage- cked ass- rough urities	Com mor ba	mercial rtgage- ncked urities		ateralized debt ligations (2))ther lebt gations	Total
Beginning balance	\$	—	\$	_	\$	—	\$	7.0	\$	_	\$	0.4	\$	0.1	\$	0.1	\$ 7.6
Additions for credit losses not previously recorded		_		_		_		2.8		_		1.3		_		_	4.1
Reductions for securities																	
sold during the period Additional increases		_		_		_		(7.0)		_				_		_	(7.0)
(decreases) for credit losses on securities with no allowance recorded in																	
the previous period	<u></u>		<u>_</u>		<u></u>		<u>_</u>		<u>_</u>		<u>_</u>	1.7	<u>_</u>	0.9	<u>_</u>	(0.1)	2.5
Ending balance	\$		\$		\$		\$	2.8	\$		\$	3.4	\$	1.0	\$		<u>\$ 7.2</u>
						F	or th	ie six mo			ine 30	, 2020					
	gover	.S. mment gencies		1-U.S nments	poli	es and itical visions	Cor	porate	mor bac pa thr secu	dential tgage- cked ass- ough urities illions)	mor ba	mercial tgage- cked ırities		nteralized debt igations (2)	d	ther lebt gations	Total
Beginning balance (1)	\$	—	\$		\$	—	\$	—	\$		\$	—	\$	—	\$	—	\$ —
Additions for credit losses not previously recorded Reductions for securities		_		_				9.8		_		1.7		0.1		0.1	11.7
Additional increases (decreases) for credit losses on securities with		_		_		_		(7.0)		_		_		_		_	(7.0)
no allowance recorded in																(2 , 4)	
the previous period Ending balance	\$		\$	_	\$		\$	2.8	\$		\$	1.7 3.4	\$	<u>0.9</u> 1.0	\$	(0.1)	2.5 \$ 7.2

(1) The allowance for credit loss associated with fixed maturities, available-for-sale was applied prospectively upon adoption of authoritative guidance effective January 1, 2020.

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

During 2020, we did not write off any accrued interest to net investment income.

Other-Than-Temporary Impairments

Prior to the implementation of authoritative guidance in 2020, we had a process in place to identify fixed maturity securities that could potentially have an impairment that is other than temporary. This process involved monitoring market events that could impact issuers' credit ratings, business climate, management changes, litigation and government actions and other similar factors. This process also involved 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 were reviewed to determine whether an other-than-temporary decline in value existed and whether losses should be recognized. We considered relevant facts and circumstances in evaluating whether a credit or interest rate related impairment of a security was other than temporary. Relevant facts and circumstances considered include: (1) the extent and length of time the fair value was 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; (4) for structured securities, the adequacy of the expected cash flows and (5) our intent 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. To the extent we determined a security was deemed to be other than temporarily impaired, an impairment loss was recognized.

The way in which impairment losses on fixed maturities were recognized in the financial statements was dependent on the facts and circumstances related to the specific security. If we intended to sell a security or it was more likely than not that we would be required to sell a security before the recovery of its amortized cost, we recognized an other-than-temporary impairment in net income for the difference between amortized cost and fair value. If we did not expect to recover the amortized cost basis, we did not plan to sell the security and if it was not more likely than not that we would be required to sell a security before the recovery of its amortized cost, the recognition of the other-than-temporary impairment was bifurcated. We recognized the credit loss portion in net income and the noncredit loss portion in OCI ("bifurcated OTTI").

Prior to 2020, net realized capital gains (losses) included total other-than-temporary impairment losses, net of recoveries from the sale of previously impaired securities, as follows:

	ee months ended 230, 2019	For	the six months ended June 30, 2019
	(in mi	llions)	
Net realized capital gains, excluding impairment losses on available-for-sale			
securities	\$ 13.3	\$	104.6
Net other-than-temporary impairment losses on available-for-sale securities	(17.0)		(26.6)
Other-than-temporary impairment losses on fixed maturities, available-for-sale			
reclassified to (from) other comprehensive income (1)	(0.3)		2.5
Net impairment losses on available-for-sale securities	 (17.3)		(24.1)
Net realized capital gains (losses)	\$ (4.0)	\$	80.5

(1) Represents the net impact of (a) gains resulting from reclassification of noncredit impairment losses for fixed maturities with bifurcated OTTI from net realized capital gains (losses) to OCI and (b) losses resulting from reclassification of previously recognized noncredit impairment losses from OCI to net realized capital gains (losses) for fixed maturities with bifurcated OTTI that had additional credit losses or fixed maturities that previously had bifurcated OTTI that have now been sold or are intended to be sold.



We estimated the amount of the credit loss component of a fixed maturity security impairment as the difference between amortized cost and the present value of the expected cash flows of the security. The present value was 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 assetbacked or floating rate security. The methodology and assumptions for establishing the best estimate cash flows varied depending on the type of security. The ABS cash flow estimates were 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 were derived from scenario-based outcomes of expected corporate restructurings or liquidations using bond specific facts and circumstances including timing, security interests and loss severity.

The following table provides a rollforward of accumulated credit losses for fixed maturities with bifurcated credit losses prior to the implementation of new accounting guidance in 2020. The purpose of the table is to provide detail of (1) additions to the bifurcated credit loss amounts recognized in net realized capital gains (losses) during the period and (2) decrements for previously recognized bifurcated credit losses where the loss is no longer bifurcated and/or there has been a positive change in expected cash flows or accretion of the bifurcated credit loss amount.

	ree months ended 1e 30, 2019	For	the six months ended June 30, 2019
			(in millions)
Beginning balance	\$ (102.3)	\$	(117.5)
Credit losses for which an other-than-temporary impairment was not previously			
recognized	(0.8)		(2.8)
Credit losses for which an other-than-temporary impairment was previously			
recognized	(4.6)		(8.9)
Reduction for credit losses previously recognized on fixed maturities now sold,			
paid down or intended to be sold	8.0		28.4
Net reduction (increase) for positive changes in cash flows expected to be			
collected and amortization (1)	(0.6)		0.5
Ending balance	\$ (100.3)	\$	(100.3)

(1) Amounts are recognized in 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:

	_	Less twelve	s than montl	15		June 3 Greater equal to tw		or	 Te	otal	
		Gross Fair unrealized value losses				Fair value (in m	ur	Gross realized losses	 Fair value	u 	Gross nrealized losses
Fixed maturities, available-for-sale (1):						,					
U.S. government and agencies	\$	30.1	\$	0.2	\$	_	\$	—	\$ 30.1	\$	0.2
Non-U.S. governments		2.6		_		_		_	2.6		_
States and political subdivisions		460.5		18.1		21.0		_	481.5		18.1
Corporate		3,521.5		248.4		149.7		26.8	3,671.2		275.2
Residential mortgage-backed pass-through											
securities		195.0		0.4		3.2		_	198.2		0.4
Commercial mortgage-backed securities		2,507.8		134.3		151.3		15.5	2,659.1		149.8
Collateralized debt obligations (2)		2,483.8		62.2		776.7		27.3	3,260.5		89.5
Other debt obligations		985.5		71.5		81.0		3.4	1,066.5		74.9
Total fixed maturities, available-for-sale	\$	10,186.8	\$	535.1	\$	1,182.9	\$	73.0	\$ 11,369.7	\$	608.1

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

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

Of the total amounts, Principal Life's consolidated portfolio represented \$11,018.9 million in available-for-sale fixed maturities with gross unrealized losses of \$574.6 million. Of the available-for-sale fixed maturities within Principal Life's consolidated portfolio in a gross unrealized loss position, 81% were investment grade (rated AAA through BBB-) with an average price of 95 (carrying value/amortized cost) as of June 30, 2020. Gross unrealized losses in our fixed maturities portfolio increased during the six months ended June 30, 2020, primarily due to widening of spreads, partially offset by a decrease in interest rates.

For those securities that had been in a continuous unrealized loss position for less than twelve months, Principal Life's consolidated portfolio held 1,286 securities with a carrying value of \$9,843.7 million and unrealized losses of \$502.1 million reflecting an average price of 95 as of June 30, 2020. Of this portfolio, 80% was investment grade (rated AAA through BBB-) as of June 30, 2020, with associated unrealized losses of \$347.5 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 196 securities with a carrying value of \$1,175.2 million and unrealized losses of \$72.5 million. The average credit rating of this portfolio was AA with an average price of 94 as of June 30, 2020. Of the \$72.5 million in unrealized losses, the corporate sector accounts for \$26.8 million in unrealized losses with an average price of 85 and an average credit rating of BB. The remaining unrealized losses also include \$27.1 million within the collateralized debt obligation sector accounts with an average price of 97 and an average credit rating of AA+. The unrealized losses on these securities can primarily be attributed to changes in market interest rates and changes in credit spreads since the securities were acquired.

Because we expected to recover our amortized cost, we did not record an allowance for credit loss on these securities as of June 30, 2020. 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.

Gross Unrealized Losses for Available-for-Sale Securities

	 Less twelve	s than mont		 Decembo Greater equal to tw	r than	or		Т	otal		
	 Fair value			 Fair value (in m	Gross unrealized losses (2) iillions)		Fair value		ur	Gross realized osses (2)	
Fixed maturities, available-for-sale:					,						
U.S. government and agencies	\$ 100.0	\$	1.9	\$ 74.2	\$	1.1	\$	174.2	\$	3.0	
Non-U.S. governments	17.6		0.2	12.4		_		30.0		0.2	
States and political subdivisions	559.9		11.2	86.3		0.4		646.2		11.6	
Corporate	1,041.5		27.8	394.7		24.4		1,436.2		52.2	
Residential mortgage-backed pass-through											
securities	429.6		1.4	237.3		2.4		666.9		3.8	
Commercial mortgage-backed securities	829.3		9.2	268.5		14.8		1,097.8		24.0	
Collateralized debt obligations (1)	639.4		1.8	1,447.8		12.5		2,087.2		14.3	
Other debt obligations	1,772.8		9.5	613.7		5.4		2,386.5		14.9	
Total fixed maturities, available-for-sale	\$ 5,390.1	\$	63.0	\$ 3,134.9	\$	61.0	\$	8,525.0	\$	124.0	

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

(2) Prior to the implementation of authoritative guidance in 2020, other than temporary impairment losses reported in OCI were included with gross unrealized losses resulting in total gross unrealized losses for fixed maturities, available-for-sale being reported in the table.

Of the total amounts, Principal Life's consolidated portfolio represented \$8,380.7 million in available-for-sale fixed maturities with gross unrealized losses of \$103.9 million. Of the available-for-sale fixed maturities within Principal Life's consolidated portfolio in a gross unrealized loss position, 97% were investment grade (rated AAA through BBB-) with an average price of 99 (carrying value/amortized cost) as of December 31, 2019. Gross unrealized losses in our fixed maturities portfolio decreased during the year ended December 31, 2019, primarily due to a decrease in interest rates and 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 882 securities with a carrying value of \$5,302.7 million and unrealized losses of \$44.0 million reflecting an average price of 99 as of December 31, 2019. Of this portfolio, 98% was investment grade (rated AAA through BBB-) as of December 31, 2019, with associated unrealized losses of \$43.1 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 502 securities with a carrying value of \$3,078.0 million and unrealized losses of \$59.9 million. The average credit rating of this portfolio was AA+ with an average price of 98 as of December 31, 2019. Of the \$59.9 million in unrealized losses, the corporate sector accounts for \$23.6 million in unrealized losses with an average price of 94 and an average credit rating of BBB-. The remaining unrealized losses also include \$14.6 million within the commercial mortgage-backed securities sector with an average price of 95 and an average credit rating of AA+. The unrealized losses on these securities can primarily be attributed to changes in market interest rates and changes in credit spreads since the securities were acquired.

Because we expected to recover our amortized cost, 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 consider these investments to be other-than-temporarily impaired as of December 31, 2019.

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:

	Ju	ne 30, 2020	December 31, 2019		
Net unrealized gains on fixed maturities, available-for-sale (1)	\$	6,193.1	illions) \$	4,834.2	
Noncredit component of impairment losses on fixed maturities, available-for-sale (2)		_		(48.4)	
Net unrealized gains on derivative instruments		131.3		94.1	
Adjustments for assumed changes in amortization patterns		(264.2)		(261.0)	
Adjustments for assumed changes in policyholder liabilities		(1,700.9)		(1,133.5)	
Net unrealized gains on other investments and noncontrolling interest adjustments		50.3		96.8	
Provision for deferred income taxes		(935.8)		(766.9)	
Net unrealized gains on available-for-sale securities and derivative instruments	\$	3,473.8	\$	2,815.3	

(1) Excludes net unrealized gains (losses) on fixed maturities, available-for-sale included in fair value hedging relationships.

(2) Prior to the implementation of authoritative guidance in 2020, the noncredit component of impairment losses on fixed maturities, available-for-sale was included as a separate component of stockholders' equity.

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 Recoverables

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 to other insurance companies through reinsurance. Reinsurance recoverables are reported with premiums due and other receivables in the consolidated statements of financial position.

Credit Quality Information for Financing Receivables

The amortized cost of our financing receivables by credit risk and vintage as of June 30, 2020, was as follows:

	2020	2019	2018	2017 (in millions	2016	Prior	Total
Commercial mortgage loans (1):				(·)		
A- and above	\$ 807.2	\$ 2,543.9	\$ 2,478.7	\$ 1,803.8	\$ 1,538.5	\$ 4,213.4	\$ 13,385.5
BBB+ thru BBB-	95.0	205.7	342.4	286.8	89.4	538.8	1,558.1
BB+ thru BB-	14.8	41.1		—	16.9	74.5	147.3
B+ and below	—			—		4.6	4.6
Total	\$ 917.0	\$ 2,790.7	\$ 2,821.1	\$ 2,090.6	\$ 1,644.8	\$ 4,831.3	\$ 15,095.5
Direct financing leases:							
A- and above	\$ 41.0	\$ 1.5	\$ 36.9	\$ 16.6	\$ 13.3	\$ 205.3	\$ 314.6
BBB+ thru BBB-	95.2	22.4	20.0	19.5	3.5	149.9	310.5
BB+ thru BB-	11.0	1.8	3.6	_		4.2	20.6
B+ and below	1.4			_		—	1.4
Total	\$ 148.6	\$ 25.7	\$ 60.5	\$ 36.1	\$ 16.8	\$ 359.4	\$ 647.1
Residential mortgage loans (1):							
Performing	\$ 243.5	\$ 460.7	\$ 192.6	\$ 180.8	\$ 171.1	\$ 389.1	\$ 1,637.8
Non-performing	_	0.9	0.9	0.1		7.4	9.3
Total	\$ 243.5	\$ 461.6	\$ 193.5	\$ 180.9	\$ 171.1	\$ 396.5	\$ 1,647.1
Reinsurance recoverables							<u>\$ 1,076.0</u>

(1) The amortized cost of mortgage loans excluded accrued interest receivable of \$58.8 million as of June 30, 2020.

The amortized cost of our commercial mortgage loan portfolio by credit risk, as determined by our internal rating system expressed in terms of an S&P bond equivalent rating, was as follows:

		December 31, 2019 (1)								
	B	rick and mortar			Total					
			(in millions)							
A- and above	\$	13,885.2	\$ 76.7	\$	13,961.9					
BBB+ thru BBB-		943.1	83.8		1,026.9					
BB+ thru BB-		23.3	_		23.3					
B+ and below		5.1	_		5.1					
Total	\$	14,856.7	\$ 160.5	\$	15,017.2					

(1) Prior to the implementation of authoritative guidance in 2020, commercial mortgage loan credit quality disclosures included information about classes of those mortgages and information by vintage was excluded. Beginning in 2020, we determined that total commercial mortgage loans by credit risk and vintage is the most meaningful presentation.

The amortized cost of our performing and non-performing residential mortgage loans was as follows:

		December 31, 2019 (1)							
		Fire	st liens		ne equity		Total		
				(in	millions)				
Performing	\$	5	1,474.2	\$	8.0	\$	1,482.2		
Non-performing			11.5		3.0		14.5		
Total	\$	5	1,485.7	\$	11.0	\$	1,496.7		
	•	-	_,,	-		-	_, 10 01/		

(1) Prior to the implementation of authoritative guidance in 2020, residential mortgage loan credit quality disclosures included information about classes of those mortgages and information by vintage was excluded. Beginning in 2020, we determined that total residential mortgage loans by credit risk and vintage is the most meaningful presentation.

Financing Receivables Credit Monitoring

Commercial 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 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:

	June 30, 2020							
	amor on no	ginning tized cost onaccrual tatus	of non assets a val	ized cost accrual without uation wance				
Commercial mortgage loans	\$	5.0	\$	n millions) 4.6	\$	_		
Residential mortgage loans		6.8		8.1	-	0.7		
Total	\$	11.8	\$	12.7	\$	0.7		
Residential:					ber 31, 20 in millions)			
First liens				\$		8.8		
Home equity						3.0		
Total				\$		11.8		

(1) Prior to the implementation of authoritative guidance in 2020, commercial and residential mortgage loan non-accrual disclosures included information about classes of those mortgages. Beginning in 2020, we determined that total commercial and residential mortgage loans on non-accrual status is the most meaningful presentation.

As of June 30, 2020, no interest income was recognized on non-accrual financing receivables.

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

	 June 30, 2020											
											nortized	
					days or					90	cost days or	
	59 days ist due		89 days Ast due	m 	ore past due		otal past due n millions)	Current	Total (1)		ore and ccruing	
Commercial mortgage loans	\$ 14.9	\$	30.1	\$	12.3	\$	57.3	\$ 15,038.2	\$ 15,095.5	\$	7.7	
Direct financing leases	3.5				—		3.5	643.6	647.1		_	
Residential mortgage loans	40.6		18.4		3.1		62.1	1,585.0	1,647.1		1.2	
Total	\$ 59.0	\$	48.5	\$	15.4	\$	122.9	\$ 17,266.8	\$ 17,389.7	\$	8.9	

(1) No reinsurance recoverables were considered past due as of June 30, 2020.

³³

	 December 31, 2019 (1)												
	59 days Ist due	60-89 days past due		90 days or more past due		Total past due (in millions)		Current		Total loans	invo 90 mo	corded estment days or ore and cruing	
Commercial-brick and mortar	\$ 	\$		\$		\$		\$ 14,856.7	\$	14,856.7	\$		
Commercial-credit tenant loans	—				—		_	160.5		160.5		_	
Residential-first liens	46.6		9.3		11.2		67.1	1,418.6		1,485.7		2.7	
Residential-home equity	0.8		_		0.3		1.1	9.9		11.0		_	
Total	\$ 47.4	\$	9.3	\$	11.5	\$	68.2	\$ 16,445.7	\$	16,513.9	\$	2.7	

(1) Prior to the implementation of authoritative guidance in 2020, commercial and residential mortgage loan past due disclosures included information about classes of those mortgages. Beginning in 2020, we determined that aging for total commercial and residential mortgage loans is the most meaningful presentation.

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. For the three and six months ended June 30, 2020, we wrote off \$0.0 million and \$0.0 million, respectively, of commercial mortgage loan accrued interest receivable. For the three and six months ended June 30, 2020, we wrote off \$0.0 million and \$0.0 million and \$0.0 million, respectively, of 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 leases are included within the commercial mortgage loan or direct financing lease valuation allowance described previously.

We evaluate residential mortgage loans based on aggregated risk factors and historical loss experience by pool type. We adjust these quantitative factors for qualitative factors of present and forecasted conditions. Qualitative factors include items such as economic and business conditions, changes in the portfolio, value of underlying collateral and concentrations. A residential mortgage loan is evaluated individually if it does not continue to share similar risk characteristics of a pool. We analyze the need for an individual evaluation for any domestic residential mortgage loan that is delinquent for 60 days or more, in process of foreclosure, restructured, on the internal "watch list" or that currently is evaluated individually. We analyze the need for an individual evaluation for any Chilean residential mortgage loan that is considered past due based on collection practices in the Chilean market and the nature of the loan.

As discussed previously, commercial and residential mortgage loans and direct financing leases are evaluated individually if the asset does not continue to share similar risk characteristics of a pool. When we determine a commercial or residential mortgage loan is probable of foreclosure, a valuation allowance is established equal to the difference between the carrying amount of the mortgage loan and the estimated value of the collateral reduced by the cost to sell. For certain commercial mortgage loans where repayment is expected to be provided substantially through the operation or sale of the collateral and the borrower is experiencing financial difficulty, we elect to establish a valuation allowance equal to the difference between the carrying amount of the mortgage loan and the estimated value of the real estate collateral, which may be reduced by the cost to sell. Estimated value may also be based on either the present value of the expected future cash flows discounted at the asset's effective interest rate or the asset's observable market price. Subsequent changes in the estimated value are reflected in the valuation allowance. Amounts on financing receivables deemed to be uncollectible are charged off and removed from the valuation allowance. The change in the valuation allowance for loans and direct financing leases is included in net realized capital gains (losses) on the consolidated statements of operations.

Our reinsurance recoverables 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.

A rollforward of our valuation allowance was as follows:

	For the three months ended June 30, 2020										
	Comm	ercial	:	Direct financing	Residential		Reinsurance				
	mortgag	ge loans		leases	mortgage loans (in millions)		recoverables			Total	
Beginning balance	\$	37.7	\$	0.2	\$`	6.1	\$	2.5	\$	46.5	
Provision		2.7		_		(1.0)		_		1.7	
Charge-offs				_		(0.1)		_		(0.1)	
Recoveries				_		0.6		_		0.6	
Ending balance	\$	40.4	\$	0.2	\$	5.6	\$	2.5	\$	48.7	

	For the six months ended June 30, 2020										
	Commercial mortgage loans		Direct financing leases		Residential <u>mortgage loans</u> (in millions)		Reinsurance recoverables		Total		
Beginning balance (1)	\$	27.3	\$	_	\$	3.3	\$	2.5	\$ 33.1		
Provision (2)		13.1		0.2		1.3		—	14.6		
Charge-offs		—				(0.2)		—	(0.2)		
Recoveries		_		_		1.2		_	1.2		
Ending balance	\$	40.4	\$	0.2	\$	5.6	\$	2.5	\$ 48.7		
				F	or the thi	ree month	s ended Jun	e 30, 20)19 (3)		
				Comme		Res	idential		Total		
Deschartes hele and				ተ	247		millions)	¢	27.6		
Beginning balance				\$	24.7	\$	2.9	\$	27.6		
Provision					0.7		(0.8)		(0.1)		
Charge-offs					_		(0.3)		(0.3)		
Recoveries				<u>_</u>		<u>_</u>	0.9	<u>_</u>	0.9		
Ending balance				\$	25.4	\$	2.7	\$	28.1		
							ended June	30, 20 1			
				Comme	ercial		idential millions)		Total		
Beginning balance				\$	24.3	\$	3.1	\$	27.4		
Provision				+	1.1	+	(1.6)	-	(0.5)		
Charge-offs							(0.4)		(0.4)		
Recoveries							1.6		1.6		
Ending balance				\$	25.4	\$	2.7	\$	28.1		
Allowance ending balance by basis of impairment method:											
Individually evaluated for impairment				\$		\$	1.5	\$	1.5		
Collectively evaluated for impairment					25.4	-	1.2	-	26.6		
Allowance ending balance				\$	25.4	\$	2.7	\$	28.1		
Loan balance by basis of impairment method:											
Individually evaluated for impairment				\$		\$	13.3	\$	13.3		
Collectively evaluated for impairment					830.6		1,321.0		16,151.6		
Loan ending balance					830.6	\$	1,334.3	\$	16,164.9		

Upon adoption of authoritative guidance effective January 1, 2020, we updated accounting policies and methodology, adjusted the commercial and residential mortgage loan valuation allowance and established a valuation allowance for reinsurance recoverables. See Note 1, Nature of Operations and Significant Accounting Policies under the caption, "Recent Accounting Pronouncements" for further details.

(2) During the six months ended June 30, 2020, the outbreak of COVID-19 adversely impacted global economic activity and contributed to significant volatility in financial markets. As a result, certain current and forecasted environmental factors management believes to be relevant were adjusted, resulting in an increase in the valuation allowance for commercial and residential mortgage loans and direct financing leases.

(3) Prior to the implementation of authoritative guidance in 2020, only commercial and residential mortgage loans were included in the allowance rollforward and the allowance was based on either individual or collective evaluation.

Mortgage Loans

We periodically purchase mortgage loans as well as sell mortgage loans we have originated. Mortgage loans purchased and sold were as follows:

	Fo	r the three Jun	mont e 30,	hs ended	F	or the six 1 Jun	nonth e 30,	s ended
		2020		2019		2020		2019
Commercial mortgage loans:				(in m	illions)		
Purchased	\$	73.5	\$	103.0	\$	86.3	\$	115.9
Sold		_		_		1.1		0.5
Residential mortgage loans:								
Purchased		267.7		66.2		494.5		99.4
Sold		48.5		21.2		73.4		32.1

Our commercial mortgage loan portfolio is diversified by geographic region and specific collateral property type as follows:

	June 30	, 2020	December	31, 2019
	Amortized	Percent	Amortized	Percent
	cost	of total (\$ in mil	cost lions)	of total
Geographic distribution		,	,	
New England	\$ 668.4	4.4 %	\$ 613.9	4.1 %
Middle Atlantic	4,137.7	27.4	4,139.7	27.5
East North Central	611.8	4.1	624.5	4.2
West North Central	236.7	1.6	237.2	1.6
South Atlantic	2,286.0	15.1	2,318.4	15.4
East South Central	340.7	2.3	438.5	2.9
West South Central	1,404.1	9.3	1,450.0	9.7
Mountain	972.3	6.4	931.8	6.2
Pacific	4,121.2	27.3	3,963.7	26.4
International	316.6	2.1	299.5	2.0
Total	\$ 15,095.5	100.0 %	\$ 15,017.2	100.0 %
Property type distribution				
Office	\$ 4,689.9	31.1 %	\$ 4,887.1	32.6 %
Retail	1,921.3	12.7	2,052.6	13.7
Industrial	2,310.0	15.3	2,268.5	15.1
Apartments	5,616.7	37.2	5,246.9	34.9
Hotel	89.9	0.6	90.8	0.6
Mixed use/other	467.7	3.1	471.3	3.1
Total	\$ 15,095.5	100.0 %	\$ 15,017.2	100.0 %

Impaired Mortgage Loans

Prior to 2020, impaired mortgage loans were loans with a related specific valuation allowance, loans whose carrying amount had been reduced to the expected collectible amount because the impairment had been considered other than temporary or a loan modification had been classified as a TDR. Based on an assessment as to the collectability of the principal, a determination was made to apply any payments received either against the principal, against the valuation allowance or according to the contractual terms of the loan. We did not have any significant impaired mortgage loans in 2019.

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. 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 nonaccrual 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 six months ended June 30, 2020.

We assess loan modifications outside the scope of the CARES Act TDR relief or Interagency Statement guidance on a case-bycase 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.

We did not have any significant loans that were modified and met the criteria of a TDR for the three and six months ended June 30, 2020 and 2019.

Securities Posted as Collateral

As of June 30, 2020 and December 31, 2019, we posted \$4,350.9 million and \$4,062.0 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 June 30, 2020 and December 31, 2019, we posted \$3,005.9 million and \$2,749.4 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 June 30, 2020 and December 31, 2019, \$260.3 million and \$163.9 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	ross amounts consolidatee of financi	d state	ments		
	Gross amount of recognized assets (1) i			Financial ruments (2) (in mi		Collateral received	Net	amount
June 30, 2020				(
Derivative assets	\$	530.6	\$	(100.3)	\$	(426.3)	\$	4.0
Reverse repurchase agreements		21.7		_		(21.7)		—
Total	\$	552.3	\$	(100.3)	\$	(448.0)	\$	4.0
December 31, 2019								
Derivative assets	\$	288.7	\$	(88.4)	\$	(197.6)	\$	2.7
Reverse repurchase agreements		23.6		_		(23.6)		_
Total	\$	312.3	\$	(88.4)	\$	(221.2)	\$	2.7

(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 above excludes \$0.8 million and \$6.0 million of derivative assets as of June 30, 2020 and December 31, 2019, respectively, that are not subject to master netting agreements or similar agreements. The gross amounts of derivative and reverse repurchase agreement assets are not netted against offsetting liabilities for presentation on the consolidated statements of financial position.

(2) Represents amount of offsetting derivative liabilities that are subject to an enforceable master netting agreement or similar agreement that are not netted against the gross derivative assets for presentation on the consolidated statements of financial position.

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

			(Gross amounts consolidated of financi	l stater	nents		
	of r	oss amount recognized bilities (1)		'inancial ruments (2) (in mi	(Ilions)	Collateral pledged	Ne	t amount
June 30, 2020				(
Derivative liabilities	\$	192.8	\$	(100.3)	\$	(77.5)	\$	15.0
December 31, 2019								
Derivative liabilities	\$	216.0	\$	(88.4)	\$	(118.3)	\$	9.3

(1) The gross amount of recognized derivative liabilities is reported with other liabilities on the consolidated statements of financial position. The above excludes \$576.0 million and \$314.5 million of derivative liabilities as of June 30, 2020 and December 31, 2019, respectively, which are primarily embedded derivatives that are not subject to master netting agreements or similar agreements. The gross amounts of derivative liabilities are not netted against offsetting assets for presentation on the consolidated statements of financial position.

(2) Represents amount of offsetting derivative assets that are subject to an enforceable master netting agreement or similar agreement that are not netted against the gross derivative liabilities for presentation on the consolidated statements of financial position.

The financial instruments that are subject to master netting agreements or similar agreements include right of setoff provisions. Derivative instruments include provisions to setoff positions covered under the agreements with the same counterparties and provisions to setoff positions outside of the agreements with the same counterparties in the event of default by one of the parties. Derivative instruments also include collateral 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 June 30, 2020 and December 31, 2019.

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 purchase 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 have used exchange-traded futures to reduce market risks from changes in interest rates and to alter mismatches between the assets in a portfolio and the liabilities supported by those assets.

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 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.

We also use exchange-traded futures in various fund strategies to manage an absolute return and volatility reduction objective for equity risk against respective benchmarks.



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 had a structured investment relationship with a trust we determined to be a VIE, which was consolidated in our financial statements. The certificates issued by the trust included obligations to deliver an underlying security to residual interest holders and the obligations contained an embedded derivative of the forecasted transaction to deliver the underlying security. The certificates matured in the second quarter of 2020.

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.

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-thecounter ("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 \$282.9 million and \$271.6 million in cash and securities under collateral arrangements as of June 30, 2020 and December 31, 2019, 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 June 30, 2020 and December 31, 2019, was \$117.0 million and \$164.7 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 triggers, we posted collateral and initial margin of \$282.9 million and \$271.6 million as of June 30, 2020 and December 31, 2019, 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 June 30, 2020, we would be required to post an additional \$83.1 million of collateral to our counterparties.

As of June 30, 2020 and December 31, 2019, we had received \$383.7 million and \$156.8 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:

		June 30, 2020		ember 31, 2019
Notional amounts of derivative instruments		(in m	illions)	
Interest rate contracts:				
Interest rate swaps	\$	38,991.6	\$	35,173.6
Interest rate options	Ψ	1,886.9	Ψ	1,416.9
Interest rate futures		591.5		142.5
Swaptions		62.0		62.0
Foreign exchange contracts:		02.0		02.0
Currency forwards		1,185.9		1,182.3
Currency swaps		986.0		1,027.2
Currency options				53.8
Equity contracts:				55.0
Equity options		1,735.9		1,672.8
Equity futures		379.9		149.5
Credit contracts:		0,0,0		110.0
Credit default swaps		310.0		165.0
Other contracts:		51000		100.0
Embedded derivatives		9,764.8		9,742.3
Total notional amounts at end of period	\$	55,894.5	\$	50,787.9
	÷	55,00 115		50,707.5
Credit exposure of derivative instruments				
Interest rate contracts:				
Interest rate swaps	\$	351.7	\$	181.9
Interest rate options		65.1		28.3
Foreign exchange contracts:				
Currency swaps		71.7		55.4
Currency forwards		10.9		4.9
Currency options		_		0.1
Equity contracts:				
Equity options		39.3		30.5
Credit contracts:				
Credit default swaps		2.6		0.5
Total gross credit exposure		541.3		301.6
Less: collateral received		446.5		208.3
Net credit exposure	\$	94.8	\$	93.3
-	-		-	

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

		Derivativ	e assets (1)		Derivative	e liabilities (2)		
	June 30, 2020			ber 31, 2019	Jun illions)	e 30, 2020	Decem	ber 31, 2019	
Derivatives designated as hedging instruments				(III III	iiiioiisj				
Interest rate contracts	\$	_	\$	_	\$	31.2	\$	21.3	
Foreign exchange contracts		61.3		30.0		0.8		15.2	
Total derivatives designated as hedging instruments	\$	61.3	\$	30.0	\$	32.0	\$	36.5	
Derivatives not designated as hedging instruments									
Interest rate contracts	\$	408.3	\$	204.2	\$	40.9	\$	16.7	
Foreign exchange contracts		20.0		29.5		102.9		100.2	
Equity contracts		39.3		30.5		14.7		63.1	
Credit contracts		2.5		0.5		2.3		1.2	
Other contracts		_		_		576.0		312.8	
Total derivatives not designated as hedging instruments		470.1		264.7		736.8		494.0	
Total derivative instruments	\$	531.4	\$	294.7	\$	768.8	\$	530.5	

(1) The fair value of derivative assets is reported with other investments on the consolidated statements of financial position.

(2) The fair value of derivative liabilities is reported with other liabilities on the consolidated statements of financial position, with the exception of certain embedded derivative liabilities. Embedded derivatives with a net liability fair value of \$576.0 million and \$214.2 million as of June 30, 2020 and December 31, 2019, respectively, are reported with contractholder funds 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 June 30, 2020 and December 31, 2019, we did not purchase credit protection relating to our sold protection transactions. In certain circumstances, our potential loss could also be reduced by any amount recovered in the default proceedings of the underlying credit name.

The following tables show our credit default swap protection sold by types of contract, types of referenced/underlying asset class and external agency rating for the underlying reference security. The maximum future payments are undiscounted and have not been reduced by the effect of any offsetting transactions, collateral or recourse features described above.

			June 30), 2020		
	otional mount	v	F air alue nillions)		aximum future ayments	Weighted average expected life (in years)
Single name credit default swaps		,	<i>,</i>			
Corporate debt						
А	\$ 20.0	\$	0.4	\$	20.0	5.0
BBB	115.0		1.4		115.0	4.4
Sovereign						
А	20.0		0.3		20.0	5.0
BBB	 15.0		0.1		15.0	1.5
Total credit default swap protection sold	\$ 170.0	\$	2.2	\$	170.0	4.3
			December	r 31, 20 1	9	
	otional mount	v	F air alue nillions)		aximum future ayments	Weighted average expected life (in years)
Single name credit default swaps		(
Corporate debt						
А	\$ 5.0	\$		\$	5.0	0.5
BBB	70.0		0.2		70.0	2.6
Sovereign						
BBB	 15.0		0.3		15.0	2.0
Total credit default swap protection sold	\$ 90.0	\$	0.5	\$	90.0	2.4

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 hedge	d item		Cumulative a value hedging l included in the of the he	basis adjus	ment
hedged item is included	J	une 30, 2020	Decen	nber 31, 2019	Jun illions)	e 30, 2020	Decem	ber 31, 2019
Fixed maturities, available-for-sale:				(111111	iiiioiis)			
Active hedging relationships	\$	152.8	\$	142.0	\$	29.3	\$	18.1
Discontinued hedging relationships		137.1		159.3		6.5		7.7
Total fixed maturities, available-for-sale in								
active or discontinued hedging relationships	\$	289.9	\$	301.3	\$	35.8	\$	25.8

Cash Flow Hedges

We utilized floating-to-fixed rate interest rate swaps to eliminate the variability in cash flows of recognized financial assets and liabilities and forecasted transactions.

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.

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 following table shows the effect of derivatives in cash flow hedging relationships on the consolidated statements of financial position.

			Amount	of gain	(loss) recog	nized in	AOCI on d	erivat	ives
		I	for the three	months	ended	I	For the six n	nonth	s ended
Derivatives in cash			Jun	e 30,			Jun	e 30,	
flow hedging relationships	Related hedged item		2020		2019		2020		2019
					(in m	illions)		_	
Interest rate contracts	Fixed maturities, available-for-sale	\$	(7.4)	\$	0.9	\$	(3.0)	\$	(3.3)
Foreign exchange contracts	Fixed maturities, available-for-sale		(18.8)		3.4		46.5		(5.2)
Total		\$	(26.2)	\$	4.3	\$	43.5	\$	(8.5)

We expect to reclassify net gains of \$24.8 million from AOCI into net income in the next 12 months, which includes both net deferred gains on discontinued hedges and net losses 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	three month	s endeo	d June 30, 202	0	
	inco to ma av	nvestment me related hedges of fixed atturities, vailable- or-sale	cap (lossed hedg ma av	t realized ital gains s) related to ges of fixed atturities, vailable- <u>or-sale</u> (in m.	C S I I I I I	Benefits, laims and ettlement expenses related to hedges of ivestment contracts	e r	perating xpenses elated to ges of debt
Total amounts of consolidated statement of operations line items in which the effects of fair value and cash flow hedges are reported	\$	944.6	\$	(27.4)	\$	1,601.3	\$	983.3
Losses on fair value hedging relationships: Interest rate contracts: Gain recognized on hedged item Loss recognized on derivatives Amortization of hedged item basis adjustments	\$	0.2 (0.2) (0.6)	\$	_	\$		\$	
Amounts related to periodic settlements on derivatives Total loss recognized for fair value hedging relationships	\$	(0.0) (1.2) (1.8)	\$		\$		\$	
Gains on cash flow hedging relationships: Interest rate contracts: Gain reclassified from AOCI on derivatives	\$	4.7	\$	3.9	\$	_	\$	_
Foreign exchange contracts: Gain reclassified from AOCI on derivatives Amounts related to periodic settlements on derivatives Total gain recognized for cash flow hedging relationships	\$	 2.1 6.8	\$	4.0 — 7.9	\$		\$	

			For	the three months	ende	d June 30, 201	9	
	inc	t investment come related to hedges of fixed naturities, available- for-sale	Net realized capital gains (losses) related to hedges of fixed maturities, available- <u>for-sale</u> (in mu		Benefits, claims and settlement expenses related to hedges of investment <u>contracts</u> millions)		1	Operating expenses related to dges of debt
Total amounts of consolidated statement of operations line items in which the effects of fair value and cash flow hedges are reported	\$	1,037.1	\$	(4.0)	<u>\$</u>	2,446.1	\$	1,046.3
Losses on fair value hedging relationships: Interest rate contracts:								
Gain recognized on hedged item	\$	4.2	\$	_	\$	_	\$	_
Loss recognized on derivatives		(4.3)						_
Amortization of hedged item basis adjustments		(1.2)				_		_
Amounts related to periodic settlements on derivatives		(0.7)						
Total loss recognized for fair value hedging relationships	\$	(2.0)	\$		\$		\$	
Gains (losses) on cash flow hedging relationships:								
Interest rate contracts: Gain (loss) reclassified from AOCI on derivatives	\$	4.9	\$		\$		\$	(2.0)
Gain reclassified from AOCI as a result that a forecasted	φ	4.9	φ		Φ		Ф	(2.0)
transaction is no longer probable of occurring		_		0.1		—		_
Foreign exchange contracts:								
Gain reclassified from AOCI on derivatives				9.5				—
Amounts related to periodic settlements on derivatives		1.7						
Total gain (loss) recognized for cash flow hedging relationships	\$	6.6	\$	9.6	\$		\$	(2.0)

			For th	e six months	ended	June 30, 2020		
	inc t n	t investment ome related to hedges of fixed naturities, available- for-sale	cap re hedg ma	t realized bital gains elated to ges of fixed aturities, vailable- <u>ior-sale</u> (in m	c s i i	Benefits, laims and ettlement expenses related to hedges of nvestment contracts	1	Operating expenses related to Iges of debt
Total amounts of consolidated statement of operations line items in which the effects of fair value and cash flow hedges are reported	\$	1,928.2	\$	104.0	\$	4,460.0	\$	2,318.8
Losses on fair value hedging relationships: Interest rate contracts:								
Gain recognized on hedged item Loss recognized on derivatives	\$	11.2 (11.5)	\$	_	\$	_	\$	_
Amortization of hedged item basis adjustments		(1.3)		—		—		—
Amounts related to periodic settlements on derivatives Total loss recognized for fair value hedging relationships	\$	(2.3) (3.9)	\$		\$		\$	
Gains on cash flow hedging relationships: Interest rate contracts:								
Gain reclassified from AOCI on derivatives	\$	9.4	\$	2.6	\$	_	\$	—
Foreign exchange contracts: Gain reclassified from AOCI on derivatives		_		6.2		_		_
Amounts related to periodic settlements on derivatives Total gain recognized for cash flow hedging relationships	\$	4.2 13.6	\$	8.8	\$		\$	

	For the six months ended June 30, 2019								
	Net investment income related to hedges of fixed maturities, available- for-sale		Net realized capital gains related to hedges of fixed maturities, available- <u>for-sale</u> (in n		Benefits, claims and settlement expenses related to hedges of investment <u>contracts</u> millions)		1	Dperating expenses related to Iges of debt	
Total amounts of consolidated statement of operations line items in which the effects of fair value and cash flow hedges are reported	\$	1,998.1	\$	80.5	\$	4,641.2	\$	2,039.0	
Losses on fair value hedging relationships: Interest rate contracts:									
Gain recognized on hedged item Loss recognized on derivatives	\$	6.6 (6.8)	\$		\$		\$	_	
Amortization of hedged item basis adjustments Amounts related to periodic settlements on derivatives		(2.5) (1.5)						_	
Total loss recognized for fair value hedging relationships	\$	(4.2)	\$		\$		\$		
Gains (losses) 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	\$	10.0	\$	_	\$	_	\$	(4.8)	
transaction is no longer probable of occurring		_		0.1		_		_	
Foreign exchange contracts: Gain reclassified from AOCI on derivatives		_		9.5		_		_	
Amounts related to periodic settlements on derivatives Total gain (loss) recognized for cash flow hedging relationships	\$	3.3 13.3	\$	9.6	\$		\$	(4.8)	

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 June 30,					Amount of gain reclassified from AOCI into net realized capital gains (losses) for the three months ended June 30,				
Derivatives in net investment hedging relationships		2020	20)19	20	020		2019		
				(in m	illions)					
Foreign exchange contracts	\$	1.8	\$	_	\$	_	\$	—		
Total	\$	1.8	\$		\$	—	\$			

	Amount of ga in AOCI or for the six n Jun	ı derivativ	ves	net re	Amount of gain reclassified from AOCI into realized capital gains (losses) for the six months ended June 30,					
Derivatives in net investment hedging relationships	 2020	2	2019	20	20	2019				
			(in mi	illions)						
Foreign exchange contracts	\$ 9.3	\$	—	\$	_	\$				
Total	\$ 9.3	\$		\$	_	\$				

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.

The following table shows the effect of derivatives not designated as hedging instruments, including fair value changes of embedded derivatives that have been bifurcated from the host contract, on the consolidated statements of operations.

Derivatives not designated as hedging instruments	mount of gain (let income on d <u>three months (</u> 2020	erivative	es for the	Amount of gain (loss) recognized in net income on derivatives for the six months ended June 30, 2020 2019					
Der watives not designated as neuging instruments	 2020			millions)	2020		2015		
Interest rate contracts	\$ (19.9)	\$	94.1	\$	480.5	\$	161.4		
Foreign exchange contracts	24.3		5.4		(32.6)		10.0		
Equity contracts	(188.2)		(15.8)		(11.1)		(90.8)		
Credit contracts	(1.4)		(4.8)		1.0		(3.5)		
Other contracts	(2.5)		(76.1)		(362.3)		(71.4)		
Total	\$ (187.7)	\$	2.8	\$	75.5	\$	5.7		

5. 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 six months ended June 30,						
		2020		2019			
	.		illions)				
Balance at beginning of period	\$	2,365.5	\$	2,252.7			
Less: reinsurance recoverable		403.8		404.3			
Net balance at beginning of period		1,961.7		1,848.4			
Incurred:							
Current year		609.5		653.6			
Prior years		34.7		29.0			
Total incurred		644.2		682.6			
Payments:							
Current year		333.7		387.8			
Prior years		257.6		238.1			
Total payments		591.3		625.9			
Net balance at end of period		2,014.6		1,905.1			
Plus: reinsurance recoverable		418.0		403.7			
Balance at end of period	\$	2,432.6	\$	2,308.8			
Amounts not included in the rollforward above:							
Claim adjustment expense liabilities	\$	56.9	\$	55.1			

Incurred liability adjustments relating to prior years, which affected current operations during 2020 and 2019, 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.

6. Long-Term Debt

	 Principal	June 30, 2020 Net unamortized discount, premium and debt issuance <u>costs</u> (in millions)	 Carrying amount
3.3% notes payable, due 2022	\$ 300.0	\$ (0.9)	\$ 299.1
3.125% notes payable, due 2023	300.0	(0.8)	299.2
3.4% notes payable, due 2025	400.0	(2.4)	397.6
3.1% notes payable, due 2026	350.0	(2.2)	347.8
3.7% notes payable, due 2029	500.0	(5.8)	494.2
2.125% notes payable, due 2030	500.0	(6.9)	493.1
6.05% notes payable, due 2036	505.6	(2.5)	503.1
4.625% notes payable, due 2042	300.0	(3.2)	296.8
4.35% notes payable, due 2043	300.0	(3.1)	296.9
4.3% notes payable, due 2046	300.0	(3.3)	296.7
4.7% notes payable, due 2055	400.0	(4.9)	395.1
Non-recourse mortgages and notes payable	42.7	1.1	43.8
Total long-term debt	\$ 4,198.3	\$ (34.9)	\$ 4,163.4

		December 31, 2019							
	 Principal	o pre del	inamortized liscount, emium and ot issuance <u>costs</u> n millions)		Carrying amount				
3.3% notes payable, due 2022	\$ 300.0	\$	(1.0)	\$	299.0				
3.125% notes payable, due 2023	300.0		(1.0)		299.0				
3.4% notes payable, due 2025	400.0		(2.6)		397.4				
3.1% notes payable, due 2026	350.0		(2.5)		347.5				
3.7% notes payable, due 2029	500.0		(6.1)		493.9				
6.05% notes payable, due 2036	505.6		(2.4)		503.2				
4.625% notes payable, due 2042	300.0		(3.2)		296.8				
4.35% notes payable, due 2043	300.0		(3.3)		296.7				
4.3% notes payable, due 2046	300.0		(3.3)		296.7				
4.7% notes payable, due 2055	400.0		(4.9)		395.1				
Non-recourse mortgages and notes payable	 107.6		1.2		108.8				
Total long-term debt	\$ 3,763.2	\$	(29.1)	\$	3,734.1				

Net discount, premium and issuance costs associated with issuing these notes are amortized to expense over the respective terms using the interest method.

On June 12, 2020, we issued \$500.0 million of senior notes. The notes bear interest at 2.125% and will mature in 2030. Interest on the notes is payable semi-annually on June 15 and December 15 each year, beginning on December 15, 2020. The proceeds from these notes were used for general corporate purposes.

7. 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 mon June 30,		For the six mont June 30,	
	2020	2019	2020	2019
U.S. corporate income tax rate	21 %	21 %	21 %	21 %
Dividends received deduction	(3)	(4)	(4)	(5)
Tax credits	(2)	(3)	(2)	(2)
Impact of equity method presentation	(1)	(1)	(1)	(1)
Interest exclusion from taxable income	(1)	(1)	(1)	(1)
State income taxes	—	—	—	1
Other	3	1	2	1
Effective income tax rate	17 %	13 %	15 %	14 %

8. Employee and Agent Benefits

Components of Net Periodic Benefit Cost

Pension	benefit		nent					
 For the three months ended June 30,				For the three months ended June 30,				
2020		2019		2020		2019		
		(in mi	llions)					
\$ 18.2	\$	16.7	\$	—	\$	_		
29.4		32.1		0.7		1.0		
(39.2)		(36.4)		(9.0)		(8.3)		
(4.2)		(2.0)		(0.3)		(0.3)		
18.9		17.2						
\$ 23.1	\$	27.6	\$	(8.6)	\$	(7.6)		
\$	For the three Jun 2020 \$ 18.2 29.4 (39.2) (4.2) 18.9	For the three months June 30, 2020 \$ 18.2 \$ 29.4 (39.2) (4.2) 18.9	June 30, 2020 2019 (in min (in min \$ 18.2 \$ 16.7 29.4 32.1 (36.4) (4.2) (2.0) 18.9 17.2	For the three months ended June 30, 2020 2019 (in millions) (in millions) \$ 18.2 \$ 16.7 \$ 29.4 32.1 (39.2) (36.4) (4.2) (2.0) 18.9 17.2 17.2 17.2	Pension benefits ben For the three months ended June 30, For the three June 30, For the three June 30, 2020 2019 2020 (in millions) 2020 0.7 \$ 18.2 \$ 16.7 \$ 29.4 32.1 0.7 (39.2) (36.4) (9.0) (4.2) (2.0) (0.3) 18.9 17.2	For the three months ended June 30, For the three months June 30, 2020 2019 (in millions) 2020 \$ 18.2 16.7 29.4 32.1 (39.2) (36.4) (4.2) (2.0) 18.9 17.2		

~ .

		Pension benefits For the six months ended June 30,				Other pos ben For the six r Jun			
	2020		2019			2020		2019	
				(in m	illions)				
Service cost	\$	36.3	\$	33.5	\$	—	\$	—	
Interest cost		58.7		64.9		1.4		1.9	
Expected return on plan assets		(78.4)		(71.9)		(18.0)		(16.6)	
Amortization of prior service benefit		(8.4)		(2.9)		(0.5)		(0.6)	
Recognized net actuarial loss		37.7		34.1		_		_	
Net periodic benefit cost (income)	\$	45.9	\$	57.7	\$	(17.1)	\$	(15.3)	
					-		-		

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

During the second quarter of 2019, we amended The Principal Pension Plan and The Principal Financial Group Nonqualified Defined Benefit Plan for Employees to end traditional benefit accruals as of December 31, 2022, and begin cash balance accruals January, 1, 2023. We remeasured the associated plan assets and pension benefit obligations as of May 31, 2019, resulting in a net actuarial loss of \$59.0 million and a total plan amendment gain of \$122.4 million. The net actuarial loss is composed of an increase in benefit obligation of \$237.6 million resulting from the reduction in discount rate compared to December 31, 2018, partially offset by a \$178.6 million asset gain. The net plan amendment gain was recorded in AOCI and will be amortized over the average future working lifetimes of the plans.

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 2020 for a combined total of up to \$75.0 million. During the three and six months ended June 30, 2020, we contributed \$15.7 million and \$21.4 million to these plans, respectively.



9. 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. 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 June 30, 2020, 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 June 30, 2020.

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 June 30, 2020, was approximately \$111.0 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 June 30, 2020, 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 and financing 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.

10. Stockholders' Equity

Common Stock Dividends

	F		r the three months ended June 30, 2020 2019		For the six months June 30,		s ended	
		2020		2019	 2020		2019	
Dividends declared per common share	\$	0.56	\$	0.54	\$ 1.12	\$	1.08	

Reconciliation of Outstanding Common Shares

	For the three m June 3		For the six months ended June 30,		
	2020 2019		2020	2019	
		(in milli	ions)		
Beginning balance	273.4	278.2	276.6	279.5	
Shares issued	0.6	0.4	1.8	2.2	
Treasury stock acquired	—	—	(4.4)	(3.1)	
Ending balance	274.0	278.6	274.0	278.6	

In November 2018, our Board of Directors authorized a share repurchase program of up to \$500.0 million of our outstanding common stock, which was completed in February 2020. In February 2020, our Board of Directors authorized a share repurchase program of up to \$900.0 million of our outstanding common stock, which has no expiration date. We paused our share repurchase program in March 2020.

Other Comprehensive Income

		e three months June 30, 2020	ended	For t	ended	
	Pre-Tax	Tax	After-Tax	Pre-Tax	Tax	After-Tax
Net unrealized gains on available-for-sale securities during the period Reclassification adjustment for gains included in net income	\$ 4,195.7	\$ (900.4)	(in mi \$ 3,295.3	illions) \$ 1,418.0	\$ (300.1)	\$ 1,117.9
(1)	(47.9)	11.0	(36.9)	(57.4)	13.6	(43.8)
Adjustments for assumed changes in amortization patterns	(336.4)	70.6	(265.8)	(3.9)	0.8	(3.1)
Adjustments for assumed changes in policyholder liabilities	(1,232.5)	277.6	(954.9)	(570.3)	125.4	(444.9)
Net unrealized gains on available-for-sale securities	2,578.9	(541.2)	2,037.7	786.4	(160.3)	626.1
Net unrealized gains (losses) on derivative instruments during the period Reclassification adjustment for gains included in net income	(10.8)	3.1	(7.7)	55.4	(11.1)	44.3
(3)	(12.6)	1.8	(10.8)	(18.2)	3.3	(14.9)
Adjustments for assumed changes in amortization patterns	1.0	(0.2)	0.8	0.7	(0.2)	0.5
Adjustments for assumed changes in policyholder liabilities	1.7	(0.4)	1.3	2.9	(0.6)	2.3
Net unrealized gains (losses) on derivative instruments	(20.7)	4.3	(16.4)	40.8	(8.6)	32.2
Foreign currency translation adjustment during the period Reclassification adjustment for losses included in net income	30.0	(13.6)	16.4	(306.6)	(2.8)	(309.4)
(4)				31.5		31.5
Foreign currency translation adjustment	30.0	(13.6)	16.4	(275.1)	(2.8)	(277.9)
Unrecognized postretirement benefit obligation during the period	_	(0.1)	(0.1)	0.6	(0.2)	0.4
Amortization of amounts included in net periodic benefit			10 F	20.0		24.0
cost (5)	14.4	(3.9)	10.5	28.8	(7.8)	21.0
Net unrecognized postretirement benefit obligation	14.4	(4.0)	10.4	29.4	(8.0)	21.4
Other comprehensive income	\$ 2,602.6	<u>\$ (554.5)</u>	\$ 2,048.1	<u>\$ 581.5</u>	<u>\$ (179.7)</u>	<u>\$ 401.8</u>

	For the	e three months June 30, 2019	ended	For t	he six months (June 30, 2019	ended
	Pre-Tax	Tax	After-Tax	Pre-Tax	Tax	After-Tax
Net unrealized gains on available-for-sale securities during the period Reclassification adjustment for losses included in net income	\$ 1,804.0	\$ (394.9)	(in mi \$ 1,409.1	llions) \$ 3,621.0	\$ (787.4)	\$ 2,833.6
(1)	27.9	(5.5)	22.4	36.6	(7.2)	29.4
Adjustments for assumed changes in amortization patterns	(117.6)	24.7	(92.9)	(239.7)	50.4	(189.3)
Adjustments for assumed changes in policyholder liabilities	(462.3)	108.6	(353.7)	(762.6)	178.1	(584.5)
Net unrealized gains on available-for-sale securities	1,252.0	(267.1)	984.9	2,655.3	(566.1)	2,089.2
Noncredit component of impairment losses on fixed						
maturities, available-for-sale during the period	0.3	_	0.3	(2.5)	0.6	(1.9)
Adjustments for assumed changes in amortization patterns	(0.8)	0.1	(0.7)	(1.2)	0.2	(1.0)
Adjustments for assumed changes in policyholder liabilities	0.1	_	0.1	0.1	_	0.1
Noncredit component of impairment losses on fixed maturities, available-for-sale (2)	(0.4)	0.1	(0.3)	(3.6)	0.8	(2.8)
Net unrealized gains on derivative instruments during the period Reclassification adjustment for gains included in net income	12.8	(2.7)	10.1	4.3	(0.9)	3.4
(3)	(12.5)	2.5	(10.0)	(14.8)	2.8	(12.0)
Adjustments for assumed changes in amortization patterns	0.6	(0.1)	0.5	2.5	(0.5)	2.0
Adjustments for assumed changes in policyholder liabilities	1.2	(0.2)	1.0	4.8	(1.1)	3.7
Net unrealized gains (losses) on derivative instruments	2.1	(0.5)	1.6	(3.2)	0.3	(2.9)
Foreign currency translation adjustment during the period Reclassification adjustment for losses included in net income	4.6	(2.2)	2.4	45.5	(4.8)	40.7
(4)	26.5	_	26.5	26.1	_	26.1
Foreign currency translation adjustment	31.1	(2.2)	28.9	71.6	(4.8)	66.8
Unrecognized postretirement benefit obligation during the period Amortization of amounts included in net periodic benefit	63.4	(17.1)	46.3	63.4	(17.1)	46.3
cost (5)	14.9	(4.0)	10.9	30.6	(8.2)	22.4
Net unrecognized postretirement benefit obligation	78.3	(21.1)	57.2	94.0	(25.3)	68.7
Other comprehensive income	\$ 1,363.1	\$ (290.8)	\$ 1,072.3	\$ 2,814.1	\$ (595.1)	\$ 2,219.0

(1) Pre-tax reclassification adjustments relating to available-for-sale securities are reported in net realized capital gains (losses) on the consolidated statements of operations.

(2) Prior to 2020, represents the net impact of (1) unrealized gains resulting from reclassification of previously recognized noncredit impairment losses from OCI to net realized capital gains (losses) for fixed maturities with bifurcated OTTI that had additional credit losses or fixed maturities that previously had bifurcated OTTI that have now been sold or are intended to be sold and (2) unrealized losses resulting from reclassification of noncredit impairment losses for fixed maturities with bifurcated OTTI from net realized capital gains (losses) to OCI.

(3) 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.

- (4) The 2020 pre-tax reclassification adjustment primarily related to the release of the cumulative translation adjustment from the dissolution of a foreign subsidiary. The 2019 pre-tax reclassification adjustment primarily related to deconsolidated sponsored investment funds and was reported in net realized capital gains (losses) on the consolidated statements of operations. For both the three and six months ended June 30, 2019, \$5.7 million of this reclassification relates to noncontrolling interest and is reported in net income attributable to noncontrolling interest on the consolidated statements of operations.
- (5) 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 8, Employee and Agent Benefits, under the caption "Components of Net Periodic Benefit Cost" for further details.

Accumulated Other Comprehensive Income (Loss)

	g availa			ncredit oonent of nent losses maturities e-for-sale(2)	0	et unrealized gains on derivative instruments (in millions	tr ad	Foreign currency anslation ljustment	ро	nrecognized stretirement benefit obligation	COL	ccumulated other nprehensive come (loss)
Balances as of April 1, 2019	\$	1,294.3	\$	(49.6)	\$	59.9	\$	(1,222.1)	\$	(501.4)	\$	(418.9)
Other comprehensive income during the period, net of adjustments Amounts reclassified from AOCI Other comprehensive income Balances as of June 30, 2019	\$	962.4 22.4 984.8 2,279.1	\$	(0.3) (0.3) (0.3) (49.9)	\$	11.6 (10.0) 1.6 61.5	\$	2.5 20.8 23.3 (1,198.8)	\$	46.3 10.9 57.2 (444.2)	\$	1,022.5 44.1 1,066.6 647.7
Balances as of April 1, 2020	\$	1,350.6	\$	_	\$	102.0	\$	(1,627.2)	\$	(424.6)	\$	(599.2)
Other comprehensive income during the period, net of adjustments Amounts reclassified to AOCI Other comprehensive income Balances as of June 30, 2020	\$	2,074.5 (36.9) 2,037.6 3,388.2	\$		\$	(5.6) (10.8) (16.4) 85.6	\$	18.3 	\$	(0.1) 10.5 10.4 (414.2)	\$	2,087.1 (37.2) 2,049.9 1,450.7

	g availa	Net unrealized gains on available-for-sale securities (1) \$ 190.0		Noncredit component of pairment losses fixed maturities ilable-for-sale (2)	Net unrealized gains on derivative <u>instruments</u> (in millions)			Foreign urrency anslation justment	pos	nrecognized stretirement benefit obligation	CO	occumulated other mprehensive ncome (loss)
Balances as of January 1, 2019	\$	190.0	\$	(47.1)	\$	64.4		(1,259.5)	\$	(512.9)	\$	(1,565.1)
Other comprehensive income during the period, net of adjustments Amounts reclassified from AOCI Other comprehensive income Balances as of June 30, 2019	\$	2,059.7 29.4 2,089.1 2,279.1	\$	(1.12) (2.8) (2.8) (49.9)	\$	9.1 (12.0) (2.9) 61.5		40.3 20.4 60.7 (1,198.8)	\$	46.3 22.4 68.7 (444.2)	\$	2,152.6 60.2 2,212.8 647.7
Balances as of January 1, 2020	\$	2,806.0	\$	(44.1)	\$	53.4	\$	(1,341.8)	\$	(435.6)	\$	1,037.9
Other comprehensive income during the period, net of adjustments Amounts reclassified to AOCI Other comprehensive income		670.1 (43.8) 626.3				47.1 (14.9) 32.2		(298.6) <u>31.5</u> (267.1)		0.4 <u>21.0</u> 21.4		419.0 (6.2) 412.8
Effects of implementation of accounting change related to credit losses, net Balances as of June 30, 2020	\$	(44.1) 3,388.2	\$		\$	85.6	\$	(1,608.9)	\$	(414.2)	\$	1,450.7

(1) Net unrealized losses on available-for-sale debt securities for which an allowance for credit loss has been recorded were \$5.7 million as of June 30, 2020.

(2) Prior to the implementation of authoritative guidance in 2020, the noncredit component of impairment losses on fixed maturities, available-for-sale was included as a separate component of stockholders' equity.

Noncontrolling Interest

Interests held by unaffiliated parties in consolidated entities are reflected in noncontrolling interest, which represents the noncontrolling partners' share of the underlying net assets of our consolidated subsidiaries. Noncontrolling interest that is not redeemable is reported in the equity section of the consolidated statements of financial position.

The noncontrolling interest holders in certain of our consolidated entities maintain an equity interest that is redeemable at the option of the holder, which may be exercised on varying dates. Since redemption of the noncontrolling interest is outside of our control, this interest is excluded from stockholders' equity and reported separately as redeemable noncontrolling interest on the consolidated statements of financial position. Our redeemable noncontrolling interest primarily relates to consolidated sponsored investment funds for which interests are redeemed at fair value from the net assets of the funds.

For our redeemable noncontrolling interest related to other consolidated subsidiaries, redemptions are required to be purchased at fair value or a value based on a formula that management intended to reasonably approximate fair value based on a fixed multiple of earnings over a measurement period. The carrying value 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 result in aution value of 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):

	F	or the three June	ıs ended	F	or the six n Jun	s ended
		2020	 2019		2020	 2019
Balance at beginning of period	\$	239.7	\$ (in mi 537.7	illions) \$	264.9	\$ 391.2
Net income (loss) attributable to redeemable noncontrolling interest		15.7	4.0		(8.0)	24.3
Redeemable noncontrolling interest of deconsolidated entities (1)		_	(370.0)		_	(370.0)
Contributions from redeemable noncontrolling interest		40.4	154.0		74.6	297.7
Distributions to redeemable noncontrolling interest		(18.1)	(25.8)		(47.8)	(46.1)
Change in redemption value of redeemable noncontrolling interest		(2.5)	(1.0)		(1.9)	1.7
Stock-based compensation attributable to redeemable noncontrolling						
interest		_	0.1		_	0.1
Other comprehensive income (loss) attributable to redeemable						
noncontrolling interest		(2.5)	5.5		(9.1)	5.6
Balance at end of period	\$	272.7	\$ 304.5	\$	272.7	\$ 304.5

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

11. Fair Value Measurements

We use fair value measurements to record fair value of certain assets and liabilities and to estimate fair value of financial instruments not recorded at fair value but required to be disclosed at fair value. Certain financial instruments, particularly policyholder liabilities other than investment contracts, are excluded from these fair value disclosure requirements.

Valuation Hierarchy

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price). The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three levels. The level in the fair value hierarchy within which the fair value measurement in its entirety falls is determined based on the lowest level input that is significant to the fair value measurement in its entirety considering factors specific to the asset or liability.

- Level 1 Fair values are based on unadjusted quoted prices in active markets for identical assets or liabilities.
- Level 2 Fair values are based on inputs other than quoted prices within Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3 Fair values are based on at least one significant unobservable input for the asset or liability.

Determination of Fair Value

The following discussion describes the valuation methodologies and inputs used for assets and liabilities measured at fair value on a recurring basis or disclosed at fair value. 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 2020.

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 June 30, 2020, less than 1% 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 net asset value (" 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 may utilize the overnight indexed swap ("OIS") 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 LIBOR interest rate curve to value our positions, which includes a credit spread. This credit spread incorporates an appropriate level of nonperformance risk into our valuations given the current ratings of our counterparties, as well as the collateral agreements in place. Counterparty credit risk is routinely monitored to ensure our adjustment for non-performance 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 non-performance risk on these trades.



Interest Rate Contracts. For non-cleared contracts we use discounted cash flow valuation techniques to determine the fair value of interest rate swaps and swaptions using observable swap curves as the inputs. 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 have a limited number of non-standard currency swaps that are and currency options that were valued using broker quotes. These are 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. In addition, in 2019 we had commercial mortgage loans of consolidated VIEs for which the fair value option was elected.

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.

Commercial mortgage loans of a consolidated VIE were valued using the more observable fair value of the liabilities of the consolidated collateralized financing entity ("CCFE") under the measurement alternative guidance and were reflected in Level 2. The liabilities were affiliated so were not reflected in our consolidated results. The trust was unwound in the third quarter of 2019.

Equity method real estate investments for which the fair value option was elected are reflected in Level 3. The equity method real estate investments consist of underlying real estate and debt. The real estate fair value is estimated using a discounted cash flow valuation model that utilizes 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 is estimated using a discounted cash flow analysis based on our incremental borrowing rate for similar borrowing arrangements.

The fair value of certain redeemable and nonredeemable preferred stock is based on an internal model using unobservable inputs, which is reflected in Level 3.

Cash Equivalents

Certain cash equivalents are reported at fair value on a recurring basis and include money market instruments and other shortterm 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 non-performance 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.

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. Certain obligations reported in other liabilities included embedded derivatives of the forecasted transactions to deliver underlying securities of structured investments to third parties. The fair value of the embedded derivatives was calculated based on the value of the underlying securities that were valued based on prices obtained from third party pricing vendors as utilized and described in our discussion of how fair value is determined for fixed maturities, which was reflected in Level 2. The certificates matured in the second quarter of 2020.

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:

					J	une 30, 2020				
	Assets/ (liabilities) measured at fair value		n	Amount neasured at net asset		F	air va	lue hierarchy le	vel	
	fair value			value (4)	_	Level 1 (in millions)		Level 2		Level 3
Assets					(in millions)				
Fixed maturities, available-for-sale:										
U.S. government and agencies	\$	1.875.0	\$	_	\$	1,460.2	\$	414.8	\$	_
Non-U.S. governments	•	1,006.9	-	_	+	1.0	*	1,005.9	+	_
States and political subdivisions		8,713.6		_				8,713.6		_
Corporate		43,586.8		_				43,311.8		275.0
Residential mortgage-backed pass-through										
securities		3,323.6		_				3,323.6		_
Commercial mortgage-backed securities		4,706.5		_		_		4,693.4		13.1
Collateralized debt obligations (1)		3,506.0		_				3,503.2		2.8
Other debt obligations		7,550.8		_				7,479.6		71.2
Total fixed maturities, available-for-sale		74,269.2				1,461.2		72,445.9		362.1
Fixed maturities, trading		583.8		_		0.5		583.3		_
Equity securities		1,778.5		_		617.9		1,160.6		_
Derivative assets (2)		531.4		_				530.3		1.1
Other investments		769.0		75.6		255.6		399.1		38.7
Cash equivalents		2,041.7		_		69.8		1,971.9		_
Sub-total excluding separate account assets		79,973.6		75.6		2,405.0		77,091.1		401.9
Separate account assets		155,936.3		135.4		89,113.4		57,866.2		8,821.3
Total assets	\$	235,909.9	\$	211.0	\$	91,518.4	\$	134,957.3	\$	9,223.2
	<u> </u>	<u>, </u>					_			
Liabilities										
Investment and universal life contracts (3)	\$	(576.0)	\$	_	\$		\$	_	\$	(576.0)
Derivative liabilities (2)	•	(192.8)	-	_	+		•	(177.5)	+	(15.3)
Other liabilities		(0.1)		_				(0.1)		()
Total liabilities	\$	(768.9)	\$		\$		\$	(177.6)	\$	(591.3)
	-	(*****)	Ť		<u> </u>		Ť	()	<u> </u>	(00000)
Net assets	\$	235,141.0	\$	211.0	\$	91,518.4	\$	134,779.7	\$	8,631.9
	¥		¥		÷		*		*	0,002.00

					December 31, 2019									
		Assets/ (liabilities)		Amount neasured at										
		neasured at	1	net asset		F	air va	lue hierarchy le	vel					
		fair value		value (4)		Level 1 (in millions)		Level 2		Level 3				
Assets						(in millions)								
Fixed maturities, available-for-sale:														
U.S. government and agencies	\$	1,724.2	\$		\$	1,320.0	\$	404.2	\$					
Non-U.S. governments	Ŷ	996.2	Ψ		Ψ	1,5=0.0	Ŷ	994.8	Ψ					
States and political subdivisions		7,490.0		_				7,490.0						
Corporate		40,647.4		_		18.5		40,547.2		81.7				
Residential mortgage-backed pass-through		- ,						- ,						
securities		2,982.4		_		_		2,982.4						
Commercial mortgage-backed securities		4,850.2						4,837.3		12.9				
Collateralized debt obligations (1)		3,215.3						3,016.3		199.0				
Other debt obligations		8,200.5		_				8,109.2		91.3				
Total fixed maturities, available-for-sale		70,106.2				1,339.9		68,381.4		384.9				
Fixed maturities, trading		675.9		_		0.5		675.1		0.3				
Equity securities		1,879.4		_		645.8		1,233.6		_				
Derivative assets (2)		294.7		_				265.4		29.3				
Other investments		796.0		78.3		335.2		343.5		39.0				
Cash equivalents		1,299.0		_		40.9		1,258.1						
Sub-total excluding separate account assets		75,051.2		78.3		2,362.3		72,157.1		453.5				
Separate account assets		165,468.0		129.0		95,652.5		60,718.5		8,968.0				
Total assets	\$	240,519.2	\$	207.3	\$	98,014.8	\$	132,875.6	\$	9,421.5				
	_													
Liabilities														
Investment and universal life contracts (3)	\$	(214.2)	\$	_	\$		\$	_	\$	(214.2)				
Derivative liabilities (2)		(217.7)		_				(201.4)		(16.3)				
Other liabilities (3)		(98.9)						(98.9)		``				
Total liabilities	\$	(530.8)	\$		\$		\$	(300.3)	\$	(230.5)				
	_							. /		<u> </u>				
Net assets	\$	239,988.4	\$	207.3	\$	98,014.8	\$	132,575.3	\$	9,191.0				

(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.

(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 \$12.4 million and \$19.9 million as of June 30, 2020 and December 31, 2019, respectively. Separate account assets using the NAV practical expedient consist of hedge funds with varying investment strategies that also have a variety of redemption terms and conditions. We do not have unfunded commitments associated with these hedge 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 months ended June 30, 2020 Total realized/unrealized													
	В	eginning			ed/unrea (losses)	lized		Net						Ending
	,	asset/ (liability) balance Included in as of net April 1, income 2020 (2)			o compr	uded in ther rehensive ome (3)	s	purchases, sales, issuances and settlements (4) in millions)		Transfers into Level 3		Transfers out of Level 3		asset/ (liability) balance as of June 30, 2020
Assets Fixed maturities, available-for-sale:							(/						
Corporate Commercial mortgage-backed	\$	170.3	\$	_	\$	5.7	\$	(15.7)	\$	217.3	\$	(102.6)	\$	275.0
securities		14.4		(0.9)		(0.4)		_		_		_		13.1
Collateralized debt obligations		171.3		(0.9)		(0.5)		0.2		—		(167.3)		2.8
Other debt obligations		104.9				1.7		(15.8)				(19.6)		71.2
Total fixed maturities, available-for-sale		460.9		(1.8)		6.5		(31.3)		217.3		(289.5)		362.1
Fixed maturities, trading Other investments		0.3 36.0		2.4		_		0.3		_		(0.3)		38.7
Separate account assets (1)		8,866.7		8.5		_		(53.9)		_		_		8,821.3
Liabilities Investment and universal life contracts		(555.4)		(18.3)		_		(2.3)		_		_		(576.0)
Derivatives Net derivative assets (liabilities)		(15.6)		2.5		_		(1.1)		_		_		(14.2)

	For the three months ended June 30, 2019													
	1	Beginning		Total realize gains	ed/unre (losses)			Net						Ending
		asset/ (liability) balance as of April 1, 2019	1	included in net income (2)	comp	uded in other rehensive ome (3)	i: se	urchases, sales, ssuances and ttlements (4) a millions)		Transfers into Level 3		Transfers out of Level 3		asset/ (liability) balance as of June 30, 2019
Assets								,						
Fixed maturities, available-for-sale: Non-U.S. governments Corporate Commercial mortgage-backed	\$	4.2 58.5	\$		\$	_	\$	(0.3) (13.8)	\$		\$		\$	3.9 44.7
securities Collateralized debt obligations		12.0 5.9		(3.2)		2.9 0.5		(1.6)		3.7 30.0		(2.3)		13.1 34.8
Other debt obligations		43.4				0.5		16.0	_		_			59.9
Total fixed maturities, available-for-sale Fixed maturities, trading		124.0		(3.2)		3.9		0.3 0.5		33.7		(2.3)		156.4 0.5
Equity securities		0.4		_		(0.4)				_		—		_
Other investments Separate account assets (1)		29.4 8,718.7		0.1 138.9		0.5		(0.4) 4.2		_		(172.5)		29.1 8,689.8
Liabilities Investment and universal life contracts		(40.5)		(76.2)		(0.2)		(1.8)		_		_		(118.7)
Derivatives Net derivative assets (liabilities)		3.4		6.6		_		5.8		_		_		15.8

	For the six months ended June 30, 2020 Total realized/unrealized													
		eginning			ed/unrea (losses)	lized		Net						Ending
	(1 t	asset/ (liability) balance Included as of in net January 1, income c 2020 (2)		of compr	ided in ther rehensive ime (3)	purchases, sales, issuances and settlements (4) (in millions)		Transfers into Level 3		1	Fransfers out of Level 3		asset/ (liability) balance as of June 30, 2020	
Assets							(
Fixed maturities, available-for-sale: Corporate	\$	81.7	\$	_	\$	(10.6)	\$	10.8	\$	342.0	\$	(148.9)	\$	275.0
Commercial mortgage-backed securities		12.9		(0.9)		1.1		_		_				13.1
Collateralized debt obligations		199.0		(1.0)		(22.6)		142.0		_		(314.6)		2.8
Other debt obligations		91.3		<u> </u>		(1.4)		(2.7)		46.1		(62.1)		71.2
Total fixed maturities, available-for-sale		384.9	_	(1.9)		(33.5)		150.1		388.1		(525.6)		362.1
Fixed maturities, trading		0.3								_		(0.3)		
Other investments		39.0		2.3		(2.9)		0.3		—				38.7
Separate account assets (1)		8,968.0		153.1		_		(299.8)		_				8,821.3
Liabilities Investment and universal life contracts		(214.2)		(358.7)		(0.3)		(2.8)		_		_		(576.0)
Derivatives Net derivative assets (liabilities)		13.0		1.8		_		(2.5)		_		(26.5)		(14.2)

	For the six months ended June 30, 2019													
	в	eginning asset/		Total realize gains		ealized		Net						Ending
	Ì	(liability) balance Included as of in net January 1, income 2019 (2)		com	cluded in other prehensive come (3)	s	ourchases, sales, issuances and ettlements (4) n millions)		Transfers into Level 3		Transfers out of Level 3	_	asset/ (liability) balance as of June 30, 2019	
Assets Fixed maturities, available-for-sale:														
Non-U.S. governments	\$	4.6	\$	_	\$		\$	(0.7)	\$	_	\$		\$	3.9
Corporate	•	57.9				0.4		(13.6)		_				44.7
Commercial mortgage-backed														
securities		9.5		(3.2)		3.2		2.2		3.7		(2.3)		13.1
Collateralized debt obligations		8.3		(2.5)		0.3		(1.3)		30.0				34.8
Other debt obligations		58.5	-			1.6		25.8				(26.0)		59.9
Total fixed maturities, available-for-sale Fixed maturities,trading		138.8		(5.7)		5.5		12.4 0.5		33.7		(28.3)		156.4 0.5
Other investments		17.2		2.3		_		(0.4)		10.0		_		29.1
Separate account assets (1)		8,615.5		313.5		0.1		(66.1)		10.0		(173.2)		8,689.8
Separate account assets (1)		0,013.5		515.5		0.1		(00.1)				(1/3.2)		0,005.0
Liabilities Investment and universal life contracts		(45.2)		(71.9)		(0.1)		(1.5)		_		_		(118.7)
Derivatives Net derivative assets (liabilities)		3.1		5.0		_		7.7				_		15.8

(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) 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 three months end June 30,						ionth e 30,	s ended
		2020		2019 (in mil		2020		2019
Assets	(P (I) *				110113)			
Fixed maturities, available-for-sale:								
Commercial mortgage-backed securities	\$	(0.9)	\$	(2.1)	\$	(0.9)	\$	(2.1)
Collateralized debt obligations		(0.9)		_		(1.0)		(2.5)
Total fixed maturities, available-for-sale		(1.8)		(2.1)		(1.9)		(4.6)
Other investments		2.4		0.1		2.3		2.3
Separate account assets		12.5		126.4		138.9		327.2
Liabilities								
Investment and universal life contracts		(1.4)		(75.5)		(368.3)		(70.3)
Derivatives								
Net derivative assets (liabilities)		2.6		11.2		0.5		8.9

(3) Includes foreign currency translation adjustments related to our Principal International segment. Changes in unrealized gains (losses) included in OCI relating to positions still held were:

For the three months ended June 30, 2020			the six hs ended 30, 2020
	(in m	illions)	
\$	5.7	\$	(0.3)
	(0.4)		1.1
	(0.5)		(0.9)
	4.8		(0.1)
	—		(2.9)
	—		(0.3)
	mont	months ended June 30, 2020 (in mi \$ 5.7 (0.4) (0.5)	months ended mont June 30, 2020 June (in millions) \$ 5.7 \$ (0.4) (0.5)

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

	For the three months ended June 30, 2020									
	Purchases		Sales		Issuances (in millions)		Settlements		Net purchases, sales, issuances and settlements	
Assets					(/				
Fixed maturities, available-for-sale:										
Corporate	\$	7.4	\$	(0.5)	\$	—	\$	(22.6)	\$	(15.7)
Collateralized debt obligations		—		—		—		0.2		0.2
Other debt obligations		_		_		_		(15.8)		(15.8)
Total fixed maturities, available-for-sale		7.4		(0.5)		_		(38.2)		(31.3)
Other investments		0.3				—				0.3
Separate account assets (5)		0.4		(1.5)		(52.6)		(0.2)		(53.9)
Liabilities										
Investment and universal life contracts		—		—		(5.5)		3.2		(2.3)
Derivatives										
Net derivative assets (liabilities)		—		(1.1)		—		—		(1.1)
				For the th	ree mon	ths ended Jur	ie 30, 20)19		

Assets	Purchases		Sales		Issuances (in millions)		Settlements		Net purchases, sales, issuances and settlements	
Fixed maturities, available-for-sale:										
Non-U.S. governments	\$		\$	_	\$	_	\$	(0.3)	\$	(0.3)
Corporate		5.2		(0.2)		—		(18.8)		(13.8)
Collateralized debt obligations						—		(1.6)		(1.6)
Other debt obligations		16.8				—		(0.8)		16.0
Total fixed maturities, available-for-sale		22.0		(0.2)		_		(21.5)		0.3
Fixed maturities, trading		0.5		—		—				0.5
Other investments		4.5		(4.9)		—				(0.4)
Separate account assets (5)		41.0		(112.8)		(156.5)		232.5		4.2
Liabilities Investment and universal life contracts		_		_		(3.5)		1.7		(1.8)
Derivatives Net derivative assets (liabilities)		_		5.8		_		_		5.8

				For the s	ix mont	hs ended June	30, 20	020		
	Purchases		Sales		Issuances (in millions)		Settlements		Net purchases, sales, issuances and settlements	
Assets					(minonsy				
Fixed maturities, available-for-sale:										
Corporate	\$	34.9	\$	(1.0)	\$	—	\$	(23.1)	\$	10.8
Collateralized debt obligations		141.8		_		_		0.2		142.0
Other debt obligations		14.3						(17.0)		(2.7)
Total fixed maturities, available-for-sale		191.0		(1.0)		_		(39.9)		150.1
Other investments		0.3		_		—		—		0.3
Separate account assets (5)		68.0		(185.6)		(226.8)		44.6		(299.8)
Liabilities										
Investment and universal life contracts		_		—		(12.2)		9.4		(2.8)
Derivatives										
Net derivative assets (liabilities)		_		(2.5)		—		—		(2.5)
	For the six months ended June 30, 2019									
	Pu	rchases		Sales		ssuances millions)		Settlements	sale	purchases, s, issuances settlements
Assets	<u>Pu</u>	rchases		Sales				Settlements	sale	s, issuances
Fixed maturities, available-for-sale:		rchases		Sales	(in				sale and	s, issuances settlements
Fixed maturities, available-for-sale: Non-U.S. governments	<u>Pu</u> \$		\$				 \$	(0.7)	sale	s, issuances settlements (0.7)
Fixed maturities, available-for-sale: Non-U.S. governments Corporate			\$	Sales (0.4)	(in			(0.7) (18.9)	sale and	s, issuances settlements (0.7) (13.6)
Fixed maturities, available-for-sale: Non-U.S. governments Corporate Commercial mortgage-backed securities			\$		(in			(0.7) (18.9) (0.2)	sale and	s, issuances settlements (0.7) (13.6) 2.2
Fixed maturities, available-for-sale: Non-U.S. governments Corporate Commercial mortgage-backed securities Collateralized debt obligations		 5.7 2.4	\$		(in			(0.7) (18.9) (0.2) (1.3)	sale and	(0.7) (13.6) 2.2 (1.3)
Fixed maturities, available-for-sale: Non-U.S. governments Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations		5.7 2.4 26.8	\$	(0.4)	(in			(0.7) (18.9) (0.2) (1.3) (1.0)	sale and	(0.7) (13.6) 2.2 (1.3) 25.8
Fixed maturities, available-for-sale: Non-U.S. governments Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale		5.7 2.4 	\$		(in			(0.7) (18.9) (0.2) (1.3)	sale and	(0.7) (13.6) 2.2 (1.3) 25.8 12.4
Fixed maturities, available-for-sale: Non-U.S. governments Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale Fixed maturities, trading		5.7 2.4 	\$	(0.4) — — — (0.4) —	(in			(0.7) (18.9) (0.2) (1.3) (1.0)	sale and	(0.7) (13.6) 2.2 (1.3) 25.8 12.4 0.5
Fixed maturities, available-for-sale: Non-U.S. governments Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale		5.7 2.4 	\$	(0.4)	(in			(0.7) (18.9) (0.2) (1.3) (1.0)	sale and	(0.7) (13.6) 2.2 (1.3) 25.8 12.4
Fixed maturities, available-for-sale: Non-U.S. governments Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale Fixed maturities, trading Other investments		5.7 2.4 26.8 34.9 0.5 4.5	\$	(0.4) — — — — (0.4) — (4.9)	(in	millions)		(0.7) (18.9) (0.2) (1.3) (1.0) (22.1) —	sale and	(0.7) (13.6) 2.2 (1.3) 25.8 12.4 0.5 (0.4)
Fixed maturities, available-for-sale: Non-U.S. governments Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale Fixed maturities, trading Other investments Separate account assets (5)		5.7 2.4 26.8 34.9 0.5 4.5	\$	(0.4) — — — — (0.4) — (4.9)	(in	millions)		(0.7) (18.9) (0.2) (1.3) (1.0) (22.1) —	sale and	(0.7) (13.6) 2.2 (1.3) 25.8 12.4 0.5 (0.4)
Fixed maturities, available-for-sale: Non-U.S. governments Corporate Commercial mortgage-backed securities Collateralized debt obligations Other debt obligations Total fixed maturities, available-for-sale Fixed maturities, trading Other investments Separate account assets (5) Liabilities		5.7 2.4 26.8 34.9 0.5 4.5	\$	(0.4) — — — — (0.4) — (4.9)	(in	millions)		(0.7) (18.9) (0.2) (1.3) (1.0) (22.1) 232.2	sale and	(0.7) (13.6) 2.2 (1.3) 25.8 12.4 0.5 (0.4) (66.1)

(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 three months ended June 30, 2020											
	Transfers out of Level 1 into Level 3		of L	Transfers outTransfeof Level 2 intoof LevelLevel 3Level			of L	nsfers out evel 3 into Level 2				
Accesto				(in m	illions)							
Assets Fixed maturities, available-for-sale:												
Corporate	\$		\$	217.3	\$		\$	102.6				
Collateralized debt obligations	4		Ψ		Ψ	_	Ψ	167.3				
Other debt obligations		_		_		_		19.6				
Total fixed maturities, available-for-sale		_		217.3		_		289.5				
Fixed maturities, trading		_		_		_		0.3				
			For tl	he three month	s ended Ju	ne 30, 2019						
		sfers out		nsfers out		sfers out		nsfers out				
		evel 1 into evel 3		evel 2 into Level 3		vel 3 into evel 1		evel 3 into Level 2				
Accesto				(in m	illions)							
Assets Fixed maturities, available-for-sale:												
Commercial mortgage-backed securities	\$	_	\$	3.7	\$	_	\$	2.3				
Collateralized debt obligations	Ψ		Ψ	30.0	Ψ		Ψ	2.5				
Total fixed maturities, available-for-sale				33.7				2.3				
Separate account assets		_		_		_		172.5				
				the six months								
		sfers out vel 1 into		nsfers out evel 2 into		sfers out vel 3 into		nsfers out evel 3 into				
	L	evel 3	I	Level 3	illions)	evel 1		Level 2				
Assets				(III III	iiiions)							
Fixed maturities, available-for-sale:												
Corporate	\$	_	\$	342.0	\$	_	\$	148.9				
Collateralized debt obligations		_		_		_		314.6				
Other debt obligations		_		46.1				62.1				
				200 1								

Derivatives

Net derivative assets (liabilities)

Fixed maturities, trading

Total fixed maturities, available-for-sale

73

388.1

525.6

0.3

26.5

	For the six months ended June 30, 2019											
	of Lev	sfers out vel 1 into evel 3	of Le	nsfers out evel 2 into Level 3	of L	nsfers out evel 3 into Level 1	of I	nsfers out Level 3 into Level 2				
Assets				(
Fixed maturities, available-for-sale:												
Commercial mortgage-backed securities	\$	_	\$	3.7	\$	_	\$	2.3				
Collateralized debt obligations		_		30.0								
Other debt obligations		_		—				26.0				
Total fixed maturities, available-for-sale				33.7				28.3				
Other investments		_		10.0								
Separate account assets								173.2				

Assets transferred into Level 3 during the three and six months ended June 30, 2020 and 2019, 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. In addition, other investments transferred from Level 2 into Level 3 during the six months ended June 30, 2019, included certain redeemable preferred stock for which at least one significant unobservable input is now used to determine fair value.

Assets transferred out of Level 3 during the three and six months ended June 30, 2020, 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. Assets transferred out of Level 3 during the three and six months ended June 30, 2019, primarily included certain separate accounts we now value using the unit trust APIF as the unit of account that were previously valued using the underlying investments of the unit trust APIF.

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 or the measurement alternative for CCFEs. Refer to "Assets and liabilities measured at fair value on a recurring basis" for a complete valuation hierarchy summary.

			June 30, 2020				
	Assets / (liabilities) measured at fair value (in millions)	Valuation technique(s)	Unobservable input description	Input/r. inp			Weighted average
Assets	(111 / 1111 / 1013)						
Fixed maturities, available- for-sale:							
Corporate	\$ 241.5	Discounted cash flow	Discount rate (1)	0.6	%-	8.0 %	5.7 %
			Illiquidity premium	0 basis points ("	'bps")-	138 bps	36 bps
			Comparability adjustment	0 bps-		364 bps	141 bps
Commercial mortgage- backed securities	1.4	Discounted cash flow	Probability of default			100.0 %	100.0 %
			Potential loss severity			72.0 %	72.0 %
Collateralized debt obligations	0.7	Discounted cash flow	Potential loss severity			41.3 %	41.3 %
			Probability of default			100.0 %	100.0 %
Other debt obligations	0.7	Discounted cash flow	Discount rate (1)			5.0 %	5.0 %
			Illiquidity premium			500 bps	500 bps
Other investments	37.3	Discounted cash flow - other investments	Discount rate (1)	25.0	% -	30.0 %	27.5 %
			Terminal earnings before interest, taxes, depreciation and amortization multiple	3.8 x-		4.7 x	4.2 x
		Market comparables -	Revenue multiples (2)	0.8 x-		7.0 x	3.8 x
		other investments Discounted cash flow - real estate	Discount rate (1)			7.3 %	7.3 %
			Terminal capitalization rate			5.3 %	5.3 %
			Average market rent growth			2.3 %	2.3 %
		Discounted cash flow - real estate debt	Loan to value			55.5 %	55.5 %
			Credit spread			2.9 %	2.9 %
Separate account assets	8,820.7	Discounted cash flow - mortgage loans	Discount rate (1)			1.7 %	1.7 %
			Illiquidity premium			60 bps	60 bps
			Credit spread rate			158 bps	158 bps
		Discounted cash flow - real estate	Discount rate (1)	5.5	%-	11.8 %	6.6 %
			Terminal capitalization rate	4.5	%-	9.3 %	5.6 %
			Average market rent growth rate	1.5	%-	4.6 %	2.8 %
		Discounted cash flow - real estate debt	Loan to value	9.0	%-	80.6 %	47.0 %
			Market interest rate	2.8	%-	5.3 %	3.6 %
· · · · · · · · · · · · · · · · · · ·							

Liabilities								
Investment and universal	(576.0)	Discounted cash flow	Long duration interest rate	0.9	%	(3)	0.9	%
life contracts (6)								
			Long-term equity market	16.9	%-	28.1 %	19.3	%
			volatility					
			Non-performance risk	0.5	%-	2.1 %	1.4	%
			Utilization rate		See no	ote (4)		
			Lapse rate	0.0	% -	18.0 %	6.1	%
			Mortality rate		See n	ote (5)		

			December 31, 2019			
	Assets / (liabilities) measured at fair value (in millions)	Valuation technique(s)	Unobservable input description	Input/ran input		Weighted average
Assets						
Fixed maturities, available-for- sale:						
Corporate	\$ 72.5	Discounted cash flow	Discount rate (1)	1.9 %-	5.1 %	3.8 %
			Illiquidity premium	0 bps-	410 bps	152 bps
Commercial mortgage-backed securities	2.4	Discounted cash flow	Probability of default		100.0 %	100.0 %
			Potential loss severity		53.1 %	53.1 %
Collateralized debt obligations	108.7	Discounted cash flow	Discount rate (1)	2.9 %-	10.0 %	3.4 %
			Potential loss severity		23.0 %	23.0 %
			Probability of default		100.0 %	100.0 %
Other debt obligations	1.2	Discounted cash flow	Discount rate (1)		5.0 %	5.0 %
			Illiquidity premium		500 bps	500 bps
Other investments	14.8	Discounted cash flow	Discount rate (1)	25.0 %-	30.0 %	27.5 %
			Terminal earnings before	3.5 x-	4.5 x	4.0 x
			interest, taxes, depreciation			
			and amortization multiple			
		Market comparables	Revenue multiples (2)	0.8 x-	7.0 x	4.1 x
Separate account assets	8,966.2	Discounted cash flow - mortgage loans	Discount rate (1)		2.8 %	2.8 %
			Illiquidity premium		60 bps	60 bps
			Credit spread rate		120 bps	120 bps
		Discounted cash flow - real estate	Discount rate (1)	5.5 %-	11.8 %	6.7 %
			Terminal capitalization rate	4.5 %-	9.3 %	5.7 %
			Average market rent growth rate	2.0 %-	4.7 %	3.0 %
		Discounted cash flow - real estate debt	Loan to value	8.0 %-	80.4 %	45.9 %
			Market interest rate	3.2 %-	5.8 %	3.6 %

Liabilities				
Investment and universal life contracts (6)	(214.2)	Discounted cash flow	Long duration interest rate	2.0 %- 2.1 % (3)
			Long-term equity market volatility	15.0 %- 26.9 %
			Non-performance risk	0.2 %- 1.3 %
			Utilization rate	See note (4)
			Lapse rate	0.0 %- 18.0 %
			Mortality rate	See note (5)

(1) Represents market comparable interest rate or an index adjusted rate used as the base rate in the discounted cash flow analysis prior to any illiquidity or other adjustments, where applicable.

(2) Revenue multiples are amounts used when we have determined market participants would use such multiples to value the investments.

(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. All of these changes in fair value would impact net income.

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 six months ended June 30, 2020 and 2019.

Fair Value Option

We elected fair value accounting for:

- Certain commercial mortgage loans of a consolidated VIE for which it was not practicable for us to determine the carrying value. The consolidated VIE was unwound in the third quarter of 2019.
- Certain real estate ventures that are subject to the equity method of accounting because the nature of the investments is to add value to the properties and generate income from the operations of the properties. Other equity method real estate investments are not fair valued because the investments mainly generate income from the operations of the underlying properties.

The following tables present information regarding the assets and liabilities for which the fair value option was elected.

	 June 30, 2020 (in m	D (illions)	ecember 31, 2019
Real estate ventures (1) Fair value	\$ 25.4	\$	22.8

(1) Reported with other investments in the consolidated statements of financial position.

	For the th				l June 30,			
	2020	<u> </u>		2019 (in m	illions)	2020		2019
Commercial mortgage loans of consolidated VIEs Interest income (1)	\$	_	\$	0.1		_	\$	0.2
Real estate ventures Change in fair value pre-tax gain (2)		2.4		0.1		2.3		2.3

(1) Reported in net investment income on the consolidated statements of operations and recorded based on the effective interest rates as determined at the closing of the loan.

(2) 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:

					J	une 30, 2020				
							Fair value hierarchy level			
	Ca	rrying amount		Fair value		Level 1 (in millions)		Level 2		Level 3
Assets (liabilities)						(in minons)				
Mortgage loans	\$	16,696.6	\$	17,686.6	\$		\$		\$	17,686.6
Policy loans		796.4		1,091.7		_				1,091.7
Other investments		318.5		311.6				212.7		98.9
Cash and cash equivalents		1,108.7		1,108.7		1,087.0		21.7		
Investment contracts		(34,476.0)		(35,424.5)				(3,885.8)		(31,538.7)
Short-term debt		(76.3)		(76.3)		_		(76.3)		_
Long-term debt		(4,163.4)		(4,714.0)		_		(4,672.8)		(41.2)
Separate account liabilities		(142,189.8)		(141,064.7)		_				(141,064.7)
Bank deposits (1)		(449.8)		(457.3)		_		(457.3)		_
Cash collateral payable		(384.0)		(384.0)		(384.0)		—		—
					Dec	ember 31, 2019 F	air val	ue hierarchy lev	el.	
	Ca	rrying amount		Fair value		F Level 1	air val	ue hierarchy lev Level 2	el	Level 3
Accesto (lickilitica)	Ca	rrying amount		Fair value		F	air val		el	Level 3
Assets (liabilities)			¢			F Level 1				
Mortgage loans	<u>Ca</u> \$	16,486.9	\$	17,214.7		F Level 1	air val		rel \$	17,214.7
Mortgage loans Policy loans		16,486.9 798.0	\$	17,214.7 1,030.8		F Level 1		Level 2		17,214.7 1,030.8
Mortgage loans Policy loans Other investments		16,486.9 798.0 278.8	\$	17,214.7 1,030.8 273.1		Eevel 1 (in millions)		Level 2		17,214.7
Mortgage loans Policy loans Other investments Cash and cash equivalents		16,486.9 798.0 278.8 1,216.9	\$	17,214.7 1,030.8 273.1 1,216.9		F Level 1		Level 2		17,214.7 1,030.8 92.8
Mortgage loans Policy loans Other investments Cash and cash equivalents Investment contracts		16,486.9 798.0 278.8 1,216.9 (33,922.2)	\$	17,214.7 1,030.8 273.1 1,216.9 (34,001.3)		Eevel 1 (in millions)		Level 2 		17,214.7 1,030.8
Mortgage loans Policy loans Other investments Cash and cash equivalents Investment contracts Short-term debt		16,486.9 798.0 278.8 1,216.9 (33,922.2) (93.4)	\$	17,214.7 1,030.8 273.1 1,216.9 (34,001.3) (93.4)		Eevel 1 (in millions)		Level 2 — 180.3 23.6 (4,304.5) (93.4)		17,214.7 1,030.8 92.8 (29,696.8)
Mortgage loans Policy loans Other investments Cash and cash equivalents Investment contracts Short-term debt Long-term debt		16,486.9 798.0 278.8 1,216.9 (33,922.2) (93.4) (3,734.1)	\$	17,214.7 1,030.8 273.1 1,216.9 (34,001.3) (93.4) (4,122.9)		Eevel 1 (in millions)		Level 2 		17,214.7 1,030.8 92.8 (29,696.8) (29,696.8) (107.6)
Mortgage loans Policy loans Other investments Cash and cash equivalents Investment contracts Short-term debt Long-term debt Separate account liabilities		16,486.9 798.0 278.8 1,216.9 (33,922.2) (93.4) (3,734.1) (151,132.4)	\$	17,214.7 1,030.8 273.1 1,216.9 (34,001.3) (93.4) (4,122.9) (149,955.6)		Eevel 1 (in millions)		Level 2 		17,214.7 1,030.8 92.8 (29,696.8)
Mortgage loans Policy loans Other investments Cash and cash equivalents Investment contracts Short-term debt Long-term debt		16,486.9 798.0 278.8 1,216.9 (33,922.2) (93.4) (3,734.1)	\$	17,214.7 1,030.8 273.1 1,216.9 (34,001.3) (93.4) (4,122.9)		Eevel 1 (in millions)		Level 2 — 180.3 23.6 (4,304.5) (93.4)		17,214.7 1,030.8 92.8 (29,696.8) (29,696.8) (107.6)

(1) Excludes deposit liabilities without defined or contractual maturities.

12. 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 services, individual variable annuities and revenues and expenses associated with the purchase of the Institutional Retirement & Trust ("IRT") business of Wells Fargo Bank N.A. (the "Acquired Business"); and Retirement and Income Solutions – Spread, which includes individual fixed annuities, investment only, pension risk transfer and banking services.

The Principal Global Investors segment provides asset management services to our asset accumulation business, our insurance operations, the Corporate segment and third party 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, India 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 individuals and small-to-medium 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, critical illness, accident, group life insurance and non-medical fee-for-service claims administration; and Individual Life insurance, which provides universal life, variable universal life, indexed universal life and traditional life insurance.

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"); RobustWealth, Inc. ("RobustWealth"), our financial technology company; 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 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 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 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 other postretirement employee benefits ("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:

	J	Dec illions)	ember 31, 2019	
Assets:				
Retirement and Income Solutions	\$	191,053.8	\$	192,698.1
Principal Global Investors		2,197.2		2,363.3
Principal International		45,381.9		48,857.6
U.S. Insurance Solutions		29,745.6		28,669.6
Corporate		2,930.9		3,499.2
Total consolidated assets	\$	271,309.4	\$	276,087.8

		For the three Jun		ıs ended		s ended		
		2020		2019		June 2020		2019
Operating revenues by segment:				(in mi	llions))		
Retirement and Income Solutions:								
Retirement and Income Solutions – Fee	\$	509.4	\$	450.5	\$	1,052.5	\$	881.3
Retirement and Income Solutions – Spread	Ψ	970.6	Ψ	1,709.1	Ψ	3,033.2	Ψ	3,170.2
Total Retirement and Income Solutions (1)		1,480.0		2,159.6		4,085.7		4,051.5
Principal Global Investors (2)		352.9		359.5		743.7		698.5
Principal International		276.4		411.6		576.9		792.1
U.S. Insurance Solutions:								
Specialty Benefits insurance		627.0		625.8		1,266.0		1,227.6
Individual Life insurance		461.2		461.6		945.5		927.9
Eliminations		(0.1)		(0.1)		(0.1)		(0.1)
Total U.S. Insurance Solutions		1,088.1		1,087.3		2,211.4		2,155.4
Corporate		(16.3)		(15.8)		(7.0)		(14.6)
Total segment operating revenues		3,181.1		4,002.2		7,610.7		7,682.9
Net realized capital gains (losses), net of related revenue adjustments		(56.2)		(13.2)		73.8		70.5
Adjustments related to equity method investments		(10.3)		(16.4)		(18.6)		(36.9)
Total revenues per consolidated statements of operations	\$	3,114.6	\$	3,972.6	\$	7,665.9	\$	7,716.5
Pre-tax operating earnings (losses) by segment:								
Retirement and Income Solutions	\$	213.9	\$	256.2	\$	419.0	\$	496.8
Principal Global Investors		108.4		115.6		220.1		216.3
Principal International		94.5		93.2		125.3		204.3
U.S. Insurance Solutions		155.0		146.3		284.5		257.0
Corporate		(84.0)		(98.1)		(175.1)		(182.5)
Total segment pre-tax operating earnings		487.8		513.2		873.8		991.9
Pre-tax net realized capital gains (losses), as adjusted (3)		18.4		(48.6)		(51.0)		17.0
Adjustments related to equity method investments and noncontrolling								
interest		(7.6)		(14.3)		4.0		(32.6)
Income before income taxes per consolidated statements of	¢	400 C	¢	450.2	¢	000.0	¢	070.0
operations	\$	498.6	\$	450.3	\$	826.8	\$	976.3

(1) Reflects inter-segment revenues of \$77.6 million and \$88.5 million for the three months ended June 30, 2020 and 2019, respectively, \$161.6 million and \$174.2 million for the six months ended June 30, 2020 and 2019, respectively.

(2) Reflects inter-segment revenues of \$62.4 million and \$66.2 million for the three months ended June 30, 2020 and 2019, respectively, \$135.1 million and \$127.7 million for the six months ended June 30, 2020 and 2019, respectively.

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

	For the three months en June 30,					For the six n Jun	nonth e 30,	s ended
	2020			2019		2020		2019
	(in				illions)		
Net realized capital gains (losses):								
Net realized capital gains (losses)	\$	(27.4)	\$	(4.0)	\$	104.0	\$	80.5
Derivative and hedging-related revenue adjustments		(35.1)		(21.4)		(48.7)		(32.9)
Adjustments related to equity method investments		2.3		1.2		(5.1)		0.8
Adjustments related to sponsored investment funds		3.5		6.8		7.4		14.8
Recognition of front-end fee revenue		0.5		4.2		16.2		7.3
Net realized capital gains (losses), net of related revenue adjustments		(56.2)		(13.2)		73.8		70.5
Amortization of deferred acquisition costs and other actuarial balances		89.6		(29.1)		(129.8)		(45.5)
Capital (gains) losses distributed		(15.4)		(15.2)		28.0		(23.9)
Market value adjustments of embedded derivatives		0.4		8.9		(23.0)		15.9
Pre-tax net realized capital gains (losses), as adjusted (a)	\$	18.4	\$	(48.6)	\$	(51.0)	\$	17.0

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

13. 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 June 30,					For the six months ended June 30,			
		2020		2019	· 11·	2020		2019	
Devenue from contracts with sustamore by comments				(ın m	illion	s)			
Revenue from contracts with customers by segment:									
Retirement and Income Solutions:					-		-		
Retirement and Income Solutions – Fee	\$	151.2	\$	63.9	\$	307.6	\$	122.3	
Retirement and Income Solutions – Spread		2.0		2.3		4.1		5.2	
Total Retirement and Income Solutions		153.2		66.2		311.7		127.5	
Principal Global Investors		348.2		346.2		731.1		678.5	
Principal International		101.6		116.2		211.1		231.1	
U.S. Insurance Solutions:									
Specialty Benefits insurance		3.5		3.6		7.3		7.3	
Individual Life insurance		11.0		12.6		23.8		24.6	
Eliminations		(0.1)		(0.1)		(0.1)		(0.1)	
Total U.S. Insurance Solutions		14.4		16.1		31.0		31.8	
Corporate		35.9		42.5		68.8		79.5	
Total segment revenue from contracts with customers		653.3		587.2		1,353.7		1,148.4	
Adjustments for fees and other revenues not within the scope of revenue									
recognition guidance (1)		390.5		415.2		819.7		824.4	
Pre-tax other adjustments (2)		0.5		4.2		16.2		7.3	
Total fees and other revenues per consolidated statements of operations	\$	1,044.3	\$	1,006.6	\$	2,189.6	\$	1,980.1	

(1) Fees and other revenues not within the scope of the revenue recognition guidance primarily represent revenue on contracts accounted for under the financial instruments or insurance contracts standards.

(2) Pre-tax other adjustments relate to the recognition of deferred front-end fee revenues for sales charges on retirement and life insurance products and certain market value adjustments to fee revenues.

Retirement and Income Solutions - Fee

Retirement and Income Solutions – Fee offers service and trust agreements for defined contribution retirement plans, including 401(k) plans, 403(b) plans, and employee stock ownership plans. The investment components of these service agreements are in the form of mutual fund offerings. In addition, plan sponsor retirement plan trust and custody services are also available through an affiliated trust company. With the Acquired Business, services and trust agreements are also 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.

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 June 30,				For the six months ended June 30,				
	2020		2019		2020			2019	
			_	(in m	illions)	_		
Administrative service fee revenue (1)	\$	150.7	\$	63.3	\$	306.9	\$	121.5	
Other fee revenue		0.5		0.6		0.7		0.8	
Total revenues from contracts with customers		151.2		63.9		307.6		122.3	
Fees and other revenues not within the scope of revenue recognition									
guidance		255.1		281.6		535.6		553.4	
Total fees and other revenues		406.3		345.5		843.2		675.7	
Premiums and other considerations		0.9		0.6		2.7		1.7	
Net investment income		102.2		104.4		206.6		203.9	
Total operating revenues	\$	509.4	\$	450.5	\$	1,052.5	\$	881.3	

(1) Includes fee revenue for the Acquired Business in 2020.

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.

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

nded	
2019	
5.2	
5.2	
9.1	
14.3	
,129.0	
,026.9	
,170.2	

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 June 30,				For the six months ended June 30,				
	2020		2019		2020			2019	
				(in m	millions)				
Management fee revenue	\$	303.5	\$	304.2	\$	624.5	\$	597.0	
Other fee revenue		44.7		42.0		106.6		81.5	
Total revenues from contracts with customers		348.2		346.2		731.1		678.5	
Fees and other revenues not within the scope of revenue recognition									
guidance		3.9		10.4		9.4		14.7	
Total fees and other revenues		352.1		356.6		740.5		693.2	
Net investment income		0.8		2.9		3.2		5.3	
Total operating revenues	\$	352.9	\$	359.5	\$	743.7	\$	698.5	

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 June 30,				For the six months ended June 30,				
		2020		2019		2020		2019	
Management fee revenue	\$	100.7	\$	(in m 115.5	illions \$) 209.2	\$	229.8	
Other fee revenue		0.9		0.7		1.9		1.3	
Total revenues from contracts with customers		101.6		116.2		211.1		231.1	
Fees and other revenues not within the scope of revenue recognition									
guidance		1.5		1.7		2.8		3.4	
Total fees and other revenues		103.1		117.9		213.9		234.5	
Premiums and other considerations		28.6		109.5		113.6		227.0	
Net investment income		144.7		184.2		249.4		330.6	
Total operating revenues	\$	276.4	\$	411.6	\$	57 6.9	\$	792.1	
Revenues from contracts with customers by region:									
Latin America	\$	74.3	\$	88.6	\$	155.8	\$	176.7	
Asia		27.3		27.6		55.3		54.6	
Principal International corporate / regional offices		0.3		0.2		0.5		0.4	
Eliminations		(0.3)		(0.2)		(0.5)		(0.6)	
Total revenues from contracts with customers	\$	101.6	\$	116.2	\$	211.1	\$	231.1	

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 June 30,				For the six months ended June 30,				
	2020			2019		2020		2019	
Specialty Depetits incurrence				(in m	illion	s)			
Specialty Benefits insurance:									
Administrative service fees	\$	3.5	\$	3.6	\$	7.3	\$	7.3	
Total revenues from contracts with customers		3.5		3.6		7.3		7.3	
Fees and other revenues not within the scope of revenue recognition									
guidance		4.6		4.9		9.5		9.8	
Total fees and other revenues		8.1		8.5		16.8		17.1	
Premiums and other considerations		582.5		571.6		1,170.9		1,127.5	
Net investment income		36.4		45.7		78.3		83.0	
Total operating revenues	\$	627.0	\$	625.8	\$	1,266.0	\$	1,227.6	

	For the three months ended June 30,				For the six months ended June 30,				
	2020			2019		2020	_	2019	
				(in m	illions))			
Individual Life insurance:									
Administrative service fees	\$	5.0	\$	6.2	\$	10.7	\$	12.1	
Commission income		6.0		6.4		13.1		12.5	
Total revenues from contracts with customers		11.0		12.6		23.8		24.6	
Fees and other revenues not within the scope of revenue recognition									
guidance		191.8		190.3		401.8		382.5	
Total fees and other revenues		202.8		202.9		425.6		407.1	
Premiums and other considerations		81.6		79.7		176.3		172.6	
Net investment income		176.8		179.0		343.6		348.2	
Total operating revenues	\$	461.2	\$	461.6	\$	945.5	\$	927.9	

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 a 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 June 30,				1	s ended		
	2020		2019		2020			2019
				(in m	nillions)			
Commission income	\$	72.6	\$	78.7	\$	153.0	\$	154.5
Other fee revenue		13.6		11.2		24.7		20.0
Eliminations		(50.3)		(47.4)		(108.9)		(95.0)
Total revenues from contracts with customers		35.9		42.5		68.8		79.5
Fees and other revenues not within the scope of revenue recognition								
guidance		(69.2)		(77.9)		(145.3)		(148.5)
Total fees and other revenues		(33.3)		(35.4)		(76.5)		(69.0)
Net investment income		17.0		19.6		69.5		54.4
Total operating revenues	\$	(16.3)	\$	(15.8)	\$	(7.0)	\$	(14.6)

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 \$148.6 million and \$157.0 million as of June 30, 2020 and December 31, 2019, 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 \$5.4 million and \$6.2 million for the three months ended June 30, 2020 and 2019 and \$12.0 million and \$11.8 million for the six months ended June 30, 2020 and 2019 and \$12.0 million statements of operations and no impairment loss was recognized in relation to the costs capitalized.

14. Stock-Based Compensation Plans

As of June 30, 2020, we had 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"). As of May 20, 2014, no new grants will be made under the Amended and Restated 2010 Stock Incentive Plan or the 2005 Directors Stock Plan. No grants have been made under the Stock Incentive Plan or the Directors Stock Plan since at least 2005. As of May 19, 2020, no new grants will be made under the 2014 Directors Stock Plan. Under the terms of the 2014 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. The 2020 Directors Stock Plan provides for the grant of nonqualified stock options, restricted stock, restricted stock, restricted stock, restricted stock, restricted stock options. To date, we have not granted any incentive stock options, restricted stock or performance units under any plans.

As of June 30, 2020, the maximum number of new shares of common stock available for grant under the 2014 Stock Incentive Plan and the 2020 Directors Stock Plan was 3.9 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 six months ended June 30,						
	 2020	2019					
	 (in millions)						
Compensation cost	\$ 47.3	\$	44.4				
Related income tax benefit	9.3		9.3				
Capitalized as part of an asset	0.8		1.0				

Nonqualified Stock Options

Nonqualified stock options were granted to certain employees under the 2014 Stock Incentive Plan. Total options granted were 1.4 million for the six months ended June 30, 2020. The fair value of stock options is estimated using the Black-Scholes option pricing model. The following is a summary of the assumptions used in this model for the stock options granted during the period:

	months ended 30, 2020
Expected volatility	25.7 %
Expected term (in years)	7.0
Risk-free interest rate	1.3 %
Expected dividend yield	4.33 %
Weighted average estimated fair value per common share	\$ 9.64

As of June 30, 2020, we had \$8.3 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 1.3 years.

Performance Share Awards

Performance share awards were granted to certain employees under the 2014 Stock Incentive Plan. Total performance share awards granted were 0.3 million for the six months ended June 30, 2020. 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 150% of the initial target awards. The fair value of performance share awards 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 performance share awards granted was \$51.73 per common share.

As of June 30, 2020, we had \$8.0 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 1.4 years.

Restricted Stock Units

Restricted stock units were issued to certain employees pursuant to the 2014 Stock Incentive Plan and non-employee directors pursuant to the 2020 Directors Stock Plan. Total restricted stock units granted were 1.1 million for the six months ended June 30, 2020. 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 \$50.53 per common share.

As of June 30, 2020, we had \$68.4 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 1.0 million shares for the six months ended June 30, 2020. The weighted average fair value of the discount on the stock purchased was \$11.63 per share.

As of June 30, 2020, a total of 0.4 million of new shares were available to be made issuable by us for this plan.

15. Earnings Per Common Share

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

	For the three months ended June 30,					For the six months ended June 30,					
	2020			2019		2020 Der share data)		2019			
Net income	\$	416.1	\$	392.1	\$	701.1	\$	844.2			
Subtract:											
Net income attributable to noncontrolling interest		17.8		5.8		13.9		28.0			
Total	\$	398.3	\$	386.3	\$	687.2	\$	816.2			
Weighted-average shares outstanding:											
Basic		274.3		279.0		274.6		278.8			
Dilutive effects:											
Stock options		0.1		0.9		0.3		0.9			
Restricted stock units		1.1		1.2		1.4		1.3			
Performance share awards		0.1		0.1		0.1		0.2			
Diluted		275.6		281.2		276.4		281.2			
Net income per common share:											
Basic	\$	1.45	\$	1.38	\$	2.50	\$	2.93			
Diluted	\$	1.45	\$	1.37	\$	2.49	\$	2.90			

The calculation of diluted earnings per share for the three and six months ended June 30, 2020 and 2019, excludes the incremental effect related to certain outstanding stock-based compensation grants due to their anti-dilutive effect.

16. Condensed Consolidating Financial Information

Principal Life has established special purpose entities to issue secured medium-term notes. Under the program, the payment obligations of principal and interest on the notes are secured by funding agreements issued by Principal Life. Principal Life's payment obligations on the funding agreements are fully and unconditionally guaranteed by PFG. All of the outstanding stock of Principal Life is indirectly owned by PFG and PFG is the only guarantor of the payment obligations of the funding agreements.

The following tables set forth condensed consolidating financial information of (i) PFG, (ii) Principal Life, (iii) Principal Financial Services ("PFS") and all other direct and indirect subsidiaries of PFG on a combined basis and (iv) the eliminations necessary to arrive at the information for PFG on a consolidated basis as of June 30, 2020 and December 31, 2019, and for the six months ended June 30, 2020 and 2019.

In presenting the condensed consolidating financial statements, the equity method of accounting has been applied to (i) PFG's interest in all direct subsidiaries of PFG, (ii) Principal Life's interest in all direct subsidiaries of Principal Life and (iii) PFS's interest in Principal Life even though all such subsidiaries meet the requirements to be consolidated under U.S. GAAP. Earnings of subsidiaries are, therefore, reflected in the parent's investment and earnings. All intercompany balances and transactions, including elimination of the parent's investment in subsidiaries, between PFG, Principal Life and PFS and all other subsidiaries have been eliminated, as shown in the column "Eliminations." These condensed consolidating financial statements should be read in conjunction with the consolidated financial information may not necessarily be indicative of results of operations, cash flows or financial position had the subsidiaries operated as independent entities.

PFG sponsors nonqualified benefit plans for select employees and agents and is responsible for the obligations of these plans. Nonqualified plan assets are held in Rabbi trusts for the benefit of all nonqualified plan participants. The Rabbi trusts are separate legal entities and are not a part of PFG on a stand-alone basis. The plan assets are available to satisfy the claims of general creditors only in the event of bankruptcy and are, therefore, consolidated in our statements of financial position.

Condensed Consolidating Statements of Financial Position June 30, 2020

	I G	Principal Financial roup, Inc. arent only]	Insurance		incipal Financial ervices, Inc. and her subsidiaries combined (1) (in millions)	E	liminations		Principal Financial Group, Inc. consolidated
Assets Fixed maturities, available-for-sale	\$	712.1	\$	65,862.2	\$	8,056.6	\$	(361.7)	\$	74,269.2
Fixed maturities, trading	Ŷ	232.7	Ψ	233.2	Ψ	117.9	Ψ	(50117)	Ψ	583.8
Equity securities		_		65.2		1,713.3		_		1,778.5
Mortgage loans		_		15,434.1		1,956.2		(693.7)		16,696.6
Real estate		_		3.1		1,696.6		`_`		1,699.7
Policy loans		_		742.5		53.9		_		796.4
Investment in unconsolidated entities		18,185.5		2,657.1		9,520.6		(29,638.9)		724.3
Other investments		10.4		6,794.9		1,983.3		(4,778.5)		4,010.1
Cash and cash equivalents		454.6		1,669.6		1,930.0		(903.8)		3,150.4
Accrued investment income		2.3		618.2		83.2		(1.6)		702.1
Premiums due and other receivables		_		2,213.4		4,767.2		(5,220.6)		1,760.0
Deferred acquisition costs		_		3,477.4		10.3		_		3,487.7
Property and equipment		—		773.6		219.5		—		993.1
Goodwill		—		54.3		1,576.6		—		1,630.9
Other intangibles		—		16.9		1,692.4		—		1,709.3
Separate account assets				119,347.2		36,589.1				155,936.3
Other assets	-	382.8	-	1,135.3	-	5,852.0	-	(5,989.1)	-	1,381.0
Total assets	\$	19,980.4	\$	221,098.2	\$	77,818.7	\$	(47,587.9)	\$	271,309.4
Liabilities										
Contractholder funds	\$	_	\$	39,235.0	\$	3,435.1	\$	(361.7)	\$	42,308.4
Future policy benefits and claims		—		37,625.7		6,806.7		(1,536.3)		42,896.1
Other policyholder funds		—		805.1		185.5		(3.2)		987.4
Short-term debt		—		—		76.3		—		76.3
Long-term debt		4,119.7		_		695.5		(651.8)		4,163.4
Income taxes currently payable		0.7		_		84.2		(68.6)		16.3
Deferred income taxes				1,203.4		1,365.3		(507.2)		2,061.5
Separate account liabilities				119,347.2		36,589.1		—		155,936.3
Other liabilities		616.9		10,684.7		10,198.7		(14,220.3)		7,280.0
Total liabilities		4,737.3		208,901.1		59,436.4		(17,349.1)		255,725.7
Redeemable noncontrolling interest		_		_		272.7		_		272.7
Stockholders' equity										
Common stock		4.8		2.5		_		(2.5)		4.8
Additional paid-in capital		10,259.6		6,332.0		10,058.5		(16,390.5)		10,259.6
Retained earnings		11,441.4		2,590.9		6,633.0		(9,223.9)		11,441.4
Accumulated other comprehensive income		1,450.7		3,271.7		1,350.2		(4,621.9)		1,450.7
Treasury stock, at cost		(7,913.4)								(7,913.4)
Total stockholders' equity attributable to PFG		15,243.1		12,197.1		18,041.7		(30,238.8)		15,243.1
Noncontrolling interest						67.9				67.9
Total stockholders' equity		15,243.1		12,197.1		18,109.6		(30,238.8)		15,311.0
Total liabilities and stockholders' equity	\$	19,980.4	\$	221,098.2	\$	77,818.7	\$	(47,587.9)	\$	271,309.4
					_		_			

(1) PFG sponsors nonqualified benefit plans. Nonqualified benefit plan assets and liabilities held in Rabbi trusts were \$741.1 million and \$597.5 million, respectively.

Condensed Consolidating Statements of Financial Position December 31, 2019

_	Principal Financial Group, Inc. parent only]	Principal Life Insurance Company only		Principal Financial Services, Inc. and other subsidiaries <u>combined (1)</u> (in millions)		Eliminations		Principal Financial Group, Inc. onsolidated
Assets Fixed maturities, available-for-sale	\$	265.8	\$	62,363.1	\$	7,833.1	\$	(355.8)	\$	70,106.2
Fixed maturities, trading		268.2		237.5		170.2				675.9
Equity securities		—		69.9		1,809.5		—		1,879.4
Mortgage loans		—		15,388.5		1,793.5		(695.1)		16,486.9
Real estate				3.3		1,711.5				1,714.8
Policy loans				742.2		55.8		_		798.0
Investment in unconsolidated entities		17,539.6		5,036.2		6,429.5		(28, 175.1)		830.2
Other investments		10.4		3,682.5		2,859.6		(2,692.5)		3,860.0
Cash and cash equivalents		394.9		1,178.1		1,767.7		(824.8)		2,515.9
Accrued investment income		1.6		608.5		81.4		(4.9)		686.6
Premiums due and other receivables				2,082.3		4,525.8		(4,867.8)		1,740.3
Deferred acquisition costs				3,509.7		11.6				3,521.3
Property and equipment				733.9		233.8		_		967.7
Goodwill				54.3		1,639.5		_		1,693.8
Other intangibles				17.7		1,769.0		_		1,786.7
Separate account assets				125,801.7		39,666.3		_		165,468.0
Other assets		383.2		1,118.6		5,358.4		(5,504.1)		1,356.1
Total assets	\$	18,863.7	\$	222,628.0	\$	77,716.2	\$	(43,120.1)	\$	276,087.8
Liabilities		- /	-	/	-		_		-	
Contractholder funds	\$		\$	38,334.6	\$	3,388.0	\$	(355.1)	\$	41,367.5
Future policy benefits and claims	ψ		Ψ	35,476.6	ψ	6,740.7	ψ	(1,379.1)	ψ	40,838.2
Other policyholder funds				790.3		171.9		(1,5/5.1)		959.4
Short-term debt				750.5		93.4		(2.0)		93.4
Long-term debt		3,625.5				763.1		(654.5)		3.734.1
Income taxes currently payable		5,025.5		_		81.7		(65.5)		16.2
Deferred income taxes				325.8		1,965.9		(495.1)		1.796.6
Separate account liabilities				125,801.7		39,666.3		(455.1)		165,468.0
Other liabilities		620.2		10,533.5		7,111.2		(11,401.2)		6,863.7
Total liabilities		4,245.7		211,262.5		59,982.2		(14,353.3)		261,137.1
Total Habilities		4,243.7		211,202.5		39,902.2		(14,555.5)		201,137.1
Redeemable noncontrolling interest		—		—		264.9		_		264.9
Stockholders' equity										
Common stock		4.8		2.5		_		(2.5)		4.8
Additional paid-in capital		10.182.6		6,331.5		10.038.7		(16,370.2)		10.182.6
Retained earnings		11.074.3		2,410.8		6,414.3		(8,825.1)		11.074.3
Accumulated other comprehensive income		1,037.9		2,620.7		948.3		(3,569.0)		1,037.9
Treasury stock, at cost		(7,681.6)		2,020.7		540.5		(3,309.0)		(7,681.6)
Total stockholders' equity attributable to PFG		14,618.0		11,365.5		17,401.3		(28,766.8)	-	14,618.0
Noncontrolling interest		14,010.0		11,505.5		67.8		(20,/00.8)		14,618.0 67.8
		14 (10.2		11 205 5				(20.700.0)		
Total stockholders' equity	<u>_</u>	14,618.0	b	11,365.5		17,469.1		(28,766.8)		14,685.8
Total liabilities and stockholders' equity	\$	18,863.7	\$	222,628.0	\$	77,716.2	\$	(43,120.1)	\$	276,087.8

(1) PFG sponsors nonqualified benefit plans. Nonqualified benefit plan assets and liabilities held in Rabbi trusts were \$731.9 million and \$593.7 million, respectively.

Condensed Consolidating Statements of Operations For the six months ended June 30, 2020

	Principal Financial Group, Inc. parent only			rincipal Life Insurance Company only	Principal Financia Services, Inc. and other subsidiaries combined (in millions)		El	iminations	l G	Principal Financial Troup, Inc. nsolidated
Revenues	¢		¢	2 200 0	¢	242.2	\$		¢	3 444 1
Premiums and other considerations Fees and other revenues	\$		\$	3,200.9 1,113.9	\$	243.2 1,269.6	\$	(193.9)	\$	3,444.1 2,189.6
Net investment income		6.7		1,408.8		1,094.0		(581.3)		1,928.2
Net realized capital gains (losses)		4.9		3,444.7		(3,348.3)		2.7		104.0
Total revenues		11.6		9,168.3		(741.5)		(772.5)		7,665.9
Expenses				0,20010		()		(11=10)		.,
Benefits, claims and settlement expenses		_		4,081.5		384.0		(5.5)		4,460.0
Dividends to policyholders		_		60.3		—		_		60.3
Operating expenses		98.4		1,268.7		1,135.5		(183.8)		2,318.8
Total expenses		98.4		5,410.5		1,519.5		(189.3)		6,839.1
Income (loss) before income taxes		(86.8)		3,757.8		(2,261.0)		(583.2)		826.8
Income taxes (benefits)		(21.6)		742.7		(595.1)		(0.3)		125.7
Equity in the net income (loss) of subsidiaries		752.4		(2,420.4)		2,426.8		(758.8)		
Net income		687.2		594.7		760.9		(1,341.7)		701.1
Net income attributable to noncontrolling interest						13.9				13.9
Net income attributable to PFG	\$	687.2	\$	594.7	\$	747.0	\$	(1,341.7)	\$	687.2
Net income	\$	687.2	\$	594.7	\$	760.9	\$	(1,341.7)	\$	701.1
Other comprehensive income		351.8	•	650.0	•	374.0		(974.0)		401.8
Comprehensive income	\$	1,039.0	\$	1,244.7	\$	1,134.9	\$	(2,315.7)	\$	1,102.9

Condensed Consolidating Statements of Operations For the six months ended June 30, 2019

	Principal Financial Group, Inc. parent only		Principal Life Insurance Company only		Principal Financial Services, Inc. and other subsidiaries <u>combined</u> (in millions)		Eliminations		l G	Principal Financial Toup, Inc. Insolidated
Revenues Premiums and other considerations Fees and other revenues Net investment income Net realized capital gains (losses), excluding impairment losses on available-for-sale securities	\$	 10.9 9.2	\$	3,293.1 1,102.5 1,419.2 411.8	\$	364.7 1,067.7 1,151.0 (316.4)	\$	(190.1) (583.0)	\$	3,657.8 1,980.1 1,998.1 104.6
Net other-than-temporary impairment losses recoveries on available-for-sale securities Other-than-temporary impairment losses on fixed maturities, available-for-sale reclassified to (from) other		9.2		(24.1)		(2.5)				(26.6)
comprehensive income Net impairment losses on available-for-sale securities Net realized capital gains (losses) Total revenues Expenses		<u> </u>		2.6 (21.5) 390.3 6,205.1		(0.1) (2.6) (319.0) 2,264.4		(773.1)		2.5 (24.1) 80.5 7,716.5
Benefits, claims and settlement expenses Dividends to policyholders Operating expenses Total expenses		<u> </u>		4,116.2 60.0 1,189.3 5,365.5		530.7 		(5.7) 		4,641.2 60.0 2,039.0 6,740.2
Income (loss) before income taxes Income taxes (benefits) Equity in the net income (loss) of subsidiaries Net income		(90.0) (22.3) <u>883.9</u> 816.2		839.6 110.7 (131.6) 597.3		816.7 44.8 134.5 906.4		(590.0) (1.1) (886.8) (1,475.7)		976.3 132.1 844.2
Net income attributable to noncontrolling interest Net income attributable to PFG	\$	816.2	\$	597.3	\$	25.6 880.8	\$	<u>2.4</u> (1,478.1)	\$	28.0 816.2
Net income Other comprehensive income Comprehensive income	\$ \$	816.2 2,201.1 3,017.3	\$ \$	597.3 2,011.1 2,608.4	\$ \$	906.4 2,227.8 3,134.2	\$ \$	(1,475.7) (4,221.0) (5,696.7)	\$ \$	844.2 2,219.0 3,063.2

Condensed Consolidating Statements of Cash Flows For the six months ended June 30, 2020

	Principal Financial Group, Inc. parent only]	rincipal Life Insurance Company only	Services other su com	Financial , Inc. and bsidiaries bined illions)	Eli	minations	F Gi	Principal Vinancial roup, Inc. nsolidated
Operating activities										
Net cash provided by (used in) operating activities	\$	(10.0)	\$	4,293.0	\$	(769.5)	\$	(1,467.4)	\$	2,046.1
Investing activities										
Fixed maturities available-for-sale and equity securities with										
intent to hold: Purchases		(535.7)				(1 5 3 1 5)		6.6		(7 717 3)
Sales		(535.7)		(5,666.7) 998.0		(1,521.5) 857.0		0.0		(7,717.3) 1,855.0
Sales Maturities		94.3		3.495.1		469.8		_		4.059.2
Maturities Mortgage loans acquired or originated		94.5		(929.8)		409.0 (535.1)		4.0		4,059.2 (1,460.9)
Mortgage loans sold or repaid		_		866.9		334.3		(2.6)		1.198.6
Real estate acquired		_		000.5		(98.2)		(2.0)		(98.2)
Net purchases of property and equipment		(0.1)		(30.3)		(16.0)		_		(46.4)
Dividends and returns of capital received from		(0.1)		(50.5)		(10.0)				(40.4)
unconsolidated entities		533.9		1.2		413.9		(949.0)		_
Net change in other investments		_		(2,506.0)		1,117.1		1,377.8		(11.1)
Net cash provided by (used in) investing activities		92.4		(3,771.6)		1,021.3		436.8		(2,221.1)
Financing activities				(0). (0)		_,				(_,,
Issuance of common stock		23.1		_		_		_		23.1
Acquisition of treasury stock		(231.8)		_		_				(231.8)
Payments for financing element derivatives		` —́		(14.7)		_		_		(14.7)
Purchase of subsidiary shares from noncontrolling interest		_		`_`		(0.9)		_		(0.9)
Dividends to common stockholders		(307.1)		_		_		_		(307.1)
Issuance of long-term debt		493.1		—		—		—		493.1
Principal repayments of long-term debt		—		—		(67.5)		2.6		(64.9)
Net repayments of short-term borrowings		_		_		(9.3)		_		(9.3)
Dividends and capital paid to parent		—		(413.9)		(535.1)		949.0		—
Investment contract deposits		—		5,160.0		238.7		—		5,398.7
Investment contract withdrawals		—		(4,761.4)		(40.1)		—		(4,801.5)
Net increase in banking operation deposits		_				324.7		—		324.7
Other				0.1						0.1
Net cash provided by (used in) financing activities		(22.7)		(29.9)		(89.5)	-	951.6		809.5
Net increase in cash and cash equivalents		59.7		491.5		162.3		(79.0)		634.5
Cash and cash equivalents at beginning of period	*	394.9	<u>+</u>	1,178.1	*	1,767.7	*	(824.8)	*	2,515.9
Cash and cash equivalents at end of period	\$	454.6	\$	1,669.6	\$	1,930.0	\$	(903.8)	\$	3,150.4

Condensed Consolidating Statements of Cash Flows For the six months ended June 30, 2019

	Principal Financial Group, Inc. parent only		Ir	ncipal Life Isurance ompany only	Services other su com	l Financial 5, Inc. and bsidiaries bined iillions)	Elimi	nations	Fi Gr	rincipal inancial oup, Inc. isolidated
Operating activities	¢	10.0	^	0 5 40 4	<i></i>	000.0	¢	(000.0)	^	0.070.4
Net cash provided by operating activities Investing activities	\$	16.3	\$	2,742.1	\$	803.9	\$	(883.9)	\$	2,678.4
Fixed maturities available-for-sale and equity securities with										
intent to hold:										
Purchases	((150.2)		(4,703.3)		(922.7)		4.4		(5,771.8)
Sales	(1.065.7		411.5				1.477.2
Maturities		158.1		2,581.4		286.4				3,025.9
Mortgage loans acquired or originated				(1, 894.5)		(121.4)		7.4		(2,008.5)
Mortgage loans sold or repaid		_		1,088.5		162.9		(7.5)		1,243.9
Real estate acquired				(0.1)		(48.4)		_		(48.5)
Real estate sold		—		—		57.0		_		57.0
Net purchases of property and equipment		_		(25.1)		(40.3)		_		(65.4)
Dividends and returns of capital received from								(0=0.0)		
unconsolidated entities		208.9		1.2		668.9		(879.0)		(050.0)
Net change in other investments		(13.6)		(317.3)		(627.7)		704.8		(253.8)
Net cash provided by (used in) investing activities		203.2		(2,203.5)		(173.8)		(169.9)		(2,344.0)
Financing activities		22.1								22.1
Issuance of common stock Acquisition of treasury stock	((153.7)		_		_		_		22.1 (153.7)
Payments for financing element derivatives	(155.7)		(13.1)				_		(13.1)
Dividends to common stockholders	(300.6)		(13.1)						(300.6)
Issuance of long-term debt		493.6		_		9.1		_		502.7
Principal repayments of long-term debt				_		(8.2)		7.5		(0.7)
Net proceeds from short-term borrowings		_		_		33.1				33.1
Dividends and capital paid to parent		_		(668.9)		(210.1)		879.0		
Investment contract deposits		_		3,401.8		225.6		_		3,627.4
Investment contract withdrawals				(3,783.1)		(17.7)				(3,800.8)
Net increase in banking operation deposits		—		—		82.0		_		82.0
Other				5.8		(0.2)				5.6
Net cash provided by (used in) financing activities		61.4		(1,057.5)		113.6		886.5		4.0
Net increase (decrease) in cash and cash equivalents		280.9		(518.9)		743.7		(167.3)		338.4
Cash and cash equivalents at beginning of period		334.9		1,323.9		2,014.8		(696.1)		2,977.5
Cash and cash equivalents at end of period	\$	615.8	\$	805.0	\$	2,758.5	\$	(863.4)	\$	3,315.9

Under our current shelf registration that was filed with the SEC and became effective April 29, 2020, 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.

The following tables set forth condensed consolidating financial information of (i) PFG, (ii) PFS, (iii) Principal Life and all other direct and indirect subsidiaries of PFG on a combined basis and (iv) the eliminations necessary to arrive at the information for PFG on a consolidated basis as of June 30, 2020 and December 31, 2019, and for the six months ended June 30, 2020 and 2019.

In presenting the condensed consolidating financial statements, the equity method of accounting has been applied to (i) PFG's interest in all direct subsidiaries of PFG and (ii) PFS's interest in Principal Life and all other subsidiaries, where applicable, even though all such subsidiaries meet the requirements to be consolidated under U.S. GAAP. Earnings of subsidiaries are, therefore, reflected in the parent's investment and earnings. All intercompany balances and transactions, including elimination of the parent's investment in subsidiaries, between PFG, PFS and Principal Life and all other subsidiaries have been eliminated, as shown in the column "Eliminations." These condensed consolidating financial statements should be read in conjunction with the consolidated financial statements. The financial information may not necessarily be indicative of results of operations, cash flows or financial position had the subsidiaries operated as independent entities.

PFG sponsors nonqualified benefit plans for select employees and agents and is responsible for the obligations of these plans. Nonqualified plan assets are held in Rabbi trusts for the benefit of all nonqualified plan participants. The Rabbi trusts are separate legal entities and are not a part of PFG on a stand-alone basis. The plan assets are available to satisfy the claims of general creditors only in the event of bankruptcy and are, therefore, consolidated in our statements of financial position.

Condensed Consolidating Statements of Financial Position June 30, 2020

	Principal Financial Group, Inc. parent only		-	Principal Financial Services, Inc. only	Principal Life Insurance Company and other subsidiaries <u>combined (1)</u> (in millions)			Eliminations		Principal Financial Group, Inc. consolidated
Assets Fixed maturities, available-for-sale	\$	712.1	\$	_	\$	73,557.1	\$	_	\$	74,269.2
Fixed maturities, trading	Ψ	232.7	Ψ	_	Ψ	351.1	Ψ	_	Ψ	583.8
Equity securities				37.3		1,741.2		_		1,778.5
Mortgage loans		_		_		16,696.6		_		16,696.6
Real estate		_		_		1,699.7		_		1,699.7
Policy loans		_		_		796.4				796.4
Investment in unconsolidated entities		18,185.5		17,277.9		532.3		(35,271.4)		724.3
Other investments		10.4		166.7		3,833.0		·		4,010.1
Cash and cash equivalents		454.6		723.6		3,054.2		(1,082.0)		3,150.4
Accrued investment income		2.3		0.1		699.7		<u> </u>		702.1
Premiums due and other receivables		_		103.2		1,954.9		(298.1)		1,760.0
Deferred acquisition costs		_		_		3,487.7		``		3,487.7
Property and equipment		_		_		993.1		_		993.1
Goodwill		_		618.5		1,012.4		_		1,630.9
Other intangibles		_		517.6		1,191.7		_		1,709.3
Separate account assets		_		_		155,936.3		_		155,936.3
Otĥer assets		382.8		28.0		1,545.0		(574.8)		1,381.0
Total assets	\$	19,980.4	\$	19,472.9	\$	269,082.4	\$	(37,226.3)	\$	271,309.4
Liabilities	_		-		_		-			
Contractholder funds	\$		\$	_	\$	42,308.4	\$	_	\$	42,308.4
Future policy benefits and claims	Ψ		Ψ	_	Ψ	42,896.1	Ψ	_	Ψ	42,896.1
Other policyholder funds				_		987.4		_		987.4
Short-term debt		_		_		76.3		_		76.3
Long-term debt		4,119.7		297.8		43.7		(297.8)		4,163.4
Income taxes currently payable		0.7		3.3		60.4		(48.1)		16.3
Deferred income taxes				15.8		2,552.9		(507.2)		2,061.5
Separate account liabilities		_				155,936.3		(30712)		155,936.3
Other liabilities		616.9		1,113.9		6,431.9		(882.7)		7,280.0
Total liabilities		4,737.3		1,430.8		251,293.4	-	(1,735.8)		255,725.7
		,		,		- ,		())		
Redeemable noncontrolling interest		—		—		272.7		—		272.7
Stockholders' equity										
Common stock		4.8		_		11.0		(11.0)		4.8
Additional paid-in capital		10,259.6		9,697.2		12,341.1		(22,038.3)		10,259.6
Retained earnings		11,441.4		6,477.8		3,057.8		(9,535.6)		11,441.4
Accumulated other comprehensive income		1,450.7		1,867.1		2,040.5		(3,907.6)		1,450.7
Treasury stock, at cost		(7,913.4)				(2.0)	_	2.0		(7,913.4)
Total stockholders' equity attributable to PFG		15,243.1		18,042.1		17,448.4		(35,490.5)		15,243.1
Noncontrolling interest	_					67.9	-			67.9
Total stockholders' equity		15,243.1		18,042.1		17,516.3		(35,490.5)		15,311.0
Total liabilities and stockholders' equity	\$	19,980.4	\$	19,472.9	\$	269,082.4	\$	(37,226.3)	\$	271,309.4
	<u> </u>		-		<u> </u>		É		<u> </u>	· · · ·

(1) PFG sponsors nonqualified benefit plans. Nonqualified benefit plan assets and liabilities held in Rabbi trusts were \$741.1 million and \$597.5 million, respectively.

Condensed Consolidating Statements of Financial Position December 31, 2019

	Principal Financial Group, Inc. parent only		Principal Financial Services, Inc. only			Principal Life surance Company and other subsidiaries combined (1) (in millions)	_1	Eliminations	(Principal Financial Group, Inc. onsolidated
Assets Fixed maturities, available-for-sale	\$	265.8	\$	_	\$	69,840.4	\$	_	\$	70,106.2
Fixed maturities, trading	Ψ	268.2	Ψ		Ψ	407.7	Ψ		Ψ	675.9
Equity securities		200.2		41.4		1,838.0		_		1.879.4
Mortgage loans		_				16,486.9		_		16,486.9
Real estate		_		_		1,714.8		_		1,714.8
Policy loans						798.0		_		798.0
Investment in unconsolidated entities		17,539.6		16,664.1		649.4		(34,022.9)		830.2
Other investments		10.4		251.9		3,597.7		(-)- ·-)		3,860.0
Cash and cash equivalents		394.9		598.4		2,656.2		(1,133.6)		2,515.9
Accrued investment income		1.6		0.4		684.6				686.6
Premiums due and other receivables		_		100.0		1,961.1		(320.8)		1,740.3
Deferred acquisition costs						3,521.3		·		3,521.3
Property and equipment		—		—		967.7		—		967.7
Goodwill		—		618.5		1,075.3		—		1,693.8
Other intangibles		_		531.7		1,255.0		_		1,786.7
Separate account assets		—		—		165,468.0		_		165,468.0
Other assets		383.2		35.2		1,509.5		(571.8)		1,356.1
Total assets	\$	18,863.7	\$	18,841.6	\$	274,431.6	\$	(36,049.1)	\$	276,087.8
Liabilities										
Contractholder funds	\$	_	\$	_	\$	41,367.5	\$	_	\$	41,367.5
Future policy benefits and claims		_		_		40,838.2		_		40,838.2
Other policyholder funds						959.4		—		959.4
Short-term debt		_		_		93.4		_		93.4
Long-term debt		3,625.5		320.7		108.7		(320.8)		3,734.1
Income taxes currently payable		—		—		66.4		(50.2)		16.2
Deferred income taxes		_		5.9		2,285.8		(495.1)		1,796.6
Separate account liabilities						165,468.0				165,468.0
Other liabilities		620.2		1,113.6		6,104.7		(974.8)		6,863.7
Total liabilities		4,245.7		1,440.2		257,292.1		(1,840.9)		261,137.1
Redeemable noncontrolling interest		—		—		264.9		_		264.9
Stockholders' equity										
Common stock		4.8		—		11.0		(11.0)		4.8
Additional paid-in capital		10,182.6		9,658.3		12,157.9		(21,816.2)		10,182.6
Retained earnings		11,074.3		6,263.5		2,985.1		(9,248.6)		11,074.3
Accumulated other comprehensive income		1,037.9		1,479.6		1,654.8		(3,134.4)		1,037.9
Treasury stock, at cost		(7,681.6)				(2.0)		2.0		(7,681.6)
Total stockholders' equity attributable to PFG		14,618.0		17,401.4		16,806.8		(34,208.2)		14,618.0
Noncontrolling interest						67.8				67.8
Total stockholders' equity		14,618.0		17,401.4		16,874.6	_	(34,208.2)		14,685.8
Total liabilities and stockholders' equity	\$	18,863.7	\$	18,841.6	\$	274,431.6	\$	(36,049.1)	\$	276,087.8

(1) PFG sponsors nonqualified benefit plans. Nonqualified benefit plan assets and liabilities held in Rabbi trusts were \$731.9 million and \$593.7 million, respectively.

Condensed Consolidating Statements of Operations For the six months ended June 30, 2020

	Fi Gr	rincipal nancial oup, Inc. rent only		Principal Financial Services, Inc. only	In	Principal Life surance Company and other subsidiaries <u>combined</u> (in millions)]	Eliminations		Principal Financial Group, Inc. consolidated
Revenues Premiums and other considerations	\$	_	\$	_	\$	3,444.1	\$	_	\$	3,444.1
Fees and other revenues	-	_	+	180.1	+	2,014.6	+	(5.1)	+	2,189.6
Net investment income (loss)		6.7		(1.3)		1,916.9		5.9		1,928.2
Net realized capital gains		4.9		27.7		71.3		0.1		104.0
Total revenues		11.6		206.5		7,446.9		0.9		7,665.9
Expenses										
Benefits, claims and settlement expenses		—		—		4,460.0		—		4,460.0
Dividends to policyholders						60.3				60.3
Operating expenses		98.4	_	260.8		1,964.1		(4.5)	_	2,318.8
Total expenses		98.4		260.8		6,484.4		(4.5)	_	6,839.1
Income (loss) before income taxes Income taxes (benefits) Equity in the net income of subsidiaries		(86.8) (21.6) 752.4		(54.3) (18.3) 783.0		962.5 165.6		5.4 		826.8 125.7
Net income		687.2		747.0		796.9	_	(1,530.0)	_	701.1
Net income attributable to noncontrolling interest						13.9		(1,550.0)		13.9
Net income attributable to PFG	\$	687.2	\$	747.0	\$	783.0	\$	(1,530.0)	\$	687.2
Net income	\$	687.2	\$	747.0	\$	796.9	\$	(1,530.0)	\$	701.1
Other comprehensive income	*	351.8	+	326.5	-	374.8	-	(651.3)	-	401.8
Comprehensive income	\$	1,039.0	\$	1,073.5	\$	1,171.7	\$	(2,181.3)	\$	1,102.9

Condensed Consolidating Statements of Operations For the six months ended June 30, 2019

	Principal Financial Group, Inc. parent only		Principal Financial Services, Inc. only		Principal Life Insurance Company and other subsidiaries <u>combined</u> (in millions)		Eliminations		Principal Financial Group, Inc. consolidated
Revenues Premiums and other considerations Fees and other revenues Net investment income (loss) Net realized capital gains, excluding impairment losses on	\$	-	\$ — 0.3 (4.1)	\$	3,657.8 1,985.8 1,987.3	\$	(6.0) 4.0	\$	3,657.8 1,980.1 1,998.1
available-for-sale securities Net other-than-temporary impairment losses on available-for- sale securities	9.2	2	5.9		89.5 (26.6)		_		104.6 (26.6)
Other-than-temporary impairment losses on fixed maturities, available-for-sale reclassified to other comprehensive income		<u> </u>			2.5				2.5
Net impairment losses on available-for-sale securities Net realized capital gains Total revenues Expenses	9.2		<u> </u>		<u>(24.1)</u> <u>65.4</u> 7,696.3	_	(2.0)		80.5 7,716.5
Benefits, claims and settlement expenses Dividends to policyholders Operating expenses			60.1		4,641.2 60.0 1,873.9				4,641.2 60.0 2,039.0
Total expenses Income (loss) before income taxes Income taxes (benefits)	(90.0 (22.3))	<u> </u>		6,575.1 1,121.2 166.2	_	(5.1) 3.1		<u>6,740.2</u> 976.3 132.1
Equity in the net income of subsidiaries Net income Net income attributable to noncontrolling interest	883.9 816.2)	927.0 880.8		955.0	_	(1,810.9) (1,807.8)		844.2 28.0
Net income attributable to PFG Net income	\$ 816.2 \$ 816.2	=	\$ 880.8 \$ 880.8	\$ \$	927.0 955.0	\$ \$	(1,000.00)	\$ \$	816.2 844.2
Other comprehensive income Comprehensive income	2,201.1 \$ 3,017.3		2,127.0 \$ 3,007.8	\$	2,149.5 3,104.5	\$	(4,258.6) (6,066.4)	\$	2,219.0 3,063.2

Condensed Consolidating Statements of Cash Flows For the six months ended June 30, 2020

	Principal Financial Group, Inc. parent only		Principal Financial Services, Inc. only		Principal Life Insurance Company and other subsidiaries <u>combined</u> (in millions)		Eliminations	F Gi	Principal Financial roup, Inc. nsolidated
Operating activities	¢	(10.0)	¢	-07 -	¢	2 0 1 0 1	¢ (550 5)	¢	2.040.1
Net cash provided by (used in) operating activities Investing activities	\$	(10.0)	\$	597.7	\$	2,018.1	\$ (559.7)	\$	2,046.1
Fixed maturities available-for-sale and equity securities with									
intent to hold:									
Purchases	(535.7)				(7,181.6)	_		(7,717.3)
Sales	,			_		1,855.0	_		1,855.0
Maturities		94.3				3,964.9	—		4,059.2
Mortgage loans acquired or originated		_		_		(1,460.9)	—		(1,460.9)
Mortgage loans sold or repaid		_		_		1,198.6	—		1,198.6
Real estate acquired		_				(98.2)	—		(98.2)
Net purchases of property and equipment		(0.1)		(1.5)		(44.8)	_		(46.4)
Dividends and returns of capital received from unconsolidated entities		533.9		550.5			(1,084.4)		
Net change in other investments		555.9		(464.6)		(134.8)	(1,084.4)		(11.1)
Net cash provided by (used in) investing activities		92.4		84.4		(1,901.8)	(496.1)		(2,221.1)
Financing activities		32.4		04.4		(1,501.0)	(430.1)		(2,221.1)
Issuance of common stock		23.1		_		_	_		23.1
Acquisition of treasury stock	(231.8)		_		_	_		(231.8)
Payments for financing element derivatives	,	_		_		(14.7)	_		(14.7)
Purchase of subsidiary shares from noncontrolling interest		_		_		(0.9)	_		(0.9)
Dividends to common stockholders		307.1)				` _ `	—		(307.1)
Issuance of long-term debt		493.1		4.4		_	(4.4)		493.1
Principal repayments of long-term debt		_		(27.4)		(64.9)	27.4		(64.9)
Net repayments of short-term borrowings		_				(9.3)			(9.3)
Dividends and capital paid to parent		_		(533.9)		(550.5)	1,084.4		- <u>-</u>
Investment contract deposits Investment contract withdrawals						5,398.7	—		5,398.7
Net increase in banking operation deposits		_		_		(4,801.5) 324.7	_		(4,801.5) 324.7
Other		_				524.7 0.1			524.7 0.1
Net cash provided by (used in) financing activities		(22.7)		(556.9)		281.7	1,107.4		809.5
Net increase in cash and cash equivalents		59.7		125.2		398.0	51.6		634.5
Cash and cash equivalents at beginning of period		394.9		598.4		2,656.2	(1,133.6)		2,515.9
Cash and cash equivalents at organing of period		454.6	\$	723.6	\$	3,054.2	\$ (1,082.0)	\$	3,150.4
Cash and cash equivalents at end of period	Ψ	10-110	Ψ	723.0	Ψ	5,034.2	φ (1,002.0)	Ψ	5,150.4

Condensed Consolidating Statements of Cash Flows For the six months ended June 30, 2019

	Principal Financial Group, Inc. parent only	Principal Financial Services, Inc. only	Principal Life Insurance Company and other subsidiaries <u>combined</u> (in millions)	Eliminations	Principal Financial Group, Inc. consolidated
Operating activities					
Net cash provided by (used in) operating activities	\$ 16.3	\$ (8.0)	\$ 2,800.6	\$ (130.5)	\$ 2,678.4
Investing activities Fixed maturities available-for-sale and equity securities with					
intent to hold:					
Purchases	(150.2)	(0.2)	(5,621.4)		(5,771.8)
Sales	(130.2)	0.2	(3,021.4)		1,477.2
Maturities	158.1	0.2	2,867.8	_	3,025.9
Mortgage loans acquired or originated		_	(2,008.5)	_	(2,008.5)
Mortgage loans sold or repaid	_		1,243.9	_	1,243.9
Real estate acquired	_		(48.5)		(48.5)
Real estate sold	_	_	57.0	_	57.0
Net purchases of property and equipment	—	(1.0)	(64.4)		(65.4)
Dividends and returns of capital received from unconsolidated					
entities	208.9	1,246.3	—	(1,455.2)	—
Net change in other investments	(13.6)	(51.5)	(131.4)	(57.3)	(253.8)
Net cash provided by (used in) investing activities	203.2	1,193.8	(2,228.5)	(1,512.5)	(2,344.0)
Financing activities					
Issuance of common stock	22.1		—		22.1
Acquisition of treasury stock	(153.7)	—		—	(153.7)
Payments for financing element derivatives	(200 6)	—	(13.1)	—	(13.1)
Dividends to common stockholders	(300.6)				(300.6)
Issuance of long-term debt	493.6	5.1	9.1	(5.1)	502.7
Principal repayments of long-term debt	_	(28.0)	(0.7) 33.1	28.0	(0.7)
Net proceeds from short-term borrowings Dividends and capital paid to parent	_	(208.9)	(1,246.3)	1,455.2	33.1
Investment contract deposits		(200.9)	3,627.4	1,455.2	3,627.4
Investment contract withdrawals			(3,800.8)		(3,800.8)
Net increase in banking operation deposits			(3,000.0) 82.0		82.0
Other		_	5.6		5.6
Net cash provided by (used in) financing activities	61.4	(231.8)	(1,303.7)	1,478.1	4.0
Net increase (decrease) in cash and cash equivalents	280.9	954.0	(731.6)	(164.9)	338.4
Cash and cash equivalents at beginning of period	334.9	649.0	3,096.8	(1,103.2)	2,977.5
Cash and cash equivalents at end of period	\$ 615.8	\$ 1,603.0	\$ 2,365.2	\$ (1,268.1)	\$ 3,315.9
Cush and cush equivalents at end of period	φ 010.0	÷ 1,000.0	÷ 2,303.2	φ (1,200,1)	¢ 0,010.0

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

The following analysis discusses our financial condition as of June 30, 2020, compared with December 31, 2019, and our consolidated results of operations for the three and six months ended June 30, 2020 and 2019, 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, 2019, 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 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 the London Inter-Bank Offered Rate ("LIBOR") may affect the value of certain derivatives and floating rate securities we hold or have issued and the profitability of certain real estate lending activity or businesses; (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 which 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) we may not be able to protect our intellectual property and may be subject to infringement claims; (13) our ability to pay stockholder dividends and meet our obligations may be constrained by the limitations on dividends Iowa insurance laws impose on Principal Life; (14) changes in accounting standards may adversely affect our reported results of operations and financial condition; (15) litigation and regulatory investigations may affect our financial strength or reduce our profitability; (16) 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; (17) 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; (18) 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; (19) technological and societal changes may disrupt our business model and impair our ability to retain existing customers, attract new customers and maintain our profitability; (20) damage to our reputation may adversely affect our revenues and profitability; (21) 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; (22) client terminations or withdrawals or changes in investor preferences may lead to a reduction in revenues for our asset management and accumulation businesses; (23) 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; (24) if we are unable to attract 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; (25) an interruption in telecommunication, information technology, or other systems, 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; (26) our international businesses face political, legal, operational and other risks that could reduce our profitability in those businesses; (27) we face risks arising from our participation in joint ventures; (28) we may need to fund deficiencies in our Closed Block assets; (29) a pandemic, terrorist attack, military action or other catastrophic event could adversely affect our operations, net income or financial condition; (30) our reinsurers could default on their obligations or increase their rates, which could adversely impact our net income and financial condition; (31) we face risks related to our acquisition of Wells Fargo Bank, N.A.'s IRT business; (32) we face risks arising from future acquisitions of businesses; (33) 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; (34) our enterprise risk management framework may not be fully effective in identifying or mitigating all of the risks to which we are exposed and (35) our financial results may be adversely impacted by global climate changes. In addition, the ongoing COVID-19 pandemic and the resulting financial market impacts could adversely affect our business, results of operations, financial condition and liquidity.

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, trust services, individual variable annuities and revenues and expenses associated with the Acquired
 Business; and Retirement and Income Solutions Spread, which includes individual fixed annuities, investment only,
 pension risk transfer and banking services. 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"); and
 - To employees of businesses and other individuals, we offer the ability to accumulate savings for retirement and other purposes through mutual funds, individual annuities and bank products, along with retirement income options.
- Principal Global Investors, which includes our mutual fund business, manages assets for sophisticated investors around the world using focused investment teams that provide diverse investment capabilities including equity, fixed income, real estate and other alternative investments. We also have experience in asset allocation, stable value management and other structured investment strategies. We focus on providing services to our other segments in addition to our retail mutual fund and third party institutional clients.
- 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, India 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, critical illness, accident, group life insurance and non-medical fee-for-service claims administration; and Individual Life insurance, which provides universal life, variable universal life, indexed universal life and traditional life insurance. We focus on solutions for individuals and small-to-medium sized businesses and their 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; RobustWealth, our financial technology company; and our exited group medical and long-term care insurance businesses are reported in this segment.

Economic Factors and Trends

The declines in the equity markets in 2020 led to decreases in account values in our Retirement and Income Solutions segment and AUM managed by our Principal Global Investors segment. Since account values and AUM are the base by which these businesses generate revenues, the declines in account values and AUM may put pressure on our revenues in future quarters.

In our Principal International segment, local currency AUM is a key indicator of earnings growth. Local currency AUM declined for the Principal International segment due to global market volatility. The financial results for the Principal International segment were also negatively impacted by foreign currency fluctuations and the unfavorable relative market performance on our required regulatory investments.

In our U.S. Insurance Solutions segment, premium and fee growth is a key indicator of earnings growth. Rising unemployment as a result of temporary business closures may impact new sales in our businesses and reduce in-group growth in our Specialty Benefits insurance business. Much of this impact may be offset by lower dental and vision claims as a result of those temporary business closures.

See Part II, Item 1A, "Risk Factors," for information on risks associated with the COVID-19 pandemic and the resulting financial market impacts.

Transactions Affecting Comparability of Results of Operations

Acquisitions

Wells Fargo Institutional Retirement & Trust Business. On July 1, 2019, we closed on our agreement with Wells Fargo Bank, N.A. to acquire its IRT business, which includes defined contribution, defined benefit, executive deferred compensation, employee stock ownership plans, institutional trust and custody, and institutional asset advisory businesses. The results of this acquisition are reflected in the Retirement and Income Solutions segment. The purchase price consisted of (i) \$1.2 billion cash paid at closing and (ii) an additional earn-out payment of up to \$150.0 million, estimated at \$0.0 million as of June 30, 2020, based upon the retention of fee revenue of the Acquired Business through December 31, 2020. The transaction was funded with available cash and debt financing.

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 countries 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 \$17.7 million and \$32.3 million for the three and six months ended June 30, 2020, 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."

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Results of Operations

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

		For the th	ree i	months ende	d Ju	For the six months ended June 30,						
	2020			2019	Increase (decrease) (in m		2020 nillions)		2019			Increase decrease)
Revenues:								·				
Premiums and other considerations	\$	1,153.1	\$	1,932.9	\$	(779.8)	\$	3,444.1	\$	3,657.8	\$	(213.7)
Fees and other revenues		1,044.3		1,006.6		37.7		2,189.6		1,980.1		209.5
Net investment income		944.6		1,037.1		(92.5)		1,928.2		1,998.1		(69.9)
Net realized capital gains (losses)		(27.4)		(4.0)		(23.4)		104.0		80.5		23.5
Total revenues		3,114.6		3,972.6		(858.0)		7,665.9		7,716.5		(50.6)
Expenses:												
Benefits, claims and settlement expenses		1,601.3		2,446.1		(844.8)		4,460.0		4,641.2		(181.2)
Dividends to policyholders		31.4		29.9		1.5		60.3		60.0		0.3
Operating expenses		983.3		1,046.3		(63.0)		2,318.8		2,039.0		279.8
Total expenses		2,616.0		3,522.3		(906.3)		6,839.1		6,740.2		98.9
Income before income taxes		498.6		450.3		48.3		826.8		976.3		(149.5)
Income taxes		82.5		58.2		24.3		125.7		132.1		(6.4)
Net income		416.1		392.1		24.0		701.1		844.2		(143.1)
Net income attributable to noncontrolling interest		17.8		5.8		12.0		13.9		28.0		(14.1)
Net income attributable to Principal Financial												
Group, Inc.	\$	398.3	\$	386.3	\$	12.0	\$	687.2	\$	816.2	\$	(129.0)

Three Months Ended June 30, 2020 Compared to Three Months Ended June 30, 2019

Net Income Attributable to Principal Financial Group, Inc.

Net income attributable to Principal Financial Group, Inc. increased primarily due an \$83.4 million decrease in DAC amortization stemming from more favorable financial markets during the second quarter of 2020 compared to the second quarter of 2019, which was partially offset by a \$53.9 million decrease in variable investment income.

Total Revenues

Premiums decreased \$711.7 million for the Retirement and Income Solutions segment primarily due to lower sales of single premium group and individual 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 increased \$59.1 million for the Retirement and Income Solutions segment primarily due to the Acquired Business. Fees and other revenues decreased \$14.8 million for the Principal International segment primarily due to foreign currency headwinds in Latin America.

Net investment income decreased primarily due to a \$67.9 million decrease in variable investment income in our U.S. operations and a \$25.0 million decrease due to foreign currency headwinds in our Latin America business. For additional information, see "Investments — Investment Results – Net Investment Income."

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. Net realized capital losses increased \$190.5 million due to derivatives not designated as hedging instruments that had losses in 2020 versus gains in 2019. This increase in losses was partially offset by \$80.8 million of available-for-sale noncredit fixed maturities gains from portfolio rebalancing in 2020 and \$69.6 million from sponsored investment funds that had gains in 2020 versus losses in 2019. For additional information, see "Investments — Investment Results — Net Realized Capital Gains (Losses)."

Total Expenses

Benefits, claims and settlement expenses decreased \$704.5 million for the Retirement and Income Solutions segment primarily due to a lower increase in reserves, stemming from lower sales of single premium group and individual annuities with life contingencies. Benefits, claims and settlement expenses decreased for the Principal International segment due to \$59.9 million lower single premium annuity sales in Chile, \$37.1 million due to foreign currency headwinds and \$30.1 million due to lower inflation based interest crediting rates to customers, all within Latin America.

Operating expenses decreased \$21.0 million for the U.S. Insurance Solutions segment primarily due to a decrease of DAC amortization in our Individual Life insurance business stemming from surrenders on a small block of indexed universal life business, largely COVID-19 related, and more favorable equity market performance. Operating expenses decreased for the Retirement and Income Solutions segment primarily due to a \$102.2 million decrease in DAC amortization stemming from more favorable financial markets during the second quarter of 2020 compared to the second quarter of 2019, partially offset by a \$96.1 million increase related to the Acquired Business. Operating expenses decreased for the Corporate segment primarily due to a \$7.0 million decrease in pension and OPEB expenses and a \$6.4 million decrease in expenses related to strategic initiatives.

Income Taxes

The effective income tax rate increased to 17% from 13% for the three months ended June 30, 2020 and June 30, 2019, respectively, primarily due to a 1% impact of higher local country permanent tax adjustments, a 1% impact of lower dividends received deductions and a 1% impact of foreign currency inflation. See Item 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 7, Income Taxes" for a reconciliation between the U.S. corporate income tax rate and the effective income tax rate.

Six Months Ended June 30, 2020 Compared to Six Months Ended June 30, 2019

Net Income Attributable to Principal Financial Group, Inc.

Net income attributable to Principal Financial Group, Inc. decreased primarily due to a \$61.0 million increase in DAC amortization stemming from unfavorable financial markets in 2020 compared to favorable in 2019, \$23.2 million of foreign currency headwinds and \$20.1 million of unfavorable relative market performance on our required regulatory investments in our Latin America business.

Total Revenues

Premiums decreased \$147.4 million for the Retirement and Income Solutions segment primarily due to lower sales of single premium individual annuities with life contingencies. Premiums decreased \$113.4 million for the Principal International segment primarily due to lower single premium annuity sales.

Fees and other revenues increased \$163.2 million for the Retirement and Income Solutions segment primarily due to the Acquired Business. Fees and other revenues increased for the Principal Global Investors segment primarily due to \$27.5 million higher management fee revenue as a result of increased average AUM and a \$20.5 million increase in performance fee revenue primarily in our real estate business.

Net investment income decreased primarily due to \$41.4 million of foreign currency headwinds and \$28.1 million of unfavorable relative market performance on our required regulatory investments in our Latin America business. For additional information, see "Investments — Investment Results – Net Investment Income."

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. Net realized capital gains increased primarily due to a \$102.2 million increase from available-for-sale noncredit fixed maturities gains from portfolio rebalancing in 2020 and increased gains of \$99.6 million from derivatives not designated as hedging instruments. These increases were partially offset by a \$75.0 million decrease from sponsored investment funds and a \$60.1 million decrease from equity securities that had losses in 2020 versus gains in 2019. For additional information, see "Investments — Investment Results — Net Realized Capital Gains (Losses)."

Total Expenses

Benefits, claims and settlement expenses decreased for the Principal International segment primarily due to \$71.4 million lower single premium annuity sales in Chile as well as \$67.5 million foreign currency headwinds, all within Latin America.

Operating expenses increased for the Retirement and Income Solutions segment primarily due to a \$201.8 million increase related to the Acquired Business and a \$70.8 million increase in DAC amortization stemming from unfavorable financial markets in 2020 compared to favorable in 2019.

Income Taxes

The effective income tax rate increased to 15% for the six months ended June 30, 2020, from 14% for the six months ended June 30, 2019. See Item 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 7, 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 12, Segment Information."

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 impacted by changes in the equity markets. Net revenue from Retirement and Income Solutions – Spread is 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:

	For the three months ended June 30,							For the six months ended June 30,					
		2020		2019		icrease ecrease)		2020		2019		ncrease ecrease)	
Retirement and Income Solutions – Fee	\$	464.9	\$	392.1	\$	(in m) 72.8	11110r \$	^{is)} 951.0	\$	771.8	\$	179.2	
Retirement and Income Solutions – Spread		133.5		177.5		(44.0)		300.4		346.7		(46.3)	
Total Retirement and Income Solutions	\$	598.4	\$	569.6	\$	28.8	\$	1,251.4	\$	1,118.5	\$	132.9	

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

	For the three months ended June 30,							For the six months ended June 30,						
		2020		2019		Increase lecrease) (in mi	illior	2020		2019		Increase lecrease)		
Operating revenues:						,		,						
Premiums and other considerations	\$	460.4	\$	1,172.1	\$	(711.7)	\$	1,983.3	\$	2,130.7	\$	(147.4)		
Fees and other revenues		411.1		352.0		59.1		853.2		690.0		163.2		
Net investment income		608.5		635.5		(27.0)		1,249.2		1,230.8		18.4		
Total operating revenues		1,480.0		2,159.6		(679.6)		4,085.7		4,051.5		34.2		
Expenses:														
Benefits, claims and settlement expenses, including														
dividends to policyholders		881.6		1,590.0		(708.4)		2,834.3		2,933.0		(98.7)		
Operating expenses		384.5		313.4		71.1		832.4		621.7		210.7		
Total expenses		1,266.1		1,903.4		(637.3)		3,666.7		3,554.7		112.0		
Pre-tax operating earnings	\$	213.9	\$	256.2	\$	(42.3)	\$	419.0	\$	496.8	\$	(77.8)		

Three Months Ended June 30, 2020 Compared to Three Months Ended June 30, 2019

Pre-Tax Operating Earnings

Pre-tax operating earnings decreased in our Fee business primarily due to an \$11.9 million decrease related to the Acquired Business. Pre-tax operating earnings decreased in our Spread business primarily due to a \$41.7 million decrease in variable investment income, partially offset by a \$7.0 million increase due to growth in the block of business and a \$6.6 million increase due to favorable experience.

Net Revenue

Net revenue increased in our Fee business primarily due to an \$84.2 million increase related to the Acquired Business. Net revenue decreased in our Spread business primarily due to a \$41.7 million decrease in variable investment income.

Operating Expenses

Operating expenses increased in our Fee business due to a \$96.1 million increase related to the Acquired Business. Operating expenses decreased in our Spread business primarily due to an \$8.0 million decrease in non-deferrable commission expense resulting from lower sales of individual annuities with life contingencies.

Six Months Ended June 30, 2020 Compared to Six Months Ended June 30, 2019

Pre-Tax Operating Earnings

Pre-tax operating earnings decreased in our Fee business primarily due to a \$29.0 million increase in DAC amortization due to unfavorable equity markets in 2020 compared to favorable in 2019 and a \$21.5 million decrease related to the Acquired Business. Pre-tax operating earnings decreased in our Spread business primarily due to a \$35.0 million decrease in variable investment income, partially offset by a \$10.9 million increase due to growth in the block of business and a \$9.1 million increase due to favorable experience.

Net Revenue

Net revenue increased in our Fee business primarily due to a \$180.3 million increase related to the Acquired Business. Net revenue decreased in our Spread business primarily due to a \$35.0 million decrease in variable investment income.

Operating Expenses

Operating expenses increased in our Fee business due to a \$201.8 million increase related to the Acquired Business. Operating expenses decreased in our Spread business primarily due to a \$20.4 million decrease in non-deferrable commission expense resulting from lower sales of individual annuities with life contingencies.

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 mon	ed June 30,	For	d June 30,			
		2020		2019		2020		2019
				(in bill	ions)			
AUM, beginning of period	\$	405.5	\$	423.1	\$	458.6	\$	393.5
Net cash flow		3.1		(5.0)		2.8		(4.5)
Investment performance		41.7		13.5		(9.7)		41.7
Operations disposed		(0.1)				(0.1)		
Other		(0.1)		0.2		(1.5)		1.1
AUM, end of period	\$	450.1	\$	431.8	\$	450.1	\$	431.8

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

	For the three months ended June 30,							For the six months ended June 30,					
		2020		2019		crease crease) (in milli	2020 ions)		2019		crease crease)		
Operating revenues:													
Fees and other revenues	\$	352.1	\$	356.6	\$	(4.5) \$	\$ 740.5	\$	693.2	\$	47.3		
Net investment income		0.8		2.9		(2.1)	3.2		5.3		(2.1)		
Total operating revenues		352.9		359.5		(6.6)	743.7		698.5		45.2		
Expenses:													
Total expenses		243.0		242.3		0.7	520.5		479.3		41.2		
Pre-tax operating earnings attributable to													
noncontrolling interest		1.5		1.6		(0.1)	3.1		2.9		0.2		
Pre-tax operating earnings	\$	108.4	\$	115.6	\$	(7.2)	\$ 220.1	\$	216.3	\$	3.8		

Three Months Ended June 30, 2020 Compared to Three Months Ended June 30, 2019

Pre-Tax Operating Earnings

Pre-tax operating earnings decreased largely due to a decrease in transaction and borrower fees revenue.

Six Months Ended June 30, 2020 Compared to Six Months Ended June 30, 2019

Pre-Tax Operating Earnings

Pre-tax operating earnings increased largely due to \$27.5 million higher management fee revenue as a result of increased average AUM and a \$20.5 million increase in performance fee revenue primarily in our real estate business. This was partially offset in expense by a \$24.6 million increase in variable compensation expenses and a \$12.4 million increase in professional fees primarily related to a one-time favorable legal settlement in 2019.

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 countries 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 t	he three mon	For the six months ended June 30					
		2020	 2019		2020		2019	
			(in bi	illions)				
AUM, beginning of period	\$	134.5	\$ 161.4	\$	169.7	\$	155.5	
Net cash flow		0.9	0.6		1.2		1.4	
Investment performance		9.7	4.7		0.8		10.2	
Effect of exchange rates		(1.1)	1.4		(27.5)		2.4	
Other		(0.5)	(0.1)		(0.7)		(1.5)	
AUM, end of period	\$	143.5	\$ 168.0	\$	143.5	\$	168.0	

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.

	For the th	ree m	onths ende	d June	e 30,		For the s	June 30,		
	 2020		2019		icrease ecrease) (in mi	illions	2020	 2019		ncrease ecrease)
Net revenue	\$ 192.3	\$	202.8	\$	(10.5)	\$	326.4	\$ 417.0	\$	(90.6)

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

	For the three months ended June 30,					ne 30,	For the six months ended June 30,					30,
		2020		2019		Increase lecrease) (in mi	llions	2020		2019		Increase lecrease)
Operating revenues:												
Premiums and other considerations	\$	28.6	\$	109.5	\$	(80.9)	\$	113.6	\$	227.0	\$	(113.4)
Fees and other revenues		103.1		117.9		(14.8)		213.9		234.5		(20.6)
Net investment income		144.7		184.2		(39.5)		249.4		330.6		(81.2)
Total operating revenues		276.4		411.6		(135.2)		576.9		792.1		(215.2)
Expenses:												
Benefits, claims and settlement expenses		84.1		208.8		(124.7)		250.5		375.1		(124.6)
Operating expenses		96.5		108.7		(12.2)		199.9		210.7		(10.8)
Total expenses		180.6		317.5		(136.9)		450.4		585.8		(135.4)
Pre-tax operating earnings attributable to												
noncontrolling interest		1.3		0.9		0.4		1.2		2.0		(0.8)
Pre-tax operating earnings	\$	94.5	\$	93.2	\$	1.3	\$	125.3	\$	204.3	\$	(79.0)

Three Months Ended June 30, 2020 Compared to Three Months Ended June 30, 2019

Pre-Tax Operating Earnings

Pre-tax operating earnings increased as Latin America earnings increased \$16.0 million but was offset by currency headwinds of \$17.0 million within the region. Additionally, pre-tax operating earnings increased due to a \$3.0 million decrease in overhead expenses.

Net Revenue

Net revenue decreased in Latin America \$8.6 million primarily due to \$28.8 million foreign currency headwinds and \$8.1 million lower earnings from our equity method investments in Brazil offsetting \$29.6 million favorable relative market performance on our required regulatory investments.

Six Months Ended June 30, 2020 Compared to Six Months Ended June 30, 2019

Pre-Tax Operating Earnings

Pre-tax operating earnings decreased \$76.4 million in Latin America primarily due to \$31.2 foreign currency headwinds, \$27.6 million unfavorable relative market performance on our required regulatory investments and \$25.6 million lower earnings from our equity method investments in Brazil.

Net Revenue

Net revenue decreased \$84.5 million in Latin America primarily due to \$50.4 million foreign currency headwinds as well as \$28.1 million unfavorable relative market performance on our required regulatory investments.

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.

In our Specialty Benefits insurance business, premium and fees growth is a result of retention, sales and in-group growth. In our Individual Life insurance business, premium and fees growth is driven by recurring premiums and sales with a focus on maintaining a balanced product portfolio.

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

	F	or the thr	onths end	ed Jı	ıne 30,		For the six months ended June 30,						
	_	2020		2019		icrease ecrease)	(in m	2020 illions)	_	2019		crease crease)	
Premium and fees: Specialty Benefits insurance Individual Life insurance	\$	590.6 284.4	\$	580.1 282.6	\$	10.5 1.8	\$	1,187.7 601.9	\$	1,144.6 579.7	\$	43.1 22.2	

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 June 30,					ne 30,	For the six months ended June 30					0,
		2020		2019		ncrease ecrease) (in	ı mill	2020 ions)		2019		crease crease)
Operating revenues:												
Premiums and other considerations	\$	664.1	\$	651.3	\$	12.8	\$	1,347.2	\$	1,300.1	\$	47.1
Fees and other revenues		210.8		211.3		(0.5)		442.3		424.1		18.2
Net investment income		213.2		224.7		(11.5)		421.9		431.2		(9.3)
Total operating revenues		1,088.1		1,087.3		0.8		2,211.4		2,155.4		56.0
Expenses:												
Benefits, claims and settlement expenses		636.1		633.3		2.8		1,304.1		1,286.9		17.2
Dividends to policyholders		31.4		29.7		1.7		60.3		59.7		0.6
Operating expenses		265.6		278.0		(12.4)		562.5		551.8		10.7
Total expenses		933.1		941.0		(7.9)		1,926.9		1,898.4		28.5
Pre-tax operating earnings	\$	155.0	\$	146.3	\$	8.7	\$	284.5	\$	257.0	\$	27.5

Three Months Ended June 30, 2020 Compared to Three Months Ended June 30, 2019

Pre-Tax Operating Earnings

Pre-tax operating earnings increased in our Specialty Benefits insurance business due to a \$67.6 million net benefit from COVID-19, primarily associated with lower claims due to temporary dental and vision office closures. Higher non COVID-19 claims of \$31.0 million and \$9.3 million in lower variable investment income partially offset this benefit. Pre-tax operating earnings decreased in our Individual Life insurance business primarily due to \$11.2 million in lower variable investment income, \$8.8 million from surrenders on a small block of indexed universal life policies, largely related to COVID-19, and \$8.2 million in COVID-19 related claims. These decreases were slightly offset by \$4.0 million lower DAC amortization stemming from more favorable equity markets in 2020 compared to 2019.

Operating Revenues

Premium and fees in our Specialty Benefits insurance business increased \$17.7 million due to growth in the business, partially offset by \$7.2 million in dental premium credits associated with COVID-19. Premium and fees increased in our Individual Life insurance business due to \$14.7 million associated with growth in the business, partially offset by a \$12.9 million reduction in revenue associated with surrenders on a small block of indexed universal life policies, largely related to COVID-19.

Net investment income decreased primarily due to lower variable investment income.

¹¹⁶

Total Expenses

Benefits, claims and settlement expenses in our Specialty Benefits insurance business decreased \$74.8 million due to the impact of COVID-19 on claims, largely resulting from the temporary dental and vision office closures. The decrease in COVID-19 related claims was partially offset by \$31.0 million in higher non COVID-19 claims and \$10.6 million associated with growth in the business. Benefits, claims and settlement expenses in our Individual Life insurance business increased primarily due to \$21.2 million in higher non COVID-19 claim costs largely as a result of growth in the business, and \$8.2 million of increases in claims attributable to COVID-19.

Operating expenses decreased primarily due to lower DAC amortization in our Individual Life business with \$4.1 million of the decrease related to surrenders from a small block of indexed universal life policies, largely related to COVID-19, and \$4.0 million stemming from more favorable equity markets in 2020 compared to 2019.

Six Months Ended June 30, 2020 Compared to Six Months Ended June 30, 2019

Pre-Tax Operating Earnings

Pre-tax operating earnings increased \$63.2 million in our Specialty Benefits insurance business primarily due to lower claims incidence largely resulting from the temporary dental and vision office closures associated with COVID-19. Pre-tax operating earnings in our Individual Life insurance business decreased due to \$18.7 million in higher non COVID-19 claim costs, \$8.8 million due to surrenders from a small block of indexed universal life policies, largely COVID-19 related, and \$8.2 million from COVID-19 claims.

Operating Revenues

Premium and fees increased \$43.1 million in our Specialty Benefits insurance business primarily due to growth in the business. Premium and fees in our Individual Life insurance business increased \$35.0 million primarily due to growth in the business, partially offset by a \$12.9 million reduction in revenue associated with surrenders from a small block of indexed universal life policies, largely related to COVID-19.

Net investment income decreased primarily due to lower variable investment income.

Total Expenses

Benefits, claims and settlement expenses decreased \$66.2 million in our Specialty Benefits insurance business due to lower incidence of claims, largely as a result of temporary dental and vision office closures associated with COVID-19. The lower claim incidence was partially offset by \$30.9 million associated with growth in the business. Benefits, claims and settlement expenses in our Individual Life insurance business increased \$25.7 million due to growth in the business, \$18.7 million due to higher non COVID-19 claim costs and \$8.2 million due to COVID-19 claims.

Operating expenses increased primarily due to growth in the 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 June 30,							For the six months ended June 30,					
		2020		2019		ncrease ecrease) (in mi	illion	2020 s)		2019		ncrease lecrease)	
Operating revenues:													
Total operating revenues	\$	(16.3)	\$	(15.8)	\$	(0.5)	\$	(7.0)	\$	(14.6)	\$	7.6	
Expenses:													
Total expenses		67.8		82.7		(14.9)		149.8		168.5		(18.7)	
Pre-tax operating earnings (losses) attributable to													
noncontrolling interest		(0.1)		(0.4)		0.3		18.3		(0.6)		18.9	
Pre-tax operating losses	\$	(84.0)	\$	(98.1)	\$	14.1	\$	(175.1)	\$	(182.5)	\$	7.4	

Three Months Ended June 30, 2020 Compared to Three Months Ended June 30, 2019

Pre-Tax Operating Losses

Pre-tax operating losses decreased primarily due to operating expense decreases, including a \$7.0 million decrease in pension and OPEB expenses and a \$6.4 million decrease in expenses related to strategic initiatives.

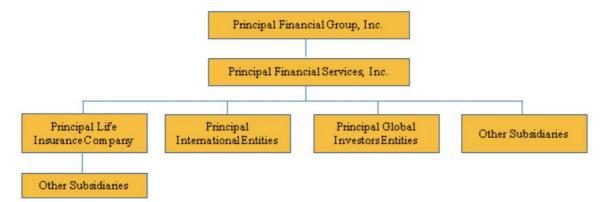
Six Months Ended June 30, 2020 Compared to Six Months Ended June 30, 2019

Pre-Tax Operating Losses

Pre-tax operating losses decreased primarily due to a \$16.4 million decrease in pension and OPEB expenses. This decrease in losses was partially offset by a \$6.7 million increase in our retail broker-dealer operations primarily related to a change in expense allocation.

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 not until 2022, 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 June 30, 2020, approximately \$9.6 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 June 30, 2020.

	actholder funds in millions)	Percentage
Not subject to discretionary withdrawal	\$ 10,778.4	31.4 %
Subject to discretionary withdrawal with adjustments:		
Specified surrender charges	10,344.8	30.1
Market value adjustments	7,973.6	23.2
Subject to discretionary withdrawal without adjustments	5,272.2	15.3
Total domestic investment contracts	\$ 34,369.0	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 June 30, 2020:

Obligor/Applicant	Financing structure	Maturity	 Capacity (in mi	Amount outstanding (3) llions)	
PFG, Principal Financial Services, Inc., and Principal Life as co-borrowers (1) PFG, Principal Financial Services, Inc., Principal	Credit facility	November 2023	\$ 600.0	\$	_
Life and Principal Financial Services V (UK) LTD as co-borrowers (1) Principal International Chile (2)	Credit facility Unsecured lines of	November 2023	200.0		_
Principal Life	credit Unsecured line of		163.2		76.3
Total	credit	September 2020	\$ 60.0 1,023.2	\$	76.3

(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.

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 June 30, 2020 and December 31, 2019. 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: Principal Financial Group, Inc. and Principal Financial Services, Inc. The principal sources of funds available to our parent holding company, PFG, are dividends from subsidiaries as well as its ability to borrow funds at competitive rates and raise capital to meet operating and growth needs. These funds are used by PFG to meet its obligations, which include the payment of dividends on common stock, debt service and the repurchase of stock. The declaration and payment of common stock dividends is subject to the discretion of our Board of Directors and will depend on our overall financial condition, results of operations, capital levels, cash requirements, future prospects, receipt of dividends 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 from Principal Life, our primary subsidiary, are limited by Iowa law. Under Iowa law, Principal Life may pay dividends 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, 2019, the ordinary stockholder dividend limitation for Principal Life is approximately \$1,060.3 million in 2020. However, because the dividend test is based on dividends previously paid over rolling 12-month periods, if paid before a specified date during 2020, 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 six months ended June 30, 2020, were \$400.0 million, all of which was extraordinary and approved by the Commissioner. As of June 30, 2020, we had \$2,319.9 million of cash and liquid assets held in our holding companies and other subsidiaries, which is available for corporate purposes. This includes assets in excess of targeted statutory capital ratios and immediate working capital needs.

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

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

Net cash provided by operating activities was \$2,046.1 million and \$2,678.4 million for the six months ended June 30, 2020 and 2019, 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 in 2020 compared to 2019 was primarily the result of fluctuations in receivables and payables associated with the timing of settlements.

Net cash used in investing activities was \$2,221.1 million and \$2,344.0 million for the six months ended June 30, 2020 and 2019, respectively. The decrease in cash used in investing activities was primarily due to decreased net contributions to sponsored investment funds in the current year. The decrease in cash used in investing activities was offset in part by net real estate acquisitions in the current year compared to net real estate sales in the prior year.

Net cash provided by financing activities was \$809.5 million and \$4.0 million for the six months ended June 30, 2020 and 2019, respectively. The increase in cash provided by financing activities was primarily due to net investment contract deposits in the current year versus net withdrawals in the prior year, as well as a net increase in banking operation deposits in the current year.

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.

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

	June 3	30, 2020	December 31, 2019		
	(in millions)				
Other recourse short-term debt	\$	76.3	\$	93.4	
Total short-term debt	\$	76.3	\$	93.4	

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. On June 12, 2020, we issued \$500.0 million of senior notes. The proceeds from these notes were used for general corporate purposes. For additional information regarding this debt issuance and all other outstanding long-term debt, see Item 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 6, Long-Term Debt."

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 dividends to stockholders and repurchase of common stock.

	For the six months ended June 30, 2020			For the year ended December 31, 2019		
		illions)				
Dividends to stockholders	\$	307.1	\$	606.0		
Repurchase of common stock		231.8		281.0		
Total cash returned to common stockholders	\$	538.9	\$	887.0		

For additional stockholders' equity information, see Item 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 10, Stockholders' Equity."

Capitalization

The following table summarizes our capital structure:

	<u>June 30, 2020</u> <u>December 31</u> (\$ in millions)					
Debt:						
Short-term debt	\$	76.3	\$	93.4		
Long-term debt		4,163.4		3,734.1		
Total debt		4,239.7		3,827.5		
Total stockholders' equity attributable to PFG		15,243.1		14,618.0		
Total capitalization	\$	19,482.8	\$	18,445.5		
Debt to equity		28 %)	26 %		
Debt to capitalization		22 %)	21 %		

Contractual Obligations and Contractual Commitments

As of June 30, 2020, no significant changes to contractual obligations and contractual commitments have occurred since December 31, 2019.

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 June 30, 2020, no significant changes to guarantees and indemnifications have occurred since December 31, 2019. For guarantee and indemnification information, see Item 1. "Financial Statements, Notes to Unaudited Condensed Consolidated Financial Statements, Note 9, 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.

In May 2020, Fitch affirmed the 'AA-' financial strength ratings of Principal Life and PNLIC. Fitch also affirmed PFG's senior unsecured debt at 'A-'. The outlook for PFG was revised to 'negative' from 'stable'. The outlook revision is due to the disruption to economic activity and the financial markets from the COVID-19 pandemic

In early 2020, each of A.M. Best, Fitch and Moody's has revised its outlook for the U.S. life insurance industry to 'negative' from 'stable'. The revisions were due to increased concerns over COVID-19 and the related financial impacts. S&P continues to maintain a 'stable' industry outlook.

In April 2020, S&P affirmed the financial strength rating of Principal Life and Principal National Life Insurance Company ("PNLIC") at 'A+'. S&P also affirmed the senior unsecured debt of PFG and Principal Financial Services, Inc at 'A-'. The outlook on all ratings changed from 'stable' to 'negative'. The ratings outlook reflects weaker earnings potential and capital adequacy as a result of the global recession.

In February 2020, A.M. Best affirmed the financial strength ratings of Principal Life and PNLIC at 'A+'. The outlook remains 'stable' for all financial strength ratings. The affirmation reflects the strength of our balance sheets as well as our strong operating performance, favorable business profile and very strong enterprise risk management. Concurrently, A.M. Best upgraded the Long-Term Issuer credit rating was revised to 'stable' from 'positive'. The ratings upgrade reflects the continued strengthening and evolution of our enterprise risk management capabilities.

In April 2019, we announced the signing of a definitive agreement with Wells Fargo Bank, N.A. to acquire its IRT business. Following the acquisition announcement, Fitch and S&P affirmed our ratings and stable outlook. A.M. Best commented that ratings remain unchanged, while Moody's commented the acquisition is a credit positive. The transaction closed on July 1, 2019.

The following table summarizes our significant financial strength and debt ratings from the major independent rating organizations. The debt ratings shown are indicative ratings. Outstanding issuances are rated the same as indicative ratings unless otherwise noted. Actual ratings can differ from indicative ratings based on contractual terms. 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	S&P	Moody's
Principal Financial Group				
Senior Unsecured Debt (1)	а	A-	A-	Baa2
Junior Subordinated Debt (2)	a-		BBB+	Baa3
Long-Term Issuer Default Rating		А		
Principal Financial Services				
Senior Unsecured Debt	а		A-	Baa1
Long-Term Issuer Default Rating		А		
Principal Life Insurance Company				
Insurer Financial Strength	A+	AA-	A+	A1
Issuer Credit Rating	aa			
Commercial Paper	AMB-1+		A-1+	P-1
Principal National Life Insurance Company				
Insurer Financial Strength	A+	AA-	A+	A1

(1) Principal Financial Group's senior debt issuance has been rated "Baa1" by Moody's.

(2) Principal Financial Group's junior subordinated debt issuance has been rated "BBB" by S&P and "Baa2" by Moody's.

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 11, Fair Value Measurements" for further details, including a reconciliation of changes in Level 3 fair value measurements.

As of June 30, 2020, 39% of our net assets (liabilities) were Level 1, 57% were Level 2 and 4% were Level 3. Excluding separate account assets as of June 30, 2020, 3% of our net assets (liabilities) were Level 1, 97% were Level 2 and 0% were Level 3.

As of December 31, 2019, 41% of our net assets (liabilities) were Level 1, 55% were Level 2 and 4% were Level 3. Excluding separate account assets as of December 31, 2019, 3% of our net assets (liabilities) were Level 1, 97% were Level 2 and 0% 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 June 30, 2020, were \$8,631.9 million as compared to \$9,191.0 million as of December 31, 2019. The decrease was primarily related to the transfer of certain structured fixed maturities from Level 3 into Level 2, investment and universal life contract embedded derivative losses largely due to market impacts and net sales in our separate account assets.

Net assets (liabilities) measured at fair value on a recurring basis using significant unobservable inputs (Level 3) as of June 30, 2019, were \$8,772.9 million as compared to \$8,729.4 million as of December 31, 2018. The increase was primarily related to gains in our separate account assets, partially offset by net transfers out of Level 3 into Level 2. Assets transferred out of Level 3 during 2019 primarily included certain separate accounts we now value using the unit trust APIF as the unit of account that were previously valued using the underlying investments of the unit trust APIF. The increase in separate account assets was largely offset by losses in our investment contract embedded derivatives.

Investments

We had total consolidated assets as of June 30, 2020, of \$271,309.4 million, of which \$100,558.6 million were invested 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 June 30, 2020, 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.

	June 30, 2020			December 31	, 2019
	Car	rying amount	<u>% of total</u> (\$ in mil	Carrying amount	% of total
Fixed maturities:			(\$ 111 1111	lions)	
Public	\$	49,382.3	49 %	\$ 46,432.9	48 %
Private		25,470.7	25	24,349.2	24
Equity securities		1,778.5	2	1,879.4	2
Mortgage loans:					
Commercial		15,055.1	15	14,992.7	16
Residential		1,641.5	1	1,494.2	2
Real estate held for sale		18.5	_	169.8	_
Real estate held for investment		1,681.2	2	1,545.0	2
Policy loans		796.4	1	798.0	1
Other investments		4,734.4	5	4,690.2	5
Total invested assets		100,558.6	100 %	96,351.4	100 %
Cash and cash equivalents		3,150.4		2,515.9	
Total invested assets and cash	\$	103,709.0		\$ 98,867.3	

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 June 30,					For the six months ended June 30,						
	2020)	2019		Increase (d	Increase (decrease)		2020			Increase (decrease)	
	Yield	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield	Amount
						(\$ in r	nillions)					
Fixed maturities	3.9 % \$	658.7	4.3 % \$	671.0	(0.4)% \$	(12.3)	4.0 % \$	1,344.2	4.3 % \$	1,306.0	(0.3)% \$	38.2
Equity securities	11.7	50.5	5.1	24.2	6.6	26.3	3.0	27.8	7.5	69.8	(4.5)	(42.0)
Mortgage loans - commercial	4.1	154.8	4.4	161.6	(0.3)	(6.8)	4.2	318.4	4.3	311.0	(0.1)	7.4
Mortgage loans - residential	4.3	17.3	6.9	23.2	(2.6)	(5.9)	5.0	39.5	5.7	38.1	(0.7)	1.4
Real estate	6.0	25.3	14.6	63.5	(8.6)	(38.2)	11.7	99.9	10.5	91.4	1.2	8.5
Policy loans	5.3	10.5	5.4	10.9	(0.1)	(0.4)	5.3	21.1	10.9	21.9	(5.6)	(0.8)
Cash and cash equivalents	0.5	3.7	2.5	17.5	(2.0)	(13.8)	1.0	13.8	2.1	33.7	(1.1)	(19.9)
Other investments	4.3	50.9	8.0	94.1	(3.7)	(43.2)	5.1	120.3	8.2	183.7	(3.1)	(63.4)
Total	4.0	971.7	4.8	1,066.0	(0.8)	(94.3)	4.1	1,985.0	4.6	2,055.6	(0.5)	(70.6)
Investment expenses	(0.1)	(27.1)	(0.1)	(28.9)		1.8	(0.1)	(56.8)	(0.1)	(57.5)		0.7
Net investment income	3.9 % \$	944.6	4.7 % \$	1,037.1	(0.8)% \$	(92.5)	4.0 % \$	1,928.2	4.5 % \$	1,998.1	(0.5)% \$	(69.9)

Three Months Ended June 30, 2020 Compared to Three Months Ended June 30, 2019

Net investment income from real estate decreased primarily due to the sale of certain value-add real estate in the second quarter of 2019.

Net investment income from other investments decreased primarily due to lower variable investment income associated with other alternative investments and foreign currency headwinds in our Latin America business.

Six Months Ended June 30, 2020 Compared to Six Months Ended June 30, 2019

Net investment income from fixed maturities increased primarily due to higher average invested assets, offset by lower yields and prepayments in our U.S. operations.

Net investment income from equity securities decreased primarily due to unfavorable relative market performance on our required regulatory investments in our Latin America business.

Net investment income from other investments decreased primarily due to lower variable investment income associated with other alternative investments and foreign currency headwinds in our Latin America business.

Net Realized Capital Gains (Losses)

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

	For the three months ended June 30,					For the	six m	onths ended J	une	Increase (decrease)		
		2020		2019	ncrease ecrease) (i	n millio	2020 ons)		2019			
Fixed maturities, available-for-sale – credit												
losses, including credit sales (1)	\$	(27.6)	\$	(17.3)	\$ (10.3)	\$	(37.2)	\$	(24.1)	\$	(13.1)	
Commercial mortgage loans – credit losses		(0.2)		(0.6)	0.4		(13.6)		(1.1)		(12.5)	
Other – credit losses		0.9		0.9	_		(1.4)		1.7		(3.1)	
Fixed maturities, available-for-sale and												
trading – noncredit		94.6		11.7	82.9		110.0		22.4		87.6	
Derivatives and related hedge activities (2)		(186.7)		3.8	(190.5)		117.2		17.6		99.6	
Other gains (losses)		91.6		(2.5)	94.1		(71.0)		64.0		(135.0)	
Net realized capital gains (losses)	\$	(27.4)	\$	(4.0)	\$ (23.4)	\$	104.0	\$	80.5	\$	23.5	

(1) Upon adoption of authoritative guidance effective January 1, 2020, credit losses include credit sales, adjustments to the credit loss valuation allowance, write-offs and recoveries on available-for-sale securities. Prior to 2020, credit losses included credit sales, net other-than-temporary impairment losses and recoveries on available-for-sale securities and other-than-temporary impairment losses on fixed maturities, available-for-sale reclassified from other OCI.

(2) Includes fixed maturities, trading net gains (losses) of \$11.4 million and \$4.1 million for the three months ended June 30, 2020 and 2019, and \$0.2 million and \$8.6 million for the six months ended June 30, 2020 and 2019, respectively, which are a component of the GMWB embedded derivative hedging program net realized capital gains (losses) reflected in this line.

Three Months Ended June 30, 2020 Compared to Three Months Ended June 30, 2019

Net realized gains on fixed maturities, available-for-sale and trading - noncredit increased primarily due to available-for-sale noncredit gains related to portfolio rebalancing in 2020.

Derivatives and related hedge activities had losses in 2020 versus gains in 2019 primarily due to increased losses on the GMWB embedded derivatives, including changes in the spread reflecting our own creditworthiness, and related hedging instruments.

Other investments had gains in 2020 versus losses in 2019 due primarily to increases from sponsored investment funds and equity securities related primarily to mark-to-market changes.

Six Months Ended June 30, 2020 Compared to Six Months Ended June 30, 2019

Net realized gains on fixed maturities, available-for-sale and trading - noncredit increased primarily due to available-for-sale noncredit gains related to portfolio rebalancing in 2020.

Net realized gains on derivatives and related hedge activities increased due primarily to gains in 2020 versus losses in 2019 on the GMWB embedded derivatives, including changes in the spread reflecting our own creditworthiness, and related hedging instruments.

Other investments had losses in 2020 versus gains in 2019 due primarily to decreases from sponsored invested funds and equity securities related primarily to mark-to-market changes.

U.S. Investment Operations

Of our invested assets, \$93,116.2 million were held by our U.S. operations as of June 30, 2020. Our U.S. invested assets are managed primarily by our Principal Global Investors segment. Our Investment Committee, appointed by our Board of Directors, 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 \$140.0 million and \$75.0 million as of June 30, 2020 and December 31, 2019, 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 strategies 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 l	oan-to-value ratio	Debt service coverage ratio			
	June 30, 2020 December 31, 2019		June 30, 2020	December 31, 2019		
New mortgages	53 %	51 %	2.6 X	2.4 X		
Entire mortgage portfolio	50 %	45 %	2.6 X	2.6 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 \$3,253.4 million and 3.6%, respectively, as of June 30, 2020, and \$3,135.5 million and 3.7%, respectively, as of December 31, 2019. 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 \$7,139.4 million and 3.0%, respectively, as of June 30, 2020, and \$7,318.7 million and 3.1%, respectively, as of December 31, 2019.

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 commercial mortgage loans. The following discussion analyzes the composition of U.S. invested assets, but excludes invested assets of the separate accounts.

	June 30, 2020			December 31, 2019		
	Car	rying amount	% of total	Carrying amount	% of total	
Fixed maturities:			(\$ in mil	lions)		
Public	\$	45,644.8	49 %	\$ 42,677.4	48 %	
Private		25,421.0	27	24,292.7	27	
Equity securities		472.0	1	480.7	1	
Mortgage loans:						
Commercial		14,740.3	16	14,693.2	17	
Residential		1,266.8	1	1,086.4	1	
Real estate held for sale		17.8	_	169.0	_	
Real estate held for investment		1,680.8	2	1,544.5	2	
Policy loans		778.4	1	777.7	1	
Other investments		3,094.3	3	2,841.7	3	
Total invested assets		93,116.2	100 %	88,563.3	100 %	
Cash and cash equivalents		2,877.1		2,312.1		
Total invested assets and cash	\$	95,993.3		\$ 90,875.4		

Fixed Maturities

Fixed maturities include bonds, ABS, redeemable preferred stock and certain non-redeemable preferred securities. Included in the privately placed category as of June 30, 2020 and December 31, 2019, were \$18.1 billion and \$17.7 billion, respectively, of securities subject to certain holding periods and resale restrictions pursuant to Rule 144A of the Securities Act of 1933.

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

	June 30, 2020			December 31, 2019		
	Carrying amount		Percent of total	Carrying amount	Percent of total	
	(\$ i			ns)		
U.S. government and agencies	\$	1,849.3	3 % \$	1,699.9	3 %	
States and political subdivisions		8,702.8	12	7,479.4	11	
Non-U.S. governments		887.2	1	855.5	1	
Corporate - public		23,395.3	33	21,845.9	33	
Corporate - private		16,886.5	24	15,539.7	23	
Residential mortgage-backed pass-through securities		3,557.8	5	3,259.1	5	
Commercial mortgage-backed securities		4,700.8	7	4,844.9	7	
Residential collateralized mortgage obligations		3,690.4	5	3,961.0	6	
Asset-backed securities		7,395.7	10	7,484.7	11	
Total fixed maturities	\$	71,065.8	100 % \$	66,970.1	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 18% of total fixed maturities as of both June 30, 2020, and December 31, 2019. It is comprised of corporate and foreign government fixed maturities. The following table presents the carrying amount of our international exposure for our U.S. operation's fixed maturities portfolio for the periods indicated.

	Ju	ne 30, 2020	December 31, 2019		
		· ·	llions)		
European Union, excluding UK	\$	3,412.6	\$	3,185.7	
United Kingdom		2,514.4		2,535.1	
Australia/New Zealand		1,910.5		1,646.8	
Asia-Pacific		1,706.8		1,656.3	
Latin America		1,356.7		1,317.6	
Europe, non-European Union		874.4		865.5	
Middle East and Africa		753.0		687.9	
Other (1)		334.3		348.4	
Total	\$	12,862.7	\$	12,243.3	

(1) Includes exposure from two countries and various supranational organizations as of both June 30, 2020, and December 31, 2019.

International fixed maturities exposure is determined by the country of domicile of the parent entity of an individual asset. 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 June 30, 2020 and December 31, 2019, our investments in Canada totaled \$2,161.7 million and \$2,111.9 million, respectively.

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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 following table presents our top ten exposures as of June 30, 2020.

	mortized cost (in millions)
Berkshire Hathaway Inc.	\$ 274.2
The Walt Disney Company	226.8
JPMorgan Chase & Co.	223.1
Sempra Energy	221.4
Wells Fargo & Company	220.1
People's Republic of China (1)	218.0
Bank of America Corporation	215.4
Comcast Corporation	213.8
Duke Energy Corporation	208.0
Microsoft Corporation	203.3
Total top ten exposures	\$ 2,224.1

(1) Primarily includes exposure to state-owned entities operating in the energy, electric and chemical sectors.

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 11, 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.

However, 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.

		June 30, 2020		De		
NAIC designation	Amortized cost	Carrying amount	Percent of carrying <u>amount</u> (\$ in mill	Amortized cost ions)	Carrying amount	Percent of carrying amount
1	\$ 44,414.2	\$ 48,176.3	68 %	\$ 43,619.2	\$ 46,300.5	69 %
2	18,079.6	19,887.2	28	16,658.4	18,079.2	27
3	2,631.3	2,596.9	3	2,211.6	2,310.5	3
4	430.1	389.1	1	230.0	227.6	1
5	14.7	12.6	_	51.7	46.1	_
6	5.7	3.7	_	6.3	6.2	_
Total fixed maturities	\$ 65,575.6	\$ 71,065.8	100 %	\$ 62,777.2	\$ 66,970.1	100 %

Fixed maturities included 47 securities with an amortized cost of \$635.7 million, gross gains of \$23.5 million, gross losses of \$1.2 million and a carrying amount of \$658.0 million as of June 30, 2020, 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 June 30, 2020, based on amortized cost, 99% 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.

		June 3	30, 2020	December 31, 2019					
NAIC designation	Amortized Carrying cost amount (in m						Carrying amount		
1	\$	4,707.4	\$	4,638.2	\$	4,664.5	\$	4,769.9	
2		51.6		45.3		50.3		49.8	
3		12.4		11.0		16.6		16.8	
4		3.2		2.9		_		_	
5		3.4		2.7		9.2		7.0	
6		1.0		0.7		1.5		1.4	
Total (1)	\$	4,779.0	\$	4,700.8	\$	4,742.1	\$	4,844.9	

(1) The CMBS portfolio included agency CMBS with a \$285.0 million amortized cost and a \$295.5 million carrying amount as of June 30, 2020, and a \$302.1 million amortized cost and a \$303.1 million carrying amount as of December 31, 2019.

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 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.

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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.

	<u> </u>	ine 30, 2020 (\$ in m	<u>Dece</u> nillions)	ember 31, 2019
Total fixed maturities (public and private)	\$	71,065.8	\$	66,970.1
Problem fixed maturities (1)	\$	14.3	\$	14.6
Potential problem fixed maturities		85.2		43.6
Total problem, potential problem and restructured fixed maturities	\$	99.5	\$	58.2
Total problem, potential problem and restructured fixed maturities as a percent of total fixed maturities		0.14 %		0.09 %

 Upon adoption of authoritative guidance effective January 1, 2020, the problem fixed maturities carrying amount is net of the credit loss valuation allowance. Prior to 2020, the problem fixed maturities carrying amount was net of other-than-temporary impairment losses.

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 \$24.9 million for the three months ended June 30, 2020, and \$34.5 million for the six months ended June 30, 2020. The net realized loss relating to other-than-temporary credit impairments and credit related sales of fixed maturities was \$17.3 million for the three months ended June 30, 2019, and \$24.1 million for the six months ended June 30, 2019.

Fixed Maturities Available-for-Sale

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

					Jun	e 30, 2020			
	I	Amortized cost	ur	Gross realized gains	uni l	Gross realized osses millions)	for	owance credit loss	 Carrying amount
Finance — Banking	\$	4,762.0	\$	425.3	\$	18.8	\$	_	\$ 5,168.5
Finance — Brokerage		519.3	-	65.7		0.4	-	_	584.6
Finance — Finance Companies		351.9		3.5		13.3		_	342.1
Finance — Financial Other		455.2		22.5		17.0		_	460.7
Finance — Insurance		2,828.3		453.9		5.7			3,276.5
Finance — Real estate investment trusts ("REITs")		1,775.6		146.3		14.3			1,907.6
Industrial — Basic Industry		1,543.0		156.2		6.2		_	1,693.0
Industrial — Capital Goods		2,105.9		191.5		11.8		_	2,285.6
Industrial — Communications		2,924.7		467.6		12.1			3,380.2
Industrial — Consumer Cyclical		1,733.9		139.9		32.2			1,841.6
Industrial — Consumer Non-Cyclical		4,317.0		602.6		7.9		_	4,911.7
Industrial — Energy		2,484.5		232.1		47.9		_	2,668.7
Industrial — Other		682.7		53.8		1.0		_	735.5
Industrial — Technology		2,060.9		241.9		4.9		_	2,297.9
Industrial — Transportation		1,991.4		190.4		40.6		_	2,141.2
Utility — Electric		3,621.3		499.1		2.7		_	4,117.7
Utility — Natural Gas		339.7		45.7				_	385.4
Utility — Other		305.0		31.4		0.2		_	336.2
Government guaranteed		1,414.3		186.4		8.6		_	1,592.1
Total corporate securities		36,216.6		4,155.8		245.6		_	 40,126.8
Residential mortgage-backed pass-through securities		3,153.0		159.5		0.4		_	3,312.1
Commercial mortgage-backed securities		4,752.9		73.7		148.5		3.4	4,674.7
Residential collateralized mortgage obligations		3,509.5		178.8		0.9		_	3,687.4
Asset-backed securities — Home equity (1)		228.2		14.8		1.5		—	241.5
Asset-backed securities — All other		3,639.4		52.9		72.5		—	3,619.8
Collateralized debt obligations — Credit		16.7		—		6.6		—	10.1
Collateralized debt obligations — CMBS		_		0.7		_		_	0.7
Collateralized debt obligations — Loans		3,576.2		4.3		84.3		1.0	3,495.2
Total mortgage-backed and other asset-backed securities		18,875.9		484.7		314.7		4.4	 19,041.5
U.S. government and agencies		1,586.0		263.0		0.2		_	1,848.8
States and political subdivisions		7,702.3		1,013.8		18.1		_	8,698.0
Non-U.S. governments		728.8		155.9		_		_	884.7
Total fixed maturities, available-for-sale	\$	65,109.6	\$	6,073.2	\$	578.6	\$	4.4	\$ 70,599.8

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

	December 31, 2019												
	A	mortized cost	u	Gross nrealized gains	un lo	Gross realized osses(1)		Carrying amount					
				(in mi	llions)								
Finance — Banking	\$	4,486.9	\$	290.1	\$	11.7	\$	4,765.3					
Finance — Brokerage		560.9		44.5		0.1		605.3					
Finance — Finance Companies		373.2		17.2		_		390.4					
Finance — Financial Other		463.4		22.8		1.8		484.4					
Finance — Insurance		2,663.5		358.1		2.1		3,019.5					
Finance — REITs		1,626.9		115.6		0.4		1,742.1					
Industrial — Basic Industry		1,264.4		110.2		—		1,374.6					
Industrial — Capital Goods		2,142.1		152.0		0.6		2,293.5					
Industrial — Communications		2,802.4		353.1		0.3		3,155.2					
Industrial — Consumer Cyclical		1,542.0		103.0		2.5		1,642.5					
Industrial — Consumer Non-Cyclical		4,089.7		406.8		0.6		4,495.9					
Industrial — Energy		2,566.5		285.7		6.7		2,845.5					
Industrial — Other		442.9		23.1		0.4		465.6					
Industrial — Technology		2,018.7		153.3		2.1		2,169.9					
Industrial — Transportation		1,972.1		142.4		0.4		2,114.1					
Utility — Electric		3,174.5		307.3		2.2		3,479.6					
Utility — Natural Gas		352.8		29.2		—		382.0					
Utility — Other		268.7		16.2		—		284.9					
Government guaranteed		1,357.6		165.0		0.9		1,521.7					
Total corporate securities		34,169.2		3,095.6		32.8		37,232.0					
Residential mortgage-backed pass-through securities		2,908.7		71.9		3.8		2,976.8					
Commercial mortgage-backed securities		4,713.9		126.6		23.8		4,816.7					
Residential collateralized mortgage obligations		3,885.8		79.0		8.6		3,956.2					
Asset-backed securities — Home equity (2)		237.1		14.5		0.6		251.0					
Asset-backed securities — All other		3,958.8		36.0		5.7		3,989.1					
Collateralized debt obligations — Credit		16.8		—		4.7		12.1					
Collateralized debt obligations — CMBS				0.9				0.9					
Collateralized debt obligations — Loans		3,209.9		2.0		9.6		3,202.3					
Total mortgage-backed and other asset-backed securities		18,931.0		330.9		56.8		19,205.1					
U.S. government and agencies		1,603.8		98.6		3.0		1,699.4					
States and political subdivisions		6,842.8		643.6		11.6		7,474.8					
Non-U.S. governments		724.6		128.4				853.0					
Total fixed maturities, available-for-sale	\$	62,271.4	\$	4,297.1	\$	104.2	\$	66,464.3					

(1) Prior to the adoption of authoritative guidance effective January 1, 2020, the gross unrealized losses included other-than-temporaryimpairment losses reported in AOCI.

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

Of the \$578.6 million in gross unrealized losses as of June 30, 2020, \$2.3 million in losses were attributed to securities scheduled to mature in one year or less, \$72.3 million attributed to securities scheduled to mature between one to five years, \$98.2 million attributed to securities scheduled to mature between five to ten years, \$91.1 million attributed to securities scheduled to mature after ten years and \$314.7 million related to mortgage-backed and other ABS that are not classified by maturity year. As of June 30, 2020, we were in a \$5,494.6 million net unrealized gain position as compared to a \$4,192.9 million net unrealized gain position as of December 31, 2019. The \$1,301.7 million increase in net unrealized gains for the six months ended June 30, 2020, can be attributed to an approximate 114 basis points decrease in interest rates, partially offset by widening of 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%.

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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.

			Jun	e 30, 202	0		December 31, 2019									
	Amortized cost	Gross unrealized gains	un	Gross realized losses		owance credit loss	Carrying amount (in millions)	Amortized cost	Gross unrealized gains	Gro unrea losses	lized	Carrying amount				
Investment grade: Public	\$ 39,619.6	\$ 4,531.4	\$	213.9	\$	1.6	\$ 43,935.5	\$ 38,221.4	\$ 3,143.4		56.2	\$ 41,308.6				
Private Below investment grade:	22,421.8	1,468.3		213.6		0.9	23,675.6	21,587.1	1,045.2		30.3	22,602.0				
Public Private	1,366.1 1,702.1	34.7 38.8		68.1 83.0		 1.9	1,332.7 1,656.0	912.9 1,550.0	47.8 60.7		6.6 11.1	954.1 1,599.6				
Total fixed maturities, available-for-						1.9					11.1					
sale	\$ 65,109.6	\$ 6,073.2	\$	578.6	\$	4.4	\$ 70,599.8	\$ 62,271.4	\$ 4,297.1	\$ 1	04.2	\$ 66,464.3				

(1) Prior to the adoption of authoritative guidance effective January 1, 2020, the gross unrealized losses included other-than-temporaryimpairment losses reported in AOCI.

The following tables present the carrying amount and the gross unrealized losses on our fixed maturities available-for-sale for which an allowance for credit loss has not been recorded by grade and aging category as of June 30, 2020.

	June 30, 2020													
		Put	olic			Priv	vate			To	tal			
		nrying nount	un	Gross realized losses		Carrying amount (in mi	un	Gross realized losses		Carrying amount	ur	Gross realized losses		
Investment grade:														
Three months or less	\$	742.2	\$	14.2	\$	548.6	\$	15.6	\$	1,290.8	\$	29.8		
Greater than three to six months	3	3,300.5		181.9		3,764.2		162.3		7,064.7		344.2		
Greater than six to nine months		14.1		0.8		150.7		3.5		164.8		4.3		
Greater than nine to twelve months		59.9		2.6		33.3		0.2		93.2		2.8		
Greater than twelve to twenty-four months		42.1		2.8		376.8		10.2		418.9		13.0		
Greater than twenty-four to thirty-six months		58.9		3.7		414.2		12.2		473.1		15.9		
Greater than thirty-six months		80.8		7.9		57.6		9.6		138.4		17.5		
Total fixed maturities, available-for-sale	\$ 4	4,298.5	\$	213.9	\$	5,345.4	\$	213.6	\$	9,643.9	\$	427.5		

		Pu	ıblic			Pri	ivate		T	otal		
				Gross				Gross		Gross		
		arrying		realized		arrying		realized	Carrying		realized	
	a	mount		osses	č	amount	illions	losses	amount		osses	
Below investment grade:						(III III	minons)				
Three months or less	\$	86.0	\$	1.0	\$	93.5	\$	1.6	\$ 179.5	\$	2.6	
Greater than three to six months		463.3		53.6		760.8		60.3	1,224.1		113.9	
Greater than six to nine months		11.0		0.6		42.9		6.4	53.9		7.0	
Greater than nine to twelve months		0.4		0.1		—		_	0.4		0.1	
Greater than twelve to twenty-four months		38.0		12.0		49.9		3.0	87.9		15.0	
Greater than twenty-four to thirty-six months		10.4		0.6		9.8		1.7	20.2		2.3	
Greater than thirty-six months		5.0		0.2		19.4		8.2	24.4		8.4	
Total fixed maturities, available-for-sale	\$	614.1	\$	68.1	\$	976.3	\$	81.2	\$ 1,590.4	\$	149.3	

	pro	Problem			 June 3 All oth maturity	er fix	ed	Total									
		Carrying amount		-		-		----------- - - - -- - - - -- - - - - - -- - -- - - - -- - - - -- - - - -- - -- - -- - - - - - - - - - -- - - - -- - - - -- - -		Gross realized osses	arrying mount (in m	un	Gross realized losses		arrying imount	un	Gross realized losses
Estimated fair value had declined and remained below amortized cost by 20% or more:					(·/										
Three months or less	\$	40.2	\$	11.9	\$ 57.3	\$	18.7	\$	97.5	\$	30.6						
Greater than three to six months		—		—	218.0		93.0		218.0		93.0						
Greater than six to nine months		_		—	0.2		0.2		0.2		0.2						
Greater than twelve months		0.1		0.4	10.3		6.7		10.4		7.1						
Total fixed maturities, available-for-sale	\$	40.3	\$	12.3	\$ 285.8	\$	118.6	\$	326.1	\$	130.9						

The following tables present the carrying amount and the gross unrealized losses, including other-than-temporary impairment losses reported in AOCI, on investment grade fixed maturities available-for-sale by grade and aging category as of December 31, 2019.

				Decembe	r 31, 2	019				
	Pul	olic		Priv	vate		То	otal		
	Carrying amount	unr	Gross realized osses	Carrying amount (in mi	uni	Gross realized osses	 Carrying amount	un	Gross realized osses	
Investment Grade:				,						
Three months or less	\$ 2,353.4	\$	22.7	\$ 1,900.9	\$	6.7	\$ 4,254.3	\$	29.4	
Greater than three to six months	539.6		8.5	297.9		2.7	837.5		11.2	
Greater than six to nine months	48.9		2.2	55.7		0.3	104.6		2.5	
Greater than nine to twelve months	12.9		0.2	3.1		—	16.0		0.2	
Greater than twelve to twenty-four months	191.0		7.5	1,372.1		7.4	1,563.1		14.9	
Greater than twenty-four to thirty-six months	201.6		2.2	400.9		5.3	602.5		7.5	
Greater than thirty-six months	574.2		12.9	190.7		7.9	764.9		20.8	
Total fixed maturities, available-for-sale	\$ 3,921.6	\$	56.2	\$ 4,221.3	\$	30.3	\$ 8,142.9	\$	86.5	

	December 31, 2019												
		Pu	blic			Pri	vate			Te	otal		
		arrying mount	unr	Fross ealized osses		arrying mount (in m	un	Gross realized osses		arrying mount	un	Gross realized osses	
Below investment grade:													
Three months or less	\$	24.4	\$	0.2	\$	61.3	\$	0.6	\$	85.7	\$	0.8	
Greater than six to nine months		7.7		0.1		22.2		0.2		29.9		0.3	
Greater than twelve to twenty-four months		14.6		1.1		72.2		2.2		86.8		3.3	
Greater than twenty-four to thirty-six months		13.1		2.3		3.7		0.7		16.8		3.0	
Greater than thirty-six months		10.6		2.9		27.4		7.4		38.0		10.3	
Total fixed maturities, available-for-sale	\$	70.4	\$	6.6	\$	186.8	\$	11.1	\$	257.2	\$	17.7	

	December 31, 2019											
	Problem, potential problem and restructured			All other fixed maturity securities				Т	otal			
	Carrying amount		Gross unrealized losses		Carrying amount		Gross unrealized losses nillions)		Carrying amount		Gross unrealized losses	
Estimated fair value had declined and remained below						(,					
amortized cost by 20% or more:												
Three months or less	\$		\$		\$	2.5	\$	0.9	\$	2.5	\$	0.9
Greater than three to six months				_		5.1		2.7		5.1		2.7
Greater than six to nine months		0.4		0.1		0.1		_		0.5		0.1
Greater than nine to twelve months		3.4		2.0		0.2		0.1		3.6		2.1
Greater than twelve months		1.6		1.0		12.3		4.8		13.9		5.8
Total fixed maturities, available-for-sale	\$	5.4	\$	3.1	\$	20.2	\$	8.5	\$	25.6	\$	11.6

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 22% and 21% of our commercial mortgage loan portfolio before valuation allowance as of June 30, 2020 and December 31, 2019, respectively. We are, therefore, exposed to potential losses resulting from the risk of catastrophes, such as earthquakes, that may affect the region. Like other lenders, we generally do not require earthquake insurance for properties on which we make commercial mortgage loans. With respect to California properties, however, we obtain an engineering report specific to each property. The report assesses the building's design specifications, whether it has been upgraded to meet seismic building codes and the maximum loss that is likely to result from a variety of different seismic events. We also obtain a report that assesses, by building and geographic fault lines, the amount of loss our commercial mortgage loan portfolio might suffer under a variety of seismic events.

The typical borrower in our commercial loan portfolio is a single purpose entity or single asset entity. As of June 30, 2020 and December 31, 2019, the total number of commercial mortgage loans outstanding was 748 and 767, of which 46% and 46% were for loans with principal balances less than \$10.0 million, respectively. The average loan size of our commercial mortgage portfolio was \$19.8 million and \$19.2 million as of June 30, 2020 and December 31, 2019, 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 did not have problem, potential problem and restructured commercial mortgage loans as of June 30, 2020 and December 31, 2019.

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 June 30, 2020 and December 31, 2019, the carrying amount of our equity real estate investment was \$1,698.6 million and \$1,713.5 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." Real estate held for investment totaled \$1,680.8 million and \$1,544.5 million as of June 30, 2020 and December 31, 2019, respectively. 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. Impairment adjustments recorded for the year ended December 31, 2019, were \$0.6 million. No such impairment adjustments were recorded for the six months ended June 30, 2020.

The carrying amount of real estate held for sale was \$17.8 million and \$169.0 million as of June 30, 2020 and December 31, 2019, respectively. 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 six months ended June 30, 2020 or for the year ended December 31, 2019.

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 June 30, 2020, our largest equity real estate portfolio concentration was in the Pacific (46%) region of the United States. By property type, our largest concentrations were in apartments (30%), office (30%), and industrial (26%) as of June 30, 2020.

Other Investments

Our other investments totaled \$3,094.3 million as of June 30, 2020, compared to \$2,841.7 million as of December 31, 2019. 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 life insurance; derivative assets and other investments.

International Investment Operations

Of our invested assets, \$7,442.4 million were held by our Principal International segment as of June 30, 2020. 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.

	June 30,	2020	December 31, 2019		
	Carrying amount	Percent of total	Carrying amount	Percent of total	
	amount	(\$ in millio		ortotai	
Fixed maturities:			-		
Public	\$ 3,737.5	50 % \$	3,755.5	48 %	
Private	49.7	1	56.5	2	
Equity securities	1,306.5	18	1,398.7	18	
Mortgage loans:					
Commercial	314.8	4	299.5	4	
Residential	374.7	5	407.8	5	
Real estate held for sale	0.7	_	0.8	_	
Real estate held for investment	0.4	_	0.5	_	
Policy loans	18.0	—	20.3	—	
Other investments:					
Direct financing leases	646.9	9	782.9	10	
Investment in unconsolidated operating entities	693.9	9	801.6	10	
Derivative assets and other investments	299.3	4	264.0	3	
Total invested assets	7,442.4	100 %	7,788.1	100 %	
Cash and cash equivalents	273.3		203.8		
Total invested assets and cash	\$ 7,715.7	\$	7,991.9		

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, 2019.

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 and universal life insurance policies with secondary guarantees. 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, 2019.

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 fully
by a reduction in the interest we credit on contractholder	offset by an increase in the interest we credit on contractholder
account balances; however, our ability to lower crediting rates	account balances
may be 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	A decrease in statutory capital we are required to hold as well as
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	bonds we own, which would reduce our opportunity to reinvest the
lower interest rates	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 our earnings sensitivity to U.S. interest rates by using two distinct assumptions: a hypothetical 100 basis point immediate, parallel decrease in the treasury yield curve and a hypothetical 50 basis point immediate decrease or increase in the Interest Rate on Excess Reserves ("IOER rate"). The hypothetical 100 basis point immediate, parallel decrease in the treasury yield would reduce segment pre-tax operating earnings by less than 1% over the next 12 months excluding the impact of any potential unlocking of our DAC asset and other actuarial balances. The hypothetical 50 basis point immediate decrease or increase in the IOER rate would reduce/increase segment pre-tax operating earnings respectively by less than 0.5% over the next 12 months. These estimates reflect 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 do 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 treasury yields and a 50 basis point immediate decrease/increase in the IOER rate 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 June 30, 2020, and the respective guaranteed minimum interest rates ("GMIRs"). Account values are broken down by GMIR level within the Retirement and Income Solutions and U.S. Insurance Solutions segments.

	Account values (1)						
		Up to 0.50%	Excess of creditin 0.51% to 1.00%	ng rates over GMIR 1.01% to 2.00%	: 2.01% or more		
	At GMIR	above GMIR	above GMIR	above GMIR	above GMIR	Total	
Guaranteed minimum interest rate			(\$ in	n millions)			
Retirement and Income Solutions							
Up to 1.00%	\$ 368.8	\$ 149.6	\$ 6,738.0	\$ 4,038.7	\$ 2,938.0	\$ 14,233.1	
1.01% - 2.00%	172.8	916.7	140.8	444.0	_	1,674.3	
2.01% - 3.00%	4,764.5	0.2	_	—	_	4,764.7	
3.01% - 4.00%	190.0					190.0	
Subtotal	5,496.1	1,066.5	6,878.8	4,482.7	2,938.0	20,862.1	
U.S. Insurance Solutions							
Up to 1.00%	_	23.0	_	_	_	23.0	
1.01% - 2.00%	339.1	_	325.3	423.8	173.9	1,262.1	
2.01% - 3.00%	1,114.3	1,303.5	569.9	109.1	0.2	3,097.0	
3.01% - 4.00%	1,720.8	37.6	19.6	27.3	3.4	1,808.7	
4.01% - 5.00%	51.2	4.3	3.7	1.7		60.9	
Subtotal	3,225.4	1,368.4	918.5	561.9	177.5	6,251.7	
Total	\$ 8,721.5	\$ 2,434.9	\$ 7,797.3	\$ 5,044.6	\$ 3,115.5	\$ 27,113.8	
Percentage of total	32.2	% 9.0 %	6 28.7 S	% <u>18.6</u> %	% 11.5 9	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 \$622.7 million and \$393.4 million of account values with GMIRs in Hong Kong and Brazil, respectively, as of June 30, 2020. 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, determine an investment is other than temporarily impaired, 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 \$5,037.7 million as of June 30, 2020, compared to \$4,791.2 million as of December 31, 2019. 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. 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, 2019.

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 June 30, 2020, increased \$246.5 million from December 31, 2019, primarily due to an increase in the balance and duration of fixed maturities, available-for-sale. The increase in the balance of fixed maturities, available-for-sale was primarily driven by a decline in interest rates and net purchase activity. The increase in the duration of fixed maturities, available-for-sale was also driven by a decline in interest rates.

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, investment only, and newer fixed deferred annuities, we use investment strategy and hedges to tightly align the cash flow run off of these asset and liability cash flows. Immunization and embedded value analysis are also utilized in the management of interest rate risk.
- *Retirement Business Dynamic Cash Flows* Dynamic liability cash flows, such as older fixed deferred annuities, are sensitive to policyholder behavior and the current interest rate environment. The risk and return metrics from deterministic and stochastic interest rate scenarios are used to manage the interest rate risk for these liabilities.
- 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, 2019.

Use of Derivatives to Manage Interest Rate Risk. We use various derivative financial instruments to manage our exposure to fluctuations in interest rates, including interest rate swaps, interest rate options, swaptions and futures. We use interest rate swaps and futures contracts to hedge changes in interest rates subsequent to the issuance of an insurance liability, such as a guaranteed investment contract, but prior to the purchase of a supporting asset, or during periods of holding assets in anticipation of near term liability sales. We use interest rate swaps 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 interest rate options to manage prepayment risks in our assets and minimum guaranteed interest rates and lapse risks in our liabilities. We purchase 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 June 30, 2020, 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, 2019. 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 \$294.5 million, or 10%, reduction in the total equity excluding noncontrolling interests of our international operations as of June 30, 2020, as compared to an estimated \$311.4 million, or 10%, reduction as of December 31, 2019. We estimate a 10% unfavorable change in the average foreign currency exchange rates to which we were exposed through our international operations would have resulted in a \$11.1 million, or 12%, reduction in segment pre-tax operating earnings of our international operations for the three months ended June 30, 2020, as compared to an estimated \$11.2 million, or 12%, reduction for the three months ended June 30, 2019. In addition, we estimate that a 10% unfavorable change in the average foreign currency exchange rates to which we were exposed through our international operating earnings of our international operating earnings of our international operations for the three months ended June 30, 2020, as compared to an estimated \$11.2 million, or 12%, reduction for the three months ended June 30, 2019. 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 \$20.5 million, or 12%, reduction in segment pre-tax operating earnings of our international operations for the six months ended June 30, 2020, as compared to an estimated \$24.1 million, or 12%, reduction for the six months ended June 30, 2019.

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. The notional amount of our currency swap agreements associated with foreign-denominated liabilities was \$128.3 million as of both June 30, 2020 and December 31, 2019. The notional amount of our currency swap agreements associated with foreign-denominated fixed maturities was \$605.4 million and \$655.7 million as of June 30, 2020 and December 31, 2019, respectively. The notional amount of our currency forwards hedging foreign-denominated equity securities was \$32.6 million and \$57.2 million as of June 30, 2020 and December 31, 2019, 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 \$252.3 million and \$243.2 million as of June 30, 2020 and December 31, 2019, respectively. Our Principal International operations also utilized currency forwards with a notional amount of \$868.3 million and \$855.2 million as of June 30, 2020 and December 31, 2019, respectively.

We use currency forwards to hedge certain net equity investments in our foreign operations, including certain sponsored investment funds. We held currency forwards with a notional amount of \$285.0 million and \$269.9 million as June 30, 2020 and December 31, 2019, respectively. We also utilized currency options with a notional amount \$53.8 million as of December 31, 2019. No such options were utilized as of June 30, 2020.

Equity Risk

Equity risk is the risk we will incur economic losses due to adverse fluctuations in equity markets. As of June 30, 2020 and December 31, 2019, the fair value of our equity securities was \$1,778.5 million and \$1,879.4 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 \$177.9 million as of June 30, 2020, as compared to a decline in fair value of our equity securities of \$187.9 million as of December 31, 2019.

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, 2019.

We also have equity risk associated with (1) fixed deferred annuity and 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, 2019.

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 7% 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 or correlation with changes in the S&P index, but rather as an illustration of the potential impact of such a decline in value of those assets. Furthermore, we have intentionally selected a decline in the value of alternative investments separate from a decline in the S&P 500 index does not necessarily correlate to a comparable decline in the value of our alternative assets.

Use of Derivatives to Manage Equity Risk. We economically hedge the fixed deferred annuity and 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 and interest rate swaps with notional amounts of \$956.8 million, \$1,119.6 million, and \$5,697.1 million, respectively, as of June 30, 2020, and notional amounts of \$292.0 million, \$1,079.6 million, and \$5,003.1 million, respectively, as of December 31, 2019. 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 June 30, 2020, except as noted below, and have concluded our disclosure controls and procedures are effective.

Our assessment of the effectiveness of disclosure controls and procedures excludes the operations and related assets of the Acquired Business, which closed on July 1, 2019. For additional information regarding the acquisition, see Part I, Item 2. "Management's Discussion and Analysis of Financial Condition and Results of Operations - Transactions Affecting Comparability" under the caption "Wells Fargo Institutional Retirement Trust Business." We are in process of evaluating internal control over financial reporting for the Acquired Business and, accordingly, have excluded its controls from our evaluation of disclosure controls and procedures. For the three and six months ended June 30, 2020, the Acquired Business's revenues related to operations represented 3% and 2% of our consolidated total revenues, respectively. As of June 30, 2020, the Acquired Business's assets related to operations represented less than 1% of our consolidated total assets.

Changes in Internal Control Over Financial Reporting

Other than the acquisition of the Acquired Business discussed above, 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 9, 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, 2019. 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, 2019, we are adding the risk factor set out below.

The ongoing COVID-19 pandemic and the resulting financial market impacts could adversely affect our business, results of operations, financial condition and liquidity.

In March 2020, the World Health Organization declared the outbreak of COVID-19 as a pandemic. COVID-19 continues to spread in the United States and throughout the world. Federal, state and local governments have taken various actions to limit the spread of the disease, including quarantines, travel restrictions, limitations on gatherings, closures of businesses and other social distancing measures. The COVID-19 pandemic and the efforts to contain the outbreak have led to significant economic disruption, including declines in interest rates and equity prices, extreme volatility in financial markets, fluctuations in foreign currency exchange rates, reduced economic activity and a sharp increase in unemployment claims.

The COVID-19 pandemic may have material adverse impacts on our business, results of operations and financial condition. Specific impacts may include, but are not limited to, increased claims in our life and disability insurance business, operational disruptions, health risks to our employees, an increase in defaults on our fixed maturity and mortgage loan portfolios and a reduction in the value and liquidity of our invested assets. In addition, rising unemployment as a result of temporary business closures may lead to lower sales in our businesses, reduced in-group growth in our Specialty Benefits insurance business and a decline in employee deposits into retirement plans. Ongoing economic disruptions may lead to further declines and volatility in interest rates or equity prices, either of which could adversely affect our results of operations and financial condition. For more information, see Item 1A. "Risk Factors – Volatility or declines in the equity, bond or real estate markets could reduce our AUM 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" and "—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" in our Annual Report on Form 10-K for the year ended December 31, 2019.

Our foreign subsidiaries have historically intended to operate in a manner that will not cause them to be subject to additional income taxation due to having their central management and control exercised outside of their country of incorporation. However, our directors and personnel reside in various jurisdictions and often must travel to carry out their duties in accordance with such intended tax positions. Travel restrictions imposed as a result of the COVID-19 pandemic have limited, and may continue to limit, such travel. While we have implemented contingency plans to mitigate the impact of such travel restrictions, no assurances can be provided that we will not become subject to greater tax liabilities than anticipated due to restrictions on the ability of our directors and personnel to carry out their activities for the intended jurisdictions.

In addition, an increase in claims, surrenders, withdrawals or other cash demands may adversely impact our liquidity position. Volatility, uncertainty or disruptions in the capital or credit markets may further diminish our ability to meet liquidity needs. For more information, see Item 1A. "Risk Factors – 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" in our Annual Report on Form 10-K for the year ended December 31, 2019.

The extent of the impact of the COVID-19 pandemic will depend on numerous factors, all of which are highly uncertain and cannot be predicted. These factors include the length and severity of the outbreak, the responses of governments and private sector businesses, and the impacts on our customers, employees and vendors. In light of COVID-19 and its potential impacts, investors should carefully consider all the risks set forth in Item 1A. "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2019.

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 puro the	cimum dollar ue of shares t may yet be chased under programs (in cillions) (2)
January 1, 2020 — January 31, 2020	2,078,273	\$ 55.26	2,075,857	\$	53.4
February 1, 2020 — February 29, 2020	1,013,055	\$ 55.20	965,166	\$	
March 1, 2020 — March 31, 2020	1,349,175	\$ 45.19	1,107,799	\$	850.3
April 1, 2020 — April 30, 2020	425	\$ 31.38	_	\$	850.3
May 1, 2020 — May 31, 2020	_	\$ _	_	\$	850.3
June 1, 2020 — June 30, 2020	_	\$ _	_	\$	850.3
Total	4,440,928		4,148,822		

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

(2) In November 2018, our Board of Directors authorized a share repurchase program of up to \$500.0 million of our outstanding common stock, which was completed in February 2020. In February 2020, our Board of Directors authorized a share repurchase program of up to \$900.0 million of our outstanding common stock, which has no expiration. We paused our share repurchase program in March 2020.

Table of Contents

Item 6. Exhibits

		Incorporated by	reference herein
Exhibit Number	Description	Form	File Date
31.1	Certification of Daniel J. Houston		
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 June 30, 2020 formatted in iXBRL (Inline eXtensible		
	Business Reporting Language): (i) the Consolidated Statements of Financial Position,		
	(ii) the Consolidated Statements of Operations, (iii) the Consolidated Statements of		
	Comprehensive Income, (iv) the Consolidated Statements of Stockholders' Equity, (v) the		
	Consolidated Statements of Cash Flows and (vi) the Notes to Unaudited Consolidated		
	Financial Statements.		
104	The cover page from Principal Financial Group, Inc.'s Quarterly Report on Form 10-Q for		
	the period ended June 30, 2020 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.

Dated: July 29, 2020

PRINCIPAL FINANCIAL GROUP, INC.

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;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 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: July 29, 2020

/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:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 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: July 29, 2020

/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 June 30, 2020, 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 June 30, 2020, 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: July 29, 2020

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 June 30, 2020, 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 June 30, 2020, 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: July 29, 2020