Guidewire Software, Inc.
Form 4
December 04, 2015

FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. *See* Instruction 1(b).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

OMB APPROVAL
OMB Number: 3235-0287
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(Print or Type Responses)

1. Name and Address of Reporting Person *
Gassner Peter P

(Last) (First) (Middle)

1001 E. HILLSDALE BLVD., SUITE 800

(Street)

FOSTER CITY, CA 94404

(City) (State) (Zip)

2. Issuer Name **and** Ticker or Trading Symbol
Guidewire Software, Inc. [GWRE]

3. Date of Earliest Transaction (Month/Day/Year)
12/03/2015

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

__X__ Director _____ 10% Owner
_____ Officer (give title below) _____ Other (specify below)

6. Individual or Joint/Group Filing(Check Applicable Line)
_X_ Form filed by One Reporting Person
___ Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1.Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	12/03/2015		A (1)		3,605	A	$ 0	5,586	D	

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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SEC 1474 (9-02)

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned
(*e.g.*, puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Underlying Securities (Instr. 3 and 4)		8. Price of Derivative Security (Instr. 5)	9. Nu Deriv Secur Bene Owne Follo Repo Trans (Instr
								Date Exercisable	Expiration Date	Title	Amount or Number of Shares		
				Code	V	(A)	(D)						

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Gassner Peter P 1001 E. HILLSDALE BLVD., SUITE 800 FOSTER CITY, CA 94404	X			

Signatures

By: Winston King Attorney in Fact For: Peter Gassner	12/04/2015
**Signature of Reporting Person	Date

Explanation of Responses:

* If the form is filed by more than one reporting person, *see* Instruction 4(b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

(1) Exempt grant of restricted stock units (RSUs). The RSUs shall vest fully on December 3, 2016 provided the Reporting Person is still providing service to the Company. However, if the Reporting Person's term of board service ends at the next annual meeting of stockholders and the Reporting Person does not stand for reelection but remains in service through such annual meeting of stockholders, then the Reporting Person shall vest in all underlying shares at the time of the next annual stockholder meeting if such meeting occurs before December 3, 2016.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure.
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(41.0
)

$
171.6

$
8.5

Net income

$
565.4

(1) The years ended December 31, 2018, 2017 and 2016 included $46.9 million, $92.8 million and $382.6 million, respectively, related to the amortization of deferred gains associated with the 2016 sale of Assurant Employee Benefits. The remaining Assurant Employee Benefits unamortized deferred gain as of December 31, 2018 was $16.4 million.

(2) The presentation of Assurant Health policyholder benefits includes the impact of the total current period net utilization of premium deficiency reserves for claim costs and claim adjustment expenses included in policyholder benefits, as well as maintenance costs, which are included within underwriting, general and administrative expenses. For the years ended December 31, 2018, 2017, and 2016, the premium deficiency reserve liability decreased $1.0 million, $35.7 million and $37.6 million, respectively, through an offset to policyholder benefit expense. In addition, there was favorable claims development experienced through December 31, 2018, in excess of actual benefit expense, which contributed to the credit balance within policyholder benefits expenses.

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(3) The year ended December 31, 2018 for Corporate and Other included an $17.7 million gain on the sale of Time Insurance Company, a $40.3 million loss on the sale of Mortgage Solutions and $17.2 million net losses from foreign exchange primarily related to the remeasurement of net monetary assets from the Company's operations in Argentina. The years ended December 31, 2017 and 2016 for Corporate and Other included an expense of$17.4 million and $23.0 million, respectively, related to a post-close adjustment pertaining to an estimated indemnification that is expected to be due on a previous disposition. The years ended December 31, 2018 and 2016 for Corporate and Other included impairment losses of $20.8 million and $16.7 million, respectively, on intangible assets.

(4) The consolidated net benefit for income taxes for the year ended December 31, 2017 included a $177.0 million one-time benefit from the reduction of net deferred tax liabilities following the enactment of the TCJA. The remeasurement of deferred tax assets and liabilities was recorded using our best estimate of deferred tax balances as of December 22, 2017, the enactment date of the TCJA. The total benefit for income taxes was reported through the Total Corporate and Other segment; however, the remeasured deferred tax assets and liabilities were adjusted within each segment. During the year ended December 31, 2018, the Company finalized the provisional adjustment, recording an expense of $1.5 million. Refer to Note 11 for further detail.

(5) The year ended December 31, 2016 includes $146.7 million of net realized gains related to assets transferred as part of the Assurant Employee Benefits sale on March 1, 2016.

The Company principally operates in the U.S., as well as Europe, Latin America, Canada and Asia. The following table summarizes selected financial information by geographic location for the years ended or as of December 31, 2018, 2017 and 2016:

Location	Revenues	Long-lived Assets
2018		
United States	$6,217.0	$ 378.8
Foreign countries	1,840.6	13.7
Total	$8,057.6	$ 392.5
2017		
United States	$4,980.8	$ 339.5
Foreign countries	1,434.2	8.1
Total	$6,415.0	$ 347.6
2016		
United States	$6,239.7	$ 336.8
Foreign countries	1,292.1	6.8
Total	$7,531.8	$ 343.6

Revenue is based in the country where the product was sold and the physical location of long-lived assets, which are primarily property and equipment. There are no reportable major customers that accounted for 10% or more of the Company's consolidated revenues for the years ended December 31, 2018, 2017 or 2016.

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The Company’s net earned premiums, fees and other income by segment and product are as follows for the periods indicated:

	Years Ended December 31,		
	2018	2017	2016
Global Housing:			
Lender-placed Insurance	$1,149.7	$1,224.9	$1,317.2
Multifamily Housing	406.1	366.3	320.9
Mortgage Solutions	116.1	257.7	329.3
Manufactured Housing and Other	417.3	326.1	321.4
Total	$2,089.2	$2,175.0	$2,288.8
Global Lifestyle:			
Connected Living (mobile, service contracts and assistance services)	$2,800.6	$2,156.0	$2,570.1
Global Automotive	1,909.2	782.8	715.8
Global Financial Services	473.5	457.4	420.2
Total	$5,183.3	$3,396.2	$3,706.1
Global Preneed:	$189.5	$181.0	$171.3
Assurant Health (1):	$0.9	$10.2	$56.9
Assurant Employee Benefits (2):	$—	$—	$182.2

(1) The Assurant Health business has been in run-off since 2015 and previously included individual and small employer group products.

(2) The Assurant Employee Benefits business was sold on March 1, 2016 and previously included group disability, group dental, group life and group supplemental and vision products.

6. Contract Revenues

The Company partners with clients to provide consumers a diverse range of protection products and services. The Company’s revenues from protection products (approximately 85% of total revenues) are accounted for as insurance contracts and therefore are not subject to the new revenue standard adopted as of January 1, 2018 and described in Note 2. Revenue from service contracts and sales of products (approximately 15% of total revenues) are recognized in accordance with the new revenue recognition standard. Specifically, these revenues are recognized as the contractual performance obligations are satisfied or the products are delivered. Revenue is measured as the amount of consideration the Company expects to be entitled to in exchange for performing the services or transferring products. If payments are received before the related revenue is recognized, the amount is recorded as unearned revenue or advance payment liabilities, until the performance obligations are satisfied or the products are transferred.

The disaggregated revenues subject to the new revenue recognition standard and included in fees and other income on the consolidated statement of operations were $241.9 million for Global Housing and $693.1 million for Global Lifestyle for the year ended December 31, 2018.

Global Housing

In the Company’s Global Housing segment, revenues from service contracts and sales of products are primarily from the Company’s Mortgage Solutions (until the sale of the business on August 1, 2018, as described in Note 4) and Lender-placed Insurance businesses. Under the Company’s Mortgage Solutions business, the Company previously offered valuation and title services and products across the origination, home equity and default markets, as well as field services, inspection services, restoration and real estate owned (“REO”) asset management services to mortgage servicing clients and investors. Under the Company’s Lender-placed Insurance business, the Company provides loan and claim payment tracking services for lenders. The Company generally invoices its customers weekly or monthly based on the volume of services provided during the billing period with payment due within a short-term period. Each service is an individual performance obligation with a standalone selling price. The Company recognizes revenue as it invoices, which corresponds to the value transferred to the customer.

Global Lifestyle

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In the Company's Global Lifestyle segment, revenue from service contracts and sales of products is primarily from the Company's Connected Living business. Through partnerships with mobile carriers, the Company provides administrative services related to its mobile device protection products, including program design and marketing strategy, risk management, data analytics, customer support and claims handling, supply chain and service delivery, repair and logistics and device disposition. Administrative fees are generally billed monthly based on the volume of services provided during the billing period (for example, based on the number of mobile subscribers) with payment due within a short-term period. Each service or bundle of services, depending on the contract, is an individual performance obligation with a standalone selling price. The Company recognizes revenue as it invoices, which corresponds to the value transferred to the customer.

The Company also sell repaired or refurbished mobile and other electronic devices. Revenue from products sold is recognized when risk of ownership transfers to customers, generally upon shipment. Each product has a standalone selling price that is determined through analysis of various factors including market data, historical costs and product lifecycle status. Payments are generally due prior to shipment or within a short-term period.

Contract Balances

The receivables and unearned revenue under these contracts were $183.7 million and $88.7 million, respectively, as of December 31, 2018. These balances are included in premiums and accounts receivable and the accounts payable and other liabilities, respectively, in the consolidated balance sheet. Revenue from service contracts and sales of products recognized during the year ended December 31, 2018 that was included in unearned revenue as of December 31, 2017 was $15.3 million.

In certain circumstances, the Company defers upfront commissions and other costs in connection with client contracts in excess of one year where the Company can demonstrate future economic benefit. For these contracts, expense is recognized as revenues are earned. The Company periodically assesses recoverability based on the performance of the related contracts. As of December 31, 2018, the Company had approximately $29.0 million of such intangible assets that will be expensed over the term of the client contracts.

7. Investments

The following tables show the cost or amortized cost, gross unrealized gains and losses, fair value and OTTI included within AOCI of the Company's fixed maturity securities and equity securities as of the dates indicated:

	December 31, 2018				
	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	OTTI in AOCI (1)
Fixed maturity securities:					
U.S. government and government agencies and authorities	$381.4	$4.4	$(1.2)	$384.6	$—
States, municipalities and political subdivisions	238.9	17.6	(0.3)	256.2	—
Foreign governments	856.3	58.8	(3.0)	912.1	
Asset-backed	513.6	0.5	(9.6)	504.5	—
Commercial mortgage-backed	79.1	2.2	(1.6)	79.7	—
Residential mortgage-backed	1,399.1	21.5	(14.8)	1,405.8	5.0
U.S. corporate	5,337.0	315.7	(59.7)	5,593.0	14.1
Foreign corporate	2,028.6	110.7	(18.1)	2,121.2	—
Total fixed maturity securities	$10,834.0	$531.4	$(108.3)	$11,257.1	$19.1

	December 31, 2017				
	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	OTTI in AOCI (1)
Fixed maturity securities:					
U.S. government and government agencies and authorities	$180.6	$3.2	$(1.2)	$182.6	$—
States, municipalities and political subdivisions	302.3	24.0	(0.1)	326.2	—
Foreign governments	524.8	72.3	(0.3)	596.8	—
Asset-backed	188.4	1.9	(0.1)	190.2	1.0
Commercial mortgage-backed	38.6	0.2	(0.7)	38.1	—
Residential mortgage-backed	1,084.2	32.5	(7.3)	1,109.4	9.2
U.S. corporate	4,774.2	602.1	(5.0)	5,371.3	17.4
Foreign corporate	1,663.4	188.6	(4.0)	1,848.0	—
Total fixed maturity securities	$8,756.5	$924.8	$(18.7)	$9,662.6	$27.6
Equity securities:					
Common stocks	$9.3	$8.4	$—	$17.7	$—
Non-redeemable preferred stocks	307.0	43.8	(0.5)	350.3	—
Total equity securities	$316.3	$52.2	$(0.5)	$368.0	$—

(1) Represents the amount of OTTI recognized in AOCI. Amount includes unrealized gains and losses on impaired securities relating to changes in the value of such securities subsequent to the impairment measurement date.

The Company’s state, municipality and political subdivision holdings are highly diversified across the U.S., with no individual state, municipality or political subdivision exposure (including both general obligation and revenue securities) exceeding 0.4% of the overall investment portfolio as of December 31, 2018 and 2017. As of December 31, 2018 and 2017, the securities included general obligation and revenue bonds issued by states, cities, counties, school districts and similar issuers, including $58.4 million and $137.7 million, respectively, of advance refunded or escrowed-to-maturity bonds (collectively referred to as “pre-refunded bonds”), which are bonds for which an irrevocable trust has been established to fund the remaining payments of principal and interest. As of December 31, 2018 and 2017, revenue bonds accounted for 56% and 53% of the holdings, respectively. Excluding pre-refunded revenue bonds, the activities supporting the income streams of the Company’s revenue bonds are across a broad range of sectors, primarily highway, water, airport and marina, specifically pledged tax revenues, leases and other miscellaneous sources such as bond banks, finance authorities and appropriations.

The Company’s investments in foreign government fixed maturity securities are held mainly in countries and currencies where the Company has policyholder liabilities, to facilitate matching of assets to the related liabilities. As of December 31, 2018, approximately 55%, 18% and 8% of the foreign government securities were held in Canadian government/provincials and the governments of Brazil and the United Kingdom, respectively. As of December 31, 2017, approximately 79%, 12% and 4% of the foreign government securities were held in Canadian government/provincials and the governments of Brazil and Germany, respectively. No other country represented more than 6% and 3% of the Company’s foreign government securities as of December 31, 2018 and 2017, respectively.

The Company had European investment exposure in its corporate fixed maturity securities of $800.9 million with a net unrealized gain of $27.7 million as of December 31, 2018 and $578.4 million with a net unrealized gain of $58.9 million as of December 31, 2017. Approximately 27% and 24% of the corporate fixed maturity European exposure was held in the financial industry as of December 31, 2018 and 2017, respectively. The Company’s largest European country exposure (the United Kingdom) represented approximately 5% and 4% of the fair value of the Company's corporate fixed maturity securities as of December 31, 2018 and 2017, respectively. The Company’s international investments are managed as part of the overall portfolio with the same approach to risk management and focus on diversification.

The cost or amortized cost and fair value of fixed maturity securities as of December 31, 2018 by contractual maturity are shown below. Actual maturities may differ from contractual maturities because issuers of the securities may have the right to call or prepay obligations with or without call or prepayment penalties.

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	December 31, 2018	
	Cost or Amortized Cost	Fair Value
Due in one year or less	$281.5	$282.9
Due after one year through five years	2,688.3	2,704.4
Due after five years through ten years	2,188.9	2,213.7
Due after ten years	3,683.5	4,066.1
Total	8,842.2	9,267.1
Asset-backed	513.6	504.5
Commercial mortgage-backed	79.1	79.7
Residential mortgage-backed	1,399.1	1,405.8
Total	$10,834.0	$11,257.1

Major categories of net investment income were as follows for the periods indicated:

	Years Ended December 31,		
	2018	2017	2016
Fixed maturity securities	$451.6	$411.8	$419.3
Equity securities	21.5	22.8	25.2
Commercial mortgage loans on real estate	33.4	31.5	41.7
Short-term investments	22.0	7.2	5.5
Other investments	41.6	25.2	24.2
Cash and cash equivalents	25.7	15.8	17.5
Revenues from consolidated investment entities (1)	77.8	9.8	—
Total investment income	673.6	524.1	533.4
Investment expenses	(23.3)	(21.9)	(17.7)
Expenses from consolidated investment entities (1)	(51.9)	(8.4)	—
Net investment income	$598.4	$493.8	$515.7

(1) The net of revenues and expenses from consolidated investment entities of $25.9 million for the year ended December 31, 2018 includes $9.5 million, $9.2 million and $2.1 million of investment income from the Company's direct investment in CLOs, the real estate fund, and the related non-controlling interest, respectively, and $5.1 million related to investment management fees. The net of revenues and expenses from consolidated investment entities of $1.4 million for the year ended December 31, 2017 includes $0.6 million and $0.5 million of investment income from the Company's direct investment in CLOs and the real estate fund, respectively, and $0.3 million related to investment management fees. Refer to Note 8 for further detail.

No material investments of the Company were non-income producing for the years ended December 31, 2018, 2017 and 2016.

The following table summarizes the proceeds from sales of available-for-sale fixed maturity (and equity securities for 2017 and 2016 prior to the previously described fair value change in accounting) and the gross realized gains and gross realized losses that have been recognized in the statement of operations as a result of those sales for the periods indicated:

	Years Ended December 31,		
	2018	2017	2016
Proceeds from sales	$3,583.6	$3,018.2	$4,610.7
Gross realized gains (1)	22.3	43.5	209.5
Gross realized losses (2)	60.0	12.2	65.2

(1) Gross realized gains for the year ended December 31, 2016 include $150.7 million related to the sale of Assurant Employee Benefits as described in Note 4.

(2) Gross realized losses for the year ended December 31, 2016 include $16.4 million related to the sale of Assurant Employee Benefits as described in Note 4.

For securities sold at a loss during the year ended December 31, 2018, the average period of time these securities were trading continuously at a price below book value was approximately 6 months.

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The following table sets forth the net realized gains (losses), including OTTI, recognized in the statement of operations for the periods indicated:

	Years Ended December 31,		
	2018	2017	2016
Net realized gains (losses) related to sales and other:			
Fixed maturity securities	$(42.8)	$22.0	$128.9
Equity securities (1)	(14.9)	7.7	17.3
Commercial mortgage loans on real estate	0.6	1.3	21.8
Other investments	2.7	1.0	1.1
Consolidated investment entities (2)	(7.7)	(1.0)	—
Total net realized gains (losses) related to sales and other (3)	(62.1)	31.0	169.1
Net realized losses related to other-than-temporary impairments:			
Fixed maturity securities	(0.1)	(0.4)	(0.7)
Other investments	(0.5)	(0.5)	(6.2)
Total net realized losses related to other-than-temporary impairments	(0.6)	(0.9)	(6.9)
Total net realized gains (losses)	$(62.7)	$30.1	$162.2

(1) The year ended December 31, 2018 includes $16.9 million of gains on equity investment holdings accounted for under the measurement alternative. The carrying value of equity investments accounted for under the measurement alternative was $84.1 million and $36.1 million as of December 31, 2018 and 2017, respectively. These investments are included within other investments on the consolidated balance sheets. For the year ended December 31, 2018, there were no impairments related to these equity investments. The Company generally considers follow on funding rounds of equity securities with similar ownership interests as the equity securities held by the Company, and involving new investors, as an observable price in an orderly transaction, which are then reviewed to determine the fair value adjustment.

(2) Consists of the net realized gains (losses) from the change in fair value of the Company’s direct investment in CLOs. See Note 8 for additional information.

(3) The year ended December 31, 2016 net gains includes $146.7 million related to the sale of Assurant Employee Benefits as described in Note 4.

The following table sets forth the portion of unrealized gains related to equity securities for the year ended December 31, 2018:

	Year Ended December 31, 2018
Net losses recognized on equity securities	$(14.9)
Less: Net realized gains related to sales of equity securities	3.9
Total net unrealized losses on equity securities held (1)	$(18.8)

(1) Net gains for the year ended December 31, 2018 are required to be reported through the income statement in accordance with the 2018 accounting guidance on financial instruments. Net unrealized gains of $12.1 million and loss of $9.9 million for the years ended December 31, 2017 and 2016, respectively, were reported through AOCI.

Other-Than-Temporary Impairments

The Company follows the OTTI guidance, which requires entities to separate an OTTI of a debt security into two components when there are credit related losses associated with the impaired debt security for which the Company asserts that it does not have the intent to sell, and it is more likely than not that it will not be required to sell before recovery of its cost basis. Under the OTTI guidance, the amount of the OTTI related to a credit loss is recognized in earnings, and the amount of the OTTI related to other, non-credit factors (*e.g.*, interest rates, market conditions, etc.) is recorded as a component of other comprehensive income. In instances where no credit loss exists but the Company intends to sell the security or it is more likely than not that the Company will have to sell the debt security prior to the anticipated recovery, the decline in market value below amortized cost is recognized as an OTTI in earnings. In periods after the recognition of an OTTI on debt securities, the Company accounts for such securities as if they had been purchased on the measurement date of the OTTI at an amortized cost basis equal to the previous amortized cost basis less the OTTI recognized in earnings. For debt securities for which OTTI was recognized in earnings, the difference between the new amortized cost basis and the cash flows expected to be collected will be accreted or amortized into net investment income.

For the years ended December 31, 2018 and 2017, the Company recorded $0.6 million and $0.9 million, respectively, of OTTI in earnings, all of which was related to credit losses and securities the Company intends to sell.

The following table sets forth the amount of credit loss impairments recognized within the results of operations on fixed maturity securities held by the Company as of the dates indicated, for which a portion of the OTTI loss was recognized in AOCI, and the corresponding changes in such amounts:

	Years Ended December 31,		
	2018	2017	2016
Balance, beginning of year	$18.1	$24.9	$32.4
Additions for credit loss impairments recognized in the current period on securities previously impaired	—	—	0.5
Reductions for increases in cash flows expected to be collected that are recognized over the remaining life of the security	(2.6)	(2.4)	(3.6)
Reductions for credit loss impairments previously recognized on securities which matured, paid down, prepaid or were sold during the period	—	(4.4)	(4.4)
Balance, end of year	$15.5	$18.1	$24.9

The Company regularly monitors its investment portfolio to ensure that investments that may be other-than-temporarily impaired are timely identified, properly valued and charged against earnings in the proper period. The determination that a security has incurred an other-than-temporary decline in value requires the judgment of management. Assessment factors include, but are not limited to, the length of time and the extent to which the market value has been less than cost, the financial condition and rating of the issuer, whether any collateral is held, the Company's intent and ability to retain the investment for a period of time sufficient to allow for recovery and the Company's intent to sell or whether it is more likely than not that the Company will be required to sell for fixed maturity securities. Inherently, there are risks and uncertainties involved in making these judgments. Changes in circumstances and critical assumptions such as a continued weak economy, a more pronounced economic downturn or unforeseen events that affect one or more companies, industry sectors or countries could result in additional impairments in future periods for other-than-temporary declines in value. The impairment of a fixed maturity security that the Company has the intent to sell or that it is more likely than not that the Company will be required to sell is deemed other-than-temporary and is written down to its market value at the balance sheet date with the amount of the impairment reported as a realized loss in that period. For all other-than-temporarily impaired fixed maturity securities that do not meet either of these two criteria, the Company is required to analyze its ability to recover the amortized cost of the security by calculating the net present value of projected future cash flows. For these other-than-temporarily impaired fixed maturity securities, the net amount recognized in earnings equals the difference between the amortized cost of the fixed maturity security and its net present value.

The Company considers different factors to determine the amount of projected future cash flows and discounting methods for corporate debt, residential and commercial mortgage-backed securities and asset-backed securities. For corporate debt securities, the split between the credit and non-credit losses is driven principally by assumptions regarding the amount and timing of projected future cash flows. The net present value is calculated by discounting the Company's best estimate of projected future cash flows at the effective interest rate implicit in the security at the date of acquisition. For residential and commercial mortgage-backed securities and asset-backed securities, cash flow estimates, including prepayment assumptions, are based on data from widely accepted third-party data sources or internal estimates. In addition to prepayment assumptions, cash flow estimates vary based on assumptions regarding the underlying collateral including default rates, recoveries and changes in value. The net present value is calculated by discounting the Company's best estimate of projected future cash flows at the effective interest rate implicit in the fixed maturity security prior to impairment at the balance sheet date. The discounted cash flows become the new amortized cost basis of the fixed maturity security.

In periods subsequent to the recognition of an OTTI, the Company generally accretes the discount (or amortizes the reduced premium) into net investment income, up to the non-discounted amount of projected future cash flows, resulting from the reduction in cost basis, based upon the amount and timing of the expected future cash flows over the estimated period of cash flows.

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The investment category and duration of the Company’s gross unrealized losses on fixed maturity securities and equity securities, as applicable, as of December 31, 2018 and 2017 were as follows:

	December 31, 2018					
	Less than 12 months		12 Months or More		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Fixed maturity securities:						
U.S. government and government agencies and authorities	$11.2	$(0.1)	$89.5	$(1.1)	$100.7	$(1.2)
States, municipalities and political subdivisions	31.5	(0.1)	3.1	(0.2)	34.6	(0.3)
Foreign governments	136.4	(2.8)	9.2	(0.2)	145.6	(3.0)
Asset-backed	370.6	(9.6)	—	—	370.6	(9.6)
Commercial mortgage-backed	29.4	(0.7)	12.4	(0.9)	41.8	(1.6)
Residential mortgage-backed	378.2	(3.7)	309.6	(11.1)	687.8	(14.8)
U.S. corporate	1,860.4	(49.5)	173.1	(10.2)	2,033.5	(59.7)
Foreign corporate	706.6	(12.9)	149.5	(5.2)	856.1	(18.1)
Total fixed maturity securities	$3,524.3	$(79.4)	$746.4	$(28.9)	$4,270.7	$(108.3)

	December 31, 2017					
	Less than 12 months		12 Months or More		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Fixed maturity securities:						
U.S. government and government agencies and authorities	$104.2	$(0.7)	$43.3	$(0.5)	$147.5	$(1.2)
States, municipalities and political subdivisions	—	—	2.4	(0.1)	2.4	(0.1)
Foreign governments	24.4	(0.2)	0.8	(0.1)	25.2	(0.3)
Asset-backed	27.6	(0.1)	—	—	27.6	(0.1)
Commercial mortgage-backed	—	—	12.4	(0.7)	12.4	(0.7)
Residential mortgage-backed	217.3	(2.4)	162.9	(4.9)	380.2	(7.3)
U.S. corporate	562.8	(4.5)	30.0	(0.5)	592.8	(5.0)
Foreign corporate	266.7	(3.5)	19.0	(0.5)	285.7	(4.0)
Total fixed maturity securities	$1,203.0	$(11.4)	$270.8	$(7.3)	$1,473.8	$(18.7)
Equity securities:						
Non-redeemable preferred stocks	$13.8	$(0.2)	$8.7	$(0.3)	$22.5	$(0.5)

Total gross unrealized losses represented approximately 3% and 1% of the aggregate fair value of the related securities as of December 31, 2018 and 2017, respectively. Approximately 73% and 61% of these gross unrealized losses had been in a continuous loss position for less than twelve months as of December 31, 2018 and 2017, respectively. The total gross unrealized losses are comprised of 2,642 and 679 individual securities as of December 31, 2018 and 2017, respectively. In accordance with its policy described above, the Company concluded that for these securities, other-than-temporary impairments of the gross unrealized losses was not warranted as of December 31, 2018 and 2017. These conclusions were based on a detailed analysis of the underlying credit and expected cash flows of each security. As of December 31, 2018, the Company did not intend to sell these fixed maturity securities and it was not more likely than not that the Company would be required to sell these securities before the anticipated recovery of their amortized cost basis. The gross unrealized losses are primarily attributable to widening credit spreads associated with an underlying shift in overall credit risk premium.

The cost or amortized cost and fair value of available-for-sale fixed maturity securities in an unrealized loss position as of December 31, 2018, by contractual maturity, is shown below:

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	December 31, 2018	
	Cost or Amortized Cost	Fair Value
Due in one year or less	$128.1	$127.5
Due after one year through five years	1,056.2	1,044.5
Due after five years through ten years	1,158.1	1,125.5
Due after ten years	910.4	873.0
Total	3,252.8	3,170.5
Asset-backed	380.2	370.6
Commercial mortgage-backed	43.4	41.8
Residential mortgage-backed	702.6	687.8
Total	$4,379.0	$4,270.7

The Company has entered into commercial mortgage loans, collateralized by the underlying real estate, on properties located throughout the U.S. and Canada. As of December 31, 2018, approximately 34% of the outstanding principal balance of commercial mortgage loans was concentrated in the states of California, Oregon and New York. Although the Company has a diversified loan portfolio, an economic downturn could have an adverse impact on the ability of its debtors to repay their loans. The outstanding balance of commercial mortgage loans range in size from $0.1 million to $12.5 million as of December 31, 2018 and from less than $0.1 million to $12.7 million as of December 31, 2017.
Credit quality indicators for commercial mortgage loans are loan-to-value and debt-service coverage ratios.
Loan-to-value and debt-service coverage ratios are measures commonly used to assess the credit quality of commercial mortgage loans. The loan-to-value ratio compares the principal amount of the loan to the fair value of the underlying property collateralizing the loan, and is commonly expressed as a percentage. The debt-service coverage ratio compares a property's net operating income to its debt-service payments and is commonly expressed as a ratio. The loan-to-value and debt-service coverage ratios are generally updated annually in the third quarter.
The following summarizes the carrying value and average debt-service coverage ratio for the Company's mortgage loans that had loan-to-value ratios falling within the stated ranges as of the dates indicated:

	December 31, 2018		
Loan-to-Value	Carrying Value	% of Gross Mortgage Loans	Average Debt-Service Coverage Ratio
70% and less	$752.8	99.1 %	2.03
71 – 80%	7.2	0.9 %	1.31
Gross commercial mortgage loans	760.0	100.0 %	2.02
Less valuation allowance	(0.4)		
Net commercial mortgage loans	$759.6		

	December 31, 2017		
Loan-to-Value	Carrying Value	% of Gross Mortgage Loans	Average Debt-Service Coverage Ratio
70% and less	$671.2	100.0 %	2.05
Less valuation allowance	(1.0)		
Net commercial mortgage loans	$670.2		

All commercial mortgage loans that are individually impaired have an established mortgage loan valuation allowance for losses. An additional valuation allowance is established for incurred, but not specifically identified impairments. Changing economic conditions affect the Company's valuation of commercial mortgage loans. Changing vacancies and rents are incorporated into the discounted cash flow analysis that the Company performs for monitored loans and may contribute to the

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establishment of (or an increase or decrease in) a commercial mortgage loan valuation allowance for losses. In addition, the Company monitors the entire commercial mortgage loan portfolio to identify risk. Areas of emphasis are properties that have deteriorating credits or have experienced a reduction in debt-service coverage ratio.
In 2018, the loan valuation allowance was decreased by $0.6 million based upon the valuation allowance analysis.
As of December 31, 2018, the Company had mortgage loan commitments outstanding of approximately $3.7 million.
The Company had short term investments and fixed maturity securities of $546.5 million and $459.5 million as of December 31, 2018 and 2017, respectively, on deposit with various governmental authorities as required by law.
The Company has entered into certain interest rate derivatives that qualify for hedge accounting to manage interest rate risk on the Company's debt. See Note 18 for additional information on these derivatives. The Company also utilizes derivatives on a limited basis to limit interest rate, foreign exchange and inflation risks and bifurcates the options on certain securities where the option is not clearly and closely related to the host instrument. These derivatives do not qualify as effective hedges for accounting purposes; therefore, they are marked-to-market and the gain or loss is recorded in the statements of operations in fees and other income, underwriting, general and administrative expenses and realized gains (losses). Amounts related to derivative instruments that do not qualify for hedge accounting as of December 31, 2018 and 2017 are assets of $4.7 million and $15.6 million, respectively, liabilities of $17.8 million and $24.4 million, respectively, all of which are included in the consolidated balance sheets. The gain from derivative instruments recorded in the results of operations related to these derivatives totaled $11.0 million, $13.4 million and $19.3 million for the years ended December 31, 2018, 2017 and 2016, respectively.

8. Variable Interest Entities

In the normal course of business, the Company is involved with various types of investment entities that may be considered VIEs. The Company evaluates its involvement with each entity to determine whether consolidation is required. The Company's maximum risk of loss is limited to the carrying value and unfunded commitments of its investments in the VIEs.

Consolidated VIEs

One of the Company's subsidiaries is registered with the U.S. Securities and Exchange Commission (the "SEC") as an investment adviser. The subsidiary (or one of its affiliates) manages and invests in CLOs and real estate funds and may conduct other forms of investment activities. The Company has determined that the CLOs and real estate fund are VIEs and consolidated each because the Company was deemed to be the primary beneficiary of these entities due to (i) its role as collateral manager, which gives it the power to direct the activities that most significantly impact the economic performance of the entities, and (ii) its economic interest in the entities, which exposes it to losses and the right to receive benefits that could potentially be significant to the entities.
In connection with the formation of CLO structures, the Company forms special purpose entities initially capitalized by contributions from the Company's wholly owned subsidiaries. Subsequent to capitalization, the special purpose entities purchase senior secured leveraged loans funded by contributions from the Company and a short-term warehousing credit facility. Borrowings from the warehousing credit facility are non-recourse to the Company and are fully repaid once the CLO closes. Additionally, the amounts contributed by the Company to fund the initial capitalization are returned after the CLO closes. The Company may elect to use the return of capital to purchase a direct investment in the CLO.
Collateralized Loan Obligations: The CLO entities are collateralized financing entities. The carrying value of the CLO debt equals the fair value of the CLO assets (senior secured leveraged loans) as the assets have more observable fair values. The CLO liabilities are reduced by the beneficial interests the Company retains in the CLO. CLO earnings attributable to the Company's shareholders are measured by the change in the fair value of the Company's CLO investments, net investment income earned and investment management and contingent performance fees earned. Investment management fees are reported as a reduction to investment expenses in the consolidated statements of operations. The assets of the CLOs are legally isolated from the Company's creditors and can only be used to settle obligations of the CLOs. The liabilities of the CLOs are non-recourse to the Company and the Company has no obligation to satisfy the liabilities of the CLOs.

As of December 31, 2018, the Company and its subsidiaries held a range of 3.4% to 6.6% of the most subordinated debt tranches of three CLO entities and 4.6% of senior debt tranches in one CLO entity. As of December 31, 2018, a fourth CLO structure was funded with $40.0 million in contributions from the Company's wholly owned subsidiaries. The carrying value of the Company's investment in the CLOs that have closed was $21.0 million in a senior debt tranche and $55.2 million in subordinated debt tranches as of December 31, 2018 and $72.8 million in the most subordinated debt tranches as of December 31, 2017.

Real Estate Fund: The Company’s real estate fund includes contributions from third party investors, which are recorded as non-controlling interest. Real estate fund earnings attributable to the Company’s shareholders are measured by the net investment income of the real estate fund, which includes the change in fair value of the Company’s investments in the real estate fund and investment management fees earned. The Company has a majority investment in the real estate fund in the form of an equity interest. The carrying value of the Company’s investment in the real estate fund was $91.5 million and $89.1 million as of December 31, 2018 and 2017, respectively. The Company’s unfunded commitment in the real estate fund was $4.2 million as of December 31, 2018.
For all consolidated investment entities, intercompany transactions are eliminated upon consolidation.
Fair Value of VIE Assets and Liabilities

The Company categorizes its fair value measurements according to a three-level hierarchy. See Note 9 for the definition of the three levels of the fair value hierarchy. The following table presents the Company’s fair value hierarchy for financial assets and liabilities held by consolidated investment entities measured at fair value on a recurring basis as of the dates indicated:

	December 31, 2018			
	Total	**Level 1**	**Level 2**	**Level 3**
Financial Assets				
Investments:				
Cash and cash equivalents	$62.6	$62.6 (1)	$—	$—
Corporate debt securities	1,464.2	—	1,464.2	—
Real estate fund	112.0	—	—	112.0
Total financial assets	$1,638.8	$62.6	$1,464.2	$112.0
Financial Liabilities				
Collateralized loan obligation notes	$1,316.7	$—	$1,316.7	$—
Total financial liabilities	$1,316.7	$—	$1,316.7	$—

	December 31, 2017			
	Total	**Level 1**	**Level 2**	**Level 3**
Financial Assets				
Investments:				
Cash and cash equivalents	$54.5	$54.5 (1)	$—	$—
Corporate debt securities	570.3	—	570.3	—
Real estate fund	84.7	—	—	84.7
Total financial assets	$709.5	$54.5	$570.3	$84.7
Financial Liabilities				
Collateralized loan obligation notes	$450.7	$—	$450.7	$—
Total financial liabilities	450.7	—	450.7	—

(1) Amounts consist of money market funds.

Level 2 Securities
Corporate debt securities: These assets are comprised of senior secured leveraged loans. The Company values these securities using estimates of fair value from a pricing service which utilizes the market valuation technique. The primary observable market inputs used by the pricing service are prices of reported trades from dealers. The fair value is calculated using a simple average of the prices received.
Collateralized loan obligation notes: As the Company elected the measurement alternative, the carrying value of the CLO debt is set equal to the fair value of the CLO assets. The CLO notes are classified within Level 2 of the fair value hierarchy, consistent with the classification of the majority of the CLO financial assets.

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Level 3 Securities

Real estate fund: These assets are comprised of investments in limited partnerships whose underlying investments are real estate properties. The market, income and cost approach valuation techniques are used to calculate fair value as appropriate given the type of real estate property, as well as the use of independent external appraisals. Significant unobservable inputs, including capitalization rates, discount rates, market comparables, expense growth rates, leasing assumptions and replacement costs, are used as appropriate to calculate fair value.

The following table summarizes the change in balance sheet carrying value associated with Level 3 assets held by consolidated investment entities measured at fair value for the years ended December 31, 2018 and 2017:

	Years Ended December 31,	
	2018	**2017**
Balance, beginning of period	$84.7	$—
Purchases	23.0	55.1
Sales	(6.8)	—
Transfers in (1)	—	44.3
Reclassified to cash (2)	—	(15.3)
Total income included in earnings (3)	11.1	0.6
Balance, end of period	$112.0	$84.7

(1) Transfer in represents real estate fund balance reclassified to consolidated investment entities in 2017. Prior to contributions from third party investors, the Company's investment in the real estate fund was reported within other investments.

(2) Reclassified to cash represents amounts included in cash and cash equivalents of consolidated investment entities.

(3) Total income included in earnings includes $2.1 million of pre-tax income related to non-controlling interests for 2018.

Non-Consolidated VIEs

The Company invests in private equity limited partnerships and real estate joint ventures. These investments are generally accounted for under the equity method as the primary beneficiary criteria is not met, but involvement is considered significant. These investments are included in the consolidated balance sheets in other investments. As of December 31, 2018, the Company's maximum exposure to loss is a recorded carrying value of $229.0 million and unfunded commitments of $32.8 million.

Commercial Mortgage Loan Securitization

On May 31, 2016, the Company transferred $259.7 million of certain commercial mortgage loans on real estate into a trust. Upon transfer, the loans were securitized as a source of funding for the Company and as a means of transferring the economic risk of the loans to third parties. The securitized assets are legally isolated from the Company's creditors and can only be used to settle obligations of the trust. The securitization of the assets was accounted for as a sale. The Company does not have the power to direct the activities of the trust, nor does it provide guarantees or recourse to the trust other than standard representations and warranties. The Company retained an interest in the trust in the form of subordinate securities issued by the trust. The trust is a VIE that the Company does not consolidate.

The cash proceeds, including accrued investment income, from the securitization were $269.8 million, with a corresponding realized gain of $9.1 million. At closing, the Company purchased $30.8 million of securities at fair value from the trust. As of December 31, 2018 and 2017, the maximum loss exposure the Company had to the trust was $20.2 million and $23.5 million, respectively. The Company calculates its maximum loss exposure based on the unlikely event that all the assets in the trust become worthless and the effect it would have on the Company's consolidated balance sheets based upon its retained interest in the trust. The securities purchased from the trust are included within fixed maturity securities available for sale at fair value on the consolidated balance sheet and are part of the Company's ongoing OTTI review. See Note 9 for additional information on the Company's fair value inputs and valuation techniques.

See Note 2 for additional information on significant accounting policies related to VIEs.

9. Fair Value Disclosures

Fair Values, Inputs and Valuation Techniques for Financial Assets and Liabilities Disclosures

The fair value measurements and disclosures guidance defines fair value and establishes a framework for measuring fair value. 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. In accordance with this guidance, the Company has categorized its recurring fair value basis financial assets and liabilities into a three-level fair value hierarchy based on the priority of the inputs to the valuation technique.

The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, the level in the fair value hierarchy within which the fair value measurement in its entirety falls has been determined based on the lowest level input that is significant to the fair value measurement in its entirety. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment, and takes into account factors specific to the asset or liability.

The levels of the fair value hierarchy are described below:

- Level 1 inputs utilize quoted prices (unadjusted) in active markets for identical assets or liabilities that the Company can access.
- Level 2 inputs utilize other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the asset or liability. Level 2 inputs include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active and inputs other than quoted prices that are observable in the marketplace for the asset or liability. The observable inputs are used in valuation models to calculate the fair value for the asset or liability.
- Level 3 inputs are unobservable but are significant to the fair value measurement for the asset or liability, and include situations where there is little, if any, market activity for the asset or liability. These inputs reflect management's own assumptions about the assumptions a market participant would use in pricing the asset or liability.

The Company reviews fair value hierarchy classifications on a quarterly basis. Changes in the observability of valuation inputs may result in a reclassification of levels for certain securities within the fair value hierarchy.

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The following tables present the Company's fair value hierarchy for assets and liabilities measured at fair value on a recurring basis as of December 31, 2018 and 2017. The amounts presented below for short-term investments, other investments, cash equivalents, other assets, assets and liabilities held in separate accounts and other liabilities differ from the amounts presented in the consolidated balance sheets because only certain investments or certain assets and liabilities within these line items are measured at estimated fair value. Other investments are comprised of investments in the AIP, the ASIC, the ADC, a modified coinsurance arrangement and other derivatives. Other liabilities are comprised of investments in the AIP, contingent considerations related to business combinations and other derivatives. The fair value amount and the majority of the associated levels presented for other investments and assets and liabilities held in separate accounts are received directly from third parties.

	December 31, 2018			
Financial Assets	**Total**	**Level 1**	**Level 2**	**Level 3**
Fixed maturity securities:				
U.S. government and government agencies and authorities	$384.6	$—	$384.6	$—
States, municipalities and political subdivisions	256.2	—	256.2	—
Foreign governments	912.1	0.5	911.6	—
Asset-backed	504.5	—	504.5	—
Commercial mortgage-backed	79.7	—	40.8	38.9
Residential mortgage-backed	1,405.8	—	1,405.8	—
U.S. corporate	5,593.0	—	5,580.3	12.7
Foreign corporate	2,121.2	—	2,071.7	49.5
Equity securities:				
Mutual funds	45.0	45.0	—	—
Common stocks	15.3	14.6	0.7	—
Non-redeemable preferred stocks	318.5	—	316.3	2.2
Short-term investments	336.0	188.9 (2)	147.1	—
Other investments	224.9	62.9 (1)	161.5 (3)	0.5 (4)
Cash equivalents	527.7	523.6 (2)	4.1 (3)	—
Other receivables	5.0	—	—	5.0 (6)
Other assets	2.6	—	—	2.6 (5)
Assets held in separate accounts	1,575.7	1,400.1 (1)	175.6 (3)	—
Total financial assets	$14,307.8	$2,235.6	$11,960.8	$111.4
Financial Liabilities				
Other liabilities	$104.8	$62.9 (1)	$0.7 (5)	$41.2 (6)
Liabilities related to separate accounts	1,575.7	1,400.1 (1)	175.6 (3)	—
Total financial liabilities	$1,680.5	$1,463.0	$176.3	$41.2

(1) Primarily includes mutual funds and related obligations.
(2) Primarily includes money market funds.
(3) Primarily includes fixed maturity securities and related obligations.
(4) Primarily includes fixed maturity securities and other derivatives.
(5) Primarily includes derivative assets and liabilities.
(6) Primarily includes contingent consideration receivables/liabilities related to business combinations and dispositions and derivatives.

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	December 31, 2017			
Financial Assets	**Total**	**Level 1**	**Level 2**	**Level 3**
Fixed maturity securities:				
U.S. government and government agencies and authorities	$182.6	$—	$182.6	$—
States, municipalities and political subdivisions	326.2	—	326.2	—
Foreign governments	596.8	1.0	595.8	—
Asset-backed	190.2	—	150.8	39.4
Commercial mortgage-backed	38.1	—	9.5	28.6
Residential mortgage-backed	1,109.4	—	1,109.4	—
U.S. corporate	5,371.3	—	5,350.2	21.1
Foreign corporate	1,848.0	—	1,802.7	45.3
Equity securities:				
Common stocks	17.7	17.0	0.7	—
Non-redeemable preferred stocks	350.3	—	348.1	2.2
Short-term investments	284.1	141.6 (2)	142.5	—
Other investments	253.9	71.2 (1)	172.7 (3)	10.0 (4)
Cash equivalents	544.9	519.1 (2)	25.8 (3)	—
Other assets	2.1	—	—	2.1 (5)
Assets held in separate accounts	1,800.6	1,635.2 (1)	165.4 (3)	—
Total financial assets	$12,916.2	$2,385.1	$10,382.4	$148.7
Financial Liabilities				
Other liabilities	$128.7	$71.2 (1)	$1.0 (5)	$56.5 (6)
Liabilities related to separate accounts	1,800.6	1,635.2 (1)	165.4 (3)	—
Total financial liabilities	$1,929.3	$1,706.4	$166.4	$56.5

(1) Primarily includes mutual funds and related obligations.
(2) Primarily includes money market funds.
(3) Primarily includes fixed maturity securities and related obligations.
(4) Primarily includes fixed maturity securities and other derivatives.
(5) Primarily includes derivative assets and liabilities.
(6) Primarily includes contingent consideration receivables/liabilities related to business combinations and dispositions and derivatives.

There were no transfers between Level 1 and Level 2 financial assets during the years ended December 31, 2018 or 2017. However, there were transfers between Level 2 and Level 3 financial assets during the years ended December 31, 2018 and 2017, which are reflected in the “Transfers in” and “Transfers out” columns in the table below. Transfers between Level 2 and Level 3 most commonly occur from changes in the availability of observable market information and the re-evaluation of the observability of valuation inputs. Any remaining unpriced securities are submitted to independent brokers who provide non-binding broker quotes or are priced by other qualified sources.

The following tables summarize the change in balance sheet carrying value associated with Level 3 financial assets and liabilities carried at fair value for the years ended December 31, 2018 and 2017:

Year Ended December 31, 2018	Balance, beginning of period	Total gains (losses) (realized/ unrealized) included in earnings (1)	Net unrealized gains (losses) included in other comprehensive income (2)	Purchases	Sales	Transfers in (3)	Transfers out (3)	Balance, end of period
Financial Assets								
Fixed Maturity Securities								
Asset-backed	$39.4	$ —	$ —	$ 79.4	$(10.1)	$ —	$(108.7)	$ —
Commercial mortgage-backed	28.6	(3.0)	1.1	36.3	(24.1)	—	—	38.9
U.S. corporate	21.1	(0.2)	—	33.4	(17.2)	11.0	(35.4)	12.7
Foreign corporate	45.3	(1.0)	(2.2)	28.1	(20.5)	7.9	(8.1)	49.5
Equity Securities								
Non-redeemable preferred stocks	2.2	—	—	—	—	—	—	2.2
Other investments	10.0	34.8	(0.1)	10.1	(54.3)	—	—	0.5
Other receivables	—	0.1	—	4.9	—	—	—	5.0
Other assets	2.1	0.1	—	0.4	—	—	—	2.6
Financial Liabilities								
Other liabilities	(56.5)	(6.2)	—	(10.2)	31.7	—	—	(41.2)
Total level 3 assets and liabilities	$92.2	$ 24.6	$ (1.2)	$ 182.4	$(94.5)	$ 18.9	$(152.2)	$ 70.2

Year Ended December 31, 2017	Balance, beginning of period	Total gains (losses) (realized/ unrealized) included in earnings (1)	Net unrealized gains (losses) included in other comprehensive income (2)	Purchases	Sales	Transfers in (3)	Transfers out (3)	Balance, end of period
Financial Assets								
Fixed Maturity Securities								
Asset-backed	$—	$ 3.3	$ (2.2)	$ 165.6	$(20.0)	$ 2.6	$(109.9)	$ 39.4
Commercial mortgage-backed	27.8	(4.9)	0.3	5.4	—	—	—	28.6
U.S. corporate	44.5	0.6	0.8	15.4	(13.4)	9.2	(36.0)	21.1
Foreign corporate	33.3	(0.1)	(0.3)	25.5	(2.3)	16.5	(27.3)	45.3
Equity Securities								
Non-redeemable preferred stocks	2.2	—	—	—	—	—	—	2.2
Other investments	3.5	(6.0)	(0.1)	17.7	(0.1)	—	(5.0)	10.0
Other assets	0.3	(0.2)	—	2.0	—	—	—	2.1
Financial Liabilities								
Other liabilities	(54.1)	0.7	—	(3.4)	0.3	—	—	(56.5)
Total level 3 assets and liabilities	$57.5	$ (6.6)	$ (1.5)	$ 228.2	$(35.5)	$ 28.3	$(178.2)	$ 92.2

(1) Included as part of net realized gains on investments, excluding other-than-temporary impairment losses, in the consolidated statements of operations.
(2) Included as part of change in unrealized gains on securities in the consolidated statement of comprehensive income.
(3) Transfers are primarily attributable to changes in the availability of observable market information and the re-evaluation of the observability of valuation inputs.

Three different valuation techniques can be used in determining fair value for financial assets and liabilities: the market, income or cost approaches. The three valuation techniques described in the fair value measurements and disclosures guidance are consistent with generally accepted valuation methodologies. The market approach valuation techniques use prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities. When possible, quoted prices (unadjusted) in active markets are used as of the period-end date (such as for mutual funds and money market funds). Otherwise, the Company uses valuation techniques consistent with the market approach including matrix pricing and comparables. Matrix pricing is a mathematical technique employed principally to value debt securities without relying exclusively on quoted prices for those securities but, rather, relying on the securities' relationship to other benchmark quoted securities. Market approach valuation techniques often use market multiples derived from a set of comparables. Multiples might lie in ranges with a different multiple for each comparable. The selection of where within the range the appropriate multiple falls requires judgment, considering both qualitative and quantitative factors specific to the measurement.

Income approach valuation techniques convert future amounts, such as cash flows or earnings, to a single present amount, or a discounted amount. These techniques rely on current market expectations of future amounts as of the period-end date. Examples of income approach valuation techniques include present value techniques, option-pricing models, binomial or lattice models that incorporate present value techniques and the multi-period excess earnings method.

Cost approach valuation techniques are based upon the amount that would be required to replace the service capacity of an asset at the period-end date, or the current replacement cost. That is, from the perspective of a market participant (seller), the price that would be received for the asset is determined based on the cost to a market participant (buyer) to acquire or construct a substitute asset of comparable utility, adjusted for obsolescence.

While not all three approaches are applicable to all financial assets or liabilities, where appropriate, the Company may use one or more valuation techniques. For all the classes of financial assets and liabilities included in the above hierarchy, excluding certain derivatives and certain privately placed corporate bonds, the Company generally uses the market valuation technique. For certain privately placed corporate bonds and certain derivatives, the Company generally uses the income valuation technique. For the years ended December 31, 2018 and 2017, the application of the valuation technique applied to the Company's classes of financial assets and liabilities has been consistent.

Level 1 Securities

The Company's investments and liabilities classified as Level 1 as of December 31, 2018 and 2017 consisted of mutual funds and related obligations, money market funds, foreign government fixed maturity securities and common stocks that are publicly listed and/or actively traded in an established market.

Level 2 Securities

The Company values Level 2 securities using various observable market inputs obtained from a pricing service. The pricing service prepares estimates of fair value measurements for the Company's Level 2 securities using proprietary valuation models based on techniques such as matrix pricing which include observable market inputs. The fair value measurements and disclosures guidance defines observable market inputs as the assumptions market participants would use in pricing the asset or liability developed on market data obtained from sources independent of the Company. The extent of the use of each observable market input for a security depends on the type of security and the market conditions at the balance sheet date. Depending on the security, the priority of the use of observable market inputs may change as some observable market inputs may not be relevant or additional inputs may be necessary. The Company uses the following observable market inputs ("standard inputs"), listed in the approximate order of priority, in the pricing evaluation of Level 2 securities: benchmark yields, reported trades, broker/dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers and reference data including market research data. Further details for Level 2 investment types follow:

U.S. government and government agencies and authorities: U.S. government and government agencies and authorities securities are priced by the Company's pricing service utilizing standard inputs. Included in this category are U.S. Treasury securities which are priced using vendor trading platform data in addition to the standard inputs.

States, municipalities and political subdivisions: States, municipalities and political subdivisions securities are priced by the Company's pricing service using material event notices and new issue data inputs in addition to the standard inputs.

Foreign governments: Foreign government securities are primarily fixed maturity securities denominated in local currencies which are priced by the Company's pricing service using standard inputs. The pricing service also evaluates each security based on relevant market information including relevant credit information, perceived market movements and sector news.

Commercial mortgage-backed, residential mortgage-backed and asset-backed: Commercial mortgage-backed, residential mortgage-backed and asset-backed securities are priced by the Company's pricing service using monthly payment information and collateral performance information in addition to the standard inputs. Additionally, commercial mortgage-backed securities and asset-backed securities utilize new issue data while residential mortgage-backed securities utilize vendor trading platform data.

U.S. and foreign corporate: Corporate securities are priced by the Company's pricing service using standard inputs. Non-investment grade securities within this category are priced by the Company's pricing service using observations of equity and credit default swap curves related to the issuer in addition to the standard inputs. Certain privately placed corporate bonds are priced by a non-pricing service source using a model with observable inputs including, but not limited to, the credit rating, credit spreads, sector add-ons, and issuer specific add-ons.

Non-redeemable preferred stocks: Non-redeemable preferred stocks are priced by the Company's pricing service using observations of equity and credit default swap curves related to the issuer in addition to the standard inputs.

Short-term investments, other investments, cash equivalents, assets held in separate accounts and liabilities related to separate accounts: To price the fixed maturity securities and related obligations in these categories, the pricing service utilizes the standard inputs.

Other liabilities: Foreign exchange forwards are priced using a pricing model which utilizes market observable inputs including foreign exchange spot rate, forward points and date to settlement.

Valuation models used by the pricing service can change from period to period, depending on the appropriate observable inputs that are available at the balance sheet date to price a security. When market observable inputs are unavailable to the pricing service, the remaining unpriced securities are submitted to independent brokers who provide non-binding broker quotes or are priced by other qualified sources. If the Company cannot corroborate the non-binding broker quotes with Level 2 inputs, these securities are categorized as Level 3 securities.

Level 3 Securities

The Company's investments classified as Level 3 as of December 31, 2018 and 2017 consisted of fixed maturity and equity securities and derivatives.

Fixed maturity securities and equity securities: All of the Level 3 fixed maturity and equity securities are priced using non-binding broker quotes that cannot be corroborated with Level 2 inputs. Of the Company's total Level 3 fixed maturity and equity securities, $37.6 million and $3.0 million were priced by a pricing service using single broker quotes due to insufficient information to provide an evaluated price as of December 31, 2018 and 2017, respectively. The single broker quotes are provided by market makers or broker-dealers who are recognized as market participants in the markets in which they are providing the quotes. The remaining $65.7 million and $133.6 million were priced internally using independent and non-binding broker quotes as of December 31, 2018 and 2017, respectively. The inputs factoring into the broker quotes include trades in the actual bond being priced, trades of comparable bonds, quality of the issuer, optionality, structure and liquidity. Significant changes in interest rates, issuer credit, liquidity, and overall market conditions would result in a significantly lower or higher broker quote. The prices received from both the pricing service and internally are reviewed for reasonableness by management and if necessary, management works with the pricing service or broker to further understand how they developed their price.

Other investments, other receivables, other assets and other liabilities: The Company prices swaptions and Mexican peso foreign exchange options using a Black-Scholes pricing model incorporating third-party market data, including swap volatility data. The Company prices credit default swaps using non-binding quotes provided by market makers or broker-dealers who are recognized as market participants. Inputs factored into the non-binding quotes include trades in the actual credit default swap which is being priced, trades in comparable credit default swaps, quality of the issuer, structure and liquidity. The net option related to the investment in Iké is valued using an income approach; specifically, a Monte Carlo simulation option pricing model. The inputs to the model include, but are not limited to, the projected normalized earnings before interest, tax, depreciation, and amortization ("EBITDA") and free cash flow for the underlying asset, the discount rate, and the volatility of and the correlation between the normalized EBITDA and the value of the underlying asset. Significant increases (decreases) in the projected normalized EBITDA relative to the value of the underlying asset in isolation would result in a significantly higher (lower) fair value. The fair value of the contingent consideration is estimated using a discounted cash flow model. Inputs may include future business performance, earn out caps, and applicable discount rates. A non-pricing service source prices certain derivatives using a model with inputs including, but not limited to, the time to expiration, the notional amount, the strike price, the forward rate, implied volatility and the discount rate.

Management evaluates the following factors in order to determine whether the market for a financial asset is inactive. The factors include, but are not limited to:

- whether there are few recent transactions,
- whether little information is released publicly,
- whether the available prices vary significantly over time or among market participants,
- whether the prices are stale (i.e., not current), and
- the magnitude of the bid-ask spread.

Illiquidity did not have a material impact in the fair value determination of the Company’s financial assets as of December 31, 2018 or 2017.

The Company generally obtains one price for each financial asset. The Company performs a monthly analysis to assess if the evaluated prices represent a reasonable estimate of the financial assets’ fair values. This process involves quantitative and qualitative analysis and is overseen by investment and accounting professionals. Examples of procedures performed include, but are not limited to, initial and on-going review of pricing service methodologies, review of the prices received from the pricing service, review of pricing statistics and trends, and comparison of prices for certain securities with two different appropriate price sources for reasonableness. Following this analysis, the Company generally uses the best estimate of fair value based upon all available inputs. On infrequent occasions, a non-pricing service source may be more familiar with the market activity for a particular security than the pricing service. In these cases the price used is taken from the non-pricing service source. The pricing service provides information to indicate which securities were priced using market observable inputs so that the Company can properly categorize the Company’s financial assets in the fair value hierarchy.

For the net option, the Company performs a periodic analysis to assess if the evaluated price represents a reasonable estimate of the fair value for the financial liability. This process involves quantitative and qualitative analysis overseen by finance and accounting professionals. Examples of procedures performed include, but are not limited to, initial and on-going review of the pricing methodology and review of the projection for the underlying asset including the probability distribution of possible scenarios.

Disclosures for Assets and Liabilities Measured at Fair Value on a Non-Recurring Basis

The Company also measures the fair value of certain assets on a non-recurring basis, generally on an annual basis, or when events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. These assets include commercial mortgage loans, goodwill and finite-lived intangible assets.

For its 2018 annual goodwill impairment test, the Company performed a quantitative assessment for all reporting units. Based on this assessment, the Company determined that it was more likely than not that the reporting units’ fair values were more than their carrying amounts, and therefore, goodwill was not impaired.

In 2018, there was a $20.8 million impairment charge related to the Green Tree acquisition. In 2016, there was a $16.7 million impairment charge related to intangible assets related to the former Mortgage Solutions business.

Fair Value of Financial Instruments Disclosures

The financial instruments guidance requires disclosure of fair value information about financial instruments, for which it is practicable to estimate such fair value. Therefore, it requires fair value disclosure for financial instruments that are not recognized or are not carried at fair value in the consolidated balance sheets. However, this guidance excludes certain financial instruments, including those related to insurance contracts and those accounted for under the equity method (such as partnerships).

For the financial instruments included within the following financial assets and financial liabilities, the carrying value in the consolidated balance sheets equals or approximates fair value. Please refer to the Fair Values Inputs and Valuation Techniques for Financial Assets and Liabilities Disclosures section above for additional information on the financial instruments included within the following financial assets and financial liabilities and the methods and assumptions used to estimate fair value:

- Cash and cash equivalents;
- Fixed maturity securities;
- Equity securities;
- Short-term investments;
- Other investments;
- Other receivables;
- Other assets;
- Assets held in separate accounts;
- Other liabilities; and
- Liabilities related to separate accounts.

In estimating the fair value of the financial instruments that are not recognized or are not carried at fair value in the consolidated balance sheets, the Company used the following methods and assumptions:

Commercial mortgage loans on real estate: The fair values of commercial mortgage loans on real estate are estimated using discounted cash flow models. The model inputs include mortgage amortization schedules and loan provisions, an internally developed credit spreads based on the credit risk associated with the borrower and the U.S. Treasury spot curve. Mortgage loans with similar characteristics are aggregated for purposes of the calculations.

Other investments: Other investments include private equity investments, Certified Capital Company and low income housing tax credits, business debentures, credit tenant loans and social impact loans which are recorded at cost or amortized cost, as well as policy loans. The carrying value reported for these investments approximates fair value.

Other assets: The carrying value of dealer loans approximates fair value.

Policy reserves under investment products: The fair values for the Company's policy reserves under investment products are determined using discounted cash flow analysis. Key inputs to the valuation include projections of policy cash flows, reserve runoff, market yields and risk margins.

Funds held under reinsurance: The carrying value reported approximates fair value due to the short maturity of the instruments.

Debt: The fair value of debt is based upon matrix pricing performed by the pricing service utilizing the standard inputs.

The following tables disclose the carrying value, fair value and hierarchy level of the financial instruments that are not recognized or are not carried at fair value in the consolidated balance sheets as of the dates indicated:

	December 31, 2018				
		Fair Value			
	Carrying Value	Total	Level 1	Level 2	Level 3
Financial Assets					
Commercial mortgage loans on real estate	$759.6	$735.1	$—	$—	$735.1
Other investments	124.9	124.9	33.9	—	91.0
Other assets	43.0	43.0	—	—	43.0
Total financial assets	$927.5	$903.0	$33.9	$—	$869.1
Financial Liabilities					
Policy reserves under investment products (Individual and group annuities, subject to discretionary withdrawal) (1)	$570.6	$556.8	$—	$—	$556.8
Funds held under reinsurance	272.0	272.0	272.0	—	—
Debt	2,006.0	2,058.7	—	2,058.7	—
Total financial liabilities	$2,848.6	$2,887.5	$272.0	$2,058.7	$556.8

	December 31, 2017				
		Fair Value			
	Carrying Value	Total	Level 1	Level 2	Level 3
Financial Assets					
Commercial mortgage loans on real estate	$670.2	$679.2	—	—	$679.2
Other investments	84.4	84.4	36.3	—	48.1
Total financial assets	$754.6	$763.6	$36.3	—	$727.3
Financial Liabilities					
Policy reserves under investment products (Individual and group annuities, subject to discretionary withdrawal) (1)	$634.3	$642.5	—	—	$642.5
Funds held under reinsurance	179.8	179.8	179.8	—	—
Debt	1,068.2	1,174.4	—	1,174.4	—
Total financial liabilities	$1,882.3	$1,996.7	$179.8	$1,174.4	$642.5

(1) Only the fair value of the Company’s policy reserves for investment-type contracts (those without significant mortality or morbidity risk) are reflected in the tables above.

10. Premiums and Accounts Receivable

Receivables are reported net of an allowance for uncollectible amounts. A summary of such receivables is as follows as of the dates indicated:

	December 31,	
	2018	2017
Insurance premiums receivable	$1,579.0	$1,128.0
Other receivables	80.6	121.8
Allowance for uncollectible amounts	(16.1)	(12.5)
Total	$1,643.5	$1,237.3

11. Income Taxes

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The components of income tax expense (benefit) were as follows for the periods indicated:

	Years Ended December 31,		
	2018	2017	2016
Pre-tax income:			
Domestic	$215.8	$336.3	$779.0
Foreign	117.7	108.2	69.6
Total pre-tax income	$333.5	$444.5	$848.6

	Years Ended December 31,		
	2018	2017	2016
Current expense (benefit):			
Federal and state	$5.7	$(111.9)	$240.1
Foreign	53.8	41.0	18.1
Total current expense (benefit)	59.5	(70.9)	258.2
Deferred (benefit) expense:			
Federal and state	31.0	8.7	19.6
Foreign	(9.6)	(12.9)	5.4
Total deferred expense (benefit)	21.4	(4.2)	25.0
Total income tax expense (benefit)	$80.9	$(75.1)	$283.2

The provision for foreign taxes includes amounts attributable to income from U.S. possessions that are considered foreign under U.S. tax laws. International operations of the Company are subject to income taxes imposed by the jurisdiction in which they operate.
A reconciliation of the federal income tax rate to the Company's effective income tax rate follows for the periods indicated:

	Years Ended December 31,		
	2018	2017	2016
Federal income tax rate:	21.0 %	35.0 %	35.0 %
Reconciling items:			
Non-taxable investment income	(1.2)	(2.3)	(1.3)
Foreign earnings (1)	3.5	(2.3)	(1.9)
Non-deductible compensation	0.9	0.2	(0.1)
Non-deductible health insurer fee	—	—	1.8
Change in liability for prior year tax	(0.5)	(6.4)	—
Tax reform deferred revaluation (2)	0.5	(39.8)	—
Other	0.1	(1.3)	(0.1)
Effective income tax rate:	24.3 %	(16.9)%	33.4 %

(1) Results for all years primarily include tax benefits associated with the earnings of certain non-U.S. subsidiaries that are deemed reinvested indefinitely and the realization of foreign tax credits for certain other subsidiaries. In addition, 2018, 2017 and 2016 reflect a benefit of 2.8%, 1.4% and 2.2%, respectively, related to international reorganizations.

(2) The TCJA reduced the corporate tax rate to 21%, effective January 1, 2018. Consequently, the Company has recorded a benefit related to the revaluation of deferred tax assets and deferred tax liabilities of $177.0 million in 2017, which had a 39.8% impact to the effective tax rate, and a SAB118 expense of $1.5 million in 2018, which has a 0.5% impact to the effective tax rate.

A reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31, 2018, 2017 and 2016 is as follows:

	Years Ended December 31,		
	2018	**2017**	**2016**
Balance at beginning of year	$(6.7)	$(34.2)	$(37.0)
Additions based on tax positions related to the current year	(2.5)	(1.0)	(1.0)
Reductions based on tax positions related to the current year	—	—	—
Additions for tax positions of prior years	(4.1)	(0.3)	(1.4)
Reductions for tax positions of prior years	0.6	28.2	3.8
Lapses	0.9	0.6	1.4
Balance at end of year	$(11.8)	$(6.7)	$(34.2)

Total unrecognized tax benefits of $13.0 million, $6.8 million and $34.5 million for the years ended December 31, 2018, 2017 and 2016, respectively, which includes interest and penalties, would impact the Company's consolidated effective tax rate if recognized. The liability for unrecognized tax benefits is included in accounts payable and other liabilities on the consolidated balance sheets.

The Company's continuing practice is to recognize interest expense related to income tax matters in income tax expense. During the years ended December 31, 2018, 2017 and 2016, the Company recognized approximately $0.4 million, $0.1 million and $0.6 million, respectively, of interest expense related to income tax matters. The Company had $0.5 million, $0.2 million and $0.2 million of interest accrued as of December 31, 2018, 2017 and 2016, respectively. The Company had $0.8 million of penalties accrued as of December 31, 2018 and none as of December 31, 2017 and 2016.

The Company does not anticipate any significant increase or decrease of unrecognized tax benefit within the next 12 months.

The Company and its subsidiaries file income tax returns in the U.S. and various state and foreign jurisdictions. The Company has substantially concluded all U.S. federal income tax matters for years through 2014. Substantially all non-U.S. income tax matters have been concluded for years through 2010, and all state and local income tax matters have been concluded for years through 2008.

The tax effects of temporary differences that result in significant deferred tax assets and deferred tax liabilities are as follows as of the dates indicated:

	December 31, 2018	December 31, 2017
Deferred Tax Assets		
Policyholder and separate account reserves	$1,301.8	$359.1
Net operating loss carryforwards	192.2	42.3
Investments, net	53.9	70.8
Credit carryforwards	36.4	19.4
Employee and post-retirement benefits	35.8	35.8
Compensation related	29.7	27.2
Capital loss carryforwards	23.2	0.6
Other	37.4	83.3
Total deferred tax assets (1)	1,710.4	638.5
Less valuation allowance	(26.4)	(9.2)
Deferred tax assets, net of valuation allowance	1,684.0	629.3
Deferred Tax Liabilities		
Deferred acquisition costs	(1,658.7)	(674.5)
Net unrealized appreciation on securities	(92.5)	(201.1)
Intangible assets	(76.2)	(2.5)
Total deferred tax liabilities (1)	(1,827.4)	(878.1)
Net deferred income tax liabilities	$(143.4)	$(248.8)

(1) 2017 reflects the reduction of deferred tax assets and liabilities following the enactment of the TCJA.

A cumulative valuation allowance of $26.4 million existed as of December 31, 2018 based on management's assessment that it is more likely than not that certain deferred tax assets attributable to international subsidiaries will not be realized.

The Company's ability to realize deferred tax assets depends on its ability to generate sufficient taxable income of the same character within the carryback or carryforward periods. In assessing future taxable income, the Company considered all sources of taxable income available to realize its deferred tax asset, including the future reversal of existing temporary differences, future taxable income exclusive of reversing temporary differences and carryforwards, taxable income in carryback years and tax-planning strategies. If changes occur in the assumptions underlying the Company's tax planning strategies or in the scheduling of the reversal of the Company's deferred tax liabilities, the valuation allowance may need to be adjusted in the future.

Other than for certain wholly owned Canadian subsidiaries, the Company plans to indefinitely reinvest the earnings in other jurisdictions. Under current U.S. tax law, no material income taxes are anticipated on future repatriation of earnings. Therefore, deferred taxes have not been provided.

Global intangible low taxed income ("GILTI"): The TCJA creates a new requirement that certain income (i.e., GILTI) earned by controlled foreign corporations ("CFCs") must be included currently in the gross income of the CFCs' U.S. shareholder. GILTI is the excess of the U.S. shareholder's "net CFC tested income" over 10% of the aggregate of the U.S. shareholder's pro rata share of the qualified business asset investment of each CFC with respect to which it is a U.S. shareholder. Under GAAP, the Company is allowed to make an accounting policy election of either (1) treating taxes due on future U.S. inclusions in taxable income related to GILTI as a current-period expense when incurred or (2) factoring such amounts into the company's measurement of its deferred taxes. As of December 31, 2018, the Company has elected to recognize the current tax on GILTI as a period expense in the period the tax is incurred. Under this policy, the Company has not provided deferred taxes related to temporary differences that upon their reversal will affect the amount of income subject to GILTI in the period. The GILTI current period expense is immaterial.

At December 31, 2018, the Company had $892.7 million of net operating loss carryforward that will expire if unused as follows:

Expiration Year	Amount
2019 - 2023	$33.6
2024 - 2028	11.4
2029 - 2033	0.7
2034 - 2038	450.2
Unlimited	396.8
	$892.7

12. Deferred Acquisition Costs

Information about deferred acquisition costs is as follows as of the dates indicated:

	December 31,		
	2018	2017	2016
Beginning balance	$3,484.5	$3,267.4	$3,150.9
Costs deferred	3,094.0	1,549.2	1,458.7
Amortization	(1,475.5)	(1,332.1)	(1,342.2)
Ending balance	$5,103.0	$3,484.5	$3,267.4

13. Property and Equipment

Property and equipment consisted of the following as of the dates indicated:

	December 31,	
	2018	2017
Land	$13.2	$13.7
Buildings and improvements	261.5	248.0
Furniture, fixtures and equipment	491.4	434.5
Total	766.1	696.2
Less accumulated depreciation	(373.6)	(348.6)
Total	$392.5	$347.6

During the year ended December 31, 2017, the Company recorded a net $5.7 million gain from the sale of a building that had been the headquarters of the Assurant Employee Benefits business, and the sale of a claims training center in Georgia. Depreciation expense for the years ended December 31, 2018, 2017 and 2016 amounted to $39.0 million, $34.2 million and $41.7 million, respectively. Depreciation expense is included in underwriting, general and administrative expenses in the consolidated statements of operations.

14. Goodwill

The Company has assigned goodwill to its reporting units for impairment testing purposes. The Total Corporate and Other segment is not assigned goodwill. For Global Housing and Global Preneed, the reporting unit for impairment testing was at the operating segment level. In 2018, we determined that it was no longer appropriate to aggregate our reporting units within our Global Lifestyle operating segment due to further differentiation of certain components of underlying products, including the economics and distribution, as a result of our acquisition of TWG and the related changes in segment leadership. As a result, the Global Lifestyle reporting unit was disaggregated into the following three reporting units: Connected Living, Global Automotive and Global Financial Services. The carrying amount of our Global Lifestyle legacy goodwill was allocated based on the fair value of the three new reporting units. The carrying amount of our goodwill from the TWG acquisition was allocated

Explanation of Responses:

to the three new reporting units based on the acquisition multiple and implied forward earnings contribution of each reporting unit. A roll forward of goodwill by reportable segment is provided below as of and for the years indicated:

	Global Housing	Global Lifestyle (1)	Global Preneed	Consolidated
Balance at December 31, 2016 (2)	$320.9	$372.3	$137.7	$830.9
Acquisitions	65.8	4.2	—	70.0
Foreign currency translation and other	—	16.3	0.5	16.8
Balance at December 31, 2017 (2)	386.7	392.8	138.2	917.7
Acquisitions (3)	—	1,421.1	—	1,421.1
Impairments (4)	(7.2)	—	—	(7.2)
Foreign currency translation and other	—	(9.2)	(0.6)	(9.8)
Balance at December 31, 2018 (2)	$379.5	$1,804.7	$137.6	$2,321.8

(1) As of December 31, 2018, $451.2 million, $1.28 billion and $72.2 million of goodwill was assigned to Connected Living, Global Automotive and Global Financial Services, respectively.

(2) Consolidated goodwill reflects $1.27 billion of accumulated impairment loss at December 31, 2018 and $1.26 billion of accumulated impairment losses at December 31, 2017 and 2016.

(3) Refer to Note 3 for additional information on the TWG acquisition (including the application of measurement period adjustments during the year ended December 31, 2018).

(4) Refer to Note 4 for additional information on the impairment loss on the Mortgage Solutions business.

15. VOBA and Other Intangible Assets

VOBA

Information about VOBA is as follows for the periods indicated:

	Years Ended December 31,		
	2018	2017	2016
Beginning balance	$24.4	$32.1	$41.2
Additions	3,972.6	—	—
Amortization, net of interest accrued	(825.2)	(7.9)	(9.2)
Foreign currency translation and other	(14.0)	0.2	0.1
Ending balance	$3,157.8	$24.4	$32.1

As of December 31, 2018, the outstanding VOBA balance is primarily attributable to the TWG acquisition within the Global Lifestyle segment. Refer to Note 3 for additional information.

As of December 31, 2018, the estimated amortization of VOBA for the next five years and thereafter is as follows:

Year	Amount
2019	$1,201.3
2020	858.8
2021	550.8
2022	306.2
2023	161.9
Thereafter	78.8
Total	$3,157.8

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Other Intangible Assets

Information about other intangible assets is as follows as of the dates indicated:

	As of December 31,					
	2018			2017		
	Carrying Value	Accumulated Amortization	Net Other Intangible Assets	Carrying Value	Accumulated Amortization	Net Other Intangible Assets
Contract based intangibles (1) (2)	$472.9	$(46.6)	$426.3	$73.1	$(13.5)	$59.6
Customer related intangibles	413.0	(272.2)	140.8	478.2	(261.4)	216.8
Marketing related intangibles	5.6	(5.5)	0.1	7.9	(7.6)	0.3
Technology based intangibles	62.0	(6.8)	55.2	36.2	(24.3)	11.9
Total	$953.5	$(331.1)	$622.4	$595.4	$(306.8)	$288.6

(1) As of December 31, 2018 and 2017, contract based intangibles included $13.7 million and $2.1 million of indefinite-lived intangible assets, respectively.

(2) As of December 31, 2018, the net amount was reduced for a $20.8 million intangible asset impairment charge related to Green Tree. Refer to Note 3 for further information.

Total amortization of other intangible assets for the years ended December 31, 2018, 2017 and 2016 was $77.9 million, $72.6 million and $67.7 million, respectively.

Other intangible assets that have finite lives, including customer relationships, customer contracts and other intangible assets, are amortized over their useful lives. The estimated amortization of other intangible assets with finite lives for the next five years and thereafter is as follows:

Year	Amount
2019	$62.9
2020	65.4
2021	60.9
2022	50.5
2023	46.0
Thereafter	323.0
Total other intangible assets with finite lives	$608.7

16. Reserves

Short Duration Contracts

Continuing Business (Global Housing and Global Lifestyle)

The Company’s short duration contracts are comprised of products and services included in the Global Lifestyle and Global Housing segments. The main product lines for Global Lifestyle include extended service contracts, vehicle service contracts, mobile device protection and credit insurance, and for Global Housing the main product lines include lender-placed homeowners and flood, Multifamily Housing and manufactured housing.

Total IBNR reserves are determined by subtracting case basis incurred losses from the ultimate loss and loss adjustment expense estimates. Ultimate loss and loss adjustment expenses are estimated utilizing generally accepted actuarial loss reserving methods. The reserving methods employed by the Company include the Chain Ladder, Munich Chain Ladder and Bornhuetter-Ferguson methods. Reportable catastrophe losses are analyzed and reserved for separately using a frequency and severity approach. The methods all involve aggregating paid and case-incurred loss data by accident quarter (or accident year) and accident age for each product grouping. As the data ages, loss development factors are calculated that measure emerging claim development patterns between reporting periods. By selecting loss development factors indicative of remaining development, known losses are projected to an ultimate incurred basis for each accident period. The underlying premise of the Chain Ladder method is that future claims development is best estimated using past claims development, whereas the Bornhuetter-Ferguson method employs a combination of past claims development and an estimate of ultimate losses based on an expected loss ratio. The Munich Chain Ladder method takes into account the correlations between paid and incurred

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development in projecting future development factors, and is typically more applicable to products experiencing greater variability in incurred to paid ratios.

The best estimate of ultimate loss and loss adjustment expense is generally selected from a blend of the different methods that are applied consistently each period. There have been no significant changes in the methodologies and assumptions utilized in estimating the liability for unpaid loss and loss adjustment expenses for any of the periods presented.

Disposed and Runoff Short Duration Insurance Lines

The Company has runoff exposure to asbestos, environmental and other general liability claims arising from the Company's participation in certain reinsurance pools from 1971 through 1985 from contracts discontinued many years ago. The amount of carried case reserves are based on recommendations of the various pool managers. Using information currently available, and after consideration of the reserves reflected in the consolidated financial statements, the Company does not believe or expect that changes in reserve estimates for these claims are likely to be material.

Disposed business includes certain medical policies no longer offered and Assurant Employee Benefits policies disposed of via reinsurance. Reserves and reinsurance recoverables for previously disposed business are included in the consolidated balance sheets. See Note 17 for additional information.

Long Duration Contracts

Continuing Business (Global Preneed)

The Company's long duration contracts are primarily comprised of preneed life insurance and annuity policies. Future policy benefits make up the largest portion of Global Preneed liabilities. Claims and benefits payable reserves are less significant. Reserve assumptions for mortality rates, lapse rates, expenses and interest rates are company-specific based on pricing assumptions and subsequent experience studies.

For business issued during the years ended December 31, 2018 and 2017, discount rates ranged between 1.5% and 4.25%. Death benefit increases for business issued during the years ended December 31, 2018 and 2017 ranged between 0.0% and 3.0%. Canadian annuity products typically have surrender charges that vary by product series and premium paying period. Surrender charges on U.S. annuity contracts generally range from 7.0% to 0.0% and grade to zero over a period of seven years.

Disposed and Runoff Long Duration Insurance Lines

The Company's universal life and annuity products are no longer offered and are in runoff. Reserves have been established based on the following assumptions. Interest rates credited on annuities were at guaranteed rates, ranging from 3.5% to 4.0%, except for a limited number of policies with guaranteed crediting rates of 4.5%. All annuity policies are past the surrender charge period. Crediting interest rates on universal life fund are at guaranteed rates of 4.0% to 4.1%. Universal life funds are subject to surrender charges that vary by product, age, sex, year of issue, risk class, face amount and grade to zero over a period not longer than 20 years.

On December 3, 2018, the Company sold Time Insurance Company, a legal entity associated with the previously exited Assurant Health business that resulted in a $1.58 billion decrease in future policy benefits and expenses upon sale. See Note 4 for additional information.

Reserve Roll Forward

The following table provides a roll forward of the Company's beginning and ending claims and benefits payable balances. Claims and benefits payable is the liability for unpaid loss and loss adjustment expenses and are comprised of case and IBNR reserves.

Since unpaid loss and loss adjustment expenses are estimates, the Company's actual losses incurred may be more or less than the Company's previously developed estimates, which is referred to as either unfavorable or favorable development, respectively.

The best estimate of ultimate loss and loss adjustment expense is generally selected from a blend of methods that are applied consistently each period. There have been no significant changes in the methodologies and assumptions utilized in estimating the liability for unpaid loss and loss adjustment expenses for any of the periods presented.

	Years Ended December 31,		
	2018	2017	2016
Claims and benefits payable, at beginning of year	$3,782.2	$3,301.2	$3,896.7
Less: Reinsurance ceded and other	(3,193.3)	(2,718.2)	(1,496.5)
Net claims and benefits payable, at beginning of year	588.9	583.0	2,400.2
Acquired reserves as of Acquisition Date (1)	137.6	—	—
Incurred losses and loss adjustment expenses related to:			
Current year	2,356.1	1,965.0	2,028.9
Prior years interest	—	—	9.8
Prior years	(7.4)	(58.5)	(196.2)
Total incurred losses and loss adjustment expenses	2,348.7	1,906.5	1,842.5
Paid losses and loss adjustment expenses related to:			
Current year	1,887.1	1,536.4	1,595.7
Prior years	428.1	364.2	2,064.0
Total paid losses and loss adjustment expenses	2,315.2	1,900.6	3,659.7
Net claims and benefits payable, at end of year	760.0	588.9	583.0
Plus: Reinsurance ceded and other (2)	2,053.7	3,193.3	2,718.2
Claims and benefits payable, at end of year (2)(3)	$2,813.7	$3,782.2	$3,301.2

(1) Acquired reserves from TWG on Acquisition Date include $418.2 million of gross claims and benefits payable and $280.6 million of ceded claims and benefits payable. The reserve roll forward includes the activity of TWG from June 1, 2018 to December 31, 2018.

(2) Includes reinsurance recoverables and claims and benefits payable of $119.8 million, $555.0 million and $153.3 million as of December 31, 2018, 2017 and 2016, respectively, which was ceded to the U.S. government. The Company acts as an administrator for the U.S. government under the voluntary National Flood Insurance Program.

(3) Claims and benefits payable and related reinsurance ceded were reduced by $730.0 million on December 3, 2018 as a result of the sale of Time Insurance Company, a legal entity associated with the previously exited Assurant Health business.

The Company experienced net favorable prior year development in each of the years ended December 31, 2018, 2017 and 2016. A comparison of net (favorable) unfavorable prior year development is shown below across the Company's current and former segments and businesses.

	Prior Year Incurred Loss Development for the Years Ending December 31,		
	2018	2017	2016
Global Housing	$16.3	$(9.6)	$(30.1)
Global Lifestyle (excluding TWG)	(17.0)	(30.0)	(39.0)
TWG	0.4	—	—
Global Preneed	(0.5)	(0.6)	(0.5)
Assurant Health	(1.3)	(8.8)	(68.4)
Assurant Employee Benefits	—	—	(42.5)
All Other	(5.3)	(9.5)	(15.7)
Total	$(7.4)	$(58.5)	$(196.2)

For the year ended December 31, 2018, the unfavorable prior year development in Global Housing was mainly attributable to $18.4 million in unfavorable development from Hurricane Maria as projected losses exceeded available reinsurance limits. Global Lifestyle's favorable development was comparatively lower in 2018 than 2017. A more detailed explanation of the claims development from Global Lifestyle and Global Housing is presented below, including claims development by accident year. Assurant Health continues to run-off and contributed lower favorable development in 2018, as expected. Reserves for the longer-tail property coverages included in All Other (e.g., asbestos, environmental and other general liability) had no material changes in estimated amounts for incurred claims in prior years.

The following tables represent the Global Lifestyle and Global Housing segments’ incurred claims and allocated claim adjustment expenses, net of reinsurance, less cumulative paid claims and allocated claim adjustment expenses, net of reinsurance to reconcile to total claims and benefits payable, net of reinsurance as of December 31, 2018. The tables provide undiscounted information about claims development by accident year for the significant short duration claims and benefits

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payable balances in Global Lifestyle and Global Housing. In addition, the tables present the total of IBNR plus expected development on reported claims by accident year and the cumulative number of reported claims as supplementary information. Foreign exchange rates have been applied to the loss development data presented below using December 31, 2018 exchange rates for all periods to remove the impact of exchange rate movements over time, and thereby enhancing the comparability of the data. Five years of claims development information is provided since most of the claims are fully developed after five years, as shown in the payout ratio tables. The TWG acquisition is presented retrospectively separately below to improve comparability across the years presented. In future years, TWG will be combined and included within the Global Lifestyle table.

Global Lifestyle (Excluding TWG) Net Claims Development Tables

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance

Years Ended December 31,

						December 31, 2018	
Accident Year	2014 Unaudited	2015 Unaudited	2016 Unaudited	2017 Unaudited	2018	Total of Incurred-but-Not Reported Liabilities Plus Expected Development on Reported Claims (1)	Cumulative Number of Reported Claims (2)
2014	$ 709.5	$ 674.7	$ 672.5	$ 672.0	$ 672.1	$ 0.2	8,203,992
2015		657.1	619.8	618.3	618.1	0.4	8,486,469
2016			668.3	639.7	637.5	0.8	9,125,909
2017				699.4	683.3	2.7	8,263,195
2018					764.9	83.8	7,212,946
				Total	$ 3,375.9		

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance
Years Ended December 31,

Accident Year	2014 Unaudited	2015 Unaudited	2016 Unaudited	2017 Unaudited	2018
2014	$ 574.5	$ 665.9	$ 670.5	$ 671.0	$ 671.7
2015		522.4	611.8	616.4	617.5
2016			540.4	631.8	636.0
2017				567.5	677.0
2018					640.2
Total					$ 3,242.4
Outstanding claims and benefits payable before 2014, net of reinsurance					1.2
Claims and benefits payable, net of reinsurance					$ 134.7

Average Annual Payout of Incurred Claims by Age, Net of Reinsurance

2014 Unaudited	2015 Unaudited	2016 Unaudited	2017 Unaudited	2018 Unaudited
84.4%	14.6%	0.7%	0.1%	0.1%

(1) Includes a provision for development on case reserves.
(2) Number of paid claims plus open (pending) claims. Claim count information related to ceded reinsurance is not reflected as it cannot be reasonably defined or quantified, given that the Company's reinsurance includes non-proportional treaties.

Using the December 31, 2018 foreign exchange rates for all years, Global Lifestyle (excluding TWG) experienced $17.0 million of favorable loss development for the year ended December 31, 2018, compared to favorable loss development of $30.0 million for the year ended December 31, 2017 and $39.0 million for the year ended December

31, 2016. These amounts are based on the change in net incurred losses from the claims development triangles above, plus additional impacts from accident years prior to 2014. Credit insurance and extended service contract products have been the main contributors to the favorable development in all years presented, some of which is contractually subject to retrospective commission payments.

The U.S. and European credit insurance businesses have been in runoff over the past three years. The loss experience, particularly loss frequency, has been more favorable than was anticipated in the prior years' reserving processes. For both the years ended December 31, 2018 and 2017, the favorable development decreased among extended service contracts and credit insurance products. The reduction was attributable to changing client mix and reductions in conservative assumptions informed by hindsight analysis. In 2016, the favorable loss development was also impacted by improved results for mobile after reserves had been strengthened as of December 31, 2015 in response to reserve deficiencies from the prior years. Foreign exchange rate movements over time caused the reserve redundancies shown in the reserve roll forward table to vary from what is reflected in the claims development tables for Global Lifestyle (excluding TWG). The impacts by year were $1.1 million, $(1.7) million, and $3.1 million for the years ended December 31, 2018, 2017 and 2016, respectively. The claims development tables above remove the impact due to changing foreign exchange rates over time.

TWG Net Claims Development Tables

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance
Years Ended December 31,

Accident Year	2014 Unaudited	2015 Unaudited	2016 Unaudited	2017 Unaudited	2018	December 31, 2018 Total of Incurred-but-Not Reported Liabilities Plus Expected Development on Reported Claims (1)	Cumulative Number of Reported Claims (2)
2014	$ 449.0	$ 432.6	$ 433.3	$ 436.5	$ 437.6	$ —	2,213,674
2015		434.5	427.5	430.4	434.5	0.6	2,230,151
2016			444.2	444.4	452.3	3.2	1,853,562
2017				514.2	505.9	6.7	1,807,698
2018					612.0	67.0	1,629,305
				Total	$ 2,442.3		

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance
Years Ended December 31,

Accident Year	2014 Unaudited	2015 Unaudited	2016 Unaudited	2017 Unaudited	2018
2014	$ 365.3	$ 427.3	$ 430.8	$ 432.3	$ 433.9
2015		361.1	423.3	427.6	429.7
2016			371.3	440.2	444.3
2017				419.2	496.3
2018					506.0
Total					$ 2,310.2
Outstanding claims and benefits payable before 2014, net of reinsurance					8.0
Claims and benefits payable, net of reinsurance					$ 140.1

Average Annual Payout of Incurred Claims by Age, Net of Reinsurance

2014 Unaudited	2015 Unaudited	2016 Unaudited	2017 Unaudited	2018 Unaudited
83.5%	14.8%	0.9%	0.4%	0.4%

(1) Includes a provision for development on case reserves.
(2) Number of paid claims plus open (pending) claims. Claim count information related to ceded reinsurance is not reflected as it cannot be reasonably defined or quantified, given that the Company’s reinsurance includes non-proportional treaties.

The claims development tables for TWG are presented on a retrospective basis to improve comparability across the years presented. Using the December 31, 2018 foreign exchange rates for all years, TWG experienced $6.7 million of unfavorable loss development for the year ended December 31, 2018, compared to unfavorable loss development of $9.6 million for the year ended December 31, 2017 and $1.9 million for the year ended December 31, 2016. These amounts are based on the change in net incurred losses from the claims development triangles above, plus additional impacts from accident years prior to 2014. Unfavorable claims experience from vehicle service contracts in North America was the main source of the prior year development in the last three years.

Global Housing Net Claims Development Tables

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance
Years Ended December 31,

						December 31, 2018	
Accident Year	2014 Unaudited	2015 Unaudited	2016 Unaudited	2017 Unaudited	2018	Total of Incurred-but-Not Reported Liabilities Plus Expected Development on Reported Claims (1)	Cumulative Number of Reported Claims (2)
2014	$ 897.6	$ 856.7	$ 856.4	$ 857.4	$ 857.3	$ 4.2	212,351
2015		792.4	753.1	758.8	757.0	7.5	198,003
2016			852.9	835.1	839.9	14.4	200,299
2017				965.6	977.6	59.4	246,921
2018					916.9	230.4	180,106
				Total	$ 4,348.7		

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance
Years Ended December 31,

Accident Year	2014 Unaudited	2015 Unaudited	2016 Unaudited	2017 Unaudited	2018
2014	$ 595.7	$ 794.4	$ 831.5	$ 845.5	$ 850.9
2015		518.7	703.0	733.2	745.1
2016			599.4	781.6	817.6
2017				701.2	903.0
2018					623.2
Total					$ 3,939.8
Outstanding claims and benefits payable before 2014, net of reinsurance					5.6
Claims and benefits payable, net of reinsurance					$ 414.5

Average Annual Payout of Incurred Claims by Age, Net of Reinsurance

2014 Unaudited	2015 Unaudited	2016 Unaudited	2017 Unaudited	2018 Unaudited
70.7%	22.8%	4.3%	1.6%	0.6%

(1) Includes a provision for development on case reserves.

(2) Number of paid claims plus open (pending) claims. Claim frequency is determined at a claimant reporting level. Depending on the nature of the product and related coverage triggers, it is possible for a claimant to contribute multiple claim counts in a given policy period. Claim count information related to ceded reinsurance is not reflected as it cannot be reasonably defined or quantified, given that the Company's reinsurance includes non-proportional treaties.

For the year ended December 31, 2018, Global Housing experienced $16.3 million of unfavorable loss development, compared to favorable loss development of $9.6 million for the year ended December 31, 2017 and $30.1 million for the year ended December 31, 2016. These amounts are based on the change in net incurred losses from the claims development data above, plus additional impacts from accident years prior to 2014. For the year ended December 31, 2018, Global Housing experienced unfavorable development from Hurricane Maria of $18.4 million as projected losses have exceeded available reinsurance limits. Excluding catastrophes, favorable development decreased due to rising severity trends for water damage and non-catastrophe related weather claims on lender-placed homeowners products. For the year ended December 31, 2017, favorable development decreased due to the moderating favorable trend in theft and vandalism claims across lender-placed homeowners products, partially offset by $5.2 million of favorable development from Hurricane Matthew. For the year ended December 31, 2016, the favorable loss development was driven by continued favorable theft and vandalism trends on lender-placed homeowners products from accident year 2015.

Reconciliation of the Disclosure of Net Incurred and Paid Claims Development to the Liability for Unpaid Claims and Benefits Payable

	December 31, 2018
Net outstanding liabilities	
Global Lifestyle (excluding TWG)	$ 134.7
TWG	140.1
Global Housing	414.5
Other short-duration insurance lines (1)	32.0
Disposed short-duration insurance lines (Assurant Health)	2.5
Claims and benefits payable, net of reinsurance	723.8
Reinsurance recoverable on unpaid claims	
Global Lifestyle (excluding TWG)	104.5
TWG (2)	320.7
Global Housing	228.0
Other short-duration insurance lines (3)	4.0
Disposed short-duration insurance lines (Assurant Employee Benefits and Assurant Health)	673.8
Total reinsurance recoverable on unpaid claims	1,331.0
Insurance lines other than short-duration	750.6
Unallocated claim adjustment expense	8.3
Total claims and benefits payable	$ 2,813.7

(1) Asbestos and pollution reserves made up $22.9 million of the other short-duration insurance lines.

(2) Disposed of property and casualty business make up $246.6 million of $320.7 million in reinsurance recoverables for TWG.

(3) Asbestos and pollution recoveries accounted for all of the other short-duration insurance lines.

17. Reinsurance

In the ordinary course of business, the Company is involved in both the assumption and cession of reinsurance with non-affiliated companies. The following table provides details of the reinsurance recoverables balance as of the dates indicated:

	December 31,	
	2018	2017
Ceded future policyholder benefits and expense	$3,132.3	$4,440.9
Ceded unearned premium	3,876.3	2,014.5
Ceded claims and benefits payable	2,046.1	3,183.0
Ceded paid losses	111.3	151.8
Total	$9,166.0	$9,790.2

A key credit quality indicator for reinsurance is the A.M. Best Company (“A.M. Best”) financial strength ratings of the reinsurer. A.M. Best financial strength ratings are an independent opinion of a reinsurer’s ability to meet ongoing obligations to policyholders. The A.M. Best ratings for new reinsurance agreements where there is material credit exposure are reviewed at the time of execution. The A.M. Best ratings for existing reinsurance agreements are reviewed on a quarterly basis, or sooner based on developments. The following table provides the reinsurance recoverable as of December 31, 2018 grouped by A.M. Best financial strength ratings:

A.M. Best Rating of Reinsurer	**Ceded future policyholder benefits and expense**	**Ceded unearned premiums**	**Ceded claims and benefits payable**	**Ceded paid losses**	**Total**
A++ or A+	$ 1,825.1	$49.4	$ 1,465.9	$ 23.2	$3,363.6
A or A-	131.9	112.0	84.7	21.6	350.2
B++ or B+	1,170.2	22.5	135.5	3.7	1,331.9
B or B-	—	—	—	—	—
C and below	—	—	—	0.1	0.1
Not Rated (1)	5.1	3,692.4	360.0	63.0	4,120.5
Total	3,132.3	3,876.3	2,046.1	111.6	9,166.3
Less: Allowance	—	—	—	(0.3)	(0.3)
Net reinsurance recoverable	$ 3,132.3	$3,876.3	$ 2,046.1	$ 111.3	$9,166.0

(1) Not Rated ceded claims and benefits payable included reinsurance recoverables of $119.8 million as of December 31, 2018 which were ceded to the U.S. government. The Company acts as an administrator for the U.S. government under the voluntary National Flood Insurance Program.

The Company has used reinsurance to exit certain businesses, including the Assurant Employee Benefits business and blocks of individual life, annuity, and long-term care business. The reinsurance recoverables relating to these dispositions amounted to $4.82 billion as of December 31, 2018, of which $4.41 billion was attributable to the four reinsurers with the largest reinsurance recoverable balances relating to these dispositions: Sun Life, John Hancock, Talcott Resolution (formerly owned by The Hartford) and Employers Reassurance Corporation (“ERAC”). The A.M. Best financial strength ratings of these four reinsurers was A+, A+, B++, and B+, respectively. A.M. Best currently maintains a stable outlook on the financial strength ratings of Sun Life, John Hancock, Talcott Resolution and ERAC. Most of the assets backing reserves relating to reinsurance recoverables from Sun Life, John Hancock and Talcott Resolution are held in trust. There are no assets or other collateral backing reserves relating to reinsurance recoverables from ERAC.

A substantial portion of the Not Rated category is related to Global Lifestyle’s and Global Housing’s agreements to reinsure premiums and risks related to business generated by certain clients to the clients’ own captive insurance companies or to reinsurance subsidiaries in which the clients have an ownership interest. To mitigate exposure to credit risk for these reinsurers, the Company evaluates the financial condition of the reinsurer and typically holds substantial collateral (in the form of funds withheld, trusts and letters of credit) as security. The Not Rated category also includes recoverables from the National Flood Insurance Program and the Florida Hurricane Catastrophe Fund.

An allowance for doubtful accounts related to reinsurance recoverables is recorded on the basis of periodic evaluations of balances due from reinsurers (net of collateral), reinsurer solvency, management’s experience and current economic conditions. The allowance for doubtful accounts was $0.3 million at both December 31, 2018 and 2017. There were no additions or write-downs charged against the allowance during the years ended December 31, 2018 or 2017.

The effect of reinsurance on premiums earned and benefits incurred was as follows for the periods indicated:

	Years Ended December 31,								
	2018			**2017**			**2016**		
	Long Duration	**Short Duration**	**Total**	**Long Duration**	**Short Duration**	**Total**	**Long Duration**	**Short Duration**	**Total**
Direct earned premiums	$412.8	$11,291.0	$11,703.8	$440.3	$9,090.5	$9,530.8	$472.1	$9,202.7	$9,674.8
Premiums assumed	3.3	150.0	153.3	3.7	150.2	153.9	4.6	365.3	369.9
Premiums ceded	(346.0)	(5,354.2)	(5,700.2)	(372.1)	(4,908.5)	(5,280.6)	(385.5)	(4,651.9)	(5,037.4)
Net earned premiums	$70.1	$6,086.8	$6,156.9	$71.9	$4,332.2	$4,404.1	$91.2	$4,916.1	$5,007.3
Direct policyholder benefits	$1,252.8	$5,050.1	$6,302.9	$918.2	$5,521.3	$6,439.5	$1,517.9	$4,203.3	$5,721.2
Policyholder benefits assumed	14.9	93.9	108.8	14.6	213.5	228.1	15.1	154.2	169.3
Policyholder benefits ceded	(995.7)	(3,073.4)	(4,069.1)	(668.8)	(4,128.2)	(4,797.0)	(1,272.3)	(2,809.7)	(4,082.0)
Net policyholder	$272.0	$2,070.6	$2,342.6	$264.0	$1,606.6	$1,870.6	$260.7	$1,547.8	$1,808.5

benefits

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The Company had $553.5 million and $596.5 million of invested assets held in trusts or by custodians as of December 31, 2018 and 2017, respectively, for the benefit of others related to certain reinsurance arrangements.
The Company utilizes ceded reinsurance for loss protection and capital management, business dispositions, and in the Global Lifestyle and Global Housing segments, for client risk and profit sharing.

Loss Protection and Capital Management

As part of the Company's overall risk and capacity management strategy, the Company purchases reinsurance for certain risks underwritten by the Company's various segments, including significant individual or catastrophic claims. For those product lines where there is exposure to losses from catastrophe events, the Company closely monitors and manages its aggregate risk exposure by geographic area. The Company has entered into reinsurance treaties to manage exposure to these types of events.

Business Divestitures

The Company has used reinsurance to sell certain businesses, such as the disposals of Assurant Employee Benefits, Fortis Financial Group and Long-Term Care. Reinsurance was used in these cases to facilitate the transactions because the businesses shared legal entities with operating segments that the Company retained. Assets supporting liabilities ceded relating to these businesses are mainly held in trusts and the separate accounts relating to Fortis Financial Group are still reflected in the Company's consolidated balance sheets.
If the reinsurers became insolvent, the Company would be exposed to the risk that the assets in the trusts and/or the separate accounts, if any, would be insufficient to support the liabilities that would revert back to the Company. The reinsurance recoverable from Sun Life was $761.7 million and $889.8 million as of December 31, 2018 and 2017, respectively. The reinsurance recoverable from Talcott Resolution was $525.7 million and $1.01 billion as of December 31, 2018 and 2017, respectively. The reinsurance recoverable from John Hancock was $2.34 billion and $4.19 billion as of December 31, 2018 and 2017, respectively.
The reinsurance agreement associated with the Fortis Financial Group sale also stipulates that Talcott Resolution contributes funds to increase the value of the separate account assets relating to Modified Guaranteed Annuity business sold if such value declines below the value of the associated liabilities. If Talcott Resolution fails to fulfill these obligations, the Company will be obligated to make these payments.
In addition, the Company would be responsible for administering this business in the event of reinsurer insolvency. The Company does not currently have the administrative systems and capabilities to process this business. Accordingly, the Company would need to obtain those capabilities in the event of an insolvency of one or more of the reinsurers of these businesses. The Company might be forced to obtain such capabilities on unfavorable terms with a resulting material adverse effect on our results of operations and financial condition.
As of December 31, 2018, the Company was not aware of any regulatory actions taken with respect to the solvency of the insurance subsidiaries of Sun Life, Talcott Resolution or John Hancock that reinsure the Assurant Employee Benefits, Fortis Financial Group and Long-Term Care businesses, and the Company has not been obligated to fulfill any of such reinsurers' obligations.
Sun Life, John Hancock and Talcott Resolution have paid their obligations when due and there have been no disputes.

Segment Client Risk and Profit Sharing

The Global Lifestyle and Global Housing segments write business produced by their clients, such as mobile providers, mortgage lenders and servicers, and financial institutions, and reinsure all or a portion of such business to insurance subsidiaries of some clients. Such arrangements allow significant flexibility in structuring the sharing of risks and profits on the underlying business.
A substantial portion of Global Lifestyle's and Global Housing's reinsurance activities are related to agreements to reinsure premiums and risks related to business generated by certain clients to the clients' own captive insurance companies or to reinsurance subsidiaries in which the clients have an ownership interest. Through these arrangements, the Company's insurance subsidiaries share some of the premiums and risk related to client-generated business. When the reinsurance companies are not authorized to do business in the state of domicile of the Company's insurance subsidiary, the Company's insurance subsidiary generally obtains collateral, such as a trust or a letter of credit, from the reinsurance company or its affiliate in an amount equal to the outstanding reserves to obtain full statutory financial credit in the domiciliary state for the reinsurance.

The Company's reinsurance agreements do not relieve the Company from its direct obligation to its insureds. Thus, a credit exposure exists to the extent that any reinsurer is unable to meet the obligations assumed in the reinsurance agreements.

To mitigate its exposure to reinsurance insolvencies, the Company evaluates the financial condition of its reinsurers and typically holds substantial collateral (in the form of funds withheld, trusts and letters of credit) as security under the reinsurance agreements.

18. Debt

The following table shows the principal amount and carrying value of the Company's outstanding debt, less unamortized discount and issuance costs as applicable, as of December 31, 2018 and 2017:

		December 31,	
		2018	2017
	Principal Amount	Carrying Value	
2.50% Senior Notes due March 2018 (1)	$350.0	$—	$349.8
Floating Rate Senior Notes due March 2021 (2)	300.0	298.1	—
4.00% Senior Notes due March 2023	350.0	348.1	347.7
4.20% Senior Notes due September 2023	300.0	296.8	—
4.90% Senior Notes due March 2028	300.0	297.6	—
6.75% Senior Notes due February 2034	375.0	370.9	370.7
7.00% Fixed-to-Floating Rate Subordinated Notes due March 2048 (3)	400.0	394.5	—
Total debt		$2,006.0	$1,068.2

(1) Repaid upon maturity on March 15, 2018.

(2) Bears floating interest at a rate equal to three-month LIBOR plus 1.25%.

(3) Bears a 7.00% annual interest rate from March 2018 to March 2028 and an annual interest rate equal to three-month LIBOR plus 4.135% thereafter.

For the years ended December 31, 2018, 2017 and 2016, interest expense was $100.3 million, $49.5 million and $57.6 million, respectively. In 2018, interest expense includes derivative related activities described in the interest rate derivatives section below. There was $28.2 million and $16.1 million of accrued interest at December 31, 2018 and 2017, respectively.

Debt Issuances

2021, 2023 and 2028 Senior Notes: In March 2018, the Company issued the following three series of senior notes with an aggregate principal amount of $900.0 million:

- *2021 Senior Notes:* The first series of senior notes is $300.0 million in principal amount, bears floating interest rate equal to three-month LIBOR plus 1.25% (4.06% as of December 31, 2018) and is payable in a single installment due March 2021 ("2021 Senior Notes"). Interest on the 2021 Senior Notes is payable quarterly. Commencing on or after March 2019, the Company may redeem the 2021 Senior Notes at any time in whole or from time to time in part at a redemption price equal to 100% of the principal amount being redeemed plus accrued and unpaid interest.
- *2023 Senior Notes:* The second series of senior notes is $300.0 million in principal amount, bears interest at 4.20% per year, is payable in a single installment due September 2023 and was issued at a 0.233% discount ("2023 Senior Notes"). Interest on the 2023 Senior Notes is payable semi-annually. Prior to August 2023, the Company may redeem the 2023 Senior Notes at any time in whole or from time to time in part at a make-whole premium plus accrued and unpaid interest. On or after that date, the Company may redeem the 2023 Senior Notes at any time in whole or from time to time in part at a redemption price equal to 100% of the principal amount being redeemed plus accrued and unpaid interest.
- *2028 Senior Notes:* The third series of senior notes is $300.0 million in principal amount, bears interest at 4.90% per year, is payable in a single installment due March 2028 and was issued at a 0.383% discount ("2028 Senior Notes"). Interest on the 2028 Senior Notes is payable semi-annually. Prior to December 2027, the Company may redeem the 2028 Senior Notes at any time in whole or from time to time in part at a make-whole premium plus accrued and unpaid interest. On or after that date, the Company may redeem the 2028 Senior Notes at any time in whole or from time to time in part at a redemption price equal to 100% of the principal amount being redeemed plus accrued and unpaid interest.

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The interest rate payable on each of the 2021 Senior Notes, 2023 Senior Notes and the 2028 Senior Notes will be subject to adjustment from time to time, if either Moody's Investors Service, Inc. ("Moody's") or S&P Global Ratings ("S&P") downgrades the credit rating assigned to such series of senior notes to Ba1 or below or to BB+ or below, respectively, or subsequently upgrades the credit ratings once the senior notes are at or below such levels. The following table details the increase in interest rate over the issuance rate by rating with the impact equal to the sum of the number of basis points next to such rating for a maximum increase of 200 basis points over the issuance rate:

	Rating Agencies		
Rating Levels	**Moody's (1)**	**S&P (1)**	**Interest Rate Increase (2)**
1	Ba1	BB+	25 basis points
2	Ba2	BB	50 basis points
3	Ba3	BB-	75 basis points
4	B1 or below	B+ or below	100 basis points

(1) Including the equivalent ratings of any substitute rating agency.
(2) Applies to each rating agency individually.

Subordinated Notes

In March 2018, the Company issued fixed-to-floating rate subordinated notes due March 2048 with principal amount of $400.0 million (the "Subordinated Notes"), which bear interest from March 2018 to March 2028 at an annual rate of 7.00%, payable semi-annually. The Subordinated Notes will bear interest at an annual rate equal to three-month LIBOR plus 4.135%, payable quarterly, beginning in June 2028. On or after March 2028, the Company may redeem the Subordinated Notes in whole at any time or in part from time to time at a redemption price equal to their principal amount plus accrued and unpaid interest; provided that if they are not redeemed in whole, a minimum amount must remain outstanding. At any time prior to March 2028, the Company may redeem the Subordinated Notes in whole but not in part after the occurrence of a tax event, rating agency event or regulatory capital event as defined in the global note representing the Subordinated Notes, at a redemption price equal to (i) with respect to a rating agency event, 102% of their principal amount and (ii) with respect to a tax event or regulatory capital event, their principal amount plus accrued and unpaid interest.

In addition, so long as no event of default with respect to the Subordinated Notes has occurred and is continuing, the Company has the right, on one or more occasions, to defer the payment of interest on the Subordinated Notes for one or more consecutive interest periods for up to five years as described in the global note representing the Subordinated Notes. During a deferral period, interest will continue to accrue on the Subordinated Notes at the then-applicable interest rate. At any time when the Company has given notice of its election to defer interest payments on the Subordinated Notes, the Company generally may not make payments on or redeem or purchase any shares of the Company's capital stock or any of its debt securities or guarantees that rank upon the Company's liquidation on a parity with or junior to the Subordinated Notes, subject to certain limited exceptions.

The net proceeds from the sale of the Notes were $1.29 billion, after deducting the underwriting discounts and offering expenses. The Company used the proceeds from the 2021 Senior Notes, the 2023 Senior Notes, the 2028 Senior Notes and the Subordinated Notes, together with the proceeds from the issuance of its 6.50% Series D Mandatory Convertible Preferred Stock, par value of $1.00 per share (the "MCPS"), available cash on hand at closing and common stock consideration, to fund the TWG acquisition and pay related fees and expenses. A portion of the aggregate proceeds was used to repay the Company's then-outstanding $350.0 million of 2.50% Senior Notes upon maturity in March 2018.

Other Notes

In March 2013, the Company issued two series of senior notes with an aggregate principal amount of $700.0 million. The first series was $350.0 million in principal amount, bore interest at 2.50% per year and was repaid in a single installment in March 2018. The second series is $350.0 million in principal amount and was issued at a 0.365% discount. This series bears interest at 4.00% per year and is payable in a single installment due March 2023. Interest is payable semi-annually. The Company may redeem the outstanding series of senior notes in whole or in part at any time and from time to time before maturity at the redemption price set forth in the global note representing the outstanding series of senior notes.

In February 2004, the Company issued senior notes with an aggregate principal amount of $475.0 million at a 0.61% discount, which bear interest at 6.75% per year and are payable in a single installment due February 2034. Interest is payable semi-annually. These senior notes are not redeemable prior to maturity. In December 2016, the Company completed a cash tender offer and purchased $100.0 million in aggregate principal amount of such senior notes.

Credit Facility and Commercial Paper Program

The Company has a five-year senior unsecured $450.0 million revolving credit agreement (the “Credit Facility”) with a syndicate of banks arranged by JPMorgan Chase Bank, N.A. and Wells Fargo Bank, National Association. The Credit Facility provides for revolving loans and the issuance of multi-bank, syndicated letters of credit and letters of credit from a sole issuing bank in an aggregate amount of $450.0 million, which may be increased up to $575.0 million. The Credit Facility is available until December 2022, provided the Company is in compliance with all covenants. The Credit Facility has a sublimit for letters of credit issued thereunder of $50.0 million. The proceeds of these loans may be used for the Company’s commercial paper program or for general corporate purposes.

The Company’s commercial paper program requires the Company to maintain liquidity facilities either in an available amount equal to any outstanding notes from the program or in an amount sufficient to maintain the ratings assigned to the notes issued from the program. The Company’s commercial paper is rated AMB-1 by A.M. Best, P-3 by Moody’s and A-2 by S&P. The Company’s subsidiaries do not maintain commercial paper or other borrowing facilities. This program is currently backed up by the Credit Facility, of which $441.0 million was available at December 31, 2018, and $9.0 million letters of credit were outstanding.

The Company did not use the commercial paper program during the years ended December 31, 2018 or 2017 and there were no amounts relating to the commercial paper program outstanding as of December 31, 2018 or 2017. The Company made no borrowings using the Credit Facility during the years ended December 31, 2018 or 2017 and no loans were outstanding as of December 31, 2018 or 2017.

Term Loan and Bridge Loan Facilities

In March 2018, the commitments under the Company’s $1.50 billion senior unsecured bridge loan facility were terminated. In May 2018, the commitments under the Company’s senior unsecured term loan facility were terminated. During the year ended December 31, 2018, the Company incurred $9.8 million of expense related to the amortization of costs capitalized in connection with such facilities.

Covenants

The Credit Facility contains restrictive covenants including, but not limited to:

(i) Maintenance of a maximum consolidated total debt to capitalization ratio on the last day of any fiscal quarter of not greater than 0.35 to 1.0, subject to certain exceptions; and

(ii) Maintenance of a consolidated adjusted net worth in an amount not less than a “Minimum Amount” equal to the sum of (a) the greater of 70% of the Company’s consolidated adjusted net worth on the date of the closing of the TWG acquisition and $2.72 billion, (b) 25% of consolidated net income for each fiscal quarter (if positive) beginning with the first fiscal quarter ending after the date of the closing of the TWG acquisition and (c) 25% of the net cash proceeds received from any capital contribution to, or issuance of any capital stock, disqualified capital stock and hybrid securities, received after the closing of the TWG acquisition.

In the event of the breach of certain covenants, all obligations under the Credit Facility, including unpaid principal and accrued interest and outstanding letters of credit, may become immediately due and payable.

Interest Rate Derivatives

In March 2018, the Company terminated a series of derivative transactions it had entered into in 2017 to hedge the interest rate risk related to interest payments on a forecasted issuance of debt. The Company determined that the derivatives qualified for hedge accounting as effective cash flow hedges and recognized a deferred gain of $26.7 million upon settlement that was reported through other comprehensive income. The deferred gain is being recognized as a reduction in interest expense related to the 2023 Senior Notes, the 2028 Senior Notes and the Subordinated Notes on an effective yield basis. The amortization of the deferred gain for the year ended December 31, 2018 was $2.2 million. The remaining deferred gain as of December 31, 2018 was $24.5 million. Additionally, the Company expensed $8.6 million of the premium paid for the derivatives as a component of interest expense for the year ended December 31, 2018.

In March 2018, the Company entered into a three-year interest rate swap under which the Company pays interest on $150.0 million of the 2021 Senior Notes at a fixed rate of 2.72% to the counterparty who in return pays the Company a variable

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rate indexed to the three-month LIBOR rate. The Company determined that the swap qualifies for hedge accounting as an effective cash flow hedge.

19. Equity Transactions

Common Stock

Changes in the number of shares of common stock outstanding are as follows for the periods presented:

	December 31,		
	2018	2017	2016
Shares of common stock outstanding, beginning	52,417,812	55,941,480	65,850,386
Issuance of shares of common stock for TWG acquisition	10,399,862	—	—
Vested restricted stock and restricted stock units, net (1)	170,426	185,890	214,828
Issuance related to performance share units (1)	110,137	138,337	290,067
Issuance related to ESPP	80,425	85,314	104,751
Shares of common stock repurchased	(1,269,683)	(3,933,209)	(10,518,552)
Shares of common stock outstanding, ending	61,908,979	52,417,812	55,941,480

(1) Vested restricted stock, restricted stock units and performance share units are shown net of shares of common stock retired to cover participant income tax liabilities.

The Company is authorized to issue 800,000,000 shares of common stock. In addition, 150,001 shares of Class B common stock and 400,001 shares of Class C common stock are authorized but have not been issued.

Stock Repurchase

On November 5, 2018, the Company's Board of Directors (the "Board") authorized the Company to repurchase up to an additional $600.0 million of its outstanding common stock.

During the year ended December 31, 2018, the Company repurchased 1,269,683 shares of the Company's outstanding common stock at a cost of $132.3 million, exclusive of commissions, leaving $761.2 million remaining under the total repurchase authorization at December 31, 2018. During the years ended December 31, 2017 and 2016, the Company repurchased 3,933,209 and 10,518,552 shares of the Company's outstanding common stock at a cost, exclusive of commissions, of $389.5 million and $869.4 million, respectively.

The timing and the amount of future repurchases will depend on market conditions, the Company's financial condition, results of operations and liquidity and other factors.

Issuance of Mandatory Convertible Preferred Stock

In March 2018, the Company issued 2,875,000 shares of the MCPS at a public offering price of $100.00 per share. The net proceeds from the sale of the MCPS was $276.4 million after deducting underwriting discounts and offering expenses. Refer to Note 18 for further details on the use of proceeds from this offering.

Each outstanding share of MCPS will convert automatically on March 15, 2021 into between 0.9358 (the "minimum conversion rate") and 1.1229 shares of common stock, subject to customary anti-dilution adjustments. At any time prior to March 2021, holders may elect to convert each share of MCPS into shares of common stock at the minimum conversion rate or in the event of a fundamental change at the specified rates defined in the Certificate of Designations of the MCPS.

Dividends on the MCPS will be payable on a cumulative basis when, as and if declared, at an annual rate of 6.50% of the liquidation preference of $100.00 per share. The Company may pay declared dividends in cash or, subject to certain limitations, in shares of the Company's common stock, or in any combination of cash and shares of the Company's common stock quarterly, commencing in June 2018 and ending in March 2021. No dividend or distribution may be declared or paid on common stock or any other class or series of junior stock, and no common stock or any other class or series of junior stock or parity stock may be purchased, redeemed or otherwise acquired for consideration unless all accumulated and unpaid dividends on the MCPS for all preceding dividend periods have been declared and paid in full, subject to certain limited exceptions. The Company paid preferred stock dividends of $14.2 million for the year ended December 31, 2018.

Explanation of Responses:

20. Stock Based Compensation
In accordance with the guidance on share-based compensation, the Company recognized stock-based compensation costs based on the grant date fair value. For the years ended December 31, 2018, 2017 and 2016, the Company recognized compensation costs net of a 5% per year estimated forfeiture rate on a pro-rated basis over the remaining vesting period.
Long-Term Equity Incentive Plan
Under the 2017 Assurant, Inc. Long-Term Equity Incentive Plan (the "ALTEIP"), the Company is authorized to issue up to 1,500,000 new shares of the Company's common stock to employees, officers and non-employee directors. Under the ALTEIP, the Company may grant awards based on shares of its common stock, including stock options, stock appreciation rights ("SARs"), restricted stock (including performance shares), unrestricted stock, restricted stock units ("RSUs"), performance share units ("PSUs") and dividend equivalents. All share-based grants are awarded under the ALTEIP.
The Compensation Committee of the Board (the "Compensation Committee") awards RSUs and PSUs annually. RSUs and PSUs are promises to issue actual shares of common stock at the end of a vesting period or performance period. The RSUs granted to employees under the ALTEIP are based on salary grade and performance and generally vest one-third each year over a three-year period. RSUs receive dividend equivalents in cash during the restricted period and do not have voting rights during the restricted period. RSUs granted to non-employee directors also vest one-third each year over a three-year period, however, issuance of vested shares and payment of dividend equivalents is deferred until separation from Board service. PSUs accrue dividend equivalents during the performance period based on a target payout and will be paid in cash at the end of the performance period based on the actual number of shares issued.
Under the ALTEIP, the Company's CEO is authorized by the Board to grant common stock, restricted stock and RSUs to employees other than the Company's executive officers. The Compensation Committee recommends the annual share allotment that can be awarded by the CEO under this program. Restricted stock and RSUs granted under this program may have different vesting periods.
The fair value of RSUs is estimated using the fair market value of a share of the Company's common stock at the date of grant. The fair value of PSUs is estimated using the Monte Carlo simulation model. The number of shares of common stock a participant will receive upon vesting of a PSU award is contingent upon the Company's performance with respect to selected metrics, as identified below. The payout levels for 2018, 2017 and 2016 awards can vary between 0% and 200% (maximum) of the target (100%) ALTEIP award amount, based on the Company's level of performance against the selected metrics.
2018 PSU Performance Goals. In July 2018, the Compensation Committee granted PSUs to the management committee that reflect the remaining half of each executive's annual target long-term incentive opportunity plus an additional opportunity to further incentivize and retain executives with respect to the TWG acquisition. Payout for the PSUs is determined by reference to two metrics measured over a thirty-month performance period: (i) total shareholder return relative to the S&P 500 Index (weighted at 60%) and (ii) the realization of net pre-tax synergies in connection with the TWG acquisition (weighted at 40%) provided that a net operating earnings per share (excluding reportable catastrophes) goal is met in 2020. The aggregate grant date fair value of the additional target opportunity provided to all members of the management committee, including the Company's CEO and other named executive officers, was $11.1 million. The additional target opportunity granted to the Company's CEO had a grant date fair value of $4.0 million.
2017 and 2016 PSU Performance Goals. The Compensation Committee established total shareholder return and net operating earnings per diluted share, excluding reportable catastrophes, as the two equally weighted performance measures for PSU awards in 2017 and 2016. Total shareholder return is defined as appreciation in Company's common stock plus dividend yield to stockholders and will be measured by the performance of the Company relative to the S&P 500 Index over the three-year performance period. Net operating earnings per diluted common share, excluding reportable catastrophes, is a Company-specific profitability metric and is defined as the Company's net operating earnings, excluding reportable catastrophes, divided by the number of fully diluted common shares outstanding at the end of the period. This metric is an absolute metric that is measured against a three-year cumulative target established

by the Compensation Committee at the award date and is not tied to the performance of peer companies.

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Restricted Stock Units

A summary of the Company's outstanding RSUs is presented below:

	Restricted Stock Units	Weighted-Average Grant-Date Fair Value
Restricted stock units outstanding at December 31, 2017	662,794	$ 85.57
Grants (1)	527,125	93.20
Vests (2)	(267,779)	80.18
Forfeitures and adjustments	(57,736)	88.70
Restricted stock units outstanding at December 31, 2018	864,404	$ 90.26
Restricted stock units vested, but deferred at December 31, 2018	70,806	$ 69.56

(1) The weighted average grant date fair value for RSUs granted in 2017 and 2016 was $99.40 and $80.24, respectively.

(2) The total fair value of RSUs vested was $25.3 million, $29.4 million and $27.8 million for the years ended December 31, 2018, 2017 and 2016, respectively.

The following table shows a summary of RSU activity during the years ended December 31, 2018, 2017 and 2016:

	Years Ended December 31,		
	2018	2017	2016
RSU compensation expense	$36.0	$23.7	$22.3
Income tax benefit	(6.5)	(8.3)	(7.8)
RSU compensation expense, net of tax	$29.5	$15.4	$14.5

As of December 31, 2018, there was $25.8 million of unrecognized compensation cost related to outstanding RSUs. That cost is expected to be recognized over a weighted-average period of 1.16 years.

Performance Share Units

A summary of the Company's outstanding PSUs is presented below:

	Performance Share Units	Weighted-Average Grant-Date Fair Value
Performance share units outstanding, December 31, 2017	798,592	$ 83.30
Grants (1)	164,957	123.51
Vests (2)	(177,884)	61.82
Performance adjustment (3)	(121,447)	61.82
Forfeitures and adjustments	(29,310)	105.84
Performance share units outstanding, December 31, 2018	634,908	$ 102.91

(1) The weighted average grant date fair value for PSUs granted in 2017 and 2016 was $112.23 and $81.30, respectively.

(2) The total fair value of PSUs vested was $16.5 million, $22.5 million and $39.7 million for the years ended December 31, 2018, 2017 and 2016, respectively.

(3) Represents the change in PSUs issued based upon the attainment of performance goals established by the Company.

PSU grants above represent initial target awards and do not reflect potential increases or decreases resulting from the financial performance objectives to be determined at the end of the prospective performance period. The actual number of PSUs to be issued at the end of each performance period will range from 0% to 200% of the initial target awards.

The following table shows a summary of PSU activity during the years ended December 31, 2018, 2017 and 2016:

	Years Ended December 31,		
	2018	2017	2016
PSU compensation expense	$19.6	$10.5	$18.1
Income tax benefit	(3.1)	(3.7)	(6.3)
PSU compensation expense, net of tax	$16.5	$6.8	$11.8

Portions of the compensation expense recorded in prior periods were reversed in 2017 related to the Company's level of actual performance as measured against pre-established performance goals and peer group results. As of December 31, 2018, there was $22.1 million of unrecognized compensation cost related to outstanding PSUs. That cost is expected to be recognized over a weighted-average period of 0.84 years.
The fair value of PSUs with market conditions was estimated on the date of grant using a Monte Carlo simulation model, which utilizes multiple variables that determine the probability of satisfying the market condition stipulated in the award. Expected volatilities for awards granted during the years ended December 31, 2018, 2017 and 2016 were based on the historical prices of the Company's common stock and peer group. The expected term for grants issued during the years ended December 31, 2018, 2017 and 2016 was assumed to equal the average of the vesting period of the PSUs. The risk-free rate was based on the U.S. Treasury yield curve in effect at the time of grant.

	For awards granted during the years ended December 31,		
	2018	2017	2016
Expected volatility	23.17%	21.81%	20.46%
Expected term (years)	2.46	2.81	2.81
Risk free interest rate	2.64 %	1.62 %	1.08 %

Employee Stock Purchase Plan
Under the Employee Stock Purchase Plan (the "ESPP"), the Company is authorized to issue up to 5,000,000 new shares of common stock to employees who are participants in the ESPP. The ESPP allows eligible employees to contribute, through payroll deductions, portions of their after-tax compensation in each offering period toward the purchase of shares of the Company's common stock. There are two offering periods during the year (January 1 through June 30 and July 1 through December 31) and shares of common stock are purchased at the end of each offering period at 90% of the lower of the closing price of the common stock on the first or last day of the offering period. Participants must be employed on the last trading day of the offering period in order to purchase shares of common stock under the ESPP. The maximum number of shares of common stock that can be purchased is 5,000 per employee. Participants' contributions are limited to a maximum contribution of $7.5 thousand per offering period, or $15.0 thousand per year. The ESPP is offered to individuals who are scheduled to work a certain number of hours per week, have been continuously employed for at least six months by the start of the offering period, are not temporary employees (employed less than 12 months) and have not been on a leave of absence for more than 90 days immediately preceding the offering period.
In January 2019, the Company issued 42,950 shares of common stock at a discounted price of $80.50 for the offering period of July 1, 2018 through December 31, 2018. In January 2018, the Company issued 39,853 shares at a discounted price of $90.76 for the offering period of July 1, 2017 through December 31, 2017.
In July 2018, the Company issued 40,571 shares of common stock to employees at a discounted price of $89.31 for the offering period of January 1, 2018 through June 30, 2018. In July 2017, the Company issued 42,367 shares of common stock to employees at a discounted price of $84.71 for the offering period of January 1, 2017 through June 30, 2017.
The compensation expense recorded related to the ESPP was $1.5 million for the year ended December 31, 2018, and $1.3 million for the years ended 2017 and 2016. The related income tax benefit for disqualified disposition was $0.2 million for the years ended December 31, 2018, 2017 and 2016.

The fair value of each award under the ESPP was estimated at the beginning of each offering period using the Black-Scholes option-pricing model and assumptions in the table below. Expected volatilities are based on implied volatilities from traded options on the Company’s common stock and the historical volatility of the Company’s common stock. The risk-free rate for periods within the contractual life of the option is based on the U.S. Treasury yield curve in effect at the time of grant. The dividend yield is based on the current annualized dividend and common stock price as of the grant date.

	For awards issued during the years ended December 31,		
	2018	2017	2016
Expected volatility	20.90 - 27.73%	21.83 - 27.20%	18.30 - 22.02%
Risk free interest rates	1.61 - 2.14%	0.37 - 0.65%	0.13 - 0.49%
Dividend yield	1.49 - 1.56%	1.61 - 1.69%	1.74 - 1.89%
Expected term (years)	0.5	0.5	0.5

Non-Stock Based Incentive Plans

Deferred Compensation

The Company's deferred compensation programs consist of the AIP, the ASIC and the ADC. The AIP and the ASIC provided key employees the ability to exchange a portion of their compensation for options to purchase certain third-party mutual funds. The AIP and the ASIC were frozen in December 2004 and no additional contributions can be made to either the AIP or the ASIC. Effective March 1, 2005 and amended and restated on January 1, 2008, the ADC Plan was established in order to comply with the American Jobs Creation Act of 2004 (the "Jobs Act") and Section 409A of the Internal Revenue Code of 1986, as amended (the "IRC"). The ADC provides key employees the ability to defer a portion of their eligible compensation to be notionally invested in a variety of mutual funds. Deferrals and withdrawals under the ADC are intended to be fully compliant with the Jobs Act definition of eligible compensation and distribution requirements.

21. Accumulated Other Comprehensive Income

Certain amounts included in the consolidated statements of comprehensive income are net of reclassification adjustments. The following tables summarize those reclassification adjustments (net of taxes) for the periods indicated:

	Year Ended December 31, 2018					
	Foreign currency translation adjustment	Net unrealized gains on securities	Net unrealized gains on derivative transactions	OTTI	Unamortized net (losses) on Pension Plans	Accumulated other comprehensive income (loss)
Balance at December 31, 2017	$(281.5)	$581.2	$ —	$17.9	$(83.6)	$ 234.0
Change in accumulated other comprehensive income before reclassifications	(94.2)	(367.6)	20.1	(6.7)	(15.2)	(463.6)
Amounts reclassified from accumulated other comprehensive income	—	25.3	(1.7)	—	2.5	26.1
Net current-period other comprehensive (loss) income	(94.2)	(342.3)	18.4	(6.7)	(12.7)	(437.5)
Cumulative effect of change in accounting principles (1)	0.1	62.1	—	3.9	(18.0)	48.1
Balance at December 31, 2018	$(375.6)	$301.0	$ 18.4	$15.1	$(114.3)	$ (155.4)

(1) See Note 2 for additional information.

	Year Ended December 31, 2017				
	Foreign currency translation adjustment	Net unrealized gains on securities	OTTI	Unamortized net (losses) on Pension Plans	Accumulated other comprehensive income
Balance at December 31, 2016	$(322.1)	$459.3	$20.6	$(63.2)	$94.6
Change in accumulated other comprehensive income before reclassifications	40.6	140.2	(2.7)	(22.1)	156.0
Amounts reclassified from accumulated other comprehensive income	—	(18.3)	—	1.7	(16.6)
Net current-period other comprehensive income (loss)	40.6	121.9	(2.7)	(20.4)	139.4
Balance at December 31, 2017	$(281.5)	$581.2	$17.9	$(83.6)	$234.0

	Year Ended December 31, 2016				
	Foreign currency translation adjustment	Net unrealized gains on securities	OTTI	Unamortized net (losses) on Pension Plans	Accumulated other comprehensive income
Balance at December 31, 2015	$(270.7)	$495.5	$22.4	$(128.6)	$118.6
Change in accumulated other comprehensive income before reclassifications	(51.4)	67.9	(2.1)	80.4	94.8
Amounts reclassified from accumulated other comprehensive income	—	(104.1)	0.3	(15.0)	(118.8)
Net current-period other comprehensive (loss) income	(51.4)	(36.2)	(1.8)	65.4	(24.0)
Balance at December 31, 2016	$(322.1)	$459.3	$20.6	$(63.2)	$94.6

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The following tables summarize the reclassifications out of AOCI for the periods indicated.

Details about AOCI components	Amount reclassified from AOCI			Affected line item in the statement where net income is presented
	Years Ended December 31,			
	2018	2017	2016	
Net unrealized losses (gains) on securities	$32.0	$(28.2)	$(160.2)	Net realized gains on investments, excluding other-than-temporary impairment losses
	(6.7)	9.9	56.1	Provision for income taxes
	$25.3	$(18.3)	$(104.1)	Net of tax
Unrealized gains on derivative transactions	$(2.2)	$—	$—	Interest expense
	0.5	—	—	Provision for income taxes
	$(1.7)	$—	$—	Net of tax
OTTI	$—	$—	$0.5	Portion of net loss (gain) recognized in other comprehensive income, before taxes
	—	—	(0.2)	Provision for income taxes
	$—	$—	$0.3	Net of tax
Amortization of pension and postretirement unrecognized net periodic benefit cost:				
Amortization of net loss	$2.7	$2.6	$1.7	(1)
Settlement loss	0.5	—	—	(1)
Gain on pension plan curtailment	—	—	(29.6)	Gain on pension plan curtailment
Loss due to pension freeze	—	—	4.8	Underwriting, general and administrative expenses
	3.2	2.6	(23.1)	Total before tax
	(0.7)	(0.9)	8.1	Provision for income taxes
	$2.5	$1.7	$(15.0)	Net of tax
Total reclassifications for the period	$26.1	$(16.6)	$(118.8)	Net of tax

(1) These AOCI components are included in the computation of net periodic pension cost. See Note 23 for additional information.

22. Statutory Information

The Company's insurance subsidiaries prepare financial statements in accordance with Statutory Accounting Principles ("SAP") prescribed or permitted by the insurance departments of their states of domicile. Prescribed SAP includes the Accounting Practices and Procedures Manual of the National Association of Insurance Commissioners (the "NAIC") as well as state laws, regulations and administrative rules.

The principal differences between SAP and GAAP are: (1) policy acquisition costs are expensed as incurred under SAP, but are deferred and amortized under GAAP; (2) VOBA is not capitalized under SAP but is under GAAP; (3) amounts collected from holders of universal life-type and annuity products are recognized as premiums when collected under SAP, but are initially recorded as contract deposits under GAAP, with cost of insurance recognized as revenue when assessed and other contract charges recognized over the periods for which services are provided; (4) the classification and carrying amounts of investments in certain securities are different under SAP than under GAAP; (5) the criteria for providing asset valuation allowances, and the methodologies used to determine the amounts thereof, are different under SAP than under GAAP; (6) the timing of establishing certain reserves, and the methodologies used to determine the amounts thereof, are different under SAP than under GAAP; (7) certain assets are not admitted for purposes of determining surplus under SAP; (8) methodologies used to determine the amounts of deferred taxes, intangible assets and goodwill are different under SAP than under GAAP; and (9) the criteria for obtaining reinsurance accounting treatment is different under SAP than under GAAP, and SAP allows net presentation of insurance reserves and reinsurance recoverables.

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The combined statutory net income, excluding intercompany dividends and surplus note interest, and capital and surplus of the Company's U.S. domiciled statutory insurance subsidiaries is as follows:

	Years Ended December 31,		
	2018	**2017**	**2016**
Property & Casualty ("P&C") companies	$234.0	$267.8	$288.5
Life and Health ("L&H") companies	157.5	214.0	600.2
Total statutory net income (1) (2)	$391.5	$481.8	$888.7

	December 31,	
	2018	**2017**
P&C companies	$1,641.2	$1,146.2
L&H companies	392.7	412.0
Total statutory capital and surplus (1) (3)	$2,033.9	$1,558.2

(1) Results included $26.0 million of statutory net income for the year ended December 31, 2018 and $393.4 million in statutory capital and surplus as of December 31, 2018 from Virginia Surety Company, an insurance subsidiary from the TWG acquisition. Additionally, there was no statutory net income for the year ended December 31, 2018 or statutory capital and surplus as of December 31, 2018 from Time Insurance Company, an insurance subsidiary that was sold in the fourth quarter of 2018.

(2) The year ended December 31, 2016 includes amortization of the SAP basis of the deferred gain associated with the sale of Assurant Employee Benefits.

(3) The total statutory capital and surplus as of December 31, 2017 was reduced by $95.0 million to support capital requirements of the Company's statutory entities since the impact of the TCJA on statutory financial statements resulted in admitted net deferred tax asset reductions.

The Company also has non-insurance subsidiaries and foreign insurance subsidiaries that are not subject to SAP. The statutory net income and statutory capital and surplus amounts presented above do not include foreign insurance subsidiaries in accordance with SAP.

Insurance enterprises are required by state insurance departments to adhere to minimum risk-based capital ("RBC") requirements developed by the NAIC. All of the Company's insurance subsidiaries exceed minimum RBC requirements.

The payment of dividends to the Company by any of the Company's regulated U.S domiciled insurance subsidiaries in excess of a certain amount (i.e., extraordinary dividends) must be approved by the subsidiary's domiciliary jurisdiction department of insurance. Ordinary dividends, for which no regulatory approval is generally required, are limited to amounts determined by a formula, which varies by jurisdiction. The formula for the majority of the jurisdictions in which the Company's subsidiaries are domiciled is based on the prior year's statutory net income or 10% of the statutory surplus as of the end of the prior year. Some jurisdictions limit ordinary dividends to the greater of these two amounts, others limit them to the lesser of these two amounts and some jurisdictions exclude prior year realized capital gains from prior year net income in determining ordinary dividend capacity. Some jurisdictions have an additional stipulation that dividends may only be paid out of earned surplus. If insurance regulators determine that payment of an ordinary dividend or any other payments by the Company's insurance subsidiaries to the Company (such as payments under a tax sharing agreement or payments for employee or other services) would be adverse to policyholders or creditors, the regulators may block such payments that would otherwise be permitted without prior approval. Based on the dividend restrictions under applicable laws and regulations, the maximum amount of dividends that the Company's U.S domiciled insurance subsidiaries could pay to the Company in 2019 without regulatory approval is approximately $353.3 million. No assurance can be given that there will not be further regulatory actions restricting the ability of the Company's insurance subsidiaries to pay dividends.

State regulators require insurance companies to meet minimum capitalization standards designed to ensure that they can fulfill obligations to policyholders. Minimum capital requirements are expressed as a ratio of a company's total adjusted capital ("TAC") to its RBC (the "RBC Ratio"). TAC equals statutory surplus adjusted to exclude certain statutory liabilities. RBC is calculated by applying specified factors to various asset, premium, expense, liability, and reserve items.

Generally, if a company’s RBC Ratio is below 100% (the “Authorized Control Level”), the insurance commissioner of the company’s jurisdiction of domicile is authorized to take control of the company, to protect the interests of policyholders. If the RBC Ratio is greater than 100% but less than 200% (the “Company Action Level”), the company must submit a RBC plan to the commissioner of the jurisdiction of domicile. Corrective actions may also be required if the RBC Ratio is greater than the Company Action Level but the company fails certain trend tests.

As of December 31, 2018, the TAC of each of the Company’s insurance subsidiaries exceeded the Company Action Level and no trend tests that would require regulatory action were violated. As of December 31, 2018, the TAC of the Company’s

L&H entities subject to RBC requirements was $430.3 million. The corresponding Authorized Control Level was $65.0 million. As of December 31, 2018, the TAC of the Company's P&C entities subject to RBC requirements was $1.64 billion. The corresponding Authorized Control Level was $315.0 million.

23. Retirement and Other Employee Benefits
Defined Benefit Plans

The Company and its subsidiaries participate in a non-contributory, qualified defined benefit pension plan ("Assurant Pension Plan") covering substantially all employees. The Assurant Pension Plan is considered "qualified" because it meets the requirements of IRC Section 401(a) ("IRC 401(a)") and the Employee Retirement Income Security Act of 1974, as amended ("ERISA"). The Assurant Pension Plan is a pension equity plan with a grandfathered final average earnings plan for a certain group of employees. Benefits are based on certain years of service and the employee's compensation during certain such years of service. The Company's funding policy is to contribute amounts to the Assurant Pension Plan sufficient to meet the minimum funding requirements in ERISA, plus such additional amounts as the Company may determine to be appropriate from time to time up to the maximum permitted. The funding policy considers several factors to determine such additional amounts, including items such as the amount of service cost plus 15% of the Assurant Pension Plan deficit and the capital position of the Company. During the year ended December 31, 2018, there were no contributions to the Assurant Pension Plan. Due to the Assurant Pension Plan's current funding status, no contributions to the Assurant Pension Plan are expected during the year ending December 31, 2019. Assurant Pension Plan assets are maintained in a separate trust. Assurant Pension Plan assets and benefit obligations are measured as of December 31, 2018.

The Company also has various non-contributory, non-qualified supplemental plans covering certain employees including the Assurant Executive Pension Plan and the Assurant Supplement Executive Retirement Plan (the "SERP"). Since these plans are "non-qualified" they are not subject to the requirements of IRC 401(a) and ERISA. As such, the Company is not required, and does not, fund these plans. The qualified and nonqualified plans are referred to as "Pension Benefits" unless otherwise noted. The Company has the right to modify or terminate these benefits; however, the Company will not be relieved of its obligation to plan participants for their vested benefits.

In addition, the Company provides certain life and health care benefits ("Retirement Health Benefits") for retired employees and their dependents. On July 1, 2011, the Company terminated certain health care benefits for employees who did not qualify for "grandfathered" status and no longer offers these benefits to new hires. The Company contribution, plan design and other terms of the remaining benefits did not change for those grandfathered employees. The Company has the right to modify or terminate these benefits.

Effective January 1, 2014, the Pension Benefits plans were closed to new hires. Effective January 1, 2016, the Assurant Pension Plan was amended and split into two separate plans, the Assurant Pension Plan No. 1 ("Plan No. 1") and the Assurant Pension Plan No. 2 ("Plan No. 2"). Plan No. 1 generally covered all eligible employees (including the active population as of January 1, 2016, the remainder of the terminated vested population and all Puerto Rico participants). Plan No. 2 generally included a subset of the terminated vested population and the total population who commenced distribution of their accrued benefit prior to January 1, 2016. Assets for Plan No. 1 and Plan No. 2 remained in the Assurant, Inc. Pension Plan Trust. Effective December 31, 2017, Plan No. 1 and Plan No. 2 were merged back together into the Assurant Pension Plan.

Effective March 1, 2016, the Pension Benefits and Retirement Health Benefits (together, the "Plans") were amended such that no additional benefits will be earned after February 29, 2016. In connection with this amendment, the Company recorded a curtailment gain of $29.6 million in the first quarter 2016, which is included in the gain on pension curtailment caption in the consolidated statements of operations.

The following table presents information on the Plans for the periods indicated:

	Pension Benefits		Retirement Health Benefits	
	2018	2017	2018	2017
Change in projected benefit obligation				
Projected benefit obligation at beginning of year	$(823.1)	$(797.6)	$(104.0)	$(96.5)
Interest cost	(26.3)	(26.3)	(3.3)	(3.4)
Actuarial gain (loss), including curtailments and settlements	46.9	(36.1)	7.7	(8.0)
Benefits paid	50.3	36.9	5.1	3.9
Projected benefit obligation at end of year	$(752.2)	$(823.1)	$(94.5)	$(104.0)
Change in plan assets				
Fair value of plan assets at beginning of year	$807.1	$774.8	$48.8	$47.4
Actual return on plan assets	(32.5)	85.9	(2.0)	5.1
Employer contributions	9.2	11.2	0.2	0.2
Benefits paid (including administrative expenses)	(51.5)	(64.8)	(5.1)	(3.9)
Fair value of plan assets at end of year	$732.3	$807.1	$41.9	$48.8
Funded status at end of year	$(19.9)	$(16.0)	$(52.6)	$(55.2)

In accordance with the guidance on retirement benefits, the Company aggregates the results of the qualified and non-qualified plans as "Pension Benefits" and is required to disclose the aggregate projected benefit obligation, accumulated benefit obligation and fair value of plan assets, if the obligations within those plans exceed plan assets.

As of December 31, 2018 and 2017, the fair value of plan assets, projected benefit obligation, funded status at end of year and the accumulated benefit obligation of Pension Benefits were as follows:

	Qualified Pension Benefits		Unfunded Nonqualified Pension Benefits		Total Pension Benefits	
	2018	2017	2018	2017	2018	2017
Fair value of plan assets	$732.3	$807.1	$—	$—	$732.3	$807.1
Projected benefit obligation	(667.2)	(725.8)	(85.0)	(97.3)	(752.2)	(823.1)
Funded status at end of year	$65.1	$81.3	$(85.0)	$(97.3)	$(19.9)	$(16.0)
Accumulated benefit obligation	$667.2	$725.8	$85.0	$97.3	$752.2	$823.1

Amounts recognized in the consolidated balance sheets consist of:

	Pension Benefits		Retirement Health Benefits	
	2018	2017	2018	2017
Assets	$65.1	$81.3	$—	$—
Liabilities	$(85.0)	$(97.3)	$(52.6)	$(55.2)

Amounts recognized in AOCI consist of:

	Pension Benefits			Retirement Health Benefits		
	2018	2017	2016	2018	2017	2016
Net (loss) gain	$(141.9)	$(122.0)	$(96.4)	$(2.5)	$(6.1)	$(0.2)
Prior service (cost) credit	(0.6)	(0.6)	(0.7)	—	—	—
	$(142.5)	$(122.6)	$(97.1)	$(2.5)	$(6.1)	$(0.2)

Components of net periodic benefit cost and other amounts recognized in AOCI for the years ended December 31 were as follows:

	Pension Benefits			Retirement Health Benefits		
	2018	2017	2016	2018	2017	2016
Net periodic benefit cost						
Service cost	$—	$—	$3.3	$—	$—	$—
Interest cost	26.3	26.3	30.9	3.3	3.4	3.5
Expected return on plan assets	(36.2)	(50.0)	(54.6)	(2.2)	(3.0)	(3.0)
Amortization of net loss (gain)	2.7	2.6	1.7	—	—	—
Curtailment/settlement loss (gain)	0.5	—	(20.5)	—	—	(4.2)
Net periodic benefit cost	$(6.7)	$(21.1)	$(39.2)	$1.1	$0.4	$(3.7)
Other changes in plan assets and benefit obligations recognized in accumulated other comprehensive income						
Net loss (gain)	$23.1	$28.1	$(98.6)	$(3.5)	$5.9	$2.2
Amortization of prior service cost, and effects of curtailments/settlements	—	—	(1.7)	—	—	4.2
Amortization of net (loss) gain	(3.3)	(2.6)	(6.5)	—	—	—
Total recognized in accumulated other comprehensive income (loss)	$19.8	$25.5	$(106.8)	$(3.5)	$5.9	$6.4
Total recognized in net periodic benefit cost and other comprehensive income (loss)	$13.1	$4.4	$(146.0)	$(2.4)	$6.3	$2.7

The Company uses a five-year averaging method to determine the market-related value of Pension Benefits plan assets, which is used to calculate the expected return of plan assets component of the Plans' expense. Under this methodology, asset gains/losses that result from actual returns which differ from the Company's expected long-term rate of return on assets assumption are recognized in the market-related value of assets on a level basis over a five year period. The difference between actual as compared to expected asset returns for the Plans will be fully reflected in the market-related value of plan assets over the next five years using the methodology described above. Other post-employment benefit assets under the Retirement Health Benefits are valued at fair value.

The estimated net loss and prior service cost of Pension Benefits that will be amortized from AOCI into net periodic benefit cost over the next fiscal year are $1.1 million and less than $0.1 million, respectively. There was no estimated prior service credit (cost) and no estimated net gain (loss) of Retirement Health Benefits that will be amortized from AOCI into net periodic benefit cost over the next fiscal year.

Determination of the projected benefit obligation was based on the following weighted-average assumptions for the years ended December 31:

	Qualified Pension Benefits					Unfunded Nonqualified Pension Benefits			Retirement Health Benefits		
	2018	2017 Plan No. 1	2017 Plan No. 2	2016 Plan No. 1	2016 Plan No. 2	2018	2017	2016	2018	2017	2016
Discount rate	4.36 %	3.67 %	3.67 %	4.31 %	4.15 %	4.21 %	3.49 %	3.89 %	4.31 %	3.63 %	4.21 %

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Determination of the net periodic benefit cost was based on the following weighted-average assumptions for the years ended December 31:

	Qualified Pension Benefits					Unfunded Nonqualified Pension Benefits			Retirement Health Benefits		
	2018	2017 Plan No. 1	2017 Plan No. 2	2016 Plan No. 1	2016 Plan No. 2	2018	2017	2016	2018	2017	2016
Discount rates:											
Effective discount rate for benefit obligations	3.68 %	4.35 %	4.16 %	4.56 %	4.48 %	3.49 %	3.91 %	4.25 %	3.63 %	4.17 %	4.53 %
Effective rate for interest on benefit obligations	3.31 %	3.54 %	3.48 %	3.75 %	3.74 %	3.09 %	3.10 %	3.44 %	3.27 %	3.52 %	3.86 %
Effective discount rate for service cost	— %	— %	— %	4.34 %	— %	— %	— %	3.72 %	— %	— %	— %
Effective rate for interest on service cost	— %	— %	— %	3.62 %	— %	— %	— %	3.22 %	— %	— %	— %
Expected long-term return on plan assets	4.75 %	6.75 %	6.75 %	6.75 %	6.75 %	— %	— %	6.75 %	4.75 %	6.75 %	6.75 %

* Assumed rates of compensation increases are also used to determine net periodic benefit cost. Assumed rates varied by age and ranged from 3.25% to 9.30% for the Pension Benefits for the year ended December 31, 2016.

The selection of the Company's discount rate assumption reflects the rate at which the Plans' obligations could be effectively settled at December 31, 2018, 2017 and 2016. The methodology for selecting the discount rate was to match each Plan's cash flows to that of a yield curve that provides the equivalent yields on zero-coupon corporate bonds for each maturity. The yield curve utilized in the cash flow analysis was comprised of 258 bonds rated AA by either Moody's or S&P's with maturities between zero and 27 years. The discount rate for each Plan is the single rate that produces the same present value of cash flows. The Company utilizes a split rate approach for purposes of determining the benefit obligations and service cost as well as a spot rate approach for the calculation of interest on these items in the determination of the net periodic benefit cost.

To develop the expected long-term rate of return on assets assumption, the Company considered the current level of expected returns on risk free investments (primarily government bonds), the historical level of the risk premium associated with the other asset classes in which the portfolio is invested and the expectations for future returns of each asset class. The expected long-term rate of return on Plan assets reflects the average rate of earnings expected on the funds invested or to be invested. The expected return for each asset class was then weighted based on the targeted asset allocation to develop the expected long-term rate of return on asset assumptions for the portfolio. The Company believes the current assumption reflects the projected return on the invested assets, given the current market conditions and the modified portfolio structure. Actual return (loss) on Plan assets was (4.0)%, 11.1% and 8.1% for the years ended December 31, 2018, 2017 and 2016, respectively.

The assumed health care cost trend rates used in measuring the accumulated postretirement benefit obligation and net periodic benefit cost were as follows:

	Retirement Health Benefits		
	2018	2017	2016
Health care cost trend rate assumed for next year:			
Pre-65 Non-reimbursement Plan	8.0 %	11.1 %	8.6 %
Post-65 Non-reimbursement Plan (Medical)	5.9 %	5.9 %	5.6 %
Post-65 Non-reimbursement Plan (Rx)	13.0 %	13.5 %	9.3 %
Pre-65 Reimbursement Plan	10.4 %	10.8 %	7.6 %
Post-65 Reimbursement Plan	10.4 %	10.8 %	7.6 %
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	4.5 %	4.5 %	4.5 %
Year that the rate reaches the ultimate trend rate			
Pre-65 Non-reimbursement Plan	2037	2037	2030
Post-65 Non-reimbursement Plan (Medical & Rx)	2037	2037	2030
Pre-65 Reimbursement Plan	2037	2037	2030
Post-65 Reimbursement Plan	2037	2037	2030

Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plans. A one-percentage point change in assumed health care cost trend rates would have the following effects:

	Retirement Health Benefits		
	2018	2017	2016
One percentage point increase in health care cost trend rate			
Effect on total of service and interest cost components	$ —	$ —	$ —
Effect on postretirement benefit obligation	0.7	0.7	0.6
One percentage point decrease in health care cost trend rate			
Effect on total of service and interest cost components	$ —	$ —	$ —
Effect on postretirement benefit obligation	(0.9)	(1.0)	(0.9)

The assets of the Plans are managed to maximize their long-term pre-tax investment return, subject to the following dual constraints: minimization of required contributions and maintenance of solvency requirements. It is anticipated that periodic contributions to the Plans will, for the foreseeable future, be sufficient to meet benefit payments thus allowing the balance to be managed according to a long-term approach. The Investment Committee for the Plans meets on a quarterly basis and reviews the re-balancing of existing fund assets and the asset allocation of new fund contributions.

The goal of the Company's asset strategy is to ensure that the growth in the value of the Plan's assets over the long-term, both in real and nominal terms, manages (controls) risk exposure. Risk is managed by investing in a broad range of asset classes, and within those asset classes, a broad range of individual securities. Diversification by asset classes stabilizes total results over short-term time periods. Each asset class is externally managed by outside investment managers appointed by the Investment Committee. Derivatives may be used consistent with the Plan's investment objectives established by the Investment Committee. All securities must be U.S. dollar denominated.

The Benefit Plan Investment Committee ("BPIC") oversees the investment of the Company's plan assets. The BPIC periodically reviews the investment strategies, strategic asset allocation, liabilities and portfolio structure of the Company's plan assets. After a 2017 review and considering the funded status of the Assurant Pension Plan, the BPIC began transitioning plan assets toward a new allocation consisting of 80% fixed income, 10% real estate, 5% hedge funds and 5% equities in 2018. This transition is expected to continue through early 2019.

The assets of the Plans are primarily invested in fixed maturity and equity securities. While equity risk is fully retained, interest rate risk is hedged by aligning the duration of the fixed maturity securities with the duration of the liabilities. Specifically, interest rate swaps are used to synthetically extend the duration of fixed maturity securities to match the duration of the liabilities, as measured on a projected benefit obligation basis. In addition, the Plans' fixed income securities have exposure to credit risk. In order to adequately diversify and limit exposure to credit risk, the Investment Committee established

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parameters which include a limit on the asset types that managers are permitted to purchase, maximum exposure limits by sector and by individual issuer (based on asset quality) and minimum required ratings on individual securities. As of December 31, 2018, 77% of plan assets were invested in fixed maturity securities and 13%, 11% and 10% of those securities were concentrated in the financial, communications and consumer non-cyclical industries, with no exposure to any single creditor in excess of 3%, 5% and 4% of those industries, respectively. As of December 31, 2018, 6% of plan assets were invested in equity securities and 92% of the Plans' equity securities were invested in a mutual fund that attempts to replicate the return of the S&P 500 Index by investing its assets in large capitalization stocks that are included in the S&P 500 Index using a weighting similar to the S&P 500 Index.

The fair value hierarchy for the Company's qualified pension plan and other postretirement benefit plan assets at December 31, 2018 by asset category, is as follows:

Qualified Pension Benefits	**December 31, 2018**		
Financial Assets	**Total**	**Level 1**	**Level 2**
Cash and cash equivalents:			
Short-term investment funds	$11.8	$—	$11.8
Equity securities:			
Preferred stock	3.5	3.5	—
Mutual funds- U.S. listed large cap	40.9	40.9	—
Fixed maturity securities:			
U.S. & foreign government and government agencies and authorities	179.4	—	179.4
Corporate- U.S. & foreign investment grade	311.1	—	311.1
Corporate- U.S. & foreign high yield	72.6	—	72.6
Other investments measured at net asset value (1)	108.6	—	—
Total financial assets	$727.9 (2)	$44.4	$574.9

(1) In accordance with fair value measurements and disclosures guidance, certain investments that are measured at fair value using the net asset value practical expedient have not been classified in the fair value hierarchy. The net asset values of $38.9 million, $9.3 million and $60.4 million as of December 31, 2018 are used as a practical expedient to fair value of the multi-strategy hedge fund, private equity fund and real estate fund, respectively.

(2) The difference between the fair value of Plan assets above and the amount used in determining the funded status is due to interest receivable which is not required to be included in the fair value hierarchy.

Retirement Health Benefits	**December 31, 2018**		
Financial Assets	**Total**	**Level 1**	**Level 2**
Cash and cash equivalents:			
Short-term investment funds	$0.7	$—	$0.7
Equity securities:			
Preferred stock	0.2	0.2	—
Mutual funds- U.S. listed large cap	2.3	2.3	—
Fixed maturity securities:			
U.S. & foreign government and government agencies and authorities	10.3	—	10.3
Corporate- U.S. & foreign investment grade	17.8	—	17.8
Corporate- U.S. & foreign high yield	4.2	—	4.2
Other investments measured at net asset value (1)	6.2	—	—
Total financial assets	$41.7 (2)	$2.5	$33.0

(1) In accordance with fair value measurements and disclosures guidance, certain investments that are measured at fair value using the net asset value practical expedient have not been classified in the fair value hierarchy. The net asset values of $2.2 million, $0.5 million and $3.5 million as of December 31, 2018 are used as a practical expedient to fair value of the multi-strategy hedge fund, private equity fund and real estate fund, respectively.

(2) The difference between the fair value of Plan assets above and the amount used in determining the funded status is due to interest receivable which is not required to be included in the fair value hierarchy.

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The fair value hierarchy for the Company’s qualified pension plan and other post retirement benefit plan assets at December 31, 2017 by asset category, is as follows:

Qualified Pension Benefits	**December 31, 2017**		
Financial Assets	**Total**	**Level 1**	**Level 2**
Cash and cash equivalents:			
Short-term investment funds	$90.1	$—	$90.1
Equity securities:			
Preferred stock	5.6	5.6	—
Mutual funds- U.S. listed large cap	8.3	8.3	—
Fixed maturity securities:			
U.S. & foreign government and government agencies and authorities	184.9	—	184.9
Corporate- U.S. & foreign investment grade	314.7	—	314.7
Corporate- U.S. & foreign high yield	78.4	—	78.4
Derivatives:			
Interest rate swap	14.4	—	14.4
Other investments measured at net asset value (1)	118.6	—	—
Total financial assets	$815.0 (2)	$13.9	$682.5

(1) In accordance with fair value measurements and disclosures guidance, certain investments that are measured at fair value using the net asset value practical expedient have not been classified in the fair value hierarchy. The net asset values of $53.6 million, $8.7 million and $56.3 million as of December 31, 2017 are used as a practical expedient to fair value of the multi-strategy hedge fund, private equity fund and real estate fund, respectively.

(2) The difference between the fair value of Plan assets above and the amount used in determining the funded status is due to interest receivable which is not required to be included in the fair value hierarchy.

Retirement Health Benefits	**December 31, 2017**		
Financial Assets	**Total**	**Level 1**	**Level 2**
Cash and cash equivalents:			
Short-term investment funds	$5.5	$—	$5.5
Equity securities:			
Preferred stock	0.3	0.3	—
Mutual funds- U.S. listed large cap	0.5	0.5	—
Fixed maturity securities:			
U.S. & foreign government and government agencies and authorities	11.2	—	11.2
Corporate- U.S. & foreign investment grade	19.0	—	19.0
Corporate- U.S. & foreign high yield	4.7	—	4.7
Derivatives:			
Interest rate swap	0.9	—	0.9
Other investments measured at net asset value (1)	7.2	—	—
Total financial assets	$49.3 (2)	$0.8	$41.3

(1) In accordance with fair value measurements and disclosures guidance, certain investments that are measured at fair value using the net asset value practical expedient have not been classified in the fair value hierarchy. The net asset values of $3.3 million, $0.5 million and $3.4 million as of December 31, 2017 are used as a practical expedient to fair value of the multi-strategy hedge fund, private equity fund and real estate fund, respectively.

(2) The difference between the fair value of Plan assets above and the amount used in determining the funded status is due to interest receivable which is not required to be included in the fair value hierarchy.

Level 1 and Level 2 securities are valued using various observable market inputs obtained from a pricing service. The pricing service prepares estimates of fair value measurements for the Company’s Level 2 securities using proprietary valuation models based on techniques such as matrix pricing which include observable market inputs. Observable market inputs for Level 1 and Level 2 securities are consistent with the observable market inputs described in Note 9.

The Company obtains one price for each investment. A quarterly analysis is performed to assess if the evaluated prices represent a reasonable estimate of their fair value. This process involves quantitative and qualitative analysis and is overseen by benefits, investment and accounting professionals. Examples of procedures performed include, but are not limited to, initial and

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on-going review of pricing service methodologies, review of pricing statistics and trends, and comparison of prices for certain securities with two different appropriate price sources for reasonableness. Following this analysis, the Company uses the best estimate of fair value based upon all available inputs. The pricing service provides information regarding their pricing procedures so that the Company can properly categorize the Plans' financial assets in the fair value hierarchy.

The following pension benefits are expected to be paid over the next ten-year period:

	Pension Benefits	Retirement Health Benefits
2019	$51.6	$ 6.0
2020	53.4	6.2
2021	45.8	6.3
2022	45.9	6.4
2023	46.4	6.5
2024 - 2028	242.0	33.0
Total	$485.1	$ 64.4

Defined Contribution Plan

The Company and its subsidiaries participate in a defined contribution plan covering substantially all employees. The defined contribution plan provides benefits payable to participants on retirement or disability and to beneficiaries of participants in the event of the participant's death. The amounts expensed by the Company related to this plan were $36.9 million, $37.0 million and $60.9 million (including the special contribution referenced below) for the years ended December 31, 2018, 2017 and 2016, respectively.

During the year ended December 31, 2016, in connection with the pension freeze, the Company provided a special, one-time contribution of 3% of eligible pay into the defined contribution plan for all active employees as of December 31, 2016. Employees whose employment ended between March 1 and December 30, 2016 due to death, total disability, retirement (as defined in the Plan) or as part of an involuntary termination without cause initiated by the Company were also eligible. The Company incurred $22.5 million in connection with this special, one-time contribution as of December 31, 2016.

24. Earnings per Common Share

The following table presents net income, the weighted average common shares used in calculating basic earnings per common share ("EPS") and those used in calculating diluted EPS for each period presented below. Diluted EPS reflects the incremental common shares from: (1) common shares issuable upon vesting of PSUs and under the ESPP using the treasury stock method; and (2) common shares issuable upon conversion of the MCPS using the if-converted method. Refer to Notes 19 and 20 for further information regarding potential common stock issuances. The outstanding RSUs have non-forfeitable rights to dividend equivalents and are therefore included in calculating basic and diluted EPS under the two-class method.

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	Years Ended December 31,		
	2018	2017	2016
Numerator			
Net income attributable to stockholders	$ 251.0	$ 519.6	$ 565.4
Less: Preferred stock dividends	(14.2)	—	—
Net income attributable to common stockholders	236.8	519.6	565.4
Less: Common stock dividends paid	(133.8)	(119.0)	(125.4)
Undistributed earnings	$ 103.0	$ 400.6	$ 440.0
Denominator			
Weighted average common shares outstanding used in basic earnings per common share calculations	59,239,608	54,986,654	61,261,288
Incremental common shares from:			
PSUs	260,904	284,835	632,731
ESPP	45,012	39,543	40,755
MCPS	—	—	—
Weighted average common shares used in diluted earnings per common share calculations	59,545,524	55,311,032	61,934,774
Earnings per common share – Basic			
Distributed earnings	$ 2.26	$ 2.16	$ 2.05
Undistributed earnings	1.74	7.29	7.18
Net income attributable to common stockholders	$ 4.00	$ 9.45	$ 9.23
Earnings per common share – Diluted			
Distributed earnings	$ 2.25	$ 2.15	$ 2.03
Undistributed earnings	1.73	7.24	7.10
Net income attributable to common stockholders	$ 3.98	$ 9.39	$ 9.13

Average PSUs totaling 39,065, 68,110 and 2,747 for the years ended December 31, 2018, 2017 and 2016, respectively, were outstanding but were anti-dilutive and thus not included in the computation of diluted EPS under the treasury stock method. Average MCPS totaling 2,357,090 for the year ended December 31, 2018 were anti-dilutive and thus not included in the computation of diluted EPS under the if-converted method.

25. Quarterly Results of Operations (Unaudited)

The Company’s quarterly results of operations for the years ended December 31, 2018 and 2017 are summarized in the tables below:

	Three Month Periods Ended			
	March 31	June 30	September 30	December 31
2018				
Total revenues	$1,638.6	$1,831.7	$2,270.3	$2,317.0
Income before provision for income taxes	136.5	78.3	75.8	42.9
Net income attributable to common stockholders	106.0	62.2	48.3	20.3
Basic per share data:				
Income before provision for income taxes	$2.57	$1.37	$1.19	$0.68
Net income	$1.99	$1.09	$0.76	$0.32
Diluted per share data:				
Income before provision for income taxes	$2.52	$1.37	$1.19	$0.68
Net income	$1.96	$1.09	$0.76	$0.32

	March 31	June 30	September 30	December 31
2017				
Total revenues	$1,551.5	$1,600.5	$1,586.4	$1,676.6
Income (loss) before provision (benefit) for income taxes	215.1	178.7	(107.6)	158.3
Net income (loss) attributable to common stockholders	143.8	120.2	(57.3)	312.9
Basic per share data:				
Income (loss) before provision (benefit) for income taxes	$3.83	$3.24	$(1.97)	$2.93
Net income (loss)	$2.56	$2.18	$(1.05)	$5.79
Diluted* per share data:				
Income (loss) before provision (benefit) for income taxes	$3.79	$3.22	$(1.97)	$2.91
Net income (loss)	$2.53	$2.16	$(1.05)	$5.76

* In accordance with earnings per share guidance, diluted per common share amounts are computed in the same manner as basic per common share amounts when a loss from operations exists.

Quarterly 2018 results reflect the results of the acquired TWG operations beginning June 1, 2018 and the sale of our Mortgage Solutions business on August 1, 2018. Quarterly 2018 results also reflect a lower U.S. federal corporate income tax rate of 21% compared to 35% in 2017. Refer to Notes 3, 4 and 11, respectively, for additional information.

Fourth quarter 2018 results reflect the impact of $95.6 million after-tax of reportable catastrophes, primarily related to Hurricane Michael and the wildfires in California. This was partially offset by an $18.4 million gain on the sale of Time Insurance Company. Fourth quarter 2018 results included a $6.2 million after-tax reduction to fourth quarter 2018 net income to correct the 2018 catastrophe reinsurance premium estimates recorded during the first three quarters of 2018.

Third quarter 2018 results reflect the impact of $67.7 million after-tax of reportable catastrophes, primarily related to Hurricane Florence and an increase in reserves for claims on Hurricane Maria. This was partially offset by $18.3 million of net losses in foreign exchange, primarily related to a re-measurement as result of Argentina’s highly inflationary economy.

Fourth quarter 2017 results were primarily affected by a one-time $177.0 million tax benefit from the reduction of net deferred tax liabilities following the enactment of the TCJA. Fourth quarter 2017 results included adjustments related to the understatement of income from certain Global Lifestyle mobile and vehicle service contracts, primarily related to 2017, 2016 and 2015. These adjustments resulted in an increase to fourth quarter 2017 net income of $5.4 million.

Third quarter 2017 results reflect the impact of $191.8 million after-tax of reportable catastrophes, primarily related to Hurricanes Harvey, Irma and Maria.

Second quarter 2017 results included adjustments related to the understatement of income from certain Global Lifestyle vehicle and extended service contracts, primarily related to 2016 and 2015. These adjustments resulted in an increase to second quarter 2017 net income of $3.7 million.

The Company performed both a qualitative and quantitative assessment of the materiality of the adjustments and concluded that the effects were not material to the Company's financial position, results of operations or cash flows for any previously reported quarterly or annual financial statements or for the current period in which they were adjusted.

26. Commitments and Contingencies
Leases

The Company and its subsidiaries lease office space and equipment under operating lease arrangements. Certain facility leases contain escalation clauses based on increases in the lessors' operating expenses. At December 31, 2018, the aggregate future minimum lease payments under these operating lease arrangements that have initial or non-cancelable terms in excess of one year are:

2019	$24.8
2020	20.8
2021	18.7
2022	13.2
2023	9.5
Thereafter	35.5
Total minimum future lease payments (1)	$122.5

(1) Total minimum future lease payments exclude $0.7 million of sublease rental income.

Rent expense was $27.4 million, $23.8 million and $26.5 million for the years ended December 31, 2018, 2017 and 2016, respectively. Sublease income was $0.7 million, $5.9 million and $5.6 million for the years ended December 31, 2018, 2017 and 2016, respectively.

Future minimum payments under purchase agreements totaled $9.0 million as of December 31, 2018, with payment of $4.5 million each due in 2019 and 2020.

Letters of Credit

In the normal course of business, letters of credit are issued primarily to support reinsurance arrangements in which the Company is the reinsurer. These letters of credit are supported by commitments under which the Company is required to indemnify the financial institution issuing the letter of credit if the letter of credit is drawn. The Company had $13.2 million and $18.1 million of letters of credit outstanding as of December 31, 2018 and 2017, respectively.

Legal and Regulatory Matters

In January 2015, at the request of the Indiana Department of Insurance, the NAIC authorized a multistate targeted market conduct examination regarding the Company's lender placed insurance products. Various underwriting companies, including American Security Insurance Company, were subject to the examination. In December 2016, the Company reached a Regulatory Settlement Agreement (the "RSA") with the participating regulators to resolve the issues raised in the market conduct examination and a separate agreement with the Minnesota Department of Commerce to settle its Lender-placed Insurance market conduct examination (together with the RSA, the "Settlement Agreements"). The terms of the Settlement Agreements took effect in the first quarter of 2017. They resolved outstanding regulatory matters related to Lender-placed Insurance within the scope of the examinations and aligned lender-placed business practices with procedures already implemented across much of the Company's lender-placed business. In April 2017, the Company paid $85.0 million to the participating jurisdictions for examination, compliance and monitoring costs. In accordance with the RSA, the Company also re-files its Lender-placed Insurance rates at least once every four years and modified certain lender-placed business. The state insurance regulatory agencies have also imposed similar requirements and restrictions on other existing writers of Lender-placed Insurance and future entrants.

The Company is involved in a variety of litigation and legal and regulatory proceedings relating to its current and past business operations and, from time to time, it may become involved in other such actions. In particular, the Company is a defendant in class actions in a number of jurisdictions regarding its Lender-placed Insurance programs. These cases assert a variety of claims under a number of legal theories. The plaintiffs typically seek premium refunds and other relief. The

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Company continues to defend itself vigorously in these class actions. The Company has participated and may participate in settlements on terms that the Company considers reasonable.

The Company has established an accrued liability for certain legal and regulatory proceedings. The possible loss or range of loss resulting from such litigation and regulatory proceedings, if any, in excess of the amounts accrued is inherently unpredictable and uncertain. Consequently, no estimate can be made of any possible loss or range of loss in excess of the accrual. Although the Company cannot predict the outcome of any pending legal or regulatory proceeding, or the potential losses, fines, penalties or equitable relief, if any, that may result, it is possible that such outcome could have a material adverse effect on the Company’s consolidated results of operations or cash flows for an individual reporting period. However, on the basis of currently available information, management does not believe that the pending matters are likely to have a material adverse effect, individually or in the aggregate, on the Company’s financial condition.

Guaranty Fund Assessments

Under state guaranty association laws, certain insurance companies can be assessed (up to prescribed limits) for certain obligations to the policyholders and claimants of impaired or insolvent insurance companies that write the same line or similar lines of business. In 2009, the Pennsylvania Insurance Commissioner (the “Commissioner”) placed long-term care insurer Penn Treaty Network America Insurance Company and one of its subsidiaries (together, “Penn Treaty”) in rehabilitation, an intermediate action before insolvency, and subsequently petitioned a state court to convert the rehabilitation into a liquidation. The state court began a hearing in July 2015 to consider the Commissioner’s most recent proposed rehabilitation plan, which contemplates a partial liquidation of Penn Treaty. Given developments in 2016, and the apparent inevitable liquidation of Penn Treaty, the Company accrued $12.5 million for its estimated share of guaranty association assessments in the fourth quarter of 2016. In March 2017, the order of liquidation was granted. During the years ended December 31, 2018 and 2017, the Company accrued an additional $1.5 million and $3.0 million of expense, respectively, related to Penn Treaty due to a revised estimated total loss of liability and had a net liability of $1.2 million and $6.5 million as of December 31, 2018 and 2017, respectively, for remaining obligations related to the insolvency.

Assurant, Inc.

Schedule I – Summary of Investments Other – Than – Investments in Related Parties

	December 31, 2018		
	Cost or Amortized Cost	Fair Value	Amount at which shown in balance sheet
	(in millions)		
Fixed maturity securities:			
U.S. government and government agencies and authorities	$381.4	$384.6	$ 384.6
States, municipalities and political subdivisions	238.9	256.2	256.2
Foreign governments	856.3	912.1	912.1
Asset-backed	513.6	504.5	504.5
Commercial mortgage-backed	79.1	79.7	79.7
Residential mortgage-backed	1,399.1	1,405.8	1,405.8
U.S. corporate	5,337.0	5,593.0	5,593.0
Foreign corporate	2,028.6	2,121.2	2,121.2
Total fixed maturity securities	10,834.0	11,257.1	11,257.1
Equity securities:			
Common stocks	8.4	15.3	15.3
Non-redeemable preferred stocks	298.0	308.3	308.3
Mutual funds	55.2	55.2	55.2
Total equity securities	361.6	378.8	378.8
Commercial mortgage loans on real estate	759.6	735.1	759.6
Short-term investments	373.2	373.2	373.2
Other investments	635.2	635.2	635.2
Total investments	$12,963.6	$13,379.4	$ 13,403.9

Assurant, Inc.

Schedule II – Condensed Balance Sheet (Parent Only)

	December 31, 2018	2017
	(in millions, except number of shares)	
Assets		
Investments:		
Equity investment in subsidiaries	$6,461.7	$4,674.3
Fixed maturity securities available for sale, at fair value (amortized cost – $305.0 and $375.4 at December 31, 2018 and 2017, respectively)	299.6	382.2
Equity securities available for sale, at fair value (amortized cost – $5.0 and $14.6 at December 31, 2018 and 2017, respectively)	6.0	16.1
Short-term investments	2.7	14.2
Other investments	103.7	115.9
Total investments	6,873.7	5,202.7
Cash and cash equivalents	196.0	136.0
Receivable from subsidiaries, net	48.2	58.4
Income tax receivable	—	26.8
Accrued investment income	1.6	3.8
Property and equipment, at cost less accumulated depreciation	139.3	118.1
Other assets	43.1	39.7
Total assets	$7,301.9	$5,585.5
Liabilities		
Accounts payable and other liabilities	$160.5	$246.7
Income tax payable	23.4	—
Debt	2,006.0	1,068.2
Total liabilities	2,189.9	1,314.9
Commitments and Contingencies		
Stockholders' equity		
6.50% Series D mandatory convertible preferred stock, par value $1.00 per share, 2,875,000 shares authorized, 2,875,000 and 0 shares issued and outstanding at December 31, 2018 and 2017, respectively	2.9	—
Common stock, par value $0.01 per share, 800,000,000 shares authorized, 161,153,454 and 150,392,604 shares issued and 61,908,979 and 52,417,812 shares outstanding at December 31, 2018 and 2017, respectively	1.6	1.5
Additional paid-in capital	4,495.6	3,197.9
Retained earnings	5,759.7	5,697.3
Accumulated other comprehensive income	(155.4)	234.0
Treasury stock, at cost; 99,244,475 and 97,974,792 shares at December 31, 2018 and 2017, respectively	(4,992.4)	(4,860.1)
Total stockholders' equity	5,112.0	4,270.6
Total liabilities and stockholders' equity	$7,301.9	$5,585.5

See the accompanying Notes to the Parent Only Condensed Financial Statements

Assurant, Inc.

Schedule II – Condensed Income Statement (Parent Only)

	Years Ended December 31,		
	2018	**2017**	**2016**
	(in thousands)		
Revenues			
Net investment income	$14.7	$11.0	$7.3
Net realized (losses) gains on investments	(0.1)	(1.0)	2.9
Fees and other income	106.0	138.8	85.1
Gain on pension plan curtailment	—	—	29.6
Equity in net income of subsidiaries	453.9	619.8	641.2
Total revenues	574.5	768.6	766.1
Expenses			
General and administrative expenses	269.9	246.0	191.3
Interest expense	100.3	49.5	57.6
Loss on extinguishment of debt	—	—	23.0
Total expenses	370.2	295.5	271.9
Income before benefit for income taxes	204.3	473.1	494.2
Benefit for income taxes	48.3	46.5	71.2
Net income	252.6	519.6	565.4
Less: Net income attributable to non-controlling interest	(1.6)	—	—
Net income attributable to stockholders	$251.0	$519.6	$565.4

See the accompanying Notes to the Parent Only Condensed Financial Statements

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Assurant, Inc.

Schedule II – Condensed Statements of Comprehensive Income (Parent Only)

	Years Ended December 31,		
	2018	2017	2016
	(in millions)		
Net income	$252.6	$519.6	$565.4
Other comprehensive (loss) income:			
Change in unrealized gains on securities, net of taxes of $3.0, $(4.3) and $(0.4) for the years ended December 31, 2018, 2017 and 2016, respectively	(11.3)	2.5	2.5
Change in unrealized gains on derivative transactions, net of taxes of $(4.9) for the year ended December 31, 2018	18.4	—	—
Change in foreign currency translation, net of taxes of $0.0, $0.1 and $(0.0) for the years ended December 31, 2018, 2017 and 2016, respectively	—	(0.1)	—
Amortization of pension and postretirement unrecognized net periodic benefit cost and change in funded status, net of taxes of $3.4, $11.0 and $(35.2) for the years ended December 31, 2018, 2017 and 2016, respectively	(12.7)	(20.4)	65.4
Change in subsidiary other comprehensive income	(431.9)	157.4	(91.9)
Total other comprehensive (loss) income	(437.5)	139.4	(24.0)
Total comprehensive (loss) income	(184.9)	659.0	541.4
Less: Net income attributable to non-controlling interest	(1.6)	—	—
Total comprehensive (loss) income attributable to stockholders	$(186.5)	$659.0	$541.4

See the accompanying Notes to the Parent Only Condensed Financial Statements

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Assurant, Inc.
Schedule II – Condensed Cash Flows (Parent Only)

	Years Ended December 31,		
	2018	2017	2016
	(in millions)		
Operating Activities			
Net cash provided by operating activities	$548.8	$177.1	$981.1
Investing Activities			
Sales of:			
Fixed maturity securities available for sale	413.1	589.8	441.0
Equity securities available for sale	12.6	9.7	10.2
Other invested assets	74.1	3.6	0.2
Property, buildings and equipment	0.1	26.2	—
Subsidiary, net of cash transferred (1)	31.5	—	13.3
Maturities, calls, prepayments, and scheduled redemption of:			
Fixed maturity securities available for sale	26.2	47.4	17.1
Purchases of:			
Fixed maturity securities available for sale	(372.8)	(538.2)	(480.2)
Equity securities available for sale	(2.8)	(3.9)	(25.6)
Other invested assets	(38.8)	(24.1)	(3.7)
Property and equipment and other	(31.9)	(23.5)	(26.3)
Subsidiary, net of cash transferred (2)	(1,490.9)	—	—
Capital contributed to subsidiaries	(61.0)	(186.6)	(86.5)
Return of capital contributions from subsidiaries	14.0	41.9	3.6
Change in short-term investments	11.5	248.8	154.9
Net cash (used in) provided by investing activities	(1,415.1)	191.1	18.0
Financing Activities			
Issuance of debt	1,285.7	—	249.6
Repayment of debt, including extinguishment	(350.0)	—	(373.0)
Issuance of mandatory convertible preferred stock, net of issuance costs	276.4	—	—
Change in tax benefit from share-based payment arrangements	—	—	5.6
Acquisition of common stock	(139.3)	(388.9)	(863.1)
Preferred stock dividends paid	(14.2)	—	—
Common stock dividends paid	(133.8)	(118.9)	(125.3)
Withholding on stock based compensation	1.4	10.8	13.1
Other	0.1	—	—
Net cash provided by (used in) financing activities	926.3	(497.0)	(1,093.1)
Cash included in held for sale assets	—	—	4.7
Change in cash and cash equivalents	60.0	(128.8)	(89.3)
Cash and cash equivalents at beginning of period	136.0	264.8	354.1
Cash and cash equivalents at end of period	$196.0	$136.0	$264.8

(1) Amounts for the year ended December 31, 2018 relate to cash received from the sale of Time Insurance Company ($23.9 million). For additional information, refer to Note 4 to the Consolidated Financial Statements.

(2) Amounts for the year ended December 31, 2018 primarily consist of $1.49 billion of cash used to fund a portion of the total purchase of the TWG acquisition, inclusive of the $595.9 million repayment of pre-existing TWG debt at the acquisition date (such debt was not legally assumed). Refer to Note 3 to the Consolidated Financial Statements for further information.

See the accompanying Notes to the Parent Only Condensed Financial Statements

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Assurant, Inc.
Notes to the Parent Only Condensed Financial Statements

Assurant, Inc.'s (the "Registrant") investments in consolidated subsidiaries are stated at cost plus equity in income of consolidated subsidiaries. The accompanying Parent Only Condensed Financial Statements of the Registrant should be read in conjunction with the Consolidated Financial Statements and Notes thereto of the registrant and its subsidiaries included in the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2018 filed with the Securities and Exchange Commission on February 22, 2019.

Assurant, Inc.

Schedule III – Supplementary Insurance Information

Segment	Deferred acquisition costs	Future policy benefits and expenses	Unearned premiums	Claims and benefits payable	Premium revenue	Net investment income	Benefits claims, losses and settlement expenses	Amortization of deferred acquisition costs	Other operating expenses (1)	Property and Casualty premiums written
(in millions)										
Year Ended December 31, 2018										
Global Lifestyle	$ 4,075.1	$ 112.2	$ 13,819.9	$ 709.8	$ 4,291.8	$ 189.4	$ 1,145.6	$ 1,207.1	$ 2,631.3	$ 716.8
Global Preneed	1,051.9	5,943.7	437.3	27.6	58.4	278.0	263.3	63.9	66.7	—
Global Housing	128.6	—	1,472.5	651.3	1,806.2	80.8	938.4	204.5	837.1	1,852.7
Assurant Health	—	0.7	0.1	4.4	0.5	2.6	(4.7)	—	5.0	—
Corporate and Other	(152.6)	3,184.3	(81.8)	1,420.6	—	47.6	—	—	265.6	—
Total segments	$ 5,103.0	$ 9,240.9	$ 15,648.0	$ 2,813.7	$ 6,156.9	$ 598.4	$ 2,342.6	$ 1,475.5	$ 3,805.7	$ 2,569.5
Year Ended December 31, 2017										
Global Lifestyle	$ 2,843.7	$ 124.9	$ 5,518.8	$ 280.1	$ 2,576.5	$ 114.6	$ 700.4	$ 1,082.3	$ 1,481.8	$ 596.2
Global Preneed	949.9	5,779.2	380.6	27.8	59.5	262.0	259.1	54.9	70.0	—
Global Housing	114.4	—	1,434.9	1,258.8	1,761.4	75.6	958.4	194.9	953.0	1,760.8
Assurant Health	—	10.5	2.1	22.3	6.7	6.5	(47.3)	—	48.0	—
Corporate and Other	(423.5)	4,482.8	(297.8)	2,193.2	—	35.1	—	—	165.5	—
Total segments	$ 3,484.5	$ 10,397.4	$ 7,038.6	$ 3,782.2	$ 4,404.1	$ 493.8	$ 1,870.6	$ 1,332.1	$ 2,718.3	$ 2,357.0
Year Ended December 31, 2016										
Global Lifestyle	$ 2,573.9	$ 135.9	$ 5,046.7	$ 263.3	$ 2,901.4	$ 113.1	$ 663.8	$ 1,044.0	$ 1,903.7	$ 516.8
Global Preneed	816.3	5,401.4	313.4	24.4	61.7	259.8	250.4	54.2	62.7	—
Global Housing	124.4	1.8	1,424.2	577.8	1,829.1	72.7	828.6	238.2	1,013.7	1,804.4
Assurant Employee Benefits	—	—	—	—	178.0	17.3	118.4	5.8	61.5	—
Assurant Health	—	9.5	4.2	109.0	37.1	8.8	(52.7)	—	165.7	—
Corporate and Other	(247.2)	4,564.3	(162.0)	2,326.7	—	44.0	—	—	244.6	—
Total segments	$ 3,267.4	$ 10,112.9	$ 6,626.5	$ 3,301.2	$ 5,007.3	$ 515.7	$ 1,808.5	$ 1,342.2	$ 3,451.9	$ 2,321.2

(1) Includes amortization of value of business acquired and underwriting, general and administration expenses.

Assurant, Inc.

Schedule IV – Reinsurance

	Direct amount	Ceded to other Companies	Assumed from other Companies	Net amount	Percentage of amount assumed to net
	(in millions)				
Year Ended December 31, 2018					
Life Insurance in Force	$53,831.6	$50,110.5	$554.1	$4,275.2	13.0 %
Premiums:					
Life insurance	$526.8	$402.5	$3.8	$128.1	3.0 %
Accident and health insurance	1,234.2	1,067.8	2.4	168.8	1.4 %
Property and liability insurance	9,942.8	4,229.9	147.1	5,860.0	2.5 %
Total earned premiums	$11,703.8	$5,700.2	$153.3	$6,156.9	2.5 %
Benefits:					
Life insurance	$599.9	$330.7	$12.8	$282.0	4.5 %
Accident and health insurance	1,114.4	1,095.8	0.4	19.0	2.1 %
Property and liability insurance	4,588.6	2,642.6	95.6	2,041.6	4.7 %
Total policyholder benefits	$6,302.9	$4,069.1	$108.8	$2,342.6	4.6 %
Year Ended December 31, 2017					
Life Insurance in Force	$77,852.8	$74,851.8	$614.8	$3,615.8	17.0 %
Premiums:					
Life insurance	$602.8	$465.8	$6.1	$143.1	4.3 %
Accident and health insurance	1,424.4	1,272.4	4.8	156.8	3.1 %
Property and liability insurance	7,503.6	3,542.4	143.0	4,104.2	3.5 %
Total earned premiums	$9,530.8	$5,280.6	$153.9	$4,404.1	3.5 %
Benefits:					
Life insurance	$666.1	$404.2	$14.4	$276.3	5.2 %
Accident and health insurance	775.0	802.0	0.2	(26.8)	(0.7)%
Property and liability insurance	4,998.4	3,590.8	213.5	1,621.1	13.2 %
Total policyholder benefits	$6,439.5	$4,797.0	$228.1	$1,870.6	12.2 %
Year Ended December 31, 2016					
Life Insurance in Force	$87,831.8	$84,880.2	$1,369.3	$4,320.9	31.7 %
Premiums:					
Life insurance	$631.6	$470.2	$13.0	$174.4	7.5 %
Accident and health insurance	1,524.9	1,299.6	66.7	292.0	22.8 %
Property and liability insurance	7,518.3	3,267.6	290.2	4,540.9	6.4 %
Total earned premiums	$9,674.8	$5,037.4	$369.9	$5,007.3	7.4 %
Benefits:					
Life insurance	$719.6	$453.0	$19.6	$286.2	6.8 %
Accident and health insurance	1,519.4	1,485.3	26.1	60.2	43.4 %
Property and liability insurance	3,482.2	2,143.7	123.6	1,462.1	8.5 %
Total policyholder benefits	$5,721.2	$4,082.0	$169.3	$1,808.5	9.4 %

Assurant, Inc.

Schedule V – Valuation and Qualifying Accounts

		Additions			
	Balance at Beginning of Year	Charged to Costs and Expenses	Charged to Other Accounts	Deductions	Balance at End of Year
For the year ended December 31, 2018					
Valuation allowance for foreign deferred tax assets	$ 9.2	$(0.5)	$17.8	$ 0.1	$ 26.4
Valuation allowance for mortgage loans on real estate	1.0	(0.6)	—	—	0.4
Valuation allowance for uncollectible agents balances	2.3	0.1	8.9	1.8	9.5
Valuation allowance for uncollectible accounts	10.2	0.2	(0.9)	1.3	8.2
Valuation allowance for reinsurance recoverables	0.3	—	—	—	0.3
Total	$ 23.0	$(0.8)	$25.8	$ 3.2	$ 44.8
For the year ended December 31, 2017					
Valuation allowance for foreign NOL deferred tax carryforward	$ 12.5	$(3.3)	$—	$ —	$ 9.2
Valuation allowance for mortgage loans on real estate	2.3	(1.3)	—	—	1.0
Valuation allowance for uncollectible agents balances	13.8	(3.8)	0.1	7.8	2.3
Valuation allowance for uncollectible accounts	15.8	(4.7)	0.1	1.0	10.2
Valuation allowance for reinsurance recoverables	0.3	—	—	—	0.3
Total	$ 44.7	$(13.1)	$0.2	$ 8.8	$ 23.0
For the year ended December 31, 2016					
Valuation allowance for foreign NOL deferred tax carryforward	$ 13.2	$(0.7)	$—	$ —	$ 12.5
Valuation allowance for mortgage loans on real estate	2.6	(0.3)	—	—	2.3
Valuation allowance for uncollectible agents balances	13.8	0.2	(0.1)	0.1	13.8
Valuation allowance for uncollectible accounts	13.9	4.3	—	2.4	15.8
Valuation allowance for reinsurance recoverables	10.8	(10.4)	—	0.1	0.3
Total	$ 54.3	$(6.8)	$(0.1)	$ 2.6	$ 44.7

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